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July 3, 2013

Mr. John Morris, P.G.
Florida Department of Environmental Protection
Waste Permitting Section
13051 Telecom Parkway
Temple Terrace, FL 33637

RE: **Southeast County Landfill
Laboratory Analytical Results
Initial Assessment Monitoring Plan
Report No. 33 – May 2013**

Dear Mr. Morris:

The Hillsborough County Public Utilities Department (County) is pleased to provide the analytical results from the May 2013 sampling event conducted as part of our continuation of the Initial Assessment Monitoring Plan (IAMP). The IAMP was developed to address the potential impacts to groundwater from the sinkhole in Phase VI of the Southeast County Landfill (SCLF), which was discovered on December 14, 2010. These sampling activities were conducted on May 2, 2013, and the samples collected were analyzed by our contracted laboratory, Test America, Inc.

As approved by the FDEP Southwest District, the County installed two additional upper Floridan / Limestone aquifer monitoring wells, designated as TH-76 and TH-77. The wells were installed utilizing the Roto-Sonic™ method on March 27-29, 2013. The new wells are located between the sinkhole and the closest property boundary in order to evaluate the potential horizontal extent of the impacts observed in TH-72. Beginning with this sampling event, the Upper Floridan monitoring wells TH-72, TH-76, and TH-77 will continue to be monitored on a monthly schedule. The surficial aquifer monitoring wells, TH-73, TH-74, and TH-75 will be included on a quarterly schedule. The County conducted the quarterly sampling of the six (6) IAMP wells on May 2, 2013.

Mr. John Morris, P.G.

July 3, 2013

Page 2

Representative samples were collected from the six (6) on-site groundwater monitoring wells. Samples collected were analyzed for total dissolved solids (TDS), chloride, total ammonia, arsenic, iron, sodium, and five (5) field parameters. The following paragraphs summarize the parameter specific results pertinent to the evaluation of potential water quality impacts from the sinkhole at the SCLF.

pH

Surficial aquifer monitoring wells TH-73, TH-74, and TH-75 continue to exhibit pH values below the Secondary Drinking Water Standard (SDWS) acceptable range of 6.5 to 8.5 pH units. The pH values in each of these wells were 5.12, 5.61, and 5.61 pH units, respectively. The pH values within the surficial aquifer across the SCLF have historically been observed below the acceptable range, and the observed values are consistent with the historical and background water qualities. The pH values observed in the three (3) upper Floridan groundwater monitoring wells were within the acceptable range, and consistent with historical data for the site.

Turbidity

During this sampling event, turbidity values in surficial aquifer groundwater monitoring wells TH-73, TH-74, and TH-75 were 8.82, 2.62 and 1.59 Nephelometric Turbidity Units (NTUs). Turbidity values within the three upper Floridan groundwater monitoring wells ranged from 0.45 to 59.4 NTUs. The elevated turbidity observed in TH-76 (36.9 NTU) and TH-77 (59.4 NTU) is common for some wells right after installation. The County believes the turbidity values should decrease as the wells are sampled during their monthly schedule.

Conductivity

The conductivity values in most of the groundwater monitoring wells sampled are relatively low and have remained consistent with historical values associated with the SCLF. The conductivity values observed in surficial aquifer monitoring wells TH-73, TH-74, and TH-75 were 240, 357, and 340 micromhos per centimeter (umhos/cm). The conductivity values observed in the upper Floridan groundwater monitoring wells at the site are historically low. However, during this sampling event TH-72 continues to exhibit an elevated conductivity value of 1,615 umhos/cm.

Total Dissolved Solids (TDS)

The TDS values observed in the surficial aquifer groundwater monitoring wells were all observed below the SDWS of 500 mg/l. The TDS observed in TH-72 was above the SDWS at 810 mg/l.

Mr. John Morris, P.G.
July 3, 2013
Page 3

Chloride

Chloride values in surficial aquifer groundwater monitoring wells TH-73, TH-74, and TH-75 were 52, 37, and 26 mg/l, which are all below the SDWS of 250 mg/l. The chloride value observed in TH-72 continues to be elevated with a result of 300 mg/l. Chloride values are historically very low in the upper Floridan aquifer monitoring wells at the SCLF.

Sodium

Sodium values in the surficial aquifer groundwater monitoring wells continue to be below the PDWS of 160 mg/l. The sodium value observed in TH-72 was 110 mg/l, which was also below the PDWS.

Iron

Total iron concentrations in the surficial aquifer and upper Floridan monitoring wells were observed above the SDWS of 0.3 mg/l. The elevated iron concentrations observed in both aquifers at specific locations across the site are consistent with background water quality, and are likely naturally occurring and/or the result of past strip mining activities.

Total Ammonia

The upper Floridan well TH-72 continues to exhibit ammonia above the former GCTL of 2.8 mg/l at a concentration of 8.6 mg/l.

Groundwater Elevations and Direction of Flow

The County has collected monthly groundwater and surface water elevation data at sixty-five (65) points across the site, including twenty eight (28) surficial aquifer wells, seven (7) upper Floridan (limestone) aquifer wells, twenty three (23) piezometers, and seven (7) surface water sites. The elevation data is collected the day before the IAMP sampling event, which was May 1, 2013. As previously mentioned last month, piezometer P-5D was observed to be filled with soil approximately 15.6 feet below the top of casing. It appears that this piezometer has structurally failed and the County would request approval from the Department to properly abandon P-5D.

No significant changes to the patterns of flow in the surficial aquifer were noted in the April data set and the diagram is consistent with the observations over the period of record. The general direction of flow within the surficial aquifer has historically been to the west northwest across the Southeast County Landfill site. The elevations observed within the wells

Mr. John Morris, P.G.

July 3, 2013

Page 4

closest to the sinkhole indicate that flow patterns may be somewhat affected, which would not be unexpected. However, the overall direction of flow remains toward the west/northwest across the site.

With the two new upper Floridan / Limestone aquifer monitoring wells in place, the contouring of groundwater elevations within that aquifer in the area of the sinkhole is possible. A contour diagram has been prepared and included with this submittal. However, it should be noted that the elevation change between TH-72 and TH-76 is only 0.02 ft., and the change between TH-72 and TH-77 is only 0.17 ft. Contouring of these three wells, indicates that flow is to the north/northwest, but at a very slow rate. When the other upper Floridan / Limestone aquifer monitoring wells located a the SCLF are included, the contouring process becomes difficult, and inconclusive. Therefore for this initial event we have contoured the flow utilizing just the three points closest to the sinkhole. We will continue to evaluate the flow direction with the upper Floridan / Limestone aquifer, and a more comprehensive understanding of this system will be developed over time.

Conclusions

The water quality observed in the May 2013 sampling event continues to indicate the wells closest to the sinkhole exhibit minor changes in water quality. Based on the proximity of the wells and the trends observed, it is apparent that these impacts are likely attributable to the waste within the sinkhole and the fluids introduced during the grouting activities.

The impacts observed in the upper Floridan aquifer monitoring well, TH-72, continue to exhibit elevated concentrations of conductivity, TDS, chloride, ammonia, iron and sodium. These impacts are not unexpected within the upper Floridan / Limestone aquifer in the immediate vicinity of the sinkhole feature.

As expected, the two new upper Floridan / Limestone aquifer monitoring wells, TH-76 and TH-77 exhibit good water quality with no evidence of impact. Conductivity values, TDS, chloride and ammonia are all very low and consistent with the historical data set for the unaffected UFA monitoring wells at the SCLF.

Based on the observations to date, the water quality impacts observed in the surficial aquifer monitoring well TH-73 have diminished over the period of record. The water quality impacts in TH-72 continue to exceed standards, but remain localized in the immediate vicinity of the source.

Recommendations

The County will move forward with the optimized IAMP, which now includes the monthly sampling of three upper Floridan / Limestone aquifer monitoring wells, TH-72, TH-76, and

Mr. John Morris, P.G.

July 3, 2013

Page 5

TH-77, and the quarterly sampling of the three surficial aquifer monitoring wells, TH-73, TH-74, and TH-75. We will continue to evaluate water quality changes in both the surficial and upper Floridan wells, and present the findings in monthly IAMP report.

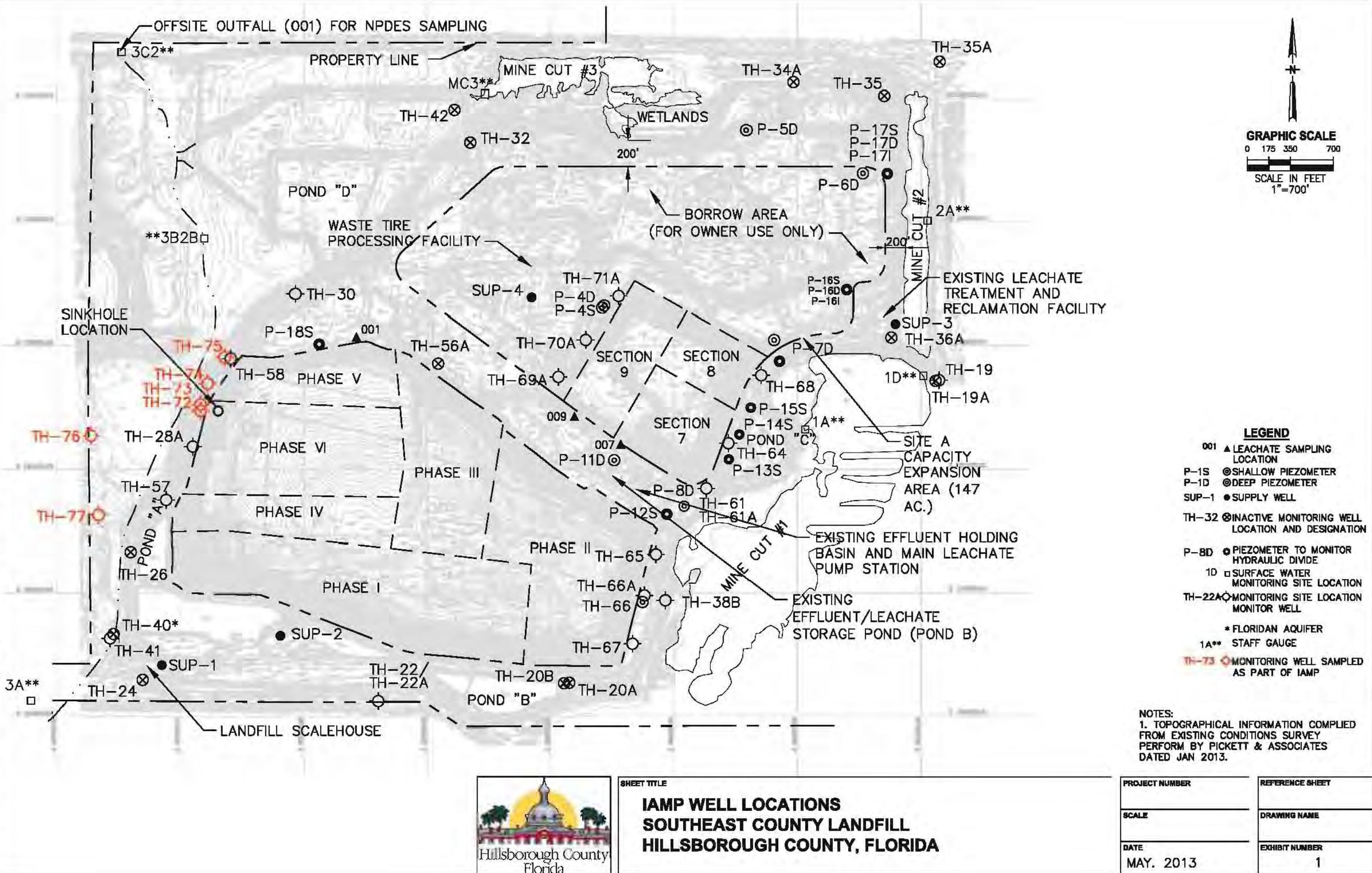
Enclosed for your review please find a site location map depicting the wells sampled, the water quality data summary table for the May 2013 sampling event, a groundwater elevation data table, a groundwater contour and flow diagram, the historical data tables for each well sampled with data from December 2010 through April 2013, and the complete analytical data report from our contracted laboratory, Test America, Inc.

Should you have any questions or require any additional information please feel free to call me at (813) 663-3221.

Respectfully submitted,



cc: John Lyons, Director, Public Utilities Department
Patricia Berry, Public Utilities Department
Andy Berry, Public Utilities Department
Larry Ruiz, Public Utilities Department
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Southeast County Landfill Laboratory Analytical Data

Surficial and Upper Floridan Aquifer Groundwater Monitoring Wells

May 2, 2013

GENERAL (mg/l) PARAMETERS	Surficial Aquifer Wells			Upper Floridan Wells			(MCL) STANDARD
	TH-73	TH-74	TH-75	TH-72	TH-76	TH-77	
conductivity (umhos/cm) (field)	240	357	340	1615	450	440	NS
dissolved oxygen (mg/l) (field)	0.24	0.39	0.21	0.18	0.22	0.57	NS
pH (field)	5.12	5.81	5.81	6.83	7.63	7.39	(6.5 - 8.5)**
temperature (°C) (field)	24.43	21.28	21.72	23.16	22.81	23.39	NS
turbidity (NTU) (field)	8.82	2.62	1.59	0.45	36.9	59.4	NS
total dissolved solids (mg/l)	120	190	170	810	220	190	500**
chloride (mg/l)	52	37	26	300	13	9.4	250**
ammonia nitrogen (mg/l as N)	0.99	2.8	1.3	8.6	0.4	0.39	2.8***
Metals: (mg/l)	TH-73	TH-74	TH-75	TH-72	TH-76	TH-77	(MCL) STANDARD
arsenic	0.004 u	0.004 u	0.0071 i	0.004 u	0.004 u	0.004 u	0.01*
iron	3.4	21	7.6	0.87	1.1	1.2	0.3**
sodium	16	14	13	110	20	17	160*

Note: Ref. Groundwater Guidance Concentrations, FDEP 2012
MCL=MAXIMUM CONTAMINANT LEVEL
BDL=BELOW DETECTION LIMIT
NTU=NEPHELOMETRIC TURBIDITY UNITS

u = parameter was analyzed but not detected.
*=DENOTES PRIMARY DRINKING WATER STANDARD
**=DENOTES SECONDARY DRINKING WATER STANDARD
***=DENOTES FLORIDA GUIDANCE CONCENTRATION

Southeast County Landfill
Groundwater and Surface Water Elevations
May 1, 2013

Measuring Point I.D.	T.O.C. Elevations (NGVD)	05/01/2013 W.L. B.T.O.C.	W.L. (NGVD)	Time
P-4D	140.78	23.11	117.67	12:40 PM
P-4S	140.95	Dry	Dry	12:42 PM
P-5D	151.94	ND	ND	11:45 AM
P-6D-A	148.01	29.18	118.83	11:47 AM
P-7D	138.92	19.01	119.91	11:02 AM
P-8D	138.34	19.16	119.18	10:44 AM
P-11D	138.02	18.60	119.42	1:02 PM
P-12S	134.97	15.45	119.52	10:42 AM
P-13S	140.21	20.58	119.63	10:47 AM
P-14S	138.56	18.97	119.59	10:50 AM
P-15S	139.19	19.74	119.45	10:52 AM
P-16S	143.38	16.55	126.83	11:24 AM
P-16I	144.15	25.14	119.01	11:26 AM
P-16D	143.84	24.88	118.96	11:28 AM
P-17S	137.35	17.64	119.71	11:31 AM
P-17I	137.32	18.43	118.89	11:30 AM
P-17D	137.22	18.39	118.83	11:29 AM
P-18S	129.86	19.03	110.83	1:00 PM
P-19	133.36	15.80	117.56	11:49 AM
P-20	132.38	13.91	118.47	11:55 AM
P-21	122.79	5.11	117.68	12:14 PM
P-22	128.35	10.49	117.86	12:16 PM
P-23	143.13	24.82	118.31	12:10 PM
TH-19*	130.27	110.95	19.32	11:15 AM
TH-20A	131.86	10.72	121.14	10:29 AM
TH-20B	132.57	11.76	120.81	10:30 AM
TH-22	128.82	5.95	122.87	10:23 AM
TH-22A	129.27	6.56	122.71	10:22 AM
TH-24A	128.23	6.24	121.99	10:17 AM
TH-28A	131.10	28.72	102.38	2:12 PM
TH-30	128.88	24.18	104.70	2:02 PM
TH-32	129.90	16.06	113.84	1:10 PM
TH-36	145.98	29.47	116.51	11:40 AM
TH-36A	152.70	33.83	118.87	2:42 PM
TH-38A	130.68	11.14	119.54	10:37 AM
TH-38B	131.81	11.93	119.88	10:36 AM
TH-40*	124.99	105.20	19.79	10:12 AM
TH-41*	125.00	111.38	13.62	10:13 AM
TH-42*	116.74	83.95	32.79	1:14 PM
TH-57	128.36	19.74	108.62	2:14 PM
TH-58	127.88	28.45	99.43	2:05 PM
TH-61	138.73	18.63	120.10	10:45 AM
TH-61A	139.45	19.27	120.18	10:46 AM
TH-64	139.64	19.14	120.50	10:48 AM
TH-65	135.40	15.56	119.84	10:40 AM
TH-66	130.58	10.28	120.32	10:34 AM
TH-66A	130.66	10.73	119.93	10:35 AM
TH-67	129.51	7.03	122.48	10:32 AM
TH-68	140.01	20.71	119.30	10:57 AM
TH-69A	144.97	26.42	118.55	12:52 PM
TH-70A	146.63	26.45	120.18	12:54 PM
TH-71A	146.95	28.39	118.56	12:20 PM
TH-72	130.96	109.56	21.40	2:09 PM
TH-73	131.07	31.40	99.67	2:10 PM
TH-74	109.08	9.94	99.14	2:17 PM
TH-75	106.92	8.00	98.92	2:19 PM
TH-76	111.21	89.83	21.38	1:45 PM
TH-77	119.88	98.31	21.57	1:30 PM
SW-3A	3.0'=125.53'	0.20	122.73	10:08 AM
SW-3B2B	3.0'=97.97'	1.40	96.37	1:26 PM
SW-3C2	6.0'=92.33'	1.10	87.43	1:22 PM
Mine Cut #1	4.0'=122.14'	1.70	119.84	10:54 AM
Mine Cut #2	6.0'=123.47'	1.70	119.17	11:11 AM
Mine Cut #3	4.0'=112.27'	ND	ND	1:15 PM
Mine Cut #4	5.0'=97.54'	1.62	94.16	1:18 PM

NGVD = National Geodetic Vertical Datum

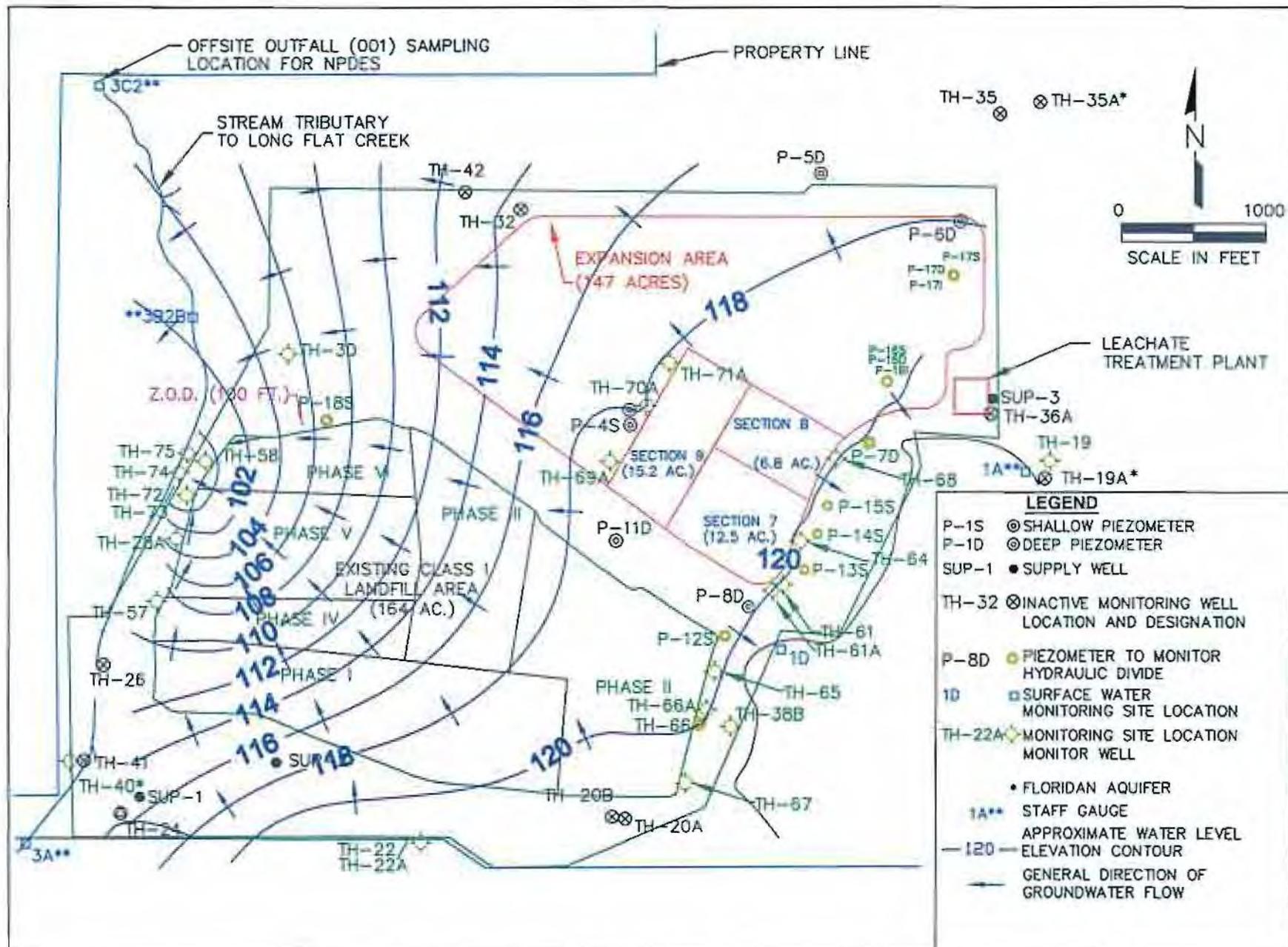
T.O.C. = Top of Casing

B.T.O.C. = Below Top of Casing

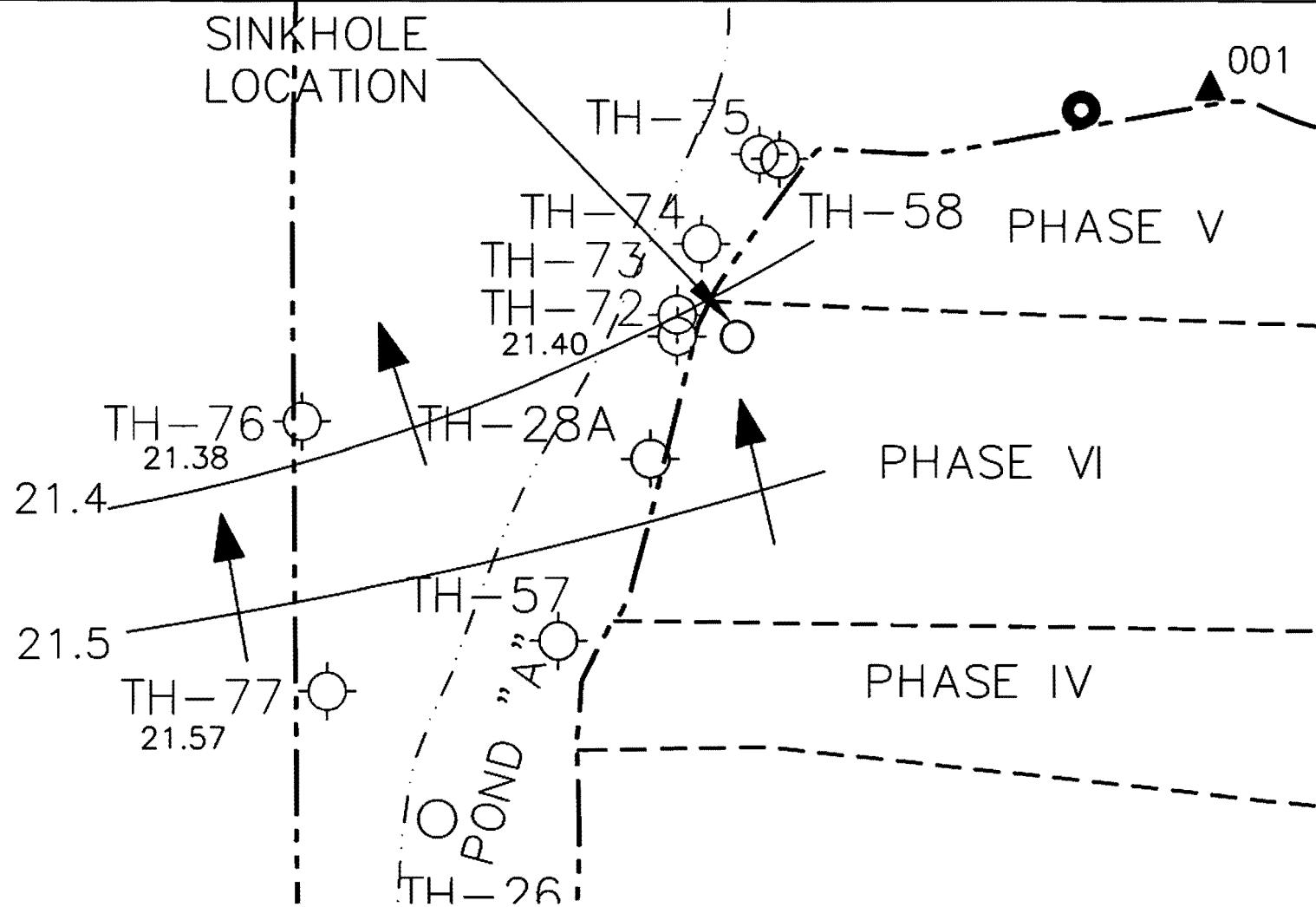
* = Floridan Well

ND = No Data

W.L. = Water Level



Southeast County Landfill
 Groundwater Elevation Contour Diagram – May 1, 2013



SHEET TITLE

**UPPER FLORIDAN CONTOUR DIAGRAM NEAR SINKHOLE
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA**

PROJECT NUMBER	
SCALE	
DATE	MAY. 2013

REFERENCE SHEET
DRAWING NAME
EXCERPT NUMBER

1

Hillsborough County Southeast Landfill
Laboratory Analytical Results from IAMP Groundwater Monitoring
P-18S

Date	Depth to Water (feet)	Water Table Elevation (NGVD)	conductivity (umhos/cm) (field)	dissolved oxygen (mg/l) (field)	pH (field)	temperature (°C) (field)	turbidity (NTU) (field)	Total dissolved solids (mg/l)	chloride (mg/l)	ammonia nitrogen (mg/l as N)	arsenic (mg/l)	iron (mg/l)	sodium (mg/l)
12/21/2010	18.9	110.96	94	0.44	4.56	26.4	853.5	110	12	0.58	0.007	4.5	9.4
12/28/2010	19.02	110.84	75	0.56	4.47	26.15	394.2	110	10	0.62	ND	ND	8
01/04/2011	18.94	110.92	77	0.72	4.63	25.85	346.3	100	11	0.48	ND	ND	7.8
01/13/2011	18.91	110.95	104	0.53	4.61	26.2	107.2	82	12	0.52	0.0049	1.6	8.2
01/20/2011	18.74	111.12	116	0.16	4.64	26.33	63	94	14	0.44	0.004 u	1.6	8.3
01/27/2011	18.82	111.04	134	0.47	4.76	25.24	89.9	110	16	0.49	0.004 u	1.9 j3	8.1
03/03/2011	18.93	110.93	132	0.28	4.86	19.62	38.6	92	17	0.45	0.004 u	2.2	8.7
03/07/2012	19.38	110.48	181	0.3	4.88	26.58	20.1	110	26	0.6	0.004 u	2.6	9.3
06/07/2012	19.50	110.36	142	0.64	4.82	26.7	16.3	98	21	1.2	0.004 u	2.2	8.8
04/04/2013	N/A	N/A	144	0.21	4.59	27.14	19.7	130	25	1.1	0.004 u	2.3	9.8

ND = NO DATA (Not analyzed)

u = parameter was analyzed but not detected

j3 = estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.

4.56

EXCEEDS STANDARD

Hillsborough County Southeast Landfill
Laboratory Analytical Results from IAMP Groundwater Monitoring
TH-28A

Date	Depth to Water (feet)	Water Table Elevation (NGVD)	conductivity (umhos/cm) (field)	dissolved oxygen (mg/l) (field)	pH (field)	temperature (°C) (field)	turbidity (NTU) (field)	total dissolved solids (mg/l)	chloride (mg/l)	ammonia nitrogen (mg/l as N)	arsenic (mg/l)	iron (mg/l)	sodium (mg/l)
12/21/2010	28.90	102.20	209	1.71	5.22	25.3	25.9	110	43	1.4	0.0023	2.5	17
12/28/2010	28.75	102.35	171	1.63	5.11	25.81	5	120	42	1.2	ND	ND	17
01/04/2011	28.88	102.22	175	0.91	5.12	25.58	1.7	92	42	1.4	ND	ND	17
01/13/2011	28.67	102.43	235	0.7	5.25	25.59	2.1	110	44	1	0.0059	2.5	17
01/20/2011	28.41	102.69	239	0.43	5.15	26.31	1.5	110	46	1.1	0.004 u	2.4	17
01/27/2011	28.44	102.66	236	0.99	5.09	25.37	1.6	120	45	0.94	0.004 u	2.4	18
02/03/2011	28.32	102.78	233	0.96	5.07	25.9	2.5	110	46	0.91	0.004 u	2.2	16
02/10/2011	28.31	102.79	209	0.61	5.06	25.85	3.1	110	45	1.3	0.004 u	2.4	18
02/14/2011	28.23	102.87	183	0.84	5.14	25.2	0.9	120	46	1.2	0.0022 i	2.5	18
02/24/2011	28.39	102.71	199	0.6	5.32	26.1	4.5	130	45	1.2	0.004 u	2.5	17
03/03/2011	28.45	102.65	229	0.51	5.18	26	13.2	140	43	1.1	0.004 u	2.7	18
03/10/2011	28.51	102.59	210	0.8	5.24	26.54	4.8	110	46	0.88	0.004 u	2.8	18
03/17/2011	28.36	102.74	161	0.64	5.19	26.06	1.9	150	47	1.3	0.004 u	2.7	18
03/24/2011	28.50	102.60	151	0.42	5.26	26.26	1.8	140	45	1.2	0.004 u	2.8	17
04/01/2011	28.10	103.00	231	0.79	5.31	25.75	4.8	120	45	0.72	0.004 u	3.1	18
04/08/2011	27.69	103.41	240	0.63	5.3	26.19	4.1	120	49	1.1	0.004 u	3.1	19
05/05/2011	28.78	102.32	227	0.88	5.15	25.77	7.9	94	41	1.2	0.004 u	2.9	16
06/08/2011	29.31	101.79	226	1.89	5.34	26.34	9.61	120	41	1.3	0.004 u	3.2	16
07/07/2011	28.26	102.84	207	0.58	5.16	26.22	3.4	110	45	1.1	0.004 u	3	16
08/04/2011	27.95	103.15	206	0.97	5.2	27.28	11.5	130	43	0.67	0.004 u	3.1	16
09/08/2011	27.66	103.44	202	0.49	5.24	26.63	4	140	46	1.5	0.004 u	3.4	19
10/04/2011	28.11	102.99	195	1.26	5.17	26.66	3.4	130	46	1	0.004 u	3	18
11/03/2011	28.20	102.90	225	0.8	5.3	26.37	7.4	110	47	1.4	0.004 u	2.9	18
12/08/2011	28.70	102.40	234	1.12	5.3	25.1	6.13	120	45	1.2	0.004 u	3.2	18
01/05/2012	28.94	102.16	231	0.71	5.27	25.35	7.15	140	50	1.2	0.004 u	3.4	18
02/10/2012	28.92	102.18	242	1.58	5.26	25.12	5.08	160	63	1.6	0.004 u	3.6	22
03/07/2012	29.15	101.95	299	0.79	5.24	26.34	5.1	190	59	1.5	0.004 u	3.5	23
04/05/2012	29.35	101.75	297	1.83	5.3	26.27	14.4	130	71	2.2	0.004 u	3.7	24
05/03/2012	29.43	101.67	305	1.32	5.13	26.64	9.15	110	61	3	0.004 u	3.7	25
06/07/2012	29.00	102.10	274	1.18	5.31	26.73	4.36	170	64	3.1	0.004 u	3	25
07/05/2012	28.05	103.05	344	0.49	5.25	26.77	3.53	150	75	3	0.004 u	4	29
08/03/2012	28.48	102.62	219	0.81	5.31	27.56	3.73	150	50	2.8	0.004 u	3.2	21
09/06/2012	27.89	103.40	269	0.24	5.27	27.26	2.55	150	49	3	0.004 u	3.6	20
10/04/2012	28.00	103.10	234	0.31	5.08	27.36	10.7	130	43	2.4	0.004 u	3.4	18
11/07/2012	28.31	102.79	253	0.51	5.18	26.6	2.33	130	46	1.6	0.004 u	3.3	19
12/05/2012	28.60	102.50	251	0.31	5.08	27.04	2.45	130	54	1.6	0.004 u	3.3	18
01/03/2013	28.43	102.67	294	0.4	5.08	26.68	1.8	190	59	2.4 j3	0.004 u	3.8	22
02/07/2013	28.67	102.43	304	0.43	5.03	26.94	1.71	160	63	2.4	0.004 u	3.8	23
03/07/2013	28.81	102.29	339	0.39	4.98	26.79	0.66	180	75	3	0.004 u	3.7	26
04/04/2013	N/A	N/A	244	0.32	4.91	26.41	0.66	200	67	2.9	0.004 u	3.4	26

ND = NO DATA (Not analyzed)

New survey data beginning with 10/4/2012.

u = parameter was analyzed but not detected

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

5.22

EXCEEDS STANDARD

Hillsborough County Southeast Landfill
Laboratory Analytical Results from IAMP Groundwater Monitoring
TH-30

Date	Depth to Water (feet)	Water Table Elevation (NGVD)	conductivity (umhos/cm) (field)	dissolved oxygen (mg/l) (field)	pH (field)	temperature (°C) (field)	turbidity (NTU) (field)	total dissolved solids (mg/l)	chloride (mg/l)	ammonia nitrogen (mg/l as N)	arsenic (mg/l)	iron (mg/l)	sodium (mg/l)
02/03/2011	24.05	104.83	244	0.27	4.45	23.65	3.6	110	57	0.94	0.004 u	0.2	19
02/10/2011	24.11	104.77	219	0.21	4.36	23.7	4	120	61	1.5	0.004 u	0.2	20
02/14/2011	24.05	104.83	192	0.3	4.45	23.7	1.8	150	57	1	0.004 u	0.2	20
02/24/2011	24.10	104.78	208	0.18	4.81	23.82	3.1	160	57	1.3	0.004 u	0.19 i	20
03/03/2011	24.15	104.73	239	0.3	4.68	24.48	2.4	150	60	0.89	0.004 u	0.25	21
03/10/2011	24.13	104.75	231	0.16	4.71	23.58	3.9	130	57	0.96	0.004 u	0.19 i	20
03/17/2011	24.18	104.70	175	0.12	4.56	23.68	6.9	130	50	1.1	0.004 u	0.24	21
03/24/2011	24.15	104.73	208	0.17	4.58	23.71	2.1	120	59	0.91	0.004 u	0.21	20
04/01/2011	24.11	104.77	252	0.14	4.68	23.56	2.8	140	58	0.8	0.004 u	0.21	20
04/08/2011	23.77	105.11	242	0.19	4.69	23.62	2.3	120	59	1.3	0.004 u	0.21	21
05/05/2011	24.20	104.68	251	0.13	4.61	23.4	3.6	130	64	1.4	0.004 u	0.21	21
06/08/2011	24.32	104.56	261	0.27	4.4	23.45	3.62	150	64	1.9	0.004 u	0.23	20
07/07/2011	24.06	104.82	266	0.3	4.47	23.42	4.25	150	67	1.6	0.004 u	0.2	21
08/04/2011	23.84	105.04	244	0.17	4.49	23.43	3.3	160	63v	1.5	0.004 u	0.23	21
09/08/2011	23.80	105.08	251	0.21	4.44	23.41	4.7	130	66v	1.7	0.004 u	0.24	23
10/04/2011	23.97	104.91	231	0.17	4.63	23.46	3.4	160	70	0.89	0.004 u	0.25	22
11/03/2011	23.94	104.94	266	0.16	4.6	23.72	1.94	170	61	1.2	0.004 u	0.05 u	22
12/08/2011	23.95	104.93	283	0.16	4.68	23.62	1.81	160	71	1.2	0.004 u	0.24	22
01/05/2012	24.10	104.78	277	0.14	4.59	23.67	1.98	150	83	1	0.004 u	0.27	25
02/10/2012	24.08	104.80	302	0.13	4.48	23.74	1.48	230	97	1.1	0.004 u	0.29	24
03/07/2012	24.26	104.62	375	0.21	4.58	23.79	1	170	99	1	0.004 u	0.31	26
04/05/2012	24.28	104.60	407	0.15	4.39	23.67	0	150	110	1.7	0.004 u	0.32	27
05/03/2012	24.32	104.56	431	0.19	4.01	23.6	1.93	180	110	2.3	0.004 u	0.36	29
06/07/2012	24.24	104.64	430	0.17	4.25	23.52	1.09	240	130	2.3	0.004 u	0.37	29
07/05/2012	23.69	105.19	462	0.15	3.94	23.5	1.83	280	130 j3	2.4 j3	0.004 u	0.43	31
08/03/2012	24.02	104.86	297	0.13	4.07	23.51	3.01	280	130	2.4	0.004 u	0.38	30
09/05/2012	23.55	106.43	433	0.11	4.24	23.61	1.51	220	130	2.6	0.004 u	0.37	28
10/04/2012	23.71	105.17	410	0.09	4.32	23.6	2.67	220	120	2.7	0.004 u	0.42	27
11/07/2012	23.89	104.99	451	0.19	4.47	23.77	1.95	230	120	1.9	0.004 u	0.38	28
12/05/2012	23.98	104.90	483	0.27	4.41	23.81	1.86	240	140	2	0.004 u	0.39	28
01/03/2013	23.99	104.89	532	0.2	4.37	23.78	1.9	350	140	2.3	0.004 u	0.44	32
02/07/2013	24.08	104.80	598	0.13	4.39	23.94	1.39	320	160	1.8	0.004 u	0.47	33
03/07/2013	24.16	104.72	591	0.31	4.35	23.84	1.93	280	170	2.4	0.004 u	0.46	35
04/04/2013	N/A	N/A	475	0.15	4.24	23.75	1.34	390	170	2.9	0.004 u	0.48	36

New survey data beginning with 10/4/2012.

u = parameter was analyzed but not detected

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

j3 = estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.

4.45 EXCEEDS STANDARD

Hillsborough County Southeast Landfill
Laboratory Analytical Results from IAMP Groundwater Monitoring
TH-57

Date	Depth to Water (feet)	Water Table Elevation (NGVD)	conductivity (umhos/cm) (field)	dissolved oxygen (mg/l) (field)	pH (field)	temperature (°C) (field)	turbidity (NTU) (field)	total dissolved solids (mg/l)	chloride (mg/l)	ammonia nitrogen (mg/l as N)	arsenic (mg/l)	iron (mg/l)	sodium (mg/l)
12/21/2010	20.18	108.20	144	1.6	5.05	26.1	0.6	76	35	0.79	0.0013 u	0.32	13
12/28/2010	20.26	108.10	150	1.45	5.21	26.2	0.5	110	44	0.93	ND	ND	13
01/04/2011	20.26	108.10	143	0.33	5.08	26.4	0.4	100	39	0.82	ND	ND	12
01/13/2011	20.19	108.17	207	0.37	5.24	26.41	0.5	80	40	0.85	0.004 u	0.51	12
01/20/2011	20.03	108.33	200	0.39	5.23	26.37	0.4	98	42	0.64	0.004 u	0.52	12
01/27/2011	19.99	108.40	172	0.23	4.99	26.05	0.5	32	36	0.88	0.004 u	0.41	11
02/03/2011	19.99	108.37	189	0.62	5.08	26.13	0.4	88	40	0.87	0.004 u	0.48	11
02/10/2011	19.47	108.89	160	0.42	5.02	26.02	2.1	82	40	1	0.004 u	0.43	11
02/14/2011	20.00	108.36	152	0.5	5.24	25.9	0.2	98	37	1	0.0013 u	0.51	13
02/24/2011	20.10	108.26	164	0.16	5.34	25.97	0.2	110	34	0.92	0.004 u	0.35	11
03/03/2011	19.65	108.71	198	0.24	5.16	25.8	0.6	110	39	0.88	0.004 u	0.48	13
03/10/2011	19.70	108.66	167	0.37	5.24	26.7	0.5	98	38	0.83	0.004 u	0.45	11
03/17/2011	20.15	108.21	133	0.31	5.16	25.76	0.1	130	42	0.81	0.004 u	0.49	12
03/24/2011	19.72	108.64	128	0.21	5.18	25.69	5.1	120	39	0.87	0.004 u	0.48	12
04/01/2011	19.99	108.37	176	0.22	5.2	25.6	0.9	92	35	0.7	0.004 u	0.46	11
04/08/2011	19.40	108.96	187	0.19	5.18	25.56	0.4	80	41	0.87	0.004 u	0.5	12
05/05/2011	20.09	108.27	182	0.51	5.09	25.3	0.2	88	34	1.1	0.004 u	0.4	11
06/08/2011	20.55	107.81	185	0.4	5.17	25.61	3.17	110	39	1.2	0.004 u	0.43	11
07/07/2011	19.66	108.70	157	0.22	5.14	25.81	2.5	200	9.7	0.17	0.004 u	0.05 u	8.6
08/04/2011	19.20	109.57	211	0.15	5.02	26.26	0.3	150	47	0.76	0.004 u	0.63	13
09/08/2011	18.60	109.76	183	0.27	5.08	26.55	2.5	110	42	1.1	0.004 u	0.51	14
10/04/2011	18.95	109.40	144	0.21	5.08	26.76	2.1	110	38	0.8	0.004 u	0.5	14
11/03/2011	19.20	109.16	218	0.25	5.26	26.72	0.66	130	42	1.2	0.004 u	0.54	14
12/08/2011	19.59	108.77	187	0.26	5.32	26.55	0.41	96	37	1	0.004 u	0.39	13
01/05/2012	19.85	108.51	154	0.65	5.24	26.31	0.7	110	36	0.85	0.004 u	0.35	13
02/10/2012	19.94	108.42	156	0.2	5.31	26.19	0.63	120	26	0.84	0.004 u	0.32	12
03/07/2012	20.19	108.17	148	0.53	5.11	25.8	0.3	84	30	0.63	0.004 u	0.3	11
04/05/2012	20.28	108.08	139	0.78	5.16	25.79	0.46	80	29	0.73	0.004 u	0.29	10
05/03/2012	20.42	107.94	152	0.28	4.88	25.87	2.24	68	26	1.2	0.004 u	0.31	11
06/07/2012	20.02	108.34	127	0.29	4.84	26.04	0.82	70	25	0.92	0.004 u	0.29	10
07/05/2012	18.39	109.97	274	0.27	5.11	26.28	1.12	170	54	1.5	0.004 u	1.2	17
08/03/2012	18.75	109.61	160	0.22	4.92	26.44	1.7	120	36	1.5	0.004 u	0.56	13
09/06/2012	18.14	109.40	252	0.2	4.9	26.79	0.97	160	40	1.1	0.004 u	0.45	14
10/04/2012	18.45	109.91	211	0.17	4.93	26.91	2.43	110	37	1.5	0.004 u	0.63	13
11/07/2012	18.72	109.64	220	0.17	5.08	27.01	0.82	120	36	1.1	0.004 u	0.54	14
12/05/2012	18.99	109.37	188	0.15	5.08	26.94	0.49	100	34	1	0.004 u	0.42	13
01/03/2013	19.08	109.28	185	0.15	5.01	26.69	0.71	140	29	1	0.004 u	0.42	13
02/07/2013	19.36	109.00	184	0.24	4.95	26.55	0.51	110	29	0.81	0.004 u	0.37	12
03/07/2013	19.53	108.83	139	0.18	5.02	26.31	0.26	88	27	1	0.004 u	0.31	11
04/04/2013	N/A	N/A	119	0.25	4.87	26.08	0.45	90	23	0.94	0.004 u	0.3	11

ND = NO DATA (Not analyzed)

New survey data beginning with 10/4/2012.

u = parameter was analyzed but not detected

5.05

EXCEEDS STANDARD

Hillsborough County Southeast Landfill
Laboratory Analytical Results from IAMP Groundwater Monitoring
TH-58

Date	Depth to Water (feet)	Water Table Elevation (NGVD)	conductivity (umhos/cm) (field)	dissolved oxygen (mg/l) (field)	pH (field)	temperature (°C) (field)	turbidity (NTU) (field)	total dissolved solids (mg/l)	chloride (mg/l)	ammonia nitrogen (mg/l as N)	arsenic (mg/l)	iron (mg/l)	sodium (mg/l)
12/21/2010	28.34	99.54	970	1.2	5.78	26	0.9	490	190	0.66	0.027	4.7	38
12/28/2010	28.34	99.54	570	0.42	5.66	26	0.9	420	130	0.75	ND	ND	30
01/04/2011	28.36	99.52	619	0.44	5.71	25.81	0.6	440	140	0.64	ND	ND	29
01/13/2011	28.31	99.57	736	0.46	5.78	25.58	0.2	390	130	0.61	0.031	5	26
01/20/2011	28.22	99.66	751	0.34	5.74	25.95	0.2	380	120	0.74	0.024	4.9	23
01/27/2011	28.11	99.77	693	0.64	5.76	25.87	0.4	380	97	0.68	0.028	5	22
02/03/2011	28.05	99.83	740	0.86	5.73	25.71	2.2	380	110	0.61	0.027	4.4	23
02/10/2011	28.02	99.86	578	0.56	5.74	25.58	1.3	350	76	0.92	0.026	4.9	20
02/14/2011	28.05	99.83	521	0.58	5.72	25.7	0.6	340	85	0.91	0.027	4.7	20
02/24/2011	28.09	99.79	692	0.59	5.79	25.76	0.5	380	92	0.95	0.025	4	21
03/03/2011	28.21	99.67	591	0.42	5.68	25.6	0.6	300	76	0.61	0.024	4.1	19
03/10/2011	28.24	99.64	524	0.47	5.76	25.38	0.6	280	63	0.68	0.026	4	17
03/17/2011	28.20	99.68	337	0.33	5.69	25.47	0.4	280	65	0.3	0.026	4.1	17
03/24/2011	28.28	99.60	440	0.42	5.72	25.53	0.2	270	57	0.93	0.024	4.3	16
04/01/2011	28.10	99.78	504	0.37	5.8	25.23	0.8	270	56	0.73	0.024	4.2	17
04/08/2011	27.59	100.29	459	0.28	5.73	25.36	0.9	250	57	0.82	0.026	4.6	16
05/05/2011	28.20	99.68	1005	0.36	5.65	25.06	0.9	580	270	2.8	0.027	8.7	45
06/08/2011	28.72	99.16	1210	1.28	5.76	26.69	10.3	800	280	1.2	0.02	7.7	63
07/07/2011	27.99	99.89	998	0.75	5.7	25.62	4.49	560	210	0.94	0.025	5.8	47
08/04/2011	27.61	100.27	2167	0.39	5.6	26.1	2.1	1700	660	1.6	0.028	16	150
09/08/2011	27.42	100.46	1239	0.9	5.7	26.18	3.6	1200	570	0.75	0.026	8.1	120
10/04/2011	27.77	100.11	1416	0.67	5.72	26.01	5.2	1100	400	0.45	0.028	4.5	96
11/03/2011	27.91	99.97	1574	0.87	5.84	26.72	8.36	920	340	0.73	0.026	3.7	81
12/08/2011	28.26	99.62	1307	0.99	5.86	24.98	11.78	570	260	0.77	0.026	3.6	65
01/05/2012	28.40	99.48	1032	1.45	5.9	24.58	8.8	610	230	0.57	0.029	3.5	58
02/10/2012	28.42	99.46	880	0.89	5.8	25.26	5.17	510	160	0.58	0.025	3.2	41
03/07/2012	28.55	99.33	992	2.01	5.94	25.1	3.6	420	160	0.42	0.026	2.8	45
04/05/2012	28.66	99.22	605	0.4	5.7	25.63	0	270	81	0.9	0.026	4	26
05/03/2012	28.70	99.18	540	0.43	5.66	25.84	0.69	250	65	1.5	0.025	4.1	24
06/07/2012	28.60	99.28	379	0.63	5.68	25.53	1.6	200	36	1.6	0.026	3.8	17
07/05/2012	27.23	100.65	527	0.62	5.72	26.35	2.34	310	87	1.4	0.024	3.4	30
08/03/2012	27.93	99.95	445	0.74	5.69	26.71	2.24	480	150	2.2	0.026	4.1	50
09/06/2012	27.24	99.83	696	0.31	5.6	25.02	0.83	390	130	1.5	0.028	3.5	36
10/04/2012	27.66	100.22	645	0.28	5.61	26.51	2.57	410	130	1.2	0.025	3.6	41
11/07/2012	28.00	99.88	652	0.46	5.71	26.24	1.1	320	97	1	0.03	3.6	36
12/05/2012	28.28	99.60	530	0.58	5.64	26.04	0.59	270	64	1.1	0.025	3.7	30
01/03/2013	28.19	99.69	507	1.52	5.63	25.71	1.06	290	47	0.97	0.025	3.3	26
02/07/2013	28.38	99.50	449	7.65	5.94	25.99	3.26	200	33	1.2	0.026	3.9	21
03/07/2013	28.41	99.47	413	0.9	5.6	25.65	0.42	220	24	1.4	0.024	3.8	18
04/04/2013	N/A	N/A	288	6.32	5.95	25.26	1.41	210	17	1.3	0.026	4.1	15

ND = NO DATA (Not analyzed)

New survey data beginning with 10/4/2012.

5.76

EXCEEDS STANDARD

Hillsborough County Southeast Landfill
Laboratory Analytical Results from IAMP Groundwater Monitoring
TH-73

Date	Depth to Water (feet)	Water Table Elevation (NGVD)	conductivity (umhos/cm) (field)	dissolved oxygen (mg/l) (field)	pH (field)	temperature (°C) (field)	turbidity (NTU) (field)	total dissolved solids (mg/l)	chloride (mg/l)	ammonia nitrogen (mg/l as N)	arsenic (mg/l)	iron (mg/l)	sodium (mg/l)
01/27/2011	30.99	100.08	440	1.7	5.53	25.01	22.2	180	69	2.3	0.004 u	15	38
02/03/2011	30.85	100.22	400	1.78	5.62	26.12	17.6	140	56	1.9	0.004 u	31	26
02/10/2011	30.76	100.31	336	1.44	5.62	25.86	12	160	56	2	0.004 u	26	27
02/14/2011	30.82	100.25	312	0.56	5.54	26	15.5	190	55	2.6	0.004 u	34	24
02/24/2011	30.78	100.29	340	0.38	5.62	26.15	16.4	170	61	3	0.004 u	17	28
03/03/2011	30.87	100.20	382	0.53	5.56	26	19.4	200	61	2.1	0.004 u	21	29
03/10/2011	30.87	100.20	371	0.66	5.56	25.97	8.3	170	60	1.7	0.004 u	21	27
03/17/2011	30.76	100.31	266	1.22	5.35	26	14.3	150	69	2.1	0.004 u	12	33
03/24/2011	30.78	100.29	346	0.61	5.47	26.02	8	140	63	2	0.004 u	13	27
04/01/2011	31.11	99.96	366	0.78	5.63	25.89	19.8	160	68	1.7	0.004 u	14	29
04/08/2011	30.65	100.42	331	0.62	5.35	25.97	18	140	66	2.1	0.004 u	11	30
05/05/2011	31.70	99.37	361	0.4	5.34	25.64	12.2	150	66	2	0.004 u	20	28
06/08/2011	32.54	98.53	391	0.7	5.41	25.69	14	150	63	2.2	0.004 u	14	27
07/07/2011	31.55	99.52	306	0.35	5.13	25.34	19.2	350	33	0.52	0.004 u	0.22	31
08/04/2011	31.40	99.67	262	0.89	5.12	25.44	19.9	140	60	1.2	0.004 u	8.2	24
09/08/2011	30.66	100.41	259	0.49	5.24	25.41	28.1	170	62	1.9	0.004 u	8.5	27
10/04/2011	31.16	99.91	345	0.89	5.2	25.48	12	220	96	1.8	0.004 u	9.1	33
11/03/2011	31.27	99.80	1273	0.3	5.21	25.55	8.16	720	360	7.3	0.004 u	22	97
12/08/2011	31.96	99.11	1499	0.62	5.3	25.24	2.64	820	500	3	0.004 u	26	110
01/05/2012	32.31	98.76	1188	0.71	5.16	25.18	2.05	750	350	3.3	0.004 u	19	80
02/10/2012	32.25	98.82	304	0.55	5.28	25.24	3.31	190	67	1.6	0.004 u	4.9	23
03/07/2012	32.42	98.65	312	1.08	5.22	25.24	3.3	150	56	1.2	0.004 u	4.7	22
04/05/2012	32.63	98.44	231	0.79	5.06	24.94	4.39	120	50	1.1	0.004 u	4.1	20
05/03/2012	32.74	98.33	283	0.99	4.8	24.88	6.47	160	63	1.9	0.004 u	4.5	22
06/07/2012	32.40	98.67	224	0.87	4.82	24.64	5.6	140	48	1.6	0.004 u	3.3	18
07/05/2012	31.51	99.56	232	0.31	4.77	24.63	9	140	50	1.7	0.004 u	4	18
08/03/2012	32.09	98.98	201	0.71	5.02	24.63	5.13	160	52	1.7	0.004 u	3.8	19
09/06/2012	31.22	99.76	242	0.5	5.06	24.67	7.39	140	47	1.3	0.004 u	3.6	18
10/04/2012	31.46	99.61	222	0.18	4.86	24.68	7.56	130	43	1.2	0.004 u	3.4	16
11/07/2012	31.84	99.23	231	0.39	5.08	24.75	5.54	130	45	0.94	0.004 u	3.6	16
12/05/2012	32.14	98.93	237	0.2	5.03	24.9	3.26	110	46	0.84	0.004 u	3.5	17
01/03/2013	31.91	99.16	237	0.49	4.96	24.84	2.47	130	45	1.1	0.004 u	3.2	16
02/07/2013	32.11	98.96	221	0.69	4.84	24.79	4.8	120	47	0.84	0.004 u	3	15
03/07/2013	32.41	98.66	179	0.23	4.78	24.46	2.64	110	45	1.2	0.004 u	3.1	17
04/04/2013	N/A	N/A	191	0.2	4.73	24.42	2.49	140	53	1.1	0.004 u	3.4	20

New survey data beginning with 10/4/2012.

u = parameter was analyzed but not detected

5.53 EXCEEDS STANDARD

Hillsborough County Southeast Landfill
Laboratory Analytical Results from IAMP Groundwater Monitoring
TH-74

Date	Depth to Water (feet)	Water Table Elevation (NGVD)	conductivity (umhos/cm) (field)	dissolved oxygen (mg/l) (field)	pH (field)	temperature (°C) (field)	turbidity (NTU) (field)	total dissolved solids (mg/l)	chloride (mg/l)	ammonia nitrogen (mg/l as N)	arsenic (mg/l)	iron (mg/l)	sodium (mg/l)
11/03/2011	9.65	ND	485	0.51	5.56	23.62	5.45	280	48	2.9	0.004 u	26	20
12/08/2011	10.11	98.97	445	0.89	5.64	22.9	14.7	270	40	2.3	0.0042 i	27	21
01/05/2012	10.30	98.78	474	0.66	5.66	21.97	16.8	240	59	1.8	0.004 u	30	26
02/10/2012	10.22	98.86	501	0.6	5.42	21.48	9.99	350	95	2.5	0.004 u	34	22
03/07/2012	10.40	98.68	618	0.53	5.24	21.57	8.7	210	120	2.3	0.004 u	38	22
04/05/2012	10.53	98.55	592	0.79	5.13	21.74	13.7	270	120	2.8	0.004 u	40	24
05/03/2012	10.71	98.37	602	0.86	5.15	21.93	12.5	330	110	2.8	0.004 u	38	25
06/07/2012	10.45	98.63	334	0.75	5.35	22.48	6.92	210	37	3	0.004 u	20	16
07/05/2012	9.45	99.63	495	0.32	4.99	23.09	5.33	240	73	2.1	0.004 u	11	27
08/03/2012	9.99	99.09	261	0.37	5.18	23.63	6.12	210	47	3	0.004 u	19	15
09/06/2012	9.36	99.66	578	0.24	5.33	24.08	2.37	330	110	2.8	0.012	21	36
10/04/2012	9.53	99.55	369	0.25	5.36	24.12	3.98	260	76	3.5	0.0055 i	19	22
11/07/2012	9.91	99.17	385	0.36	5.47	23.53	3.21	240	60	1.9	0.0045 i	18	20
12/05/2012	10.14	98.94	398	0.34	5.44	22.82	3.08	230	59	2.7	0.004 u	21	19
01/03/2013	9.96	99.12	418	0.31	5.43	22.03	3.03	280	59	2.7	0.004 u	20	20
02/07/2013	10.16	98.92	394	0.34	5.43	21.66	1.95	200	45	1.9	0.004 u	20	16
03/07/2013	10.23	98.85	363	0.35	5.38	21.06	1.24	180	47	3	0.004 u	20	17
04/04/2013	N/A	N/A	273	0.38	5.34	20.75	5.85	210	43	1.9	0.004 u	20	16

ND = NO DATA (Not analyzed)

New survey data beginning with 10/4/2012.

u = parameter was analyzed but not detected

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

5.56

EXCEEDS STANDARD

Hillsborough County Southeast Landfill
Laboratory Analytical Results from IAMP Groundwater Monitoring
TH-75

Date	Depth to Water (feet)	Water Table Elevation (NGVD)	conductivity (umhos/cm) (field)	dissolved oxygen (mg/l) (field)	pH (field)	temperature (°C) (field)	turbidity (NTU) (field)	total dissolved solids (mg/l)	chloride (mg/l)	ammonia nitrogen (mg/l as N)	arsenic (mg/l)	iron (mg/l)	sodium (mg/l)
11/03/2011	7.68	ND	396	0.25	5.65	23.63	11.6	220	49	1.4	0.0085 i	11	14
12/08/2011	7.90	99.02	301	0.46	5.57	22.9	20.1	150	23	1.1	0.011	8.9	11
01/05/2012	8.01	98.91	300	0.92	5.58	21.69	18.9	180	25	1.1	0.0071 i	8.6	10
02/10/2012	8.00	98.92	422	0.51	5.48	21.5	17.9	280	81	1.1	0.0072 i	12	20
03/07/2012	8.14	98.78	495	0.26	5.39	21.5	19.6	220	79	0.96	0.0079 i	13	22
04/05/2012	8.15	98.77	584	0.33	5.37	21.76	4.94	300	130	1.3	0.0063 i	16	26
05/03/2012	8.27	98.65	588	0.28	5.32	22.06	0.0	350	120	1.9	0.0078 i	16	33
06/07/2012	8.14	98.78	702	0.39	5.61	22.87	5.69	480	140	1.5	0.0095 i	10	40
07/05/2012	7.36	99.56	344	0.22	5.35	23.52	6.48	180	37	2	0.01	9.8	15
08/03/2012	7.80	99.12	241	0.28	5.28	24.07	4.21	190	25	1.8	0.008 i	8.3	14
09/06/2012	7.42	99.50	360	0.18	5.41	24.5	4.41	200	40	2	0.01	9.1	15
10/04/2012	7.55	99.37	346	0.15	5.35	24.54	6.73	240	51	2.5	0.0084 i	9.2	15
11/07/2012	7.79	99.13	422	0.3	5.48	23.8	2.51	200	54	1.6	0.0086 i	9.8	17
12/05/2012	7.98	98.94	395	0.31	5.5	22.97	7.22	210	48	1.4	0.0067 i	9.2	16
01/03/2013	7.88	99.04	447	0.37	5.53	21.89	13.9	400	60	1.3	0.0065 i	8.1	21
02/07/2013	8.02	98.90	453	0.2	5.48	21.71	6.35	240	62	1.5	0.0076 i	9.8	19
03/07/2013	8.04	98.88	379	0.27	5.4	21.38	2.71	200	40	1.9	0.0061 i	8	17
04/04/2013	N/A	N/A	245	0.25	5.34	21.08	4.92	180	22	1.7	0.0068 i	7.3	14

New survey data beginning with 10/4/2012.

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

5.65

EXCEEDS STANDARD

Hillsborough County Southeast Landfill
Laboratory Analytical Results from IAMP Groundwater Monitoring
TH-19

Date	Depth to Water (feet)	Water Table Elevation (NGVD)	conductivity (umhos/cm) (field)	dissolved oxygen (mg/l) (field)	pH (field)	temperature (°C) (field)	turbidity (NTU) (field)	total dissolved solids (mg/l)	chloride (mg/l)	ammonia nitrogen (mg/l) as N	arsenic (mg/l)	iron (mg/l)	sodium (mg/l)
12/21/2010	117.30	12.97	392	1.34	7.37	23.2	0.2	250	7.8	0.25	0.0013 u	0.033 u	14
12/28/2010	118.33	11.94	319	0.78	7.4	23.23	0.2	230	7.9	0.23	ND	ND	16
01/04/2011	117.83	12.44	337	0.94	7.33	23.27	0.2	220	8.3	0.27	ND	ND	14
01/13/2011	114.88	15.39	441	0.42	7.41	23.13	0.2	220	8.6	0.24	0.004 u	0.051 i	14
01/20/2011	113.69	16.58	417	0.5	7.36	23.39	0.6	230	8.5	0.28	0.004 u	0.05 u	14
01/27/2011	110.45	19.82	399	0.49	7.51	23.37	0.2	250	8.2	0.23	0.004 u	0.05 u	14
02/03/2011	107.11	23.16	409	0.83	7.49	23.42	0.2	220	8.3	0.22	0.004 u	0.05 u	12
02/10/2011	104.74	25.53	381	0.8	7.56	23.33	0.7	240	8.9	0.29	0.004 u	0.05 u	14
02/14/2011	102.93	27.34	325	0.92	7.58	23.2	0.5	240	8.4	0.25	0.0013 u	0.033 i	15
02/24/2011	104.04	26.23	432	0.82	7.45	23.37	0.6	250	8.3	0.21	0.004 u	0.05 u	14
03/03/2011	105.78	24.49	419	0.35	7.48	23.4	0.1	240	8.3	0.2	0.004 u	0.05 u	14
03/10/2011	107.24	23.03	400	0.33	7.51	23.34	0.2	230	8.1	0.23	0.004 u	0.05 u	13
03/17/2011	106.66	23.61	300	0.29	7.39	23.38	0.3	240	7.8	0.24	0.004 u	0.05 u	14
03/24/2011	107.74	22.53	353	0.35	7.42	23.4	0.2	240	8.4	0.28	0.004 u	0.05 u	14
04/01/2011	109.40	20.87	377	1.3	7.48	23.09	0.2	240	8.8	0.19	0.004 u	0.05 u	14
04/08/2011	106.35	23.92	419	0.39	7.32	23.46	0.3	220	8.2	0.25	0.004 u	0.05 u	14
05/05/2011	110.09	20.18	408	0.5	7.58	23.56	0.1	230	8.2	0.27	0.004 u	0.05 u	14
06/08/2011	113.57	16.70	432	0.8	7.39	23.48	0.56	250	8.4	0.35	0.004 u	0.05 u	14
07/07/2011	108.42	21.85	430	0.37	7.37	23.53	0.33	260	8.1	0.31	0.004 u	0.05 u	14
08/04/2011	99.25	31.02	391	0.3	7.22	23.55	0	250	7.5	0.32	0.004 u	0.05 u	14
09/08/2011	93.66	36.61	397	0.8	7.35	23.47	0.6	220	7.9	0.35	0.004 u	0.05 u	15
10/04/2011	94.58	35.69	335	0.44	7.33	23.46	0.7	210	7.3	0.24	0.004 u	0.05 u	14
11/03/2011	98.51	31.76	393	0.59	7.28	23.35	1.38	220	8	0.28	0.004 u	0.05 u	14
12/08/2011	101.64	28.63	378	0.26	7.3	23.43	0.37	220	7.2	0.26	0.004 u	0.05 u	14
01/05/2012	107.26	23.01	369	0.45	7.29	23.25	0.24	200	8.3	0.25	0.004 u	0.05 u	15
02/10/2012	109.48	20.79	378	0.26	7.5	23.34	0.44	240	8.6	0.23	0.004 u	0.05 u	14
03/07/2012	116.31	13.96	413	0.84	7.25	23.35	0.4	210	8.1	0.19	0.004 u	0.05 u	14
04/05/2012	120.81	9.46	423	0.58	7	23.44	0	190	8.1	0.26	0.004 u	0.05 u	14
05/03/2012	123.35	6.92	402	0.1	6.85	23.46	0	220	8.1	0.48	0.004 u	0.05 u	14
06/07/2012	119.00	11.27	379	2.13	7.21	23.44	0.6	230	8	0.38	0.004 u	0.05 u	14
07/05/2012	104.99	25.28	304	0.63	6.69	23.49	0.42	210	7.9	0.54	0.004 u	0.05 u	14
08/03/2012	97.45	32.82	260	0.26	6.91	23.49	0.58	240	7.9	0.34	0.004 u	0.05 u	14
09/06/2012	90.81	38.97	406	0.23	6.92	23.49	1.21	230	8.4	0.35	0.004 u	0.05 u	14
10/04/2012	89.85	40.42	363	0.33	7.09	23.48	0.39	240	8.1	0.39 j3	0.004 u	0.05 u	13
11/07/2012	98.98	31.29	424	0.35	7.23	23.49	0.63	210	8.1	0.33	0.004 u	0.05 u	14
12/05/2012	101.14	29.13	430	8	7.14	23.47	0.27	190	8.4	0.29 j3	0.004 u	0.05 u	14
01/03/2013	99.93	30.34	435	0.53	7.12	23.43	0.47	220	7.5	0.31	0.004 u	0.05 u	14
02/07/2013	105.15	25.12	424	0.29	7.11	23.45	0.21	210	8.2	0.29	0.004 u	0.05 u	13
03/07/2013	110.12	20.15	338	0.31	7.19	23.27	0.14	230	8.3	0.34	0.004 u	0.05 u	13
04/04/2013	N/A	N/A	366	0.39	7.04	23.49	0.14	210	7.9	0.36	0.004 u	0.05 u	14

ND = NO DATA (Not analyzed)

New survey data beginning with 10/4/2012.

u = parameter was analyzed but not detected

j3 = estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.

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

Hillsborough County Southeast Landfill
Laboratory Analytical Results from IAMP Groundwater Monitoring
TH-40

Date	Depth to Water (feet)	Water Table Elevation (NGVD)	conductivity (umhos/cm) (field)	dissolved oxygen (mg/l) (field)	pH (field)	temperature (°C) (field)	turbidity (NTU) (field)	total dissolved solids (mg/l)	chloride (mg/l)	ammonia nitrogen (mg/l as N)	arsenic (mg/l)	iron (mg/l)	sodium (mg/l)
12/21/2010	115.10	9.94	348	1.06	7.61	23.3	0.3	210	8.3	0.31	0.0013 u	0.041	20
12/28/2010	116.90	8.09	304	1.37	7.55	22.7	1.4	220	8	0.42	ND	ND	17
01/04/2011	115.10	9.91	323	2.33	7.2	23.23	1	220	8.7	0.27	ND	ND	16
01/13/2011	112.16	12.83	400	0.74	7.54	23.11	0.5	210	8.5	0.27	0.0048	0.065	16
01/20/2011	111.15	13.84	420	0.58	7.52	23.28	0.8	220	8.6	0.31	0.004 u	0.11	16
01/27/2011	107.91	17.08	359	1.3	7.73	23.38	0.2	220	8.2	0.29	0.004 u	0.063	16
02/03/2011	104.37	20.62	398	0.81	7.74	23.35	0.2	210	8.3	0.32	0.004 u	0.05 u	15
02/10/2011	102.03	22.96	346	0.48	7.68	23.38	0.6	210	8.7	0.31	0.004 u	0.05 u	16
02/14/2011	100.18	24.81	325	0.92	7.58	23.2	0.5	230	8.2	0.38	0.0013 u	0.073 i	18
02/24/2011	101.87	23.12	345	0.46	7.65	23.4	0.3	230	8.2	0.26	0.004 u	0.05 u	16
03/03/2011	103.59	21.40	378	0.34	7.71	23.4	0.1	230	8.4	0.27	0.004 u	0.05 u	16
03/10/2011	105.12	19.87	351	0.43	7.66	23.3	0.1	210	8	0.33	0.004 u	0.05 u	16
03/17/2011	104.60	20.39	274	0.36	7.59	23.31	0.1	220	7.5	0.3	0.004 u	0.05 u	16
03/24/2011	106.11	18.88	309	0.37	7.65	23.44	0.1	210	8.1	0.3	0.004 u	0.05 u	16
04/01/2011	107.77	17.22	355	0.52	7.6	23.33	0.3	230	7.8	0.26	0.004 u	0.05 u	16
04/08/2011	104.35	20.64	387	0.39	7.51	23.46	0.4	210	7.9	0.29	0.004 u	0.05 u	16
05/05/2011	108.11	16.88	392	0.63	7.42	23.44	0.2	220	7.6	0.34	0.004 u	0.05 u	16
06/08/2011	111.06	13.93	417	0.52	7.59	23.5	0.18	240	8.4	0.41	0.004 u	0.05 u	15
07/07/2011	105.55	19.44	430	0.51	7.46	23.53	0.35	230	7.8	0.39	0.004 u	0.098 i	16
08/04/2011	95.76	29.23	361	0.34	7.52	23.64	0	220	7.3	0.4	0.004 u	0.05 u	16
09/08/2011	90.15	34.84	370	1.04	7.59	23.6	0.7	190	7.4	0.45	0.004 u	0.05 u	17
10/04/2011	91.54	33.45	291	0.51	7.58	23.51	0.8	190	6.5	0.33	0.004 u	0.05 u	16
11/03/2011	95.45	29.54	255	0.41	7.67	23.42	0.31	210	7.7	0.32	0.004 u	0.05 u	16
12/08/2011	98.90	26.09	367	0.54	7.58	23.03	0.51	170	7.2	0.33	0.004 u	0.05 u	16
01/05/2012	107.41	17.58	354	0.95	7.48	23.15	0.39	200	8.3	0.3	0.004 u	0.05 u	16
02/10/2012	106.49	18.50	308	0.45	7.66	23.29	0.66	210	8.9	0.3	0.004 u	0.05 u	16
03/07/2012	114.22	10.77	381	1.09	7.56	23.4	0.5	160	8.5	0.23	0.004 u	0.05 u	17
04/05/2012	118.71	6.28	351	0.66	7.37	23.43	0.86	170	8.8	0.31	0.004 u	0.05 u	17
05/03/2012	120.35	4.64	388	0.47	7.29	23.44	0	170	8.5	0.63	0.004 u	0.05 u	19
06/07/2012	114.61	10.38	382	0.75	7.13	23.42	0.48	200	8.9	0.43	0.004 u	0.05 u	18
07/05/2012	100.03	24.96	389	0.6	7.39	23.78	0.18	200	8.5	0.68	0.004 u	0.05 u	18
08/03/2012	92.72	32.27	276	0.29	7.3	23.56	0.47	210	8.3	0.6	0.004 u	0.05 u	17
09/06/2012	85.90	38.47	337	0.29	7.33	23.59	0.68	210	8.5 [3]	0.45	0.004 u	0.05 u	16
10/04/2012	84.99	40.00	328	0.25	7.29	23.5	0.19	200	8.2	0.46	0.004 u	0.05 u	16
11/07/2012	94.30	30.69	356	0.49	7.44	23.46	0.65	200	7.9	0.44	0.004 u	0.05 u	16
12/05/2012	96.88	28.11	361	0.32	7.34	23.58	0.33	200	8.1	0.38	0.004 u	0.05 u	16
01/03/2013	95.40	29.59	400	0.99	7.14	23.26	0.35	180	7.7	0.38	0.004 u	0.05 u	17
02/07/2013	101.05	23.94	391	0.65	7.15	23.37	0.63	220	8.2	0.37	0.004 u	0.05 u	16
03/07/2013	105.39	19.60	292	0.42	7.29	23.34	0.16	190	7.9	0.31	0.004 u	0.05 u	16
04/04/2013	N/A	N/A	279	0.35	7.25	23.43	0.15	220	7.5	0.37	0.004 u	0.05 u	16

ND = NO DATA (Not analyzed)

New survey data beginning with 10/4/2012.

u = parameter was analyzed but not detected

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

Hillsborough County Southeast Landfill
Laboratory Analytical Results from IAMP Groundwater Monitoring
TH-42

Date	Depth to Water (feet)	Water Table Elevation (NGVD)	conductivity (umhos/cm) (field)	dissolved oxygen (mg/l) (field)	pH (field)	temperature (°C) (field)	turbidity (NTU) (field)	total dissolved solids (mg/l)	chloride (mg/l)	ammonia nitrogen (mg/l as N)	arsenic (mg/l)	iron (mg/l)	sodium (mg/l)
12/21/2010	89.31	27.43	496	0.77	7.29	23.7	796	320	17	0.36	0.009 u	25	18
12/28/2010	89.22	27.52	412	0.42	7.21	23.47	156.1	310	17	0.24	ND	ND	15
01/04/2011	90.92	25.82	427	0.81	7.24	23.52	234.4	300	18	0.16	ND	ND	15
01/13/2011	89.73	27.01	556	0.32	7.31	23.22	175.1	300	18	0.2	0.004 u	3.5	16
01/20/2011	88.91	27.83	562	0.22	7.02	23.69	160.3	320	18	0.27	0.004 u	3.8	16
01/27/2011	86.86	29.88	498	0.59	7.43	23.05	202.9	310	18	0.22	0.004 u	3.8	15
02/03/2011	84.45	32.29	536	0.77	7.07	23.51	329.3	290	18	0.24	0.004 u	6.6	15
02/10/2011	82.50	34.24	476	0.84	7.26	23.62	95.6	300	18	0.27	0.004 u	2.5	15
02/14/2011	80.86	35.88	420	0.49	7.28	23.7	55	300	19	0.26	0.004 u	1.6	16
02/24/2011	81.01	35.73	541	2.26	7.29	23.66	41.1	320	18	0.19	0.004 u	1.2	15
03/03/2011	82.17	34.57	527	0.25	7.33	23.7	40.8	310	17	0.17	0.004 u	1.2	16
03/10/2011	83.41	33.33	503	0.37	7.41	23.42	57.5	310	17	0.26	0.004 u	1.2	15
03/17/2011	83.86	32.88	377	0.14	7.26	23.68	25.7	300	16	0.26	0.004 u	1.1	16
03/24/2011	84.20	32.54	443	0.29	7.32	23.77	22.1	300	17	0.27	0.004 u	0.63	16
04/01/2011	86.39	30.35	471	0.7	7.35	23.39	19.5	320	19	0.16	0.004 u	0.94	16
04/08/2011	84.84	31.90	526	0.34	7.2	23.72	16.6	290	17	0.22	0.004 u	0.68	15
05/05/2011	85.80	30.94	535	0.16	7.18	23.59	12.2	290	18	0.29	0.004 u	0.35	15
06/08/2011	89.20	27.54	544	0.32	7.33	23.98	8.87	310	20	0.33	0.004 u	0.22	15
07/07/2011	86.45	30.29	541	0.27	7.26	23.85	18.1	310	18	0.33	0.004 u	0.088 i	16
08/04/2011	78.31	38.43	493	0.13	7.23	24.02	18.3	300	17	0.094	0.004 u	0.52	16
09/08/2011	72.14	44.60	499	0.22	7.36	23.97	18.1	280	17	0.28	0.004 u	0.37	17
10/04/2011	71.42	45.32	421	0.25	7.26	23.93	11.5	230	15	0.25	0.004 u	0.37	16
11/03/2011	74.50	42.24	495	0.23	7.21	23.64	20.6	260	18	0.25	0.004 u	0.36	16
12/08/2011	77.64	39.10	475	0.21	7.18	23.72	11.9	280	16	0.21	0.004 u	0.47	15
01/05/2012	83.90	32.84	466	0.22	7.12	23.67	12	270	18	0.21	0.004 u	0.4	17
02/10/2012	84.26	32.48	474	0.22	7.42	23.62	11.4	290	18	0.23	0.004 u	0.56	16
03/07/2012	88.95	27.79	521	0.17	7.15	23.83	12.4	260	18	0.13	0.004 u	0.4	16
04/05/2012	93.21	23.53	536	0.19	7	23.78	3.98	250	17	0.25	0.004 u	0.16 i	16
05/03/2012	95.72	21.02	511	2.82	7.07	23.8	4.76	260	18	0.41	0.004 u	0.12 i	17
06/07/2012	93.92	22.82	476	1.54	7.18	23.93	8.39	300	18	0.3	0.004 u	0.24	16
07/05/2012	82.84	33.90	454	0.86	6.5	24.06	7.16	280	17	0.53	0.004 u	0.22	16
08/03/2012	75.30	41.44	306	0.57	6.78	24.4	17.2	290	17	0.47	0.004 u	0.53	16
09/06/2012	69.12	47.08	519	0.14	6.98	23.87	16.9	280	18	0.32	0.004 u	0.64	16
10/04/2012	67.42	49.32	366	0.15	7.03	23.93	17.8	270	17	0.35	0.004 u	0.64 j3	15
11/07/2012	73.49	43.25	538	0.27	7.07	23.66	33.1	280	17	0.34	0.004 u	0.6	16
12/05/2012	76.16	40.58	543	0.31	7.04	23.92	18.1	250	18	0.27	0.004 u	0.5	16
01/03/2013	76.85	39.89	549	0.44	7.03	23.72	12.9	280	17	0.31	0.004 u	0.4	16
02/07/2013	78.90	37.84	536	0.23	7.02	23.82	10.3	280	17	0.29	0.004 u	0.27	15
03/07/2013	83.23	33.51	536	0.23	7.02	23.82	10.3	280	17	0.29	0.004 u	0.27	15
04/04/2013	N/A	N/A	459	0.94	7.05	23.87	16.1	280	17	0.35	0.004 u	0.76	17

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Hillsborough County Southeast Landfill
Laboratory Analytical Results from IAMP Groundwater Monitoring
TH-72

Date	Depth to Water (feet)	Water Table Elevation (NGVD)	conductivity (umhos/cm) (field)	dissolved oxygen (mg/l) (field)	pH (field)	temperature (°C) (field)	turbidity (NTU) (field)	total dissolved solids (mg/l)	chloride (mg/l)	ammonia nitrogen (mg/l as N)	arsenic (mg/l)	iron (mg/l)	sodium (mg/l)
01/27/2011	115.69	15.27	551	0.39	7.43	22.88	3.2	320	32	0.22	0.004 u	0.52	32
02/03/2011	112.18	18.78	565	1.09	7.38	22.95	9.9	300	32	0.21	0.004 u	0.62	27
02/10/2011	109.80	21.16	514	1.58	7.34	22.65	3.2	340	31	0.28	0.004 u	0.54	31
02/14/2011	108.18	22.78	483	1.15	7.36	22.7	3.5	320	32	0.24	0.0013 u	0.58	32
02/24/2011	111.71	19.25	513	0.19	7.34	22.85	1	350	32	0.22	0.004 u	0.53	31
03/03/2011	111.88	19.08	579	0.77	7.35	22.8	0.8	330	31	0.23	0.004 u	0.43	32
03/10/2011	113.65	17.31	551	1.26	7.41	22.73	0.9	320	30	0.18	0.004 u	0.35	31
03/17/2011	112.85	18.11	388	1.05	7.34	22.9	0.9	330	30	0.31	0.004 u	0.25	31
03/24/2011	114.33	16.63	1192	1.5	7.58	23.1	1.5	1,100	350	9	0.004 u	0.64	130
04/01/2011	115.70	15.26	928	0.16	7.41	22.8	3.6	520	110	2	0.004 u	0.24	59
04/08/2011	112.10	18.86	810	0.92	7.35	23.13	6.1	420	87	1.9	0.004 u	0.22	51
05/05/2011	116.21	14.75	609	0.71	7.67	23.01	6.6	320	33	0.3	0.004 u	0.27	37
06/08/2011	119.19	11.77	607	0.71	7.65	23.35	4.51	340	32	0.57	0.004 u	0.2	34
07/07/2011	113.30	17.66	606	0.72	7.4	23.25	3.94	150	64	2.1	0.004 u	7.9	27
08/04/2011	103.31	27.65	564	0.33	7.29	23.18	0.4	360	33	0.21	0.004 u	0.18 i	34
09/08/2011	97.99	32.97	536	1.11	7.29	23.2	0.6	340	34	0.41	0.004 u	0.18 i	36
10/04/2011	99.45	31.51	471	1.69	7.31	23.13	1.1	290	31	0.3	0.004 u	0.14 i	34
11/03/2011	103.37	27.59	550	1.8	7.28	23.04	1.51	290	32	0.29	0.004 u	0.15 i	34
12/08/2011	105.80	24.16	528	1.92	7.31	22.9	0.73	320	29	0.32	0.004 u	0.13 i	33
01/05/2012	113.08	17.88	535	0.2	7.23	22.74	0.44	330	32	0.29	0.004 u	0.097 i	31
02/10/2012	113.86	17.10	511	0.94	7.3	22.89	1.39	310	28	0.28	0.004 u	0.13 i	30
03/07/2012	121.00	9.96	575	0.27	7.15	23.23	0.5	310	25	0.22	0.004 u	0.11 i	31
04/05/2012	124.96	6.00	522	1.09	7.08	23.18	0.65	280	28	0.41	0.004 u	0.11 i	29
05/03/2012	126.55	4.41	746	1.6	6.9	23.46	0.81	380	72	2.3	0.004 u	0.54	49
06/07/2012	120.46	10.50	641	0.72	7.07	23.4	0.26	370	46	1	0.004 u	0.23	37
07/05/2012	104.95	26.01	900	0.23	6.54	23.52	0.4	650	190	2.9 J3	0.004 u	0.39	70
08/03/2012	98.26	32.70	843	0.69	6.77	23.6	2.23	730	210	3	0.004 u	0.48	78
09/06/2012	91.18	39.66	2,357	0.2	6.51	23.62	1.05	1,300	570	12	0.004 u	1.1	170
10/04/2012	90.19	40.77	1,654	0.6	6.43	23.22	0.46	1,500	650	25	0.004 u	1.9	210
11/07/2012	99.29	31.67	2,488	0.76	6.58	23.03	0.74	1,400	540	15	0.004 u	1.4	180
12/05/2012	101.82	29.14	2,416	0.23	6.49	23.18	0.45	1,300	540	13	0.004 u	1.3	180 J3
01/03/2013	100.65	30.31	2,430	1.1	6.44	23.09	0.42	1,400	500	15	0.004 u	1.3	170 J3
02/07/2013	105.58	25.38	2,206	0.6	6.5	23.1	0.22	1,100	470	13	0.004 u	1.1	160
03/07/2013	110.00	20.96	1,234	0.3	6.61	22.85	0.41	770	290	11	0.004 u	1.1	110
04/04/2013	N/A	N/A	1,252	0.33	6.74	23.15	9.9	870	260	10	0.004 u	1	100

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1,100 EXCEEDS STANDARD

Hillsborough County Southeast Landfill
Laboratory Analytical Results from IAMP Groundwater Monitoring
SUP-1

	conductivity (umhos/cm) (field)	dissolved oxygen (mg/l) (field)	pH (field)	temperature (°C) (field)	turbidity (NTU) (field)	total dissolved solids (mg/l)	chloride (mg/l)	ammonia nitrogen (mg/l as N)	arsenic (mg/l)	iron (mg/l)	sodium (mg/l)
12/28/2010	275	0.49	7.63	24.46	0.1	180	9.9	0.17	ND	ND	11
01/04/2011	387	1.9	7.51	21.04	0.1	210	18	0.18	ND	ND	13
01/13/2011	380	0.27	7.64	24.36	0	190	10	0.13	0.004 u	0.05 u	8.1
01/20/2011	387	0.09	7.45	24.36	0.1	190	10	0.15	0.004 u	0.058	8.5
01/27/2011	378	0.1	7.63	24.43	2	190	9.9	0.17	0.004 u	0.05 u	8.7
02/03/2011	353	0.31	7.59	24.42	0.1	190	9.9	0.14	0.004 u	0.05 u	8.2
02/10/2011	322	0.31	7.66	24.33	0.2	210	9.9	0.11	0.004 u	0.05 u	8.6
02/14/2011	289	0.33	7.6	24.3	0.2	190	10	0.084	0.004 u	0.05 u	8.5
02/24/2011	373	0.5	7.66	24.48	0.1	220	9.9	0.095	0.004 u	0.05 u	8.7
03/03/2011	370	0.08	7.68	24.48	0.3	190	9.9	0.13	0.004 u	0.05 u	8.6
03/10/2011	330	0.07	7.66	24.37	0.3	190	9.7	0.17	0.004 u	0.05 u	8.6
03/17/2011	244	0.06	7.58	24.49	0.2	210	9.6	0.16	0.004 u	0.05 u	8.6
03/24/2011	239	0.06	7.64	24.7	0.7	210	9.7	0.22	0.004 u	0.05 u	8.7
04/01/2011	370	0.06	7.69	24.31	0.4	200	9.3	0.15	0.004 u	0.05 u	8.7
04/08/2011	354	0.04	7.53	24.54	0	190	9.7	0.16	0.004 u	0.05 u	8.7
05/05/2011	351	0.16	7.86	24.59	0.1	210	9.2	0.14	0.004 u	0.05 u	8.7
06/08/2011	373	0.11	7.61	24.6	0.35	220	9.5	0.18	0.004 u	0.05 u	8.4
07/07/2011	350	0.07	7.5	24.47	0.23	210	10	0.16	0.004 u	0.05 u	8.8
08/04/2011	337	0.03	7.49	24.54	0.1	230	9.1	0.27	0.004 u	0.05 u	8.4
09/08/2011	323	0.1	7.52	24.46	0.5	220	9.3	0.19	0.004 u	0.05 u	9
10/04/2011	322	0.18	7.47	24.45	0	190	9	0.16	0.004 u	0.05 u	9
11/03/2011	339	0.5	7.46	24.38	0	170	9.5	0.15	0.004 u	0.05 u	8.6
12/08/2011	328	0.07	7.52	24.51	0.14	200	8.6	0.16	0.004 u	0.05 u	8.6
01/05/2012	317	0.08	7.5	24.34	0.06	150	9.6	0.16	0.004 u	0.05 u	9
02/10/2012	313	0.06	7.45	24.44	0.1	220	10	0.14	0.004 u	0.05 u	8.4
03/07/2012	362	0.05	7.34	24.53	0	190	9.8	0.074	0.004 u	0.05 u	8.5
04/05/2012	363	0.04	7.37	24.53	0	150	9.4	0.15	0.004 u	0.41	8.3
05/03/2012	348	0.07	7.4	24.59	0	180	9.5	0.33	0.004 u	0.05 u	9
06/07/2012	292	0.06	7.29	24.6	0.07	190	9.2	0.23	0.004 u	0.05 u	8.8
07/05/2012	263	0.07	7.27	24.61	0.02	160	9.1	0.57	0.004 u	0.05 u	8.5
08/03/2012	241	0.08	7.1	24.49	0.08	220	9.1	0.34	0.004 u	0.05 u	8.4
09/06/2012	351	0.06	7.27	24.48	0.74	210	9.7 j3	0.14	0.004 u	0.05 u	8.3
10/04/2012	243	0.06	7.29	24.45	0.17	210	9.4	0.15	0.004 u	0.47	8.3
11/07/2012	365	0.24	7.46	24.32	0.49	210	9.3	0.33	0.004 u	0.05 u	8.3
12/05/2012	360	0.11	7.37	24.49	0.38	200	9.7	0.17	0.004 u	0.05 u	8.4
01/03/2013	372	0.08	7.37	24.31	0.02	250	9.4	0.16	0.004 u	0.05 u	8.6
02/07/2013	365	0.07	7.27	24.54	0	200	8.7	0.17	0.004 u	0.05 u	8.2
03/07/2013	358	0.02	7.33	24.45	0.1	200	9.3	0.16	0.004 u	0.05 u	8.8
04/04/2013	292	0.75	7.33	24.37	0.15	180	9.4	0.11	0.004 u	0.054 i	13

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0.41

EXCEEDS STANDARD

Hillsborough County Southeast Landfill
Laboratory Analytical Results from IAMP Groundwater Monitoring
SUP-2

	conductivity (umhos/cm) (field)	dissolved oxygen (mg/l) (field)	pH (field)	temperature (°C) (field)	turbidity (NTU) (field)	total dissolved solids (mg/l)	chloride (mg/l)	ammonia nitrogen (mg/l as N)	arsenic (mg/l)	iron (mg/l)	sodium (mg/l)
12/28/2010	293	0.27	7.59	24.18	0.1	200	12	0.15	ND	ND	13
01/04/2011	378	0.29	7.57	24.19	0.1	200	12	0.16	ND	ND	9.2
01/13/2011	389	0.15	7.42	24.4	0	200	11	0.28	0.004 u	0.05 u	8.1
01/20/2011	392	0.24	7.45	24.4	0	210	11	0.14	0.004 u	0.05 u	8.6
01/27/2011	384	0.11	7.59	24.35	0	210	11	0.13	0.004 u	0.05 u	8.8
02/03/2011	360	1.09	7.62	24.43	0.1	190	11	0.18	0.004 u	0.05 u	8.4
02/10/2011	328	0.98	7.76	24.27	0.1	210	11	0.11	0.004 u	0.05 u	8.7
02/14/2011	296	0.35	7.59	24.5	0.2	200	11	0.084	0.004 u	0.05 u	8.8
02/24/2011	381	0.07	7.69	24.45	0.1	230	11	0.065	0.004 u	0.05 u	8.7
03/03/2011	379	0.43	7.72	24.66	0.8	210	11	0.13	0.004 u	0.05 u	8.6
03/10/2011	332	0.06	7.65	24.33	0.3	190	10	0.17	0.004 u	0.05 u	8.4
03/17/2011	246	0.08	7.54	24.32	0.2	210	10	0.16	0.004 u	0.05 u	8.6
03/24/2011	241	0.07	7.6	24.29	0.5	230	10	0.24	0.004 u	0.05 u	8.6
04/01/2011	372	0.05	7.69	24.31	0	210	9.4	0.11	0.004 u	0.05 u	8.7
04/08/2011	359	0.05	7.5	24.46	0.1	190	10	0.12	0.004 u	0.05 u	8.8
05/05/2011	361	0.17	7.8	26.01	0	210	10	0.17	0.004 u	0.05 u	8.7
06/08/2011	381	0.1	7.6	24.52	0.43	230	11	0.22	0.004 u	0.05 u	8.6
07/07/2011	356	0.07	7.5	24.39	0.19	82	30	0.87	0.004 u	0.4	11
08/04/2011	348	0.1	7.56	25.87	0	240	11	0.2	0.004 u	0.05 u	11
09/08/2011	347	0.28	7.56	26.71	1.6	230	12	0.21	0.004 u	0.05 u	10
10/04/2011	331	0.45	7.59	25.84	0	210	11	0.15	0.004 u	0.05 u	8.9
11/03/2011	347	0.07	7.44	24.62	0	180	10	0.16	0.004 u	0.05 u	8.6
12/08/2011	339	0.37	7.44	24.75	0.33	190	9.6	0.19	0.004 u	0.05 u	8.6
01/05/2012	328	0.3	7.57	24.53	1	180	11	0.15	0.004 u	0.05 u	9
02/10/2012	321	0.04	7.49	24.53	0.34	200	11	0.13	0.004 u	0.05 u	8.2
03/07/2012	373	0.04	7.42	24.85	0.1	190	11	0.089	0.004 u	0.05 u	8.2
04/05/2012	376	0.04	7.5	24.94	0	170	11	0.14	0.004 u	0.05 u	8.3
05/03/2012	364	0.17	7.45	24.79	0	190	11	0.29	0.004 u	0.05 u	8.5
06/07/2012	304	0.1	7.15	25.07	0.05	220	10	0.15	0.004 u	0.05 u	8.8
07/05/2012	275	0.08	7.35	24.69	0.07	190	10	0.04	0.004 u	0.05 u	8.6
08/03/2012	265	0.07	7.11	24.82	0.45	220	11	0.61	0.004 u	0.05 u	8.7
09/06/2012	359	0.05	7.24	24.79	0.5	210	11	0.15	0.004 u	0.05 u	8.4
10/04/2012	261	0.06	7.26	24.82	0.12	220	11	0.15	0.004 u	0.05 u	8.4
11/07/2012	381	0.29	7.47	24.47	0.36	210	11	0.16	0.004 u	0.05 u	8.7
12/05/2012	383	0.1	7.39	24.74	0.23	210	13	0.16	0.004 u	0.05 u	9.1
01/03/2013	389	0.06	7.36	24.45	0.22	270	11	0.13	0.004 u	0.05 u	8.5
02/07/2013	385	0.07	7.22	24.61	0.07	200	11	0.16	0.004 u	0.05 u	8.4
03/07/2013	379	0.09	7.32	24.7	0.04	220	11	0.17	0.004 u	0.05 u	8.8
04/04/2013	299	0.11	7.35	24.4	0.07	190	11	0.13	0.004 u	0.05 u	9.2

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New survey data beginning with 10/4/2012.

u = parameter was analyzed but not detected

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

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6712 Benjamin Road
Suite 100
Tampa, FL 33634
Tel: (813)885-7427

TestAmerica Job ID: 660-54146-1

Client Project/Site: SELF IAMP

For:

Hillsborough County Public Utilities Dep
Solid Waste Management Group
Brandon Support Operations Complex
332 North Falkenburg Rd, 2nd Floor
Tampa, Florida 33619

Attn: David Adams



Authorized for release by:

5/10/2013 9:50:39 AM

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page	1
Table of Contents	2
Sample Summary	3
Case Narrative	4
Definitions/Glossary	5
Detection Summary	6
Client Sample Results	9
QC Sample Results	17
QC Association Summary	20
Lab Chronicle	22
Method Summary	25
Certification Summary	26
Chain of Custody	28
Receipt Checklists	37

Sample Summary

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
660-54146-1	BLANK EQUIPMENT	Ground Water	05/02/13 09:38	05/02/13 16:20
660-54146-2	TH-77	Ground Water	05/02/13 10:49	05/02/13 16:20
660-54146-3	TH-76	Water	05/02/13 12:02	05/02/13 16:20
660-54146-4	TH-72	Ground Water	05/02/13 13:11	05/02/13 16:20
660-54146-5	TH-73	Ground Water	05/02/13 13:37	05/02/13 16:20
660-54146-6	TH-74	Ground Water	05/02/13 14:10	05/02/13 16:20
660-54146-7	TH-75	Ground Water	05/02/13 14:35	05/02/13 16:20
660-54146-8	DUPLICATE NOT BLANK	Ground Water	05/02/13 00:00	05/02/13 16:20

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Case Narrative

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Job ID: 660-54146-1

Laboratory: TestAmerica Tampa

Narrative

Job Narrative 660-54146-1

Comments

No additional comments.

Receipt

The samples were received on 5/2/2013 4:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.2° C.

Metals

No analytical or quality issues were noted.

General Chemistry

No analytical or quality issues were noted.

Definitions/Glossary

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates that 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.

General Chemistry

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.

Glossary

Abbreviation These commonly used abbreviations may or may not be present in this report.

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Detection Summary

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Client Sample ID: BLANK EQUIPMENT

Lab Sample ID: 660-54146-1

No Detections.

Client Sample ID: TH-77

Lab Sample ID: 660-54146-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	1200		200	50	ug/L	1		6010B	Total Recoverable
Sodium	17		0.50	0.31	mg/L	1		6010B	Total Recoverable
Chloride	9.4		5.0	1.0	mg/L	5		300.0	Total/NA
Ammonia as N	0.39		0.050	0.026	mg/L	1		350.1	Total/NA
Total Dissolved Solids	190		10	10	mg/L	1		SM 2540C	Total/NA
Field pH	7.39			SU		1		Field Sampling	Total/NA
Field Temperature	23.39			Degrees C		1		Field Sampling	Total/NA
Oxygen, Dissolved	0.57			mg/L		1		Field Sampling	Total/NA
Specific Conductance	440			umhos/cm		1		Field Sampling	Total/NA
Turbidity	59.4			NTU		1		Field Sampling	Total/NA

Client Sample ID: TH-76

Lab Sample ID: 660-54146-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	1100		200	50	ug/L	1		6010B	Total Recoverable
Sodium	20		0.50	0.31	mg/L	1		6010B	Total Recoverable
Chloride	13		5.0	1.0	mg/L	5		300.0	Total/NA
Ammonia as N	0.40		0.050	0.026	mg/L	1		350.1	Total/NA
Total Dissolved Solids	220		10	10	mg/L	1		SM 2540C	Total/NA
Field pH	7.63			SU		1		Field Sampling	Total/NA
Field Temperature	22.81			Degrees C		1		Field Sampling	Total/NA
Oxygen, Dissolved	0.22			mg/L		1		Field Sampling	Total/NA
Specific Conductance	450			umhos/cm		1		Field Sampling	Total/NA
Turbidity	36.9			NTU		1		Field Sampling	Total/NA

Client Sample ID: TH-72

Lab Sample ID: 660-54146-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	870		200	50	ug/L	1		6010B	Total Recoverable
Sodium	110		0.50	0.31	mg/L	1		6010B	Total Recoverable
Chloride	300		10	2.0	mg/L	10		300.0	Total/NA
Ammonia as N	8.6		0.25	0.13	mg/L	5		350.1	Total/NA
Total Dissolved Solids	810		25	25	mg/L	1		SM 2540C	Total/NA
Field pH	6.83			SU		1		Field Sampling	Total/NA
Field Temperature	23.16			Degrees C		1		Field Sampling	Total/NA
Oxygen, Dissolved	0.18			mg/L		1		Field Sampling	Total/NA
Specific Conductance	1615			umhos/cm		1		Field Sampling	Total/NA
Turbidity	0.45			NTU		1		Field Sampling	Total/NA

Client Sample ID: TH-73

Lab Sample ID: 660-54146-5

This Detection Summary does not include radiochemical test results.

TestAmerica Tampa

Detection Summary

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Client Sample ID: TH-73 (Continued)

Lab Sample ID: 660-54146-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	3400		200	50	ug/L	1		6010B	Total Recoverable
Sodium	16		0.50	0.31	mg/L	1		6010B	Total Recoverable
Chloride	52		5.0	1.0	mg/L	5		300.0	Total/NA
Ammonia as N	0.99		0.050	0.026	mg/L	1		350.1	Total/NA
Total Dissolved Solids	120		5.0	5.0	mg/L	1		SM 2540C	Total/NA
Field pH	5.12			SU		1		Field Sampling	Total/NA
Field Temperature	24.43			Degrees C		1		Field Sampling	Total/NA
Oxygen, Dissolved	0.24			mg/L		1		Field Sampling	Total/NA
Specific Conductance	240			umhos/cm		1		Field Sampling	Total/NA
Turbidity	8.82			NTU		1		Field Sampling	Total/NA

Client Sample ID: TH-74

Lab Sample ID: 660-54146-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	21000		200	50	ug/L	1		6010B	Total Recoverable
Sodium	14		0.50	0.31	mg/L	1		6010B	Total Recoverable
Chloride	37		5.0	1.0	mg/L	5		300.0	Total/NA
Ammonia as N	2.8		0.10	0.052	mg/L	2		350.1	Total/NA
Total Dissolved Solids	190		5.0	5.0	mg/L	1		SM 2540C	Total/NA
Field pH	5.61			SU		1		Field Sampling	Total/NA
Field Temperature	21.28			Degrees C		1		Field Sampling	Total/NA
Oxygen, Dissolved	0.39			mg/L		1		Field Sampling	Total/NA
Specific Conductance	357			umhos/cm		1		Field Sampling	Total/NA
Turbidity	2.62			NTU		1		Field Sampling	Total/NA

Client Sample ID: TH-75

Lab Sample ID: 660-54146-7

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	7.1	I	10	4.0	ug/L	1		6010B	Total Recoverable
Iron	7600		200	50	ug/L	1		6010B	Total Recoverable
Sodium	13		0.50	0.31	mg/L	1		6010B	Total Recoverable
Chloride	26		5.0	1.0	mg/L	5		300.0	Total/NA
Ammonia as N	1.3		0.050	0.026	mg/L	1		350.1	Total/NA
Total Dissolved Solids	170		5.0	5.0	mg/L	1		SM 2540C	Total/NA
Field pH	5.61			SU		1		Field Sampling	Total/NA
Field Temperature	21.72			Degrees C		1		Field Sampling	Total/NA
Oxygen, Dissolved	0.21			mg/L		1		Field Sampling	Total/NA
Specific Conductance	340			umhos/cm		1		Field Sampling	Total/NA
Turbidity	1.59			NTU		1		Field Sampling	Total/NA

Client Sample ID: DUPLICATE NOT BLANK

Lab Sample ID: 660-54146-8

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	880		200	50	ug/L	1		6010B	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Tampa

Detection Summary

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Client Sample ID: DUPLICATE NOT BLANK (Continued)

Lab Sample ID: 660-54146-8

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	110		0.50	0.31	mg/L	1		6010B	Total
Chloride	300		10	2.0	mg/L	10		300.0	Recoverable
Ammonia as N	8.7		0.25	0.13	mg/L	5		350.1	Total/NA
Total Dissolved Solids	770		25	25	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Tampa

Client Sample Results

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Client Sample ID: BLANK EQUIPMENT

Lab Sample ID: 660-54146-1

Date Collected: 05/02/13 09:38

Matrix: Ground Water

Date Received: 05/02/13 16:20

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	U	10	4.0	ug/L		05/06/13 16:07	05/07/13 11:55	1
Iron	50	U	200	50	ug/L		05/06/13 16:07	05/07/13 11:55	1
Sodium	0.31	U	0.50	0.31	mg/L		05/06/13 16:07	05/07/13 11:55	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	5.0	1.0	mg/L		05/08/13 13:16		5
Ammonia as N	0.026	U	0.050	0.026	mg/L		05/07/13 13:14		1
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L		05/06/13 10:57		1

Client Sample Results

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Client Sample ID: TH-77

Lab Sample ID: 660-54146-2

Date Collected: 05/02/13 10:49

Matrix: Ground Water

Date Received: 05/02/13 16:20

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	U	10	4.0	ug/L		05/06/13 16:07	05/07/13 11:58	1
Iron	1200		200	50	ug/L		05/06/13 16:07	05/07/13 11:58	1
Sodium	17		0.50	0.31	mg/L		05/06/13 16:07	05/07/13 11:58	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.4		5.0	1.0	mg/L			05/08/13 13:54	5
Ammonia as N	0.39		0.050	0.026	mg/L			05/07/13 13:14	1
Total Dissolved Solids	190		10	10	mg/L			05/06/13 10:57	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.39				SU			05/02/13 10:49	1
Field Temperature	23.39				Degrees C			05/02/13 10:49	1
Oxygen, Dissolved	0.57				mg/L			05/02/13 10:49	1
Specific Conductance	440				umhos/cm			05/02/13 10:49	1
Turbidity	59.4				NTU			05/02/13 10:49	1

Client Sample Results

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Client Sample ID: TH-76

Lab Sample ID: 660-54146-3

Date Collected: 05/02/13 12:02

Matrix: Water

Date Received: 05/02/13 16:20

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	U	10	4.0	ug/L		05/06/13 16:07	05/07/13 12:08	1
Iron	1100		200	50	ug/L		05/06/13 16:07	05/07/13 12:08	1
Sodium	20		0.50	0.31	mg/L		05/06/13 16:07	05/07/13 12:08	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		5.0	1.0	mg/L			05/08/13 14:06	5
Ammonia as N	0.40		0.050	0.026	mg/L			05/07/13 13:23	1
Total Dissolved Solids	220		10	10	mg/L			05/06/13 10:57	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.63				SU			05/02/13 12:02	1
Field Temperature	22.81				Degrees C			05/02/13 12:02	1
Oxygen, Dissolved	0.22				mg/L			05/02/13 12:02	1
Specific Conductance	450				umhos/cm			05/02/13 12:02	1
Turbidity	36.9				NTU			05/02/13 12:02	1

Client Sample Results

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Client Sample ID: TH-72

Lab Sample ID: 660-54146-4

Date Collected: 05/02/13 13:11

Matrix: Ground Water

Date Received: 05/02/13 16:20

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	U	10	4.0	ug/L		05/06/13 16:07	05/07/13 12:11	1
Iron	870		200	50	ug/L		05/06/13 16:07	05/07/13 12:11	1
Sodium	110		0.50	0.31	mg/L		05/06/13 16:07	05/07/13 12:11	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	300		10	2.0	mg/L			05/08/13 14:18	10
Ammonia as N	8.6		0.25	0.13	mg/L			05/07/13 14:22	5
Total Dissolved Solids	810		25	25	mg/L			05/06/13 10:57	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.83				SU			05/02/13 13:11	1
Field Temperature	23.16				Degrees C			05/02/13 13:11	1
Oxygen, Dissolved	0.18				mg/L			05/02/13 13:11	1
Specific Conductance	1615				umhos/cm			05/02/13 13:11	1
Turbidity	0.45				NTU			05/02/13 13:11	1

Client Sample Results

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Client Sample ID: TH-73

Lab Sample ID: 660-54146-5

Date Collected: 05/02/13 13:37

Matrix: Ground Water

Date Received: 05/02/13 16:20

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	U	10	4.0	ug/L		05/06/13 16:07	05/07/13 12:15	1
Iron	3400		200	50	ug/L		05/06/13 16:07	05/07/13 12:15	1
Sodium	16		0.50	0.31	mg/L		05/06/13 16:07	05/07/13 12:15	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	52		5.0	1.0	mg/L			05/08/13 14:31	5
Ammonia as N	0.99		0.050	0.026	mg/L			05/07/13 13:23	1
Total Dissolved Solids	120		5.0	5.0	mg/L			05/06/13 10:57	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.12				SU			05/02/13 13:37	1
Field Temperature	24.43				Degrees C			05/02/13 13:37	1
Oxygen, Dissolved	0.24				mg/L			05/02/13 13:37	1
Specific Conductance	240				umhos/cm			05/02/13 13:37	1
Turbidity	8.82				NTU			05/02/13 13:37	1

Client Sample Results

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Client Sample ID: TH-74

Lab Sample ID: 660-54146-6

Date Collected: 05/02/13 14:10

Matrix: Ground Water

Date Received: 05/02/13 16:20

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	U	10	4.0	ug/L		05/06/13 16:07	05/07/13 12:18	1
Iron	21000		200	50	ug/L		05/06/13 16:07	05/07/13 12:18	1
Sodium	14		0.50	0.31	mg/L		05/06/13 16:07	05/07/13 12:18	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	37		5.0	1.0	mg/L			05/08/13 14:43	5
Ammonia as N	2.8		0.10	0.052	mg/L			05/07/13 14:22	2
Total Dissolved Solids	190		5.0	5.0	mg/L			05/06/13 10:57	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.61				SU			05/02/13 14:10	1
Field Temperature	21.28				Degrees C			05/02/13 14:10	1
Oxygen, Dissolved	0.39				mg/L			05/02/13 14:10	1
Specific Conductance	357				umhos/cm			05/02/13 14:10	1
Turbidity	2.62				NTU			05/02/13 14:10	1

Client Sample Results

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Client Sample ID: TH-75

Lab Sample ID: 660-54146-7

Date Collected: 05/02/13 14:35

Matrix: Ground Water

Date Received: 05/02/13 16:20

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.1	I	10	4.0	ug/L		05/06/13 16:07	05/07/13 12:21	1
Iron	7600		200	50	ug/L		05/06/13 16:07	05/07/13 12:21	1
Sodium	13		0.50	0.31	mg/L		05/06/13 16:07	05/07/13 12:21	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	26		5.0	1.0	mg/L			05/08/13 14:56	5
Ammonia as N	1.3		0.050	0.026	mg/L			05/07/13 13:23	1
Total Dissolved Solids	170		5.0	5.0	mg/L			05/06/13 10:57	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.61				SU			05/02/13 14:35	1
Field Temperature	21.72				Degrees C			05/02/13 14:35	1
Oxygen, Dissolved	0.21				mg/L			05/02/13 14:35	1
Specific Conductance	340				umhos/cm			05/02/13 14:35	1
Turbidity	1.59				NTU			05/02/13 14:35	1

Client Sample Results

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Client Sample ID: DUPLICATE NOT BLANK

Lab Sample ID: 660-54146-8

Date Collected: 05/02/13 00:00

Matrix: Ground Water

Date Received: 05/02/13 16:20

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	U	10	4.0	ug/L		05/06/13 16:07	05/07/13 12:24	1
Iron	880		200	50	ug/L		05/06/13 16:07	05/07/13 12:24	1
Sodium	110		0.50	0.31	mg/L		05/06/13 16:07	05/07/13 12:24	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	300		10	2.0	mg/L		05/08/13 15:08		10
Ammonia as N	8.7		0.25	0.13	mg/L		05/07/13 14:22		5
Total Dissolved Solids	770		25	25	mg/L		05/06/13 10:57		1

QC Sample Results

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 660-137161/1-A

Matrix: Water

Analysis Batch: 137177

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 137161

Analyte	MB	MB	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	4.0	U	10	4.0	ug/L		05/06/13 16:07	05/07/13 11:02	1
Iron	50	U	200	50	ug/L		05/06/13 16:07	05/07/13 11:02	1
Sodium	0.31	U	0.50	0.31	mg/L		05/06/13 16:07	05/07/13 11:02	1

Lab Sample ID: LCS 660-137161/2-A

Matrix: Water

Analysis Batch: 137177

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 137161

Analyte	Sample	Sample	Spike	LCS	LCS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Arsenic			1000	974		ug/L		97	80 - 120
Iron			1000	1040		ug/L		104	80 - 120
Sodium			10.0	9.56		mg/L		96	80 - 120

Lab Sample ID: 660-54054-F-1-B MS

Matrix: Water

Analysis Batch: 137177

Client Sample ID: Matrix Spike

Prep Type: Total Recoverable

Prep Batch: 137161

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Arsenic	4.0	U	1000	987		ug/L		99	80 - 120
Iron	1400		1000	2380		ug/L		101	80 - 120
Sodium	18		10.0	27.4		mg/L		96	80 - 120

Lab Sample ID: 660-54054-F-1-C MSD

Matrix: Water

Analysis Batch: 137177

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total Recoverable

Prep Batch: 137161

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Arsenic	4.0	U	1000	978		ug/L		98	80 - 120	1	20
Iron	1400		1000	2330		ug/L		96	80 - 120	2	20
Sodium	18		10.0	26.9		mg/L		90	80 - 120	2	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 680-276141/2

Matrix: Water

Analysis Batch: 276141

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	1.0	U		5.0	mg/L			05/08/13 11:11	5

Lab Sample ID: LCS 680-276141/3

Matrix: Water

Analysis Batch: 276141

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	LCS	LCS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Chloride			50.0	53.1		mg/L		106	90 - 110

TestAmerica Tampa

QC Sample Results

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCSD 680-276141/4

Matrix: Water

Analysis Batch: 276141

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD	RPD Limit
Chloride	50.0	53.2		mg/L		106	90 - 110	0	30

Lab Sample ID: 660-54146-1 MS

Matrix: Ground Water

Analysis Batch: 276141

Client Sample ID: BLANK EQUIPMENT
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.
Chloride	1.0	U	50.0	53.9		mg/L		108	90 - 110

Lab Sample ID: 660-54146-1 MSD

Matrix: Ground Water

Analysis Batch: 276141

Client Sample ID: BLANK EQUIPMENT
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	RPD
Chloride	1.0	U	50.0	53.6		mg/L		107	90 - 110

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 680-275844/33

Matrix: Water

Analysis Batch: 275844

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	0.026	U	0.050	0.026	mg/L			05/07/13 14:33	1

Lab Sample ID: LCS 680-275844/7

Matrix: Water

Analysis Batch: 275844

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
Ammonia as N	1.00	0.974		mg/L		97	90 - 110

Lab Sample ID: 660-54146-2 MS

Matrix: Ground Water

Analysis Batch: 275844

Client Sample ID: TH-77
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.
Ammonia as N	0.39		1.00	1.41		mg/L		102	90 - 110

Lab Sample ID: 660-54146-2 MSD

Matrix: Ground Water

Analysis Batch: 275844

Client Sample ID: TH-77
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	RPD
Ammonia as N	0.39		1.00	1.41		mg/L		102	90 - 110

TestAmerica Tampa

QC Sample Results

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: 660-54146-3 DU

Matrix: Water

Analysis Batch: 275844

Client Sample ID: TH-76
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Ammonia as N	0.40		0.416		mg/L		3	30

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 660-137143/1

Matrix: Water

Analysis Batch: 137143

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			05/06/13 10:57	1

Lab Sample ID: LCS 660-137143/2

Matrix: Water

Analysis Batch: 137143

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits
	Added	Result	Qualifier				
Total Dissolved Solids	10000	10800		mg/L	108	80 - 120	

Lab Sample ID: 660-54146-4 DU

Matrix: Ground Water

Analysis Batch: 137143

Client Sample ID: TH-72
Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Total Dissolved Solids	810		810		mg/L		0	20

QC Association Summary

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Metals

Prep Batch: 137161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-54054-F-1-B MS	Matrix Spike	Total Recoverable	Water	3005A	5
660-54054-F-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	5
660-54146-1	BLANK EQUIPMENT	Total Recoverable	Ground Water	3005A	5
660-54146-2	TH-77	Total Recoverable	Ground Water	3005A	6
660-54146-3	TH-76	Total Recoverable	Water	3005A	7
660-54146-4	TH-72	Total Recoverable	Ground Water	3005A	7
660-54146-5	TH-73	Total Recoverable	Ground Water	3005A	8
660-54146-6	TH-74	Total Recoverable	Ground Water	3005A	8
660-54146-7	TH-75	Total Recoverable	Ground Water	3005A	9
660-54146-8	DUPLICATE NOT BLANK	Total Recoverable	Ground Water	3005A	9
LCS 660-137161/2-A	Lab Control Sample	Total Recoverable	Water	3005A	10
MB 660-137161/1-A	Method Blank	Total Recoverable	Water	3005A	10

Analysis Batch: 137177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-54054-F-1-B MS	Matrix Spike	Total Recoverable	Water	6010B	137161
660-54054-F-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	137161
660-54146-1	BLANK EQUIPMENT	Total Recoverable	Ground Water	6010B	137161
660-54146-2	TH-77	Total Recoverable	Ground Water	6010B	137161
660-54146-3	TH-76	Total Recoverable	Water	6010B	137161
660-54146-4	TH-72	Total Recoverable	Ground Water	6010B	137161
660-54146-5	TH-73	Total Recoverable	Ground Water	6010B	137161
660-54146-6	TH-74	Total Recoverable	Ground Water	6010B	137161
660-54146-7	TH-75	Total Recoverable	Ground Water	6010B	137161
660-54146-8	DUPLICATE NOT BLANK	Total Recoverable	Ground Water	6010B	137161
LCS 660-137161/2-A	Lab Control Sample	Total Recoverable	Water	6010B	137161
MB 660-137161/1-A	Method Blank	Total Recoverable	Water	6010B	137161

General Chemistry

Analysis Batch: 137143

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-54146-1	BLANK EQUIPMENT	Total/NA	Ground Water	SM 2540C	
660-54146-2	TH-77	Total/NA	Ground Water	SM 2540C	
660-54146-3	TH-76	Total/NA	Water	SM 2540C	
660-54146-4	TH-72	Total/NA	Ground Water	SM 2540C	
660-54146-4 DU	TH-72	Total/NA	Ground Water	SM 2540C	
660-54146-5	TH-73	Total/NA	Ground Water	SM 2540C	
660-54146-6	TH-74	Total/NA	Ground Water	SM 2540C	
660-54146-7	TH-75	Total/NA	Ground Water	SM 2540C	
660-54146-8	DUPLICATE NOT BLANK	Total/NA	Ground Water	SM 2540C	
LCS 660-137143/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 660-137143/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 275844

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-54146-1	BLANK EQUIPMENT	Total/NA	Ground Water	350.1	
660-54146-2	TH-77	Total/NA	Ground Water	350.1	
660-54146-2 MS	TH-77	Total/NA	Ground Water	350.1	
660-54146-2 MSD	TH-77	Total/NA	Ground Water	350.1	

TestAmerica Tampa

QC Association Summary

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

General Chemistry (Continued)

Analysis Batch: 275844 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-54146-3	TH-76	Total/NA	Water	350.1	
660-54146-3 DU	TH-76	Total/NA	Water	350.1	
660-54146-4	TH-72	Total/NA	Ground Water	350.1	
660-54146-5	TH-73	Total/NA	Ground Water	350.1	
660-54146-6	TH-74	Total/NA	Ground Water	350.1	
660-54146-7	TH-75	Total/NA	Ground Water	350.1	
660-54146-8	DUPLICATE NOT BLANK	Total/NA	Ground Water	350.1	
LCS 680-275844/7	Lab Control Sample	Total/NA	Water	350.1	
MB 680-275844/33	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 276141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-54146-1	BLANK EQUIPMENT	Total/NA	Ground Water	300.0	
660-54146-1 MS	BLANK EQUIPMENT	Total/NA	Ground Water	300.0	
660-54146-1 MSD	BLANK EQUIPMENT	Total/NA	Ground Water	300.0	
660-54146-2	TH-77	Total/NA	Ground Water	300.0	
660-54146-3	TH-76	Total/NA	Water	300.0	
660-54146-4	TH-72	Total/NA	Ground Water	300.0	
660-54146-5	TH-73	Total/NA	Ground Water	300.0	
660-54146-6	TH-74	Total/NA	Ground Water	300.0	
660-54146-7	TH-75	Total/NA	Ground Water	300.0	
660-54146-8	DUPLICATE NOT BLANK	Total/NA	Ground Water	300.0	
LCS 680-276141/3	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-276141/4	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-276141/2	Method Blank	Total/NA	Water	300.0	

Field Service / Mobile Lab

Analysis Batch: 137265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-54146-2	TH-77	Total/NA	Ground Water	Field Sampling	
660-54146-3	TH-76	Total/NA	Water	Field Sampling	
660-54146-4	TH-72	Total/NA	Ground Water	Field Sampling	
660-54146-5	TH-73	Total/NA	Ground Water	Field Sampling	
660-54146-6	TH-74	Total/NA	Ground Water	Field Sampling	
660-54146-7	TH-75	Total/NA	Ground Water	Field Sampling	

Lab Chronicle

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Client Sample ID: BLANK EQUIPMENT

Lab Sample ID: 660-54146-1

Date Collected: 05/02/13 09:38

Matrix: Ground Water

Date Received: 05/02/13 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			137161	05/06/13 16:07	RG	TAL TAM
Total Recoverable	Analysis	6010B		1	137177	05/07/13 11:55	GF	TAL TAM
Total/NA	Analysis	SM 2540C		1	137143	05/06/13 10:57	TO	TAL TAM
Total/NA	Analysis	350.1		1	275844	05/07/13 13:14	JE	TAL SAV
Total/NA	Analysis	300.0		5	276141	05/08/13 13:16	PAT	TAL SAV

Client Sample ID: TH-77

Lab Sample ID: 660-54146-2

Date Collected: 05/02/13 10:49

Matrix: Ground Water

Date Received: 05/02/13 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			137161	05/06/13 16:07	RG	TAL TAM
Total Recoverable	Analysis	6010B		1	137177	05/07/13 11:58	GF	TAL TAM
Total/NA	Analysis	SM 2540C		1	137143	05/06/13 10:57	TO	TAL TAM
Total/NA	Analysis	350.1		1	275844	05/07/13 13:14	JE	TAL SAV
Total/NA	Analysis	300.0		5	276141	05/08/13 13:54	PAT	TAL SAV
Total/NA	Analysis	Field Sampling		1	137265	05/02/13 10:49		TAL TAM

Client Sample ID: TH-76

Lab Sample ID: 660-54146-3

Date Collected: 05/02/13 12:02

Matrix: Water

Date Received: 05/02/13 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			137161	05/06/13 16:07	RG	TAL TAM
Total Recoverable	Analysis	6010B		1	137177	05/07/13 12:08	GF	TAL TAM
Total/NA	Analysis	SM 2540C		1	137143	05/06/13 10:57	TO	TAL TAM
Total/NA	Analysis	350.1		1	275844	05/07/13 13:23	JE	TAL SAV
Total/NA	Analysis	300.0		5	276141	05/08/13 14:06	PAT	TAL SAV
Total/NA	Analysis	Field Sampling		1	137265	05/02/13 12:02		TAL TAM

Client Sample ID: TH-72

Lab Sample ID: 660-54146-4

Date Collected: 05/02/13 13:11

Matrix: Ground Water

Date Received: 05/02/13 16:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			137161	05/06/13 16:07	RG	TAL TAM
Total Recoverable	Analysis	6010B		1	137177	05/07/13 12:11	GF	TAL TAM
Total/NA	Analysis	SM 2540C		1	137143	05/06/13 10:57	TO	TAL TAM
Total/NA	Analysis	350.1		5	275844	05/07/13 14:22	JE	TAL SAV
Total/NA	Analysis	300.0		10	276141	05/08/13 14:18	PAT	TAL SAV
Total/NA	Analysis	Field Sampling		1	137265	05/02/13 13:11		TAL TAM

TestAmerica Tampa

Lab Chronicle

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Client Sample ID: TH-73

Date Collected: 05/02/13 13:37
Date Received: 05/02/13 16:20

Lab Sample ID: 660-54146-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			137161	05/06/13 16:07	RG	TAL TAM
Total Recoverable	Analysis	6010B		1	137177	05/07/13 12:15	GF	TAL TAM
Total/NA	Analysis	SM 2540C		1	137143	05/06/13 10:57	TO	TAL TAM
Total/NA	Analysis	350.1		1	275844	05/07/13 13:23	JE	TAL SAV
Total/NA	Analysis	300.0		5	276141	05/08/13 14:31	PAT	TAL SAV
Total/NA	Analysis	Field Sampling		1	137265	05/02/13 13:37		TAL TAM

Client Sample ID: TH-74

Date Collected: 05/02/13 14:10
Date Received: 05/02/13 16:20

Lab Sample ID: 660-54146-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			137161	05/06/13 16:07	RG	TAL TAM
Total Recoverable	Analysis	6010B		1	137177	05/07/13 12:18	GF	TAL TAM
Total/NA	Analysis	SM 2540C		1	137143	05/06/13 10:57	TO	TAL TAM
Total/NA	Analysis	350.1		2	275844	05/07/13 14:22	JE	TAL SAV
Total/NA	Analysis	300.0		5	276141	05/08/13 14:43	PAT	TAL SAV
Total/NA	Analysis	Field Sampling		1	137265	05/02/13 14:10		TAL TAM

Client Sample ID: TH-75

Date Collected: 05/02/13 14:35
Date Received: 05/02/13 16:20

Lab Sample ID: 660-54146-7

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			137161	05/06/13 16:07	RG	TAL TAM
Total Recoverable	Analysis	6010B		1	137177	05/07/13 12:21	GF	TAL TAM
Total/NA	Analysis	SM 2540C		1	137143	05/06/13 10:57	TO	TAL TAM
Total/NA	Analysis	350.1		1	275844	05/07/13 13:23	JE	TAL SAV
Total/NA	Analysis	300.0		5	276141	05/08/13 14:56	PAT	TAL SAV
Total/NA	Analysis	Field Sampling		1	137265	05/02/13 14:35		TAL TAM

Client Sample ID: DUPLICATE NOT BLANK

Date Collected: 05/02/13 00:00
Date Received: 05/02/13 16:20

Lab Sample ID: 660-54146-8

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			137161	05/06/13 16:07	RG	TAL TAM
Total Recoverable	Analysis	6010B		1	137177	05/07/13 12:24	GF	TAL TAM
Total/NA	Analysis	SM 2540C		1	137143	05/06/13 10:57	TO	TAL TAM
Total/NA	Analysis	350.1		5	275844	05/07/13 14:22	JE	TAL SAV
Total/NA	Analysis	300.0		10	276141	05/08/13 15:08	PAT	TAL SAV

TestAmerica Tampa

Lab Chronicle

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858
TAL TAM = TestAmerica Tampa, 6712 Benjamin Road, Suite 100, Tampa, FL 33634, TEL (813)885-7427

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Method Summary

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL TAM
300.0	Anions, Ion Chromatography	MCAWW	TAL SAV
350.1	Nitrogen, Ammonia	MCAWW	TAL SAV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL TAM
Field Sampling	Field Sampling	EPA	TAL TAM

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL TAM = TestAmerica Tampa, 6712 Benjamin Road, Suite 100, Tampa, FL 33634, TEL (813)885-7427

Certification Summary

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Laboratory: TestAmerica Tampa

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alabama	State Program	4	40610	06-30-13
Florida	NELAP	4	E84282	06-30-13
Georgia	State Program	4	905	06-30-13
USDA	Federal		P330-11-00177	04-20-14

Laboratory: TestAmerica Savannah

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		0399-01	05-31-13
Alabama	State Program	4	41450	06-30-13
Alaska (UST)	State Program	10	UST-104	06-19-13
Arkansas DEQ	State Program	6	88-0692	02-01-13 *
California	NELAP	9	3217CA	07-31-13
Colorado	State Program	8	N/A	12-31-13
Florida	NELAP	4	E87052	06-30-13
GA Dept. of Agriculture	State Program	4	N/A	12-31-13
Georgia	State Program	4	N/A	06-30-13
Georgia	State Program	4	803	06-30-13
Hawaii	State Program	9	N/A	06-30-13
Illinois	NELAP	5	200022	11-30-13
Indiana	State Program	5	N/A	06-30-13
Iowa	State Program	7	353	07-01-13 *
Kentucky	State Program	4	90084	12-31-12 *
Kentucky (UST)	State Program	4	18	03-31-13 *
Louisiana	NELAP	6	30690	06-30-13
Louisiana	NELAP	6	LA100015	12-31-13
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-13
Massachusetts	State Program	1	M-GA006	06-30-13
Michigan	State Program	5	9925	06-30-13
Mississippi	State Program	4	N/A	06-30-13
Montana	State Program	8	CERT0081	01-01-14
Nebraska	State Program	7	TestAmerica-Savannah	06-30-13 *
New Jersey	NELAP	2	GA769	06-30-13
New Mexico	State Program	6	N/A	06-30-13
New York	NELAP	2	10842	04-01-14
North Carolina DENR	State Program	4	269	12-31-13
North Carolina DHHS	State Program	4	13701	07-31-13
Oklahoma	State Program	6	9984	08-31-13
Pennsylvania	NELAP	3	68-00474	06-30-13 *
Puerto Rico	State Program	2	GA00006	01-01-14
South Carolina	State Program	4	98001	06-30-13
Tennessee	State Program	4	TN02961	06-30-13
Texas	NELAP	6	T104704185-08-TX	11-30-13
USDA	Federal		SAV 3-04	04-07-14
Virginia	NELAP	3	460161	06-14-13 *
Washington	State Program	10	C1794	06-10-13
West Virginia	State Program	3	9950C	12-31-13
West Virginia DEP	State Program	3	94	06-30-13

* Expired certification is currently pending renewal and is considered valid.

TestAmerica Tampa

Certification Summary

Client: Hillsborough County Public Utilities Dep
Project/Site: SELF IAMP

TestAmerica Job ID: 660-54146-1

Laboratory: TestAmerica Savannah (Continued)

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	999819810	08-31-13
Wyoming	State Program	8	8TMS-Q	06-30-13

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TestAmerica Tampa

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ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

660-5446

6712 Benjamin Rd, Suite 1000
Tampa, FL 33634

Phone

www.testaheticanc.com

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD											
TestAmerica											
160-54146											
PROJECT REFERENCE		PROJECT NO.		PROJECT LOCATION		MATRIX TYPE		PAGE		OF	
SELF-JAMP Monitoring Wells				Lithia, FL				1		1	
TESTAMERICA (LAB) PROJECT MANAGER		P.O. NUMBER		CONTRACT NO.				STANDARD REPORT		<input type="radio"/>	
Nancy Robertson								DELIVERY		<input type="radio"/>	
CLIENT SITE/P.M.		CLIENT PHONE		CLIENT FAX				DATE DUE		<input type="radio"/>	
Michael Townsel		(813) 663-3222		(813) 274-6801				EXPEDITED REPORT		<input type="radio"/>	
CLIENT NAME		CLIENT EMAIL		townselm@hillsboroughcounty.org				DELIVERY (SURCHARGE)		<input type="radio"/>	
CLIENT ADDRESS		COMPANY CONTRACTING THIS WORK		SAMPLES SIGNATURE				DATE DUE:		<input type="radio"/>	
332 North Falkenburg Road											
SAMPLE		TIME		SAMPLE IDENTIFICATION		NUMBER OF CONTAINERS SUBMITTED		REMARKS			
5-2-13	9:38	Equipment Blank		G	X	/	/	/	/		
5-2-13	10:49	TH - 77		G	X	/	/	/	/		
5-2-13	12:02	TH - 76		G	X	/	/	/	/		
5-2-13	13:11	TH - 72		G	X	/	/	/	/		
5-2-13	13:37	TH - 73		G	X	/	/	/	/		
5-2-13	14:10	TH - 74		G	X	/	/	/	/		
5-2-13	14:55	TH - 75		G	X	/	/	/	/		
5-2-13	—	DUPLICATE		G	X	/	/	/	/		
RELINQUISHED BY: (SIGNATURE)		DATE		TIME		RELINQUISHED BY: (SIGNATURE)		DATE		TIME	
<i>Paul McNulty</i>		5-2-13		16:20							
RECEIVED BY: (SIGNATURE)		DATE		TIME		RECEIVED BY: (SIGNATURE)		DATE		TIME	
		5/2/13		16:20							
RECEIVED FOR LABORATORY BY: DATE TIME CUSTODY/INTACT CUSTODY SEAL NO. STL LOG NO. LABORATORY REMARKS: <i>Paul McNulty</i> 5-2-13 16:20 YES NO 5-2-13 (U-37)											
LABORATORY USE ONLY											
660-54146 Chain of Custody											
 											

Serial Number

Form FD 9000-24
GROUNDWATER SAMPLING LOG

54144

SAMPLING DATA

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

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

pH: ± 0.2 units **Temperature:** $\pm 0.2^\circ\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** all readings $< 20\%$ saturation (saturation optional) $\pm 0.2 \text{ mg/l}$ or $\pm 10\%$ (whichever is greater). **Turbidity:** all readings $< 20 \text{ NTU}$ (saturation optional) $\pm 5 \text{ NTU}$ or $\pm 10\%$ (whichever is greater).

optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill		SITE LOCATION: Lithia, FL									
WELL NO: TH-77		SAMPLE ID: TH-77									
		DATE: 5-2-2013									
PURGING DATA											
WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): $\frac{1}{2}$	WELL SCREEN INTERVAL DEPTH: 159.2 feet to 169.2 feet	STATIC DEPTH TO WATER (feet): 98.52								
PURGE PUMP TYPE OR BAILER: BP											
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)											
$= (169.20 \text{ feet} - 98.52 \text{ feet}) \times 0.16 \text{ gallons/foot} = 11.31 \text{ gallons}$											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)											
$= \text{gallons} + (\text{gallons/foot} \times \text{feet}) + \text{gallons} = \text{gallons}$											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 168.2		FINAL PUMP OR TUBING DEPTH IN WELL (feet): 168.2	PURGING INITIATED AT: 9:38								
PURGING ENDED AT:		TOTAL VOLUME PURGED (gallons):									
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
10:01	11.5	11.5	0.5	98.85	7.33	23.47	438	0.45	63.5	Slightly Cloudy	None
10:06	2.5	14.0	0.5	98.85	7.35	23.46	438	0.47	59.0	Slightly Cloudy	None
10:11	2.5	16.5	0.5	98.85	7.36	23.46	438	0.46	60.6	Slightly Cloudy	None
10:16	2.5	19.0	0.5	98.85	7.37	23.46	438	0.48	65.2	Slightly Cloudy	None
10:21	2.5	21.5	0.5	98.85	7.37	23.45	438	0.48	63.3	Slightly Cloudy	None
10:26	2.5	24.0	0.5	98.85	7.38	23.45	439	0.49	62.9	Slightly Cloudy	None
10:31	2.5	26.5	0.5	98.85	7.39	23.44	439	0.50	63.8	Slightly Cloudy	None
10:36	1.25	27.75	0.25	98.63	7.40	23.39	439	0.56	62.5	Slightly Cloudy	None
10:41	1.25	29.0	0.25	98.63	7.39	23.40	440	0.54	58.1	Slightly Cloudy	None
10:46	1.25	30.25	0.25	98.63	7.39	23.39	440	0.57	59.4	Slightly Cloudy	None
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							
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)				SAMPLING DATA							
SAMPLED BY (PRINT) / AFFILIATION: <i>Mike Townsend / Andrew Ballou</i>			SAMPLER(S) SIGNATURE(S): <i>Mike Townsend / Andrew Ballou</i>			SAMPLING INITIATED AT: 10:47		SAMPLING ENDED AT: 10:49			
PUMP OR TUBING DEPTH IN WELL (feet): 168.2		TUBING MATERIAL CODE: PE		FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Filtration Equipment Type:		FILTER SIZE: _____ μm					
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/> N				TUBING Y <input checked="" type="checkbox"/> N <input type="checkbox"/> (replaced)				DUPLICATE: Y <input checked="" type="checkbox"/> N			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
REMARKS: SEE C.O.C. FOR ANALYSIS											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)											

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

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

pH: + 0.2 units. Temperature: + 0.2 °C. Specific Conductance: + 5%. Dissolved Oxygen: all readings < 20% saturation (s).

pH: ± 0.2 units **Temperature:** $\pm 0.2^\circ\text{C}$ **Specific Conductance:** $\pm 5\%$ **Dissolved Oxygen:** optional, $\pm 0.2 \text{ mg/L}$ or $\pm 10\%$ (whichever is greater) **Turbidity:** all readings $< 20 \text{ NTU}$; optional

optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$

Revision Date: February 12, 2009

Revision Date: February 12, 2009

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill	SITE LOCATION: Lithia, FL
WELL NO: TH-76	SAMPLE ID: TH-76

DATE: 5-2-2013

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH: 163.35 feet to 178.35 feet	STATIC DEPTH TO WATER (feet): 89.54	PURGE PUMP TYPE OR BAILER: BP
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)	= (178.35 feet - 89.54 feet) x 0.16 gallons/foot = 14.21 gallons
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EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)	= gallons + (gallons/foot X feet) + gallons = gallons
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INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 177.35	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 177.35	PURGING INITIATED AT: 11:00	PURGING ENDED AT: 1159	TOTAL VOLUME PURGED (gallons): 24.5
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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. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1129	14.5	14.5	0.5	91.59	22.80	22.80	443	0.43	43.0	Slightly cloudy	None
1134	2.5	17.0	0.5	91.59	7.82	22.79	443	0.31	45.0	Slightly cloudy	None
1139	2.5	19.5	0.5	91.59	7.75	22.79	444	0.29	41.2	Slightly cloudy	None
1144	1.25	20.75	0.25	90.54	7.70	22.80	446	0.28	37.6	Slightly cloudy	None
1149	1.25	22.0	0.25	90.06	7.65	22.82	448	0.26	35.2	Slightly cloudy	None
1154	1.25	23.25	0.25	90.06	7.63	22.82	449	0.26	36.1	Slightly cloudy	None
1159	1.25	24.50	0.25	90.06	7.63	22.81	450	0.22	36.9	Slightly cloudy	None

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

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <i>Mike Townsend / Andrew Ballou</i>	SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>	SAMPLING INITIATED AT: 1200	SAMPLING ENDED AT: 1202						
PUMP OR TUBING DEPTH IN WELL (feet): 177.35	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y <input checked="" type="checkbox"/> Filtration Equipment Type:	FILTER SIZE: _____ µm						
FIELD DECONTAMINATION: PUMP Y <input checked="" type="checkbox"/>	TUBING Y <input checked="" type="checkbox"/> (X replaced)		DUPPLICATE: Y <input checked="" type="checkbox"/>						
SAMPLE CONTAINER SPECIFICATION		SAMPLE PRESERVATION							
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)

REMARKS:

SEE C.O.C. FOR ANALYSIS

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

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

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

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

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

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill	SITE LOCATION: Lithia, FL	
WELL NO: TH-72	SAMPLE ID: TH-72	DATE: 5-2-2013

PURGING DATA

WELL
DIAMETER (inches): 2 TUBING
DIAMETER (inches): 1/2 WELL SCREEN INTERVAL
DEPTH: 180 feet to 190 feet STATIC DEPTH
TO WATER (feet): 107.95 PURGE PUMP TYPE
OR BAILER: BP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

$$= \frac{190 \text{ feet} - 107.95 \text{ feet}}{0.16 \text{ gallons/foot}} = 13.13 \text{ gallons}$$

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

$$= \text{gallons} + (\text{gallons/foot} \times \text{feet}) + \text{gallons} = \text{gallons}$$

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 189 FINAL PUMP OR TUBING DEPTH IN WELL (feet): 189 PURGING INITIATED AT: 1226 PURGING ENDED AT: 1309 TOTAL VOLUME PURGED (gallons): 17.2

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.): $1/8'' = 0.0008$; $3/16'' = 0.0014$; $1/4'' = 0.0028$; $5/16'' = 0.004$; $3/8'' = 0.008$; $1/2'' = 0.010$; $5/8'' = 0.016$

PURGING EQUIPMENT CODES: B = Baler; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

PURGING EQUIPMENT CODES: B = Baller; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

REMARKS:

SEE C.O.C. FOR ANALYSIS.

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

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

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

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

pH: + 0.2 units. Temperature: + 0.2 °C. Specific Conductivity: + 5%. Dissolved Oxygen: all readings < 20% saturation (see notes).

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

optionally, $\pm 0.2 \text{ mg/L}$ or $\pm 10\%$ (whichever is greater). **Turbidity:** all readings $\leq 20 \text{ NTU}$, optionally $\pm 5 \text{ NTU}$ or $\pm 10\%$ (whichever is greater).

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

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

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

pH: + 0.2 units. Temperature: + 0.2 °C. Specific Conductance: + 5%. Dissolved Oxygen: all readings < 20% saturation / a

pH: ± 0.2 units Temperature: $\pm 0.2^\circ\text{C}$ Specific Conductance: $\pm 5\%$ Dissolved Oxygen: all readings < 20% saturation (s.e. $\pm 0.2\text{ mg l}^{-1}$, or $\pm 10\%$ whichever is greater). Turbidity: all readings 1.0 NTU^{-1} ($\pm 1.5 \text{ NTU}^{-1}$, or $\pm 10\%$ whichever is greater).

- optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or $\pm 10\%$ (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

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

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

pH: + 0.2 units. Temperature: + 0.2 °C. Specific Conductance: + 5%. Dissolved Oxygen: all readings < 20% saturation (see section 9).

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

optionally, ± 0.2 mg/L or $\pm 10\%$ (whichever is greater). Turbidity: all readings ≥ 20 NTU; optionally ± 3 NTU or $\pm 10\%$ (whichever is greater).

Revision Date: February 12, 2009

Form FD 9000-24
GROUNDWATER SAMPLING LOG

SAMPLING DATA

REMARKS:

SEE C.O.C. FOR ANALYSIS

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

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

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

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

pH: + 0.2 units, Temperature: + 0.2 °C, Specific Conductance: + 5%, Dissolved Oxygen: all readings < 20% saturation (see notes)

pH: ± 0.2 units Temperature: $\pm 0.2^\circ\text{C}$ Specific Conductance: $\pm 5\%$ Dissolved Oxygen: all readings $\leq 20\%$ saturation (see Table F-3 2200-2), optionally, $\pm 0.2\text{ mg/L}$ or $\pm 10\%$ (whichever is greater) Turbidity: all readings $\leq 20\text{ NTU}$; optionally $\pm 5\text{ NTU}$ or $\pm 10\%$ (whichever is greater)

Revision Date: February 12, 2009

Chain of Custody Record

TestAmerica Tampa
68712 Benjamin Board Suite 100

U.S. DEPARTMENT OF STATE
Tampa, FL 33634
Phone (813) 885-7427 Fax (813) 885-7049

Login Sample Receipt Checklist

Client: Hillsborough County Public Utilities Dep

Job Number: 660-54146-1

Login Number: 54146

List Source: TestAmerica Tampa

List Number: 1

Creator: McNulty, Carol

Question	Answer	Comment	
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A		
The cooler's custody seal, if present, is intact.	True		
Sample custody seals, if present, are intact.	True		
The cooler or samples do not appear to have been compromised or tampered with.	True		
Samples were received on ice.	True		
Cooler Temperature is acceptable.	True		
Cooler Temperature is recorded.	True		
COC is present.	True		
COC is filled out in ink and legible.	True		
COC is filled out with all pertinent information.	True		
Is the Field Sampler's name present on COC?	True		
There are no discrepancies between the containers received and the COC.	True		
Samples are received within Holding Time.	True		
Sample containers have legible labels.	True		
Containers are not broken or leaking.	True		
Sample collection date/times are provided.	True		
Appropriate sample containers are used.	True		
Sample bottles are completely filled.	True		
Sample Preservation Verified.	True		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A		
Multiphasic samples are not present.	True		
Samples do not require splitting or compositing.	True		
Residual Chlorine Checked.	False		

Login Sample Receipt Checklist

Client: Hillsborough County Public Utilities Dep

Job Number: 660-54146-1

Login Number: 54146

List Source: TestAmerica Savannah

List Number: 1

List Creation: 05/04/13 08:49 AM

Creator: Conner, Keaton

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	