Public Utilities
PO Box 1110
Tampa, FL 33601-1110
Phone: (813) 272-5977
Fax: (813) 272-5589

Public Utilities

November 21, 2014

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. 50 – October 2014

Dear Mr. Morris:

The Hillsborough County Public Utilities Department (County) is pleased to provide the analytical results from the October 2014 sampling event conducted as part of the continuation of the Initial Assessment Monitoring Plan (IAMP). The IAMP was developed to address the potential impacts to groundwater from the sinkhole on the edge of Phase VI at the Southeast County Landfill (SCLF), which was discovered on December 14, 2010.

As part of the agreement between the County and Florida Department of Environmental Protection (Department) Southwest District Office, four (4) upper Floridan/Limestone aquifer monitoring wells, designated as TH-72, TH-76, TH-77, and TH-78 are sampled on a monthly schedule. Representative samples were collected from each of these four (4) monitoring wells on October 7-8, 2014 and analyzed for total dissolved solids (TDS), chloride, total ammonia, arsenic, iron, sodium, and five (5) field parameters. Each sample collected was analyzed by our contracted laboratory, Test America, Inc. The following paragraphs summarize the parameter specific results pertinent to the evaluation of potential water quality impacts from the sinkhole at the SCLF.

pH

pH was observed at 8.39 pH units in new upper Floridan aquifer (UFA) monitoring well, TH-78. The elevated values observed in this well do not appear to be representative of the unaffected UFA. Based on the decreasing trend of pH values since installation of this well, the County believes the elevated values observed are likely attributable to the grout materials utilized during construction of this monitoring well. The pH values in other three UFA monitoring wells, TH-72, TH-76, and TH-77, were recorded at 6.78, 7.37, and 7.36 pH units, respectively.

Turbidity

Turbidity values in the upper Floridan / Limestone aquifer monitoring wells TH-72, TH-76, TH-77, and TH-78 were recorded at 0.79, 17.9, 0.71, and 1.12 Nephelometric Turbididy Units (NTU), respectively.

Conductivity

The conductivity values observed in monitoring wells TH-72, TH-76, TH-77, and TH-78 were 2,300, 432, 416, and 508 micromhos per centimeter (umhos/cm), respectively. Monitoring well TH-72 is the closest location to the sinkhole, and continues to exhibit water quality indicative of impacts. The elevated conductivity observed is likely attributable to the waste in the deep areas of the sinkhole and the subsurface grouting processes conducted as part of the sinkhole stabilization and remediation. Conductivity values in the down gradient monitoring wells TH-76, TH-77, and TH-78 are relatively low and appear to be consistent with the unaffected deep wells across the site.

Total Dissolved Solids (TDS)

The TDS in monitoring well TH-72 was observed at 1,300 mg/l, which continues to be above the SDWS of 500 mg/l. The elevated value is likely attributable to the waste within the remediated sinkhole. The remaining three (3) down gradient UFA monitoring wells, TH-76, TH-77, and TH-78 exhibited TDS values of 260, 240, and 270 mg/l, respectively, which is consistent with the water quality of the unaffected deep wells across the site.

Chloride

Chloride was observed at 530 mg/l in monitoring well TH-72, which is above the SDWS of 250 mg/l. The elevated chloride value observed is likely attributable to waste in the sinkhole and the grout materials injected into the subsurface as part of the sinkhole stabilization and remediation. Chloride values in the down gradient UFA monitoring wells TH-76, TH-77, and TH-78 were observed at 12, 9.3, and 34 mg/l, which is consistent with the unaffected deep wells across the site. The value of 34 mg/l observed in TH-78, although well below the SDWS, is also thought to potentially be attributable to the grout materials used to seal the casing in the new well. The County will continue to evaluate any trends with chloride values in the future.

Iron

Total iron concentrations in two (2) of the four (4) upper Floridan/Limestone aquifer monitoring wells were observed above the SDWS of 0.3 mg/l. Monitoring wells TH-72 and TH-76 exhibited iron at 0.61 and 0.77 mg/l, respectively. Monitor wells TH-77 and TH-78 exhibited iron below the SDWS at 0.16i and 0.23 mg/l. The iron concentrations is these wells have been consistent, and as discussed in many of our previous

submittals, the iron appears to be naturally occurring in some areas of the limestone formation, or may be the result of impacts from the strip mining activities conducted at the site prior to the landfill operations.

Sodium

Sodium was observed at a concentration of 200 mg/l in monitoring well TH-72, which is above the PDWS of 160 mg/l. The elevated sodium value is likely attributable to the waste in the sinkhole and/or the grouting materials, as previously discussed. Sodium values in down gradient monitoring wells TH-76, TH-77, and TH-78 were observed at 19, 16, and 34 mg/l, which is consistent with the unaffected deep wells across the site.

Groundwater Elevations and Direction of Flow

On October 7, 2014, the County collected groundwater and surface water elevation data at eleven (11) locations along the western portion of Phases 1-6 at the landfill site, including seven (7) surficial aquifer wells and four (4) upper Floridan (limestone) aquifer wells. No significant changes to the patterns of flow in the surficial aquifer were noted in the data set, and the flow diagram provided is consistent with the observations over the extensive period of record. The elevations observed within the wells closest to the sinkhole indicate that flow patterns continue to be affected in that area, which has not been unexpected. However, the overall direction of flow within the surficial aquifer remains toward the west/northwest.

A contour diagram of the upper Floridan / Limestone aquifer has been prepared for the west side of the landfill around the sinkhole, and it is provided with this submittal. This diagram was generated manually in AutoCad ™ utilizing the four data points closest to the sinkhole. During this sampling event, the changes in elevations between TH-72 and TH-76 is - 0.06 ft., and TH-72 and TH-77 is + 0.09 ft. Elevation of newly installed monitor well TH-78 indicated an elevation of approximately 5 feet higher than those elevations recorded at TH-72, TH-76, and TH-77. This anomaly in the groundwater elevation indicates that TH-78 may be influenced by the surface water body in this area, or some other geologic formation anomaly may be creating this potentiometric high. The elevation data from TH-78 was not utilized to prepare the UFA contour diagram. However, the County maintains the position that the configuration of the three down gradient deep monitoring wells adequately addresses the potential for migration of the contamination observed in TH-72.

Conclusions

The water quality observed in the October 2014 IAMP sampling event indicates that the monitoring well TH-72, which is closest to the sinkhole, continues to exhibit impacts to water quality in the upper Floridan / Limestone aquifer. The impacts observed include elevated conductivity, TDS, chloride, iron and sodium. The values have remained relatively stable, and do not appear to be migrating to the down gradient wells. These impacts were not unexpected in the immediate vicinity of the sinkhole, as TH-72 is less than fifty feet away from the former surface expression, and likely even closer to the subsurface karst feature where waste and grout materials are likely present. Down gradient monitoring wells, TH-76 and TH-77, and TH-78 exhibit good water quality with no evidence of impact from the sinkhole. Conductivity values, pH, TDS, sodium and chloride are all very low and consistent with the historical data sets for the unaffected upper Floridan aquifer groundwater monitoring wells at the SCLF.

Recommendations

The County continues to move forward with implementation of the IAMP, which includes the monthly sampling of the four upper Floridan / Limestone aquifer groundwater monitoring wells, TH-72, TH-76, TH-77, and TH-78, and quarterly sampling of the three surficial aquifer wells, TH-73, TH-74, and TH-75. The County will continue to evaluate any water quality changes in both the surficial and upper Floridan aquifer wells, and present the findings in the monthly IAMP reports. Monthly sampling shall continue for the short term. However, it should be noted the IAMP has been conducted for nearly four years, and the consistency of the data set supports closure of this monitoring plan. A select group of the IAMP wells, designed to provide long term protectiveness, should be included in the semi-annual sampling required by the Landfill Operations Permit No. 35435-022-SO/01. It is anticipated that an application for modification of that permit will include this proposed approach. If you have any specific concerns with this concept, please provide your feedback as soon as possible, so we can incorporate any suggestions into our strategy moving forward.

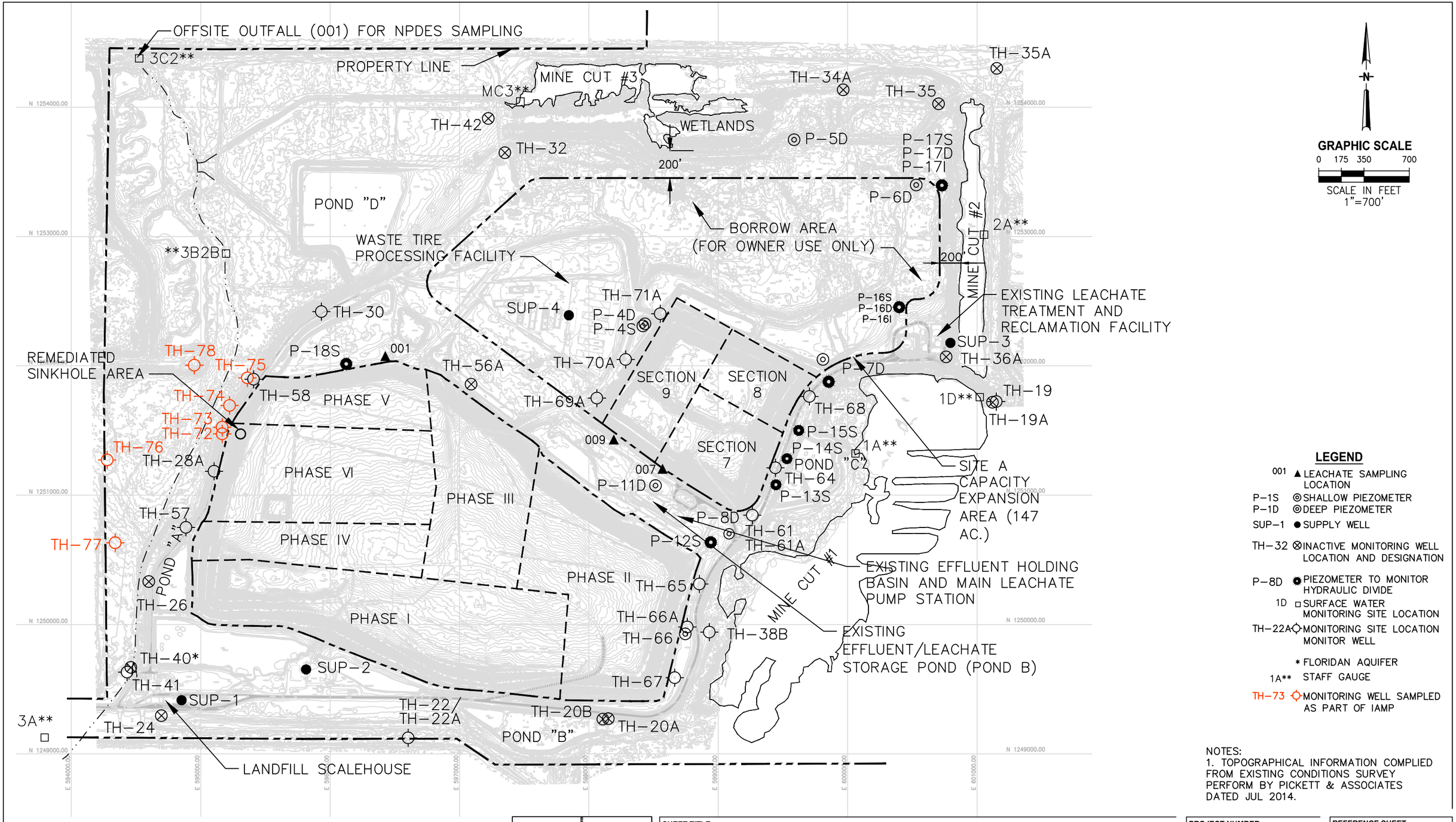
Enclosed for your review please find a site location map depicting the location of the monitoring wells sampled, the water quality data summary table for this sampling event, a groundwater elevation data table, groundwater contour and flow diagrams for the surficial and upper Floridan / Limestone aquifers, the historical data summary tables for the wells sampled this month, 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,

David S. Adams 11/21/2014

David S. Adams, P.G
Environmental Manager
Public Utilities Department

xc: John Lyons, Director, Public Works Department
Kim Byer, Director, Solid Waste Division, Public Works
Larry Ruiz, Landfill Manager, Solid Waste Division, Public Works
Jeff Greenwell, GMIII, Environmental Services, Public Utilities
Richard Tedder, FDEP Tallahassee
Clark Moore, FDEP Tallahassee
Steve Morgan, FDEP, Southwest District
Andy Schipfer, EPC
Ernest Ely, WMI
Brian Miller, DOH
Rich Siemering, HDR
Bob Curtis, HDR
Joe O'Neill, CDS



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GRAPHIC SCALE

0 175 350 700

SCALE IN FEET
1"=700'

LEGEND

- 001 ▲ LEACHATE SAMPLING LOCATION
- P-1S ◎ SHALLOW PIEZOMETER
- P-1D ◎ DEEP PIEZOMETER
- SUP-1 ● SUPPLY WELL
- TH-32 ⊗ INACTIVE MONITORING WELL LOCATION AND DESIGNATION
- P-8D ✹ PIEZOMETER TO MONITOR HYDRAULIC DIVIDE
- 1D □ SURFACE WATER MONITORING SITE LOCATION
- TH-22A ⊙ MONITORING SITE LOCATION MONITOR WELL
- * FLORIDAN AQUIFER
- 1A** STAFF GAUGE
- TH-73 ⊙ MONITORING WELL SAMPLED AS PART OF IAMP

NOTES:
1. TOPOGRAPHICAL INFORMATION COMPLIED FROM EXISTING CONDITIONS SURVEY PERFORM BY PICKETT & ASSOCIATES DATED JUL 2014.

Hillsborough County
Florida

SHEET TITLE

MONITORING WELLS, PIEZOMETERS, AND SURFACE WATER MONITORING LOCATIONS HILLSBOROUGH COUNTY, FLORIDA

PROJECT NUMBER	REFERENCE SHEET
SCALE	DRAWING NAME
DATE: NOVEMBER, 2014	EXHIBIT NUMBER: 1

Southeast County Landfill
Laboratory Analytical Data
Upper Floridan Aquifer Groundwater Monitoring Wells
October 7-8, 2014

GENERAL	Upper Floridan Wells				MCL STANDARD
PARAMETERS	**TH-72**	**TH-76**	**TH-77**	**TH-78**	
conductivity (umhos/cm) (field)	2,300	432	416	508	**NS**
dissolved oxygen (mg/l) (field)	0.18	0.34	0.22	0.30	**NS**
pH (field)	6.78	7.37	7.36	8.39	**(6.5 - 8.5)****
temperature (°C) (field)	23.59	22.89	23.64	23.35	**NS**
turbidity (NTU) (field)	0.79	17.9	0.71	1.12	**NS**
total dissolved solids (mg/l)	**1,300**	260	240	270	**500****
chloride (mg/l)	**530**	12	9.3	34	**250****
ammonia nitrogen (mg/l as N)	23	0.78	1.4 j3	0.44	**NS**
METALS (mg/l)					**MCL STANDARD**
arsenic	0.004 u	0.004 u	0.004 u	0.004 u	**0.01***
iron	**0.61**	**0.77**	0.16 i	0.23	**0.3****
sodium	**200**	19	16	34	**160***

Note: Ref. Groundwater Guidance Concentrations, FDEP 2012

MCL = Maximum Contaminant Level

NTU = Nephelometric Turbidity Units

NS = No Standard

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

u = parameter was analyzed but not detected.

* = Primary Drinking Water Standard

** = Secondary Drinking Water Standard

1,300

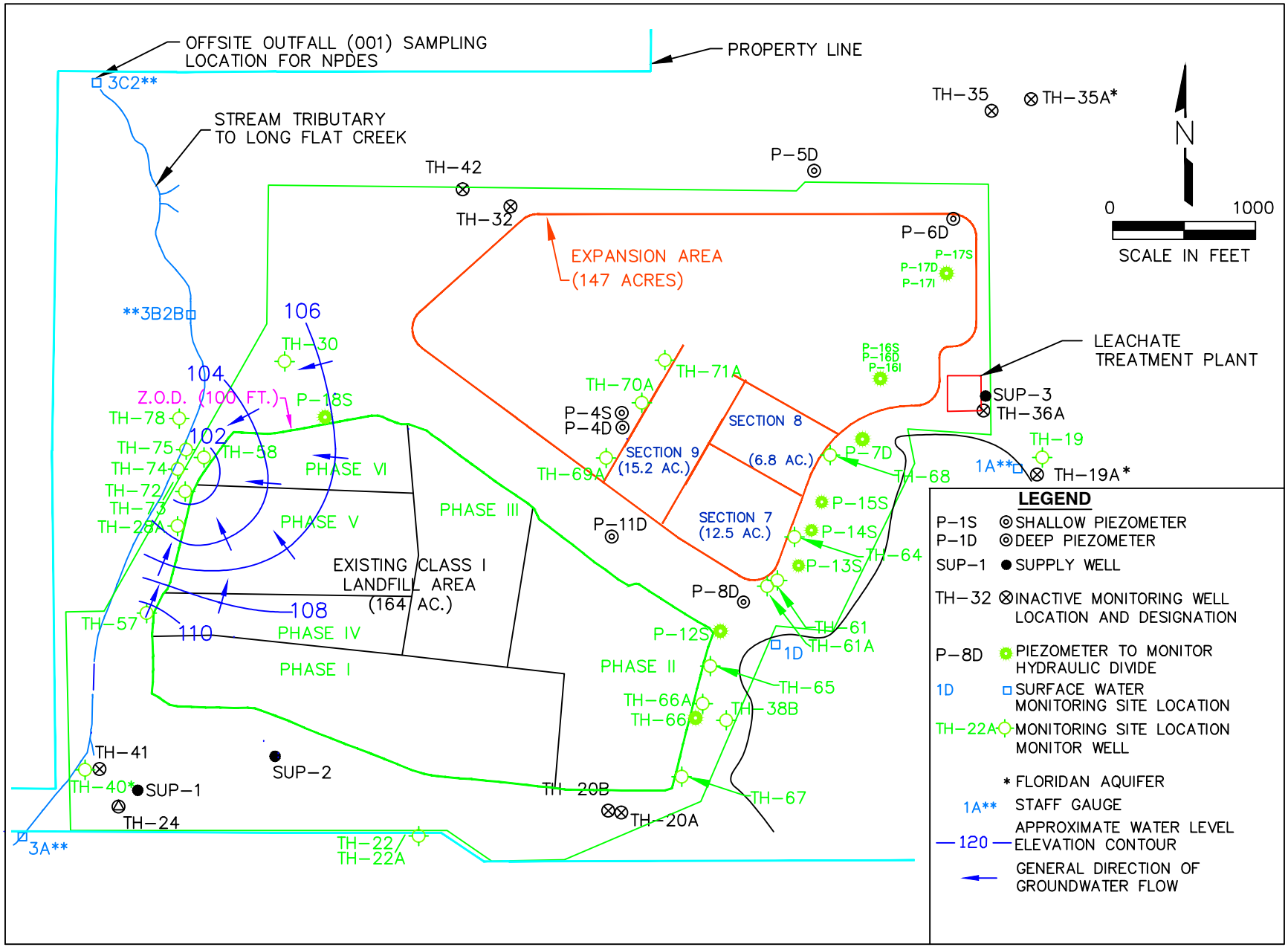
ug/l = micrograms per liter

mg/l = milligrams per liter

Southeast County Landfill
Groundwater Elevations
October 7, 2014

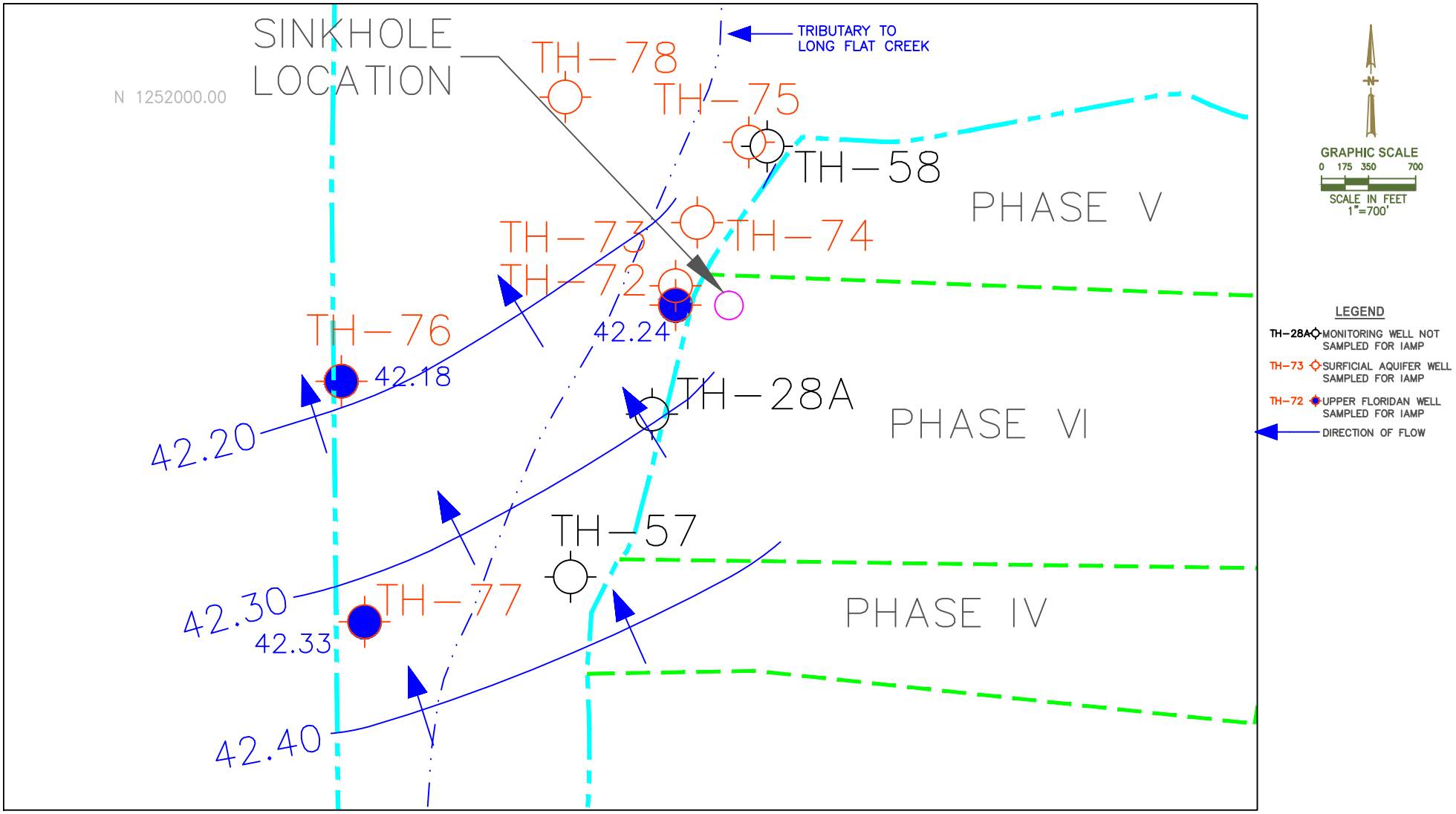
Measuring Point I.D.	T.O.C. Elevations (NGVD)	W.L. B.T.O.C.	W.L. (NGVD)	Time
TH-28A	131.10	27.40	103.70	10:10 AM
TH-30	128.88	23.44	105.44	10:00 AM
TH-57	128.36	18.10	110.26	9:41 AM
TH-58	127.88	26.53	101.35	10:03 AM
TH-72*	130.96	88.72	42.24	10:06 AM
TH-73	131.07	29.69	101.38	10:05 AM
TH-74	109.08	8.35	100.73	9:49 AM
TH-75	106.92	7.07	99.85	9:52 AM
TH-76*	111.21	69.03	42.18	10:30 AM
TH-77*	119.88	77.55	42.33	12:03 PM
TH-78*	120.75	73.49	47.26	10:22 AM

NGVD = National Geodetic Vertical Datum
T.O.C. = Top of Casing
B.T.O.C. = Below Top of Casing
***** = Floridan Well
ND = No Data - Potential Error in Survey
W.L. = Water Level



Southeast County Landfill

Groundwater Elevation Contour Diagram – October 7, 2014



OCTOBER 2014
UPPER FLORIDAN / LIMESTONE AQUIFER CONTOUR DIAGRAM
IN THE VICINITY OF THE FORMER SINKHOLE
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

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	106.80	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	111.35	19.61	1,252	0.33	6.74	23.15	9.9	**870**	**260**	10	0.004 u	**1**	100
05/02/2013	109.56	21.40	1,615	0.18	6.83	23.16	0.45	**810**	**300**	8.6	0.004 u	**0.87**	110
06/04/2013	109.62	21.34	1,440	0.31	7.13	23.3	0.27	**850**	**290**	8.4	0.004 u	**0.82**	120
07/03/2013	98.72	32.24	1,450	0.18	7.03	23.5	0.41	**820**	**280**	8.8	0.004 u	**0.79**	120
08/02/2013	ND	ND	1,256	0.46	6.88	23.43	0.2	**800**	**290**	6.8	0.004 u	**0.72**	120
09/05/2013	87.92	43.04	1,001	0.61	6.98	23.45	1.17	**760**	**290**	7.6	0.004 u	**0.71**	110
10/02/2013	87.39	43.57	1,566	0.32	6.86	23.53	12.6	**1,000**	**350**	7.4 j3	0.004 u	**0.79**	120
11/06/2013	97.90	33.06	2,145	0.16	6.69	23.36	0.8	**1,200**	**450**	12	0.004 u	**0.64**	**170**
12/05/2013	98.50	32.46	2,615	0.39	6.74	23.45	0.58	**1,200**	**580**	16	0.004 u	**0.65**	**200**
01/03/2014	99.02	31.94	2,220	0.84	6.83	22.88	1.64	**1,200**	**580**	25	0.004 u	**0.67**	**230 j3**
02/06/2014	99.50	31.46	2,452	0.13	6.69	23.13	2.07	**1,300**	**580**	23 j3	0.004 u	**0.71**	**210**
03/04/2014	97.91	33.05	2,173	0.24	6.67	23.4	1.33	**1,500**	**580**	22	0.004 u	**0.74**	**220**
04/03/2014	96.22	34.74	1,992	0.22	6.74	23.35	1.33	**1,400**	**590**	27	0.0013 u	**0.71**	**220**
05/06/2014	100.22	30.74	2,247	0.46	6.81	23.5	1.22	**1,400**	**590**	24	0.004 u	**0.64**	**230**
06/03/2014	102.58	28.38	2,771	0.34	**6.45**	23.46	0.96	**1,400**	**570**	27	0.004 u	**0.73**	**220**
07/03/2014	97.64	33.32	2,388	0.29	6.86	23.54	1.34	**1,300**	**570**	24	0.004 u	**0.72**	**220**
08/12/2014	90.40	40.56	2,375	0.28	6.87	23.55	0.81	**1,300**	**540**	23	0.004 u	**0.62**	**200 j3**
09/05/2014	90.75	40.21	3,156	0.46	6.74	23.61	1.96	**1,400**	**510**	20	0.004 u	**0.65**	**210**

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.
ND = No Data - water levels collected during quarterly ADR.
1,100 EXCEEDS STANDARD

Hillsborough County Southeast Landfill
Laboratory Analytical Results from IAMP Groundwater Monitoring
TH-76

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)
05/02/2013	89.83	21.38	450	0.22	7.63	22.81	36.9	220	13	0.4	0.004 u	**1.1**	20
06/04/2013	89.91	21.30	401	0.27	7.86	22.9	16.2	240	13	0.4	0.004 u	**0.66**	22
07/03/2013	79.04	32.17	398	0.19	8	23	28.6	210	12	0.34	0.004 u	**0.99**	22
08/02/2013	ND	ND	343	0.22	7.57	23.02	42.2	230	13	0.26	0.004 u	**1.6**	21
09/05/2013	68.22	42.99	278	0.21	7.74	22.97	46	240	12	0.32	0.004 u	**1.5**	20
10/02/2013	67.69	43.46	399	0.22	7.61	22.99	61.9	120	13	0.38	0.004 u	**1.7**	20
11/06/2013	78.19	33.02	446	0.64	7.54	22.84	29	260	13	0.36	0.004 u	**1.1**	20
12/05/2013	78.80	32.41	478	0.48	7.45	22.9	19.2	240	12	0.35	0.004 u	**0.96**	20
01/03/2014	79.38	31.83	398	0.58	7.67	22.35	19.4	190	12	0.23 j3	0.004 u	**1.1**	20
02/06/2014	79.87	31.34	446	0.14	7.54	22.57	18.1	230	12	0.45	0.004 u	**0.96**	20
03/04/2014	78.20	33.01	434	0.18	7.36	22.7	26.2	230	12	0.33	0.004 u	**0.69**	20
04/03/2014	76.54	34.67	441	0.18	7.46	22.82	24.7	210	12	0.6	0.0013 u	**0.34**	19
05/06/2014	80.52	30.69	427	0.24	7.56	22.85	12.7	220	12	0.38	0.004 u	**0.65**	21
06/03/2014	82.85	28.36	423	0.3	7.47	22.82	16.8	240	12	0.47	0.004 u	**0.64**	20
07/03/2014	77.98	33.23	421	0.3	7.46	22.83	19.5	230	12	0.49	0.004 u	**0.2**	20
08/13/2014	70.72	40.49	445	0.25	7.37	22.81	17	240	12	0.5	0.004 u	**0.7**	20
09/05/2014	71.05	40.16	596	0.2	7.28	22.92	19	240	12	0.72	0.004 u	**0.61**	20

u = parameter was analyzed but not detected
ND = No Data - water levels collected during quarterly ADR.
1.1 EXCEEDS STANDARD

Hillsborough County Southeast Landfill
Laboratory Analytical Results from IAMP Groundwater Monitoring
TH-77

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)
05/02/2013	98.31	21.57	440	0.57	7.39	23.39	59.4	190	9.4	0.39	0.004 u	**1.2**	17
06/04/2013	98.38	21.50	384	0.56	7.86	23.59	35.4	230	8.9	0.42	0.004 u	**0.89**	18
07/03/2013	87.48	32.40	388	0.41	7.8	23.7	38.4	210	8.9	0.4	0.004 u	**1.1**	17
08/02/2013	ND	ND	334	0.47	7.44	23.66	42.9	230	9.2	0.36	0.004 u	**1.1**	18
09/05/2013	76.66	43.22	269	0.83	7.61	23.68	47.1	230	8.9	0.35	0.004 u	**0.96**	16
10/02/2013	76.14	43.72	383	0.69	7.5	23.59	52.7	240	9.1	0.39	0.004 u	**1.3**	17
11/06/2013	86.68	33.20	423	0.74	7.43	23.51	25.1	230	9.7	0.36 j3	0.004 u	**0.68**	17
12/05/2013	87.29	32.59	451	0.9	7.44	23.6	16.4	220	9	0.36	0.004 u	**0.58**	17
01/03/2014	87.87	32.01	371	0.85	7.65	23.18	16.5	160	9.1	0.39	0.004 u	**0.63**	17
02/06/2014	88.30	31.58	424	0.09	7.53	23.39	4.62	250	9.2	0.27	0.004 u	0.26	16
03/04/2014	86.70	33.18	418	0.36	7.34	23.38	1.12	230	9.3	0.32	0.004 u	0.21	16
04/03/2014	85.02	34.86	430	0.28	7.45	23.47	1.97	220	9.4	0.61	0.0013 u	0.18	15
05/06/2014	89.02	30.86	414	0.34	7.52	23.47	1.01	220	9.7	0.59	0.004 u	0.19	17
06/03/2014	91.34	28.54	464	0.27	7.47	23.49	0.88	230	9.7	0.75	0.004 u	0.19	17
07/03/2014	86.40	33.48	409	0.34	7.44	23.65	1.56	230	9.6	0.48	0.004 u	0.14 i	17
08/13/2014	79.19	40.69	436	0.36	7.39	23.76	0.61	260	9.5	0.49	0.004 u	0.16 i	16
09/05/2014	79.52	40.36	578	0.37	7.31	23.62	1.02	240	12	0.72	0.004 u	0.61	20

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.
ND = No Data - water levels collected during quarterly ADR.
1.2 EXCEEDS STANDARD

Hillsborough County Southeast Landfill
Laboratory Analytical Results from IAMP Groundwater Monitoring
TH-78

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)
07/02/2014	ND	ND	363	0.41	**9.08**	23.89	19.3	210	43	0.44	0.0019 i	**1**	38
08/12/2014	75.51	45.24	467	0.4	**9.55**	23.56	7.37	240	38	0.42 j3	0.004 u	**0.48**	34
09/05/2014	75.12	45.63	680	0.15	8.18	23.46	3.86	270	36	0.4	0.004 u	0.27	35

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.
ND = No Data - survey data was not complete.
1.2 EXCEEDS STANDARD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 660-63242-1
Client Project/Site: SELF IAMP Monitoring Wells

For:
Hillsborough Co Public Utilities Dept
Environmental Services Group
Brandon Support Operations Complex
332 North Falkenburg Rd, 2nd Floor
Tampa, Florida 33619

Attn: David Adams

Authorized for release by:
10/20/2014 4:47:11 PM

Nancy Robertson, Project Manager II
(813)885-7427
nancy.robertson@testamericainc.com

Table of Contents

Sample Summary

Client: Hillsborough Co Public Utilities Dept
Project/Site: SELF IAMP Monitoring Wells

TestAmerica Job ID: 660-63242-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
660-63242-1	TH- 77	Water	10/07/14 12:53	10/07/14 15:10
660-63242-2	TH- 76	Water	10/07/14 11:48	10/07/14 15:10
660-63242-3	FIELD BLANK	Water	10/07/14 10:40	10/07/14 15:10
660-63267-1	TH-72	Ground Water	10/08/14 12:06	10/08/14 14:00
660-63267-2	TH-78	Ground Water	10/08/14 10:47	10/08/14 14:00
660-63267-3	DUPLICATE	Ground Water	10/08/14 00:00	10/08/14 14:00

Job ID: 660-63242-1

Laboratory: TestAmerica Tampa

Narrative

Job Narrative
660-63242-1

Comments
No additional comments.

Receipt
The samples were received on 10/7/2014 3:10 PM and 10/8/2014 2:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.0º C and 4.4º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 350.1: The matrix spike duplicate (MSD) recovery for batch 353054 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. The sample is flagged with J3.

No additional analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Qualifiers

HPLC/IC

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

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
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
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
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
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)
NC	Not Calculated
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 Co Public Utilities Dept
Project/Site: SELF IAMP Monitoring Wells

TestAmerica Job ID: 660-63242-1

Client Sample ID: TH- 77 — Lab Sample ID: 660-63242-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.3		0.50	0.25	mg/L	1		300.0	Total/NA
Iron	160	I	200	50	ug/L	1		6010B	Total Recoverable
Sodium	16		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	1.4	J3	0.10	0.052	mg/L	2		350.1	Total/NA
Total Dissolved Solids	240		10	10	mg/L	1		SM 2540C	Total/NA
Field pH	7.36				SU	1		Field Sampling	Total/NA
Field Temperature	23.64				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.22				mg/L	1		Field Sampling	Total/NA
Specific Conductance	416				umhos/cm	1		Field Sampling	Total/NA
Turbidity	0.71				NTU	1		Field Sampling	Total/NA

Client Sample ID: TH- 76 — Lab Sample ID: 660-63242-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12		0.50	0.25	mg/L	1		300.0	Total/NA
Iron	770		200	50	ug/L	1		6010B	Total Recoverable
Sodium	19		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	0.78		0.050	0.026	mg/L	1		350.1	Total/NA
Total Dissolved Solids	260		10	10	mg/L	1		SM 2540C	Total/NA
Field pH	7.37				SU	1		Field Sampling	Total/NA
Field Temperature	22.89				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.34				mg/L	1		Field Sampling	Total/NA
Specific Conductance	432				umhos/cm	1		Field Sampling	Total/NA
Turbidity	17.9				NTU	1		Field Sampling	Total/NA

Client Sample ID: FIELD BLANK — Lab Sample ID: 660-63242-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ammonia as N	0.11		0.050	0.026	mg/L	1		350.1	Total/NA

Client Sample ID: TH-72 — Lab Sample ID: 660-63267-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	530		10	5.0	mg/L	20		300.0	Total/NA
Iron	610		200	50	ug/L	1		6010B	Total Recoverable
Sodium	200		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	23		1.0	0.52	mg/L	20		350.1	Total/NA
Total Dissolved Solids	1300		25	25	mg/L	1		SM 2540C	Total/NA
Field pH	6.78				SU	1		Field Sampling	Total/NA
Field Temperature	23.59				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.18				mg/L	1		Field Sampling	Total/NA
Specific Conductance	2300				uS/cm	1		Field Sampling	Total/NA
Turbidity	0.79				NTU	1		Field Sampling	Total/NA

Client Sample ID: TH-78 — Lab Sample ID: 660-63267-2

This Detection Summary does not include radiochemical test results.

TestAmerica Tampa

Client Sample ID: TH-78 (Continued)

Lab Sample ID: 660-63267-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	34		0.50	0.25	mg/L	1		300.0	Total/NA
Iron	230		200	50	ug/L	1		6010B	Total Recoverable
Sodium	34		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	0.44		0.050	0.026	mg/L	1		350.1	Total/NA
Total Dissolved Solids	270		10	10	mg/L	1		SM 2540C	Total/NA
Field pH	8.39				SU	1		Field Sampling	Total/NA
Field Temperature	23.35				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.30				mg/L	1		Field Sampling	Total/NA
Specific Conductance	508				uS/cm	1		Field Sampling	Total/NA
Turbidity	1.12				NTU	1		Field Sampling	Total/NA

Client Sample ID: DUPLICATE

Lab Sample ID: 660-63267-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	34		0.50	0.25	mg/L	1		300.0	Total/NA
Iron	240		200	50	ug/L	1		6010B	Total Recoverable
Sodium	34		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	0.88		0.050	0.026	mg/L	1		350.1	Total/NA
Total Dissolved Solids	260		10	10	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Hillsborough Co Public Utilities Dept
Project/Site: SELF IAMP Monitoring Wells

TestAmerica Job ID: 660-63242-1

Client Sample ID: TH- 77
Date Collected: 10/07/14 12:53
Date Received: 10/07/14 15:10

Lab Sample ID: 660-63242-1
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.3		0.50	0.25	mg/L			10/15/14 15:09	1

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		10/09/14 11:01	10/13/14 10:42	1
Iron	160	I	200	50	ug/L		10/09/14 11:01	10/13/14 10:42	1
Sodium	16		0.50	0.31	mg/L		10/09/14 11:01	10/13/14 10:42	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	1.4	J3	0.10	0.052	mg/L			10/10/14 12:53	2
Total Dissolved Solids	240		10	10	mg/L			10/08/14 07:16	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.36				SU			10/07/14 12:52	1
Field Temperature	23.64				Degrees C			10/07/14 12:52	1
Oxygen, Dissolved	0.22				mg/L			10/07/14 12:52	1
Specific Conductance	416				umhos/cm			10/07/14 12:52	1
Turbidity	0.71				NTU			10/07/14 12:52	1

Client: Hillsborough Co Public Utilities Dept
Project/Site: SELF IAMP Monitoring Wells

TestAmerica Job ID: 660-63242-1

Client Sample ID: TH- 76
Date Collected: 10/07/14 11:48
Date Received: 10/07/14 15:10

Lab Sample ID: 660-63242-2
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12		0.50	0.25	mg/L			10/15/14 15:24	1

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		10/09/14 11:01	10/13/14 10:55	1
Iron	770		200	50	ug/L		10/09/14 11:01	10/13/14 10:55	1
Sodium	19		0.50	0.31	mg/L		10/09/14 11:01	10/13/14 10:55	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	0.78		0.050	0.026	mg/L			10/10/14 12:36	1
Total Dissolved Solids	260		10	10	mg/L			10/08/14 07:16	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.37				SU			10/07/14 11:48	1
Field Temperature	22.89				Degrees C			10/07/14 11:48	1
Oxygen, Dissolved	0.34				mg/L			10/07/14 11:48	1
Specific Conductance	432				umhos/cm			10/07/14 11:48	1
Turbidity	17.9				NTU			10/07/14 11:48	1

Client: Hillsborough Co Public Utilities Dept
Project/Site: SELF IAMP Monitoring Wells

TestAmerica Job ID: 660-63242-1

Client Sample ID: FIELD BLANK
Date Collected: 10/07/14 10:40
Date Received: 10/07/14 15:10

Lab Sample ID: 660-63242-3
Matrix: Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.25	U	0.50	0.25	mg/L			10/15/14 16:10	1

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		10/09/14 11:01	10/13/14 10:58	1
Iron	50	U	200	50	ug/L		10/09/14 11:01	10/13/14 10:58	1
Sodium	0.31	U	0.50	0.31	mg/L		10/09/14 11:01	10/13/14 10:58	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	**0.11**		0.050	0.026	mg/L			10/09/14 21:36	1
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			10/08/14 07:16	1

Client: Hillsborough Co Public Utilities Dept
Project/Site: SELF IAMP Monitoring Wells

TestAmerica Job ID: 660-63242-1

Client Sample ID: TH-72
Date Collected: 10/08/14 12:06
Date Received: 10/08/14 14:00

Lab Sample ID: 660-63267-1
Matrix: Ground Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	530		10	5.0	mg/L			10/15/14 00:43	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		10/09/14 11:01	10/13/14 11:18	1
Iron	610		200	50	ug/L		10/09/14 11:01	10/13/14 11:18	1
Sodium	200		0.50	0.31	mg/L		10/09/14 11:01	10/13/14 11:18	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	23		1.0	0.52	mg/L			10/14/14 10:27	20
Total Dissolved Solids	1300		25	25	mg/L			10/09/14 15:43	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.78				SU			10/08/14 12:06	1
Field Temperature	23.59				Degrees C			10/08/14 12:06	1
Oxygen, Dissolved	0.18				mg/L			10/08/14 12:06	1
Specific Conductance	2300				uS/cm			10/08/14 12:06	1
Turbidity	0.79				NTU			10/08/14 12:06	1

Client: Hillsborough Co Public Utilities Dept
Project/Site: SELF IAMP Monitoring Wells

TestAmerica Job ID: 660-63242-1

Client Sample ID: TH-78
Date Collected: 10/08/14 10:47
Date Received: 10/08/14 14:00

Lab Sample ID: 660-63267-2
Matrix: Ground Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34		0.50	0.25	mg/L			10/15/14 00:58	1

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		10/09/14 11:01	10/13/14 11:22	1
Iron	230		200	50	ug/L		10/09/14 11:01	10/13/14 11:22	1
Sodium	34		0.50	0.31	mg/L		10/09/14 11:01	10/13/14 11:22	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	0.44		0.050	0.026	mg/L			10/13/14 20:31	1
Total Dissolved Solids	270		10	10	mg/L			10/09/14 15:43	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	8.39				SU			10/08/14 10:47	1
Field Temperature	23.35				Degrees C			10/08/14 10:47	1
Oxygen, Dissolved	0.30				mg/L			10/08/14 10:47	1
Specific Conductance	508				uS/cm			10/08/14 10:47	1
Turbidity	1.12				NTU			10/08/14 10:47	1

Client: Hillsborough Co Public Utilities Dept
Project/Site: SELF IAMP Monitoring Wells

TestAmerica Job ID: 660-63242-1

Client Sample ID: DUPLICATE
Date Collected: 10/08/14 00:00
Date Received: 10/08/14 14:00

Lab Sample ID: 660-63267-3
Matrix: Ground Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**34**		0.50	0.25	mg/L			10/15/14 01:41	1

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		10/09/14 11:01	10/13/14 11:25	1
Iron	**240**		200	50	ug/L		10/09/14 11:01	10/13/14 11:25	1
Sodium	**34**		0.50	0.31	mg/L		10/09/14 11:01	10/13/14 11:25	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	**0.88**		0.050	0.026	mg/L			10/14/14 10:10	1
Total Dissolved Solids	**260**		10	10	mg/L			10/09/14 15:43	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 680-353588/29
Matrix: Water
Analysis Batch: 353588

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.25	U	0.50	0.25	mg/L			10/14/14 20:24	1

Lab Sample ID: LCS 680-353588/30
Matrix: Water
Analysis Batch: 353588

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.82		mg/L		98	90 - 110

Lab Sample ID: LCSD 680-353588/31
Matrix: Water
Analysis Batch: 353588

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	9.81		mg/L		98	90 - 110	0	30

Lab Sample ID: 660-63267-2 MS
Matrix: Ground Water
Analysis Batch: 353588

Client Sample ID: TH-78
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	34		10.0	44.1		mg/L		97	80 - 120

Lab Sample ID: 660-63267-2 MSD
Matrix: Ground Water
Analysis Batch: 353588

Client Sample ID: TH-78
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	34		10.0	44.2		mg/L		98	80 - 120	0	30

Lab Sample ID: MB 680-353675/5
Matrix: Water
Analysis Batch: 353675

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.25	U	0.50	0.25	mg/L			10/15/14 13:06	1

Lab Sample ID: LCS 680-353675/6
Matrix: Water
Analysis Batch: 353675

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.71		mg/L		97	90 - 110

Lab Sample ID: LCSD 680-353675/7
Matrix: Water
Analysis Batch: 353675

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	9.81		mg/L		98	90 - 110	1	30

Lab Sample ID: 660-63242-2 MS
Matrix: Water
Analysis Batch: 353675

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	12		10.0	22.1		mg/L		103	80 - 120

Lab Sample ID: 660-63242-2 MSD
Matrix: Water
Analysis Batch: 353675

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	12		10.0	21.9		mg/L		100	80 - 120	1	30

Lab Sample ID: 680-105985-E-1 DU
Matrix: Water
Analysis Batch: 353675

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chloride	2.6		2.61		mg/L		1	30

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 660-152180/1-A
Matrix: Water
Analysis Batch: 152278

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 152180

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	U	10	4.0	ug/L		10/09/14 11:01	10/13/14 10:32	1
Iron	50	U	200	50	ug/L		10/09/14 11:01	10/13/14 10:32	1
Sodium	0.31	U	0.50	0.31	mg/L		10/09/14 11:01	10/13/14 10:32	1

Lab Sample ID: LCS 660-152180/2-A
Matrix: Water
Analysis Batch: 152278

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 152180

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	996		ug/L		100	80 - 120
Iron	1000	1040		ug/L		104	80 - 120
Sodium	10.0	9.72		mg/L		97	80 - 120

Lab Sample ID: 660-63242-1 MS
Matrix: Water
Analysis Batch: 152278

Client Sample ID: TH- 77
Prep Type: Total Recoverable
Prep Batch: 152180

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	4.0	U	1000	1010		ug/L		101	80 - 120
Iron	160	I	1000	1190		ug/L		103	80 - 120
Sodium	16		10.0	26.2		mg/L		100	80 - 120

Lab Sample ID: 660-63242-1 MSD
Matrix: Water
Analysis Batch: 152278

Client Sample ID: TH- 77
Prep Type: Total Recoverable
Prep Batch: 152180

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	4.0	U	1000	1030		ug/L		103	80 - 120	2	20

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 660-63242-1 MSD — **Client Sample ID: TH- 77**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 152278 — **Prep Batch: 152180**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Iron	160	I	1000	1210		ug/L		105	80 - 120	1	20
Sodium	16		10.0	26.5		mg/L		104	80 - 120	1	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 680-353054/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 353054

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			10/09/14 20:00	1

Lab Sample ID: LCS 680-353054/40 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 353054

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia as N	1.00	1.02		mg/L		102	90 - 110

Lab Sample ID: 660-63242-1 MS — **Client Sample ID: TH- 77**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 353054

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia as N	1.4	J3	1.00	2.25	J3	mg/L		85	90 - 110

Lab Sample ID: 660-63242-1 MSD — **Client Sample ID: TH- 77**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 353054

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia as N	1.4	J3	1.00	2.06	J3	mg/L		67	90 - 110	8	30

Lab Sample ID: 680-106011-B-11 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 353054

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia as N	0.23		0.211		mg/L		10	30

Lab Sample ID: MB 680-353445/36 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 353445

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			10/14/14 10:10	1

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: LCS 680-353445/1
Matrix: Water
Analysis Batch: 353445

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia as N			1.00	1.01		mg/L		101	90 - 110		

Lab Sample ID: 640-49416-B-1 MS
Matrix: Water
Analysis Batch: 353445

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia as N	0.13		1.00	1.20		mg/L		107	90 - 110		

Lab Sample ID: 640-49416-B-1 MSD
Matrix: Water
Analysis Batch: 353445

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia as N	0.13		1.00	1.16		mg/L		102	90 - 110	4	30

Lab Sample ID: 660-63267-2 DU
Matrix: Ground Water
Analysis Batch: 353445

Client Sample ID: TH-78
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Ammonia as N	0.44			0.452		mg/L				3	30

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

Lab Sample ID: MB 660-152121/1
Matrix: Water
Analysis Batch: 152121

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			10/08/14 07:16	1

Lab Sample ID: LCS 660-152121/2
Matrix: Water
Analysis Batch: 152121

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids			10000	9950		mg/L		99	80 - 120		

Lab Sample ID: 660-63242-2 DU
Matrix: Water
Analysis Batch: 152121

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

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	260			264		mg/L				0	20

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

Lab Sample ID: MB 660-152196/1
Matrix: Water
Analysis Batch: 152196

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			10/09/14 15:43	1

Lab Sample ID: LCS 660-152196/2
Matrix: Water
Analysis Batch: 152196

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids			10000	9930		mg/L		99	80 - 120		

Lab Sample ID: 660-63267-2 DU
Matrix: Ground Water
Analysis Batch: 152196

Client Sample ID: TH-78
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	270			284		mg/L				4	20

HPLC/IC

Analysis Batch: 353588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-63267-1	TH-72	Total/NA	Ground Water	300.0	
660-63267-2	TH-78	Total/NA	Ground Water	300.0	
660-63267-2 MS	TH-78	Total/NA	Ground Water	300.0	
660-63267-2 MSD	TH-78	Total/NA	Ground Water	300.0	
660-63267-3	DUPLICATE	Total/NA	Ground Water	300.0	
LCS 680-353588/30	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-353588/31	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-353588/29	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 353675

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-63242-1	TH- 77	Total/NA	Water	300.0	
660-63242-2	TH- 76	Total/NA	Water	300.0	
660-63242-2 MS	TH- 76	Total/NA	Water	300.0	
660-63242-2 MSD	TH- 76	Total/NA	Water	300.0	
660-63242-3	FIELD BLANK	Total/NA	Water	300.0	
680-105985-E-1 DU	Duplicate	Total/NA	Water	300.0	
LCS 680-353675/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-353675/7	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-353675/5	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 152180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-63242-1	TH- 77	Total Recoverable	Water	3005A	
660-63242-1 MS	TH- 77	Total Recoverable	Water	3005A	
660-63242-1 MSD	TH- 77	Total Recoverable	Water	3005A	
660-63242-2	TH- 76	Total Recoverable	Water	3005A	
660-63242-3	FIELD BLANK	Total Recoverable	Water	3005A	
660-63267-1	TH-72	Total Recoverable	Ground Water	3005A	
660-63267-2	TH-78	Total Recoverable	Ground Water	3005A	
660-63267-3	DUPLICATE	Total Recoverable	Ground Water	3005A	
LCS 660-152180/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 660-152180/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 152278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-63242-1	TH- 77	Total Recoverable	Water	6010B	152180
660-63242-1 MS	TH- 77	Total Recoverable	Water	6010B	152180
660-63242-1 MSD	TH- 77	Total Recoverable	Water	6010B	152180
660-63242-2	TH- 76	Total Recoverable	Water	6010B	152180
660-63242-3	FIELD BLANK	Total Recoverable	Water	6010B	152180
660-63267-1	TH-72	Total Recoverable	Ground Water	6010B	152180
660-63267-2	TH-78	Total Recoverable	Ground Water	6010B	152180
660-63267-3	DUPLICATE	Total Recoverable	Ground Water	6010B	152180
LCS 660-152180/2-A	Lab Control Sample	Total Recoverable	Water	6010B	152180
MB 660-152180/1-A	Method Blank	Total Recoverable	Water	6010B	152180

General Chemistry

Analysis Batch: 152121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-63242-1	TH- 77	Total/NA	Water	SM 2540C	
660-63242-2	TH- 76	Total/NA	Water	SM 2540C	
660-63242-2 DU	TH- 76	Total/NA	Water	SM 2540C	
660-63242-3	FIELD BLANK	Total/NA	Water	SM 2540C	
LCS 660-152121/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 660-152121/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 152196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-63267-1	TH-72	Total/NA	Ground Water	SM 2540C	
660-63267-2	TH-78	Total/NA	Ground Water	SM 2540C	
660-63267-2 DU	TH-78	Total/NA	Ground Water	SM 2540C	
660-63267-3	DUPLICATE	Total/NA	Ground Water	SM 2540C	
LCS 660-152196/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 660-152196/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 353054

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-63242-1	TH- 77	Total/NA	Water	350.1	
660-63242-1 MS	TH- 77	Total/NA	Water	350.1	
660-63242-1 MSD	TH- 77	Total/NA	Water	350.1	
660-63242-2	TH- 76	Total/NA	Water	350.1	
660-63242-3	FIELD BLANK	Total/NA	Water	350.1	
680-106011-B-11 DU	Duplicate	Total/NA	Water	350.1	
LCS 680-353054/40	Lab Control Sample	Total/NA	Water	350.1	
MB 680-353054/2	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 353445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
640-49416-B-1 MS	Matrix Spike	Total/NA	Water	350.1	
640-49416-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	350.1	
660-63267-1	TH-72	Total/NA	Ground Water	350.1	
660-63267-2	TH-78	Total/NA	Ground Water	350.1	
660-63267-2 DU	TH-78	Total/NA	Ground Water	350.1	
660-63267-3	DUPLICATE	Total/NA	Ground Water	350.1	
LCS 680-353445/1	Lab Control Sample	Total/NA	Water	350.1	
MB 680-353445/36	Method Blank	Total/NA	Water	350.1	

Field Service / Mobile Lab

Analysis Batch: 152144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-63242-1	TH- 77	Total/NA	Water	Field Sampling	
660-63242-2	TH- 76	Total/NA	Water	Field Sampling	

Analysis Batch: 152508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-63267-1	TH-72	Total/NA	Ground Water	Field Sampling	
660-63267-2	TH-78	Total/NA	Ground Water	Field Sampling	

Client Sample ID: TH- 77

Lab Sample ID: 660-63242-1

Date Collected: 10/07/14 12:53

Matrix: Water

Date Received: 10/07/14 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	353675	10/15/14 15:09	DAS	TAL SAV
Total Recoverable	Prep	3005A			152180	10/09/14 11:01	GAF	TAL TAM
Total Recoverable	Analysis	6010B		1	152278	10/13/14 10:42	GAF	TAL TAM
Total/NA	Analysis	350.1		2	353054	10/10/14 12:53	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	152121	10/08/14 07:16	TKO	TAL TAM
Total/NA	Analysis	Field Sampling		1	152144	10/07/14 12:52	FS	TAL TAM

Client Sample ID: TH- 76

Lab Sample ID: 660-63242-2

Date Collected: 10/07/14 11:48

Matrix: Water

Date Received: 10/07/14 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	353675	10/15/14 15:24	DAS	TAL SAV
Total Recoverable	Prep	3005A			152180	10/09/14 11:01	GAF	TAL TAM
Total Recoverable	Analysis	6010B		1	152278	10/13/14 10:55	GAF	TAL TAM
Total/NA	Analysis	350.1		1	353054	10/10/14 12:36	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	152121	10/08/14 07:16	TKO	TAL TAM
Total/NA	Analysis	Field Sampling		1	152144	10/07/14 11:48	FS	TAL TAM

Client Sample ID: FIELD BLANK

Lab Sample ID: 660-63242-3

Date Collected: 10/07/14 10:40

Matrix: Water

Date Received: 10/07/14 15:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	353675	10/15/14 16:10	DAS	TAL SAV
Total Recoverable	Prep	3005A			152180	10/09/14 11:01	GAF	TAL TAM
Total Recoverable	Analysis	6010B		1	152278	10/13/14 10:58	GAF	TAL TAM
Total/NA	Analysis	350.1		1	353054	10/09/14 21:36	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	152121	10/08/14 07:16	TKO	TAL TAM

Client Sample ID: TH-72

Lab Sample ID: 660-63267-1

Date Collected: 10/08/14 12:06

Matrix: Ground Water

Date Received: 10/08/14 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20	353588	10/15/14 00:43	DAS	TAL SAV
Total Recoverable	Prep	3005A			152180	10/09/14 11:01	GAF	TAL TAM
Total Recoverable	Analysis	6010B		1	152278	10/13/14 11:18	GAF	TAL TAM
Total/NA	Analysis	350.1		20	353445	10/14/14 10:27	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	152196	10/09/14 15:43	TKO	TAL TAM
Total/NA	Analysis	Field Sampling		1	152508	10/08/14 12:06	FS	TAL TAM

Lab Chronicle

Client: Hillsborough Co Public Utilities Dept
Project/Site: SELF IAMP Monitoring Wells

TestAmerica Job ID: 660-63242-1

Client Sample ID: TH-78

Lab Sample ID: 660-63267-2

Date Collected: 10/08/14 10:47

Matrix: Ground Water

Date Received: 10/08/14 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	353588	10/15/14 00:58	DAS	TAL SAV
Total Recoverable	Prep	3005A			152180	10/09/14 11:01	GAF	TAL TAM
Total Recoverable	Analysis	6010B		1	152278	10/13/14 11:22	GAF	TAL TAM
Total/NA	Analysis	350.1		1	353445	10/13/14 20:31	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	152196	10/09/14 15:43	TKO	TAL TAM
Total/NA	Analysis	Field Sampling		1	152508	10/08/14 10:47	FS	TAL TAM

Client Sample ID: DUPLICATE

Lab Sample ID: 660-63267-3

Date Collected: 10/08/14 00:00

Matrix: Ground Water

Date Received: 10/08/14 14:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	353588	10/15/14 01:41	DAS	TAL SAV
Total Recoverable	Prep	3005A			152180	10/09/14 11:01	GAF	TAL TAM
Total Recoverable	Analysis	6010B		1	152278	10/13/14 11:25	GAF	TAL TAM
Total/NA	Analysis	350.1		1	353445	10/14/14 10:10	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	152196	10/09/14 15:43	TKO	TAL TAM

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

Method Summary

Client: Hillsborough Co Public Utilities Dept
Project/Site: SELF IAMP Monitoring Wells

TestAmerica Job ID: 660-63242-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL SAV
6010B	Metals (ICP)	SW846	TAL TAM
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 Co Public Utilities Dept
Project/Site: SELF IAMP Monitoring Wells

TestAmerica Job ID: 660-63242-1

Laboratory: TestAmerica Tampa

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E84282	06-30-15

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
	AFCEE		SAVLAB	
A2LA	DoD ELAP		399.01	02-28-15
A2LA	ISO/IEC 17025		399.01	02-28-15
Alabama	State Program	4	41450	06-30-15
Arkansas DEQ	State Program	6	88-0692	01-31-15
California	NELAP	9	3217CA	07-31-14 *
Colorado	State Program	8	N/A	12-31-14
Connecticut	State Program	1	PH-0161	03-31-15
Florida	NELAP	4	E87052	06-30-15
GA Dept. of Agriculture	State Program	4	N/A	06-12-17
Georgia	State Program	4	N/A	06-30-15
Georgia	State Program	4	803	06-30-15
Guam	State Program	9	09-005r	04-16-15
Hawaii	State Program	9	N/A	06-30-15
Illinois	NELAP	5	200022	11-30-14 *
Indiana	State Program	5	N/A	06-30-15
Iowa	State Program	7	353	07-01-15
Kentucky (DW)	State Program	4	90084	12-31-14
Kentucky (UST)	State Program	4	18	06-30-15
Louisiana	NELAP	6	30690	06-30-14 *
Louisiana (DW)	NELAP	6	LA140023	12-31-14
Maine	State Program	1	GA00006	09-24-16
Maryland	State Program	3	250	12-31-14
Massachusetts	State Program	1	M-GA006	06-30-15
Michigan	State Program	5	9925	06-30-15
Mississippi	State Program	4	N/A	06-30-15
Montana	State Program	8	CERT0081	01-01-15
Nebraska	State Program	7	TestAmerica-Savannah	06-30-15
New Jersey	NELAP	2	GA769	06-30-15
New Mexico	State Program	6	N/A	06-30-15
New York	NELAP	2	10842	03-31-15
North Carolina (DW)	State Program	4	13701	07-31-15
North Carolina (WW/SW)	State Program	4	269	12-31-14
Oklahoma	State Program	6	9984	08-31-15
Pennsylvania	NELAP	3	68-00474	06-30-15
Puerto Rico	State Program	2	GA00006	12-31-14
South Carolina	State Program	4	98001	06-30-14 *
Tennessee	State Program	4	TN02961	06-30-15
Texas	NELAP	6	T104704185-08-TX	11-30-14 *
USDA	Federal		SAV 3-04	06-11-17
Virginia	NELAP	3	460161	06-14-15
Washington	State Program	10	C805	06-10-15
West Virginia (DW)	State Program	3	9950C	12-31-14
West Virginia DEP	State Program	3	94	06-30-15

* Certification renewal pending - certification considered valid.

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	08-31-15
Wyoming	State Program	8	8TMS-L	06-30-15

Serial Number

10/20/2014

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Tampa
6712 Benjamin Rd, Suite 100
Tampa, FL 33634
www.testamericainc.com
Phone: (813) 885 7427
Fax: (813) 885 7049

Alternate Laboratory Name/Location:
Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION
SELF-IAMP Monitoring Wells		Lithia, FL
TESTAMERICA (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
Nancy Robertson		
CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
Michael Townsel	(813) 663-3222	(813) 274-6801
CLIENT NAME	CLIENT EMAIL	
Hills. County Public Utilities	townselm@hillsboroughcounty.org	
CLIENT ADDRESS		
332 North Falkenburg Road		
COMPANY CONTRACTING THIS WORK	SAMPLER'S SIGNATURE	

PAGE ___ OF ___

STANDARD REPORT DELIVERY ○
DATE DUE_____
EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE:

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX: COMPOSITE (C) OR GRAB (G) INDICATE	MATRIX: AQUEOUS (WATER)	MATRIX: SOLID OR SEMISOLID	MATRIX: AIR	MATRIX: NONAQUEOUS LIQUID (OIL, SOLVENT...)	NUMBER OF CONTAINERS SUBMITTED: Ammonia-N (H2SO4)	TDS (ice)	Chloride (ice)	As, Fe, Na (HNO3)	REMARKS
10-7-14	12:53	TH-77	G	X				X	X	X	X	
↓	11:48	TH-76	↓	X				X	X	X	X	
↓	10:40	FIELD BLANK	↓	X				X	X	X	X	

660-63242 Chain of Custody

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	10-7-14							
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
	10-7-14	15:10						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT YES ○ NO	CUSTODY SEAL NO.	STL LOG NO.	LABORATORY REMARKS:

Original - Return to Laboratory with Sample(s)

2.6/2.6 CU-09

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Southeast County Landfill IAMP	SITE LOCATION:	Lithia, Florida
WELL NO: TH-77	SAMPLE ID: TH-77	DATE:	10-7-14

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.5	WELL SCREEN INTERVAL DEPTH: 154.2 feet to 169.2 feet	STATIC DEPTH TO WATER (feet): 77.55	PURGE PUMP TYPE OR BAILER: DBP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (169.2 feet – 77.55 feet) X .16 gallons/foot = 14.67 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 168.2	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 168.2	PURGING INITIATED AT: 12:06	PURGING ENDED AT: 12:52	TOTAL VOLUME PURGED (gallons): 23

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. µS/cm	DISSOLVED OXYGEN mg/L	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
12:36	15	15	.50	77.66	7.37	23.65	416	.24	1.26	NONE	NONE
12:44	4	19	.50	77.66	7.37	23.65	416	.23	.88	↓	↓
12:52	4	23	.50	77.66	7.36	23.64	416	.22	.71	↓	↓

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: ANDREW BALLOON / ZACK PATTERSON	SAMPLER(S) SIGNATURE(S): Zack Patterson	SAMPLING INITIATED AT: 12:53	SAMPLING ENDED AT: 13:03
PUMP OR TUBING DEPTH IN WELL (feet): 168.2	TUBING MATERIAL CODE: T	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y N (Dedicated)	TUBING Y N (Dedicated)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)

SEE C.O.C. FOR SAMPLE ANALYSIS DBP= Dedicated bladder pump

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 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Southeast County Landfill IAMP	SITE LOCATION:.	Lithia, Florida	10.7.14
WELL NO: TH-76		SAMPLE ID:	TH-76	DATE: 10-6-14

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.5	WELL SCREEN INTERVAL DEPTH: 163.35 feet to 178.35 feet	STATIC DEPTH TO WATER (feet): 69.03	PURGE PUMP TYPE OR BAILER: DBP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (178.35 feet − 69.03 feet) X .16 gallons/foot = 17.50 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 177.35	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 177.35	PURGING INITIATED AT: 10:55	PURGING ENDED AT: 1148	TOTAL VOLUME PURGED (gallons): 26.50

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. µS/cm	DISSOLVED OXYGEN mg/L	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
11:30	17.50	17.50	.50	69.78	7.37	22.95	433	.31	18.7	light cloudy	NONE
11:39	4.5	22.00	.50	69.78	7.37	22.93	432	.31	16.2	↓	↓
11:48	4.5	26.50	.50	69.78	7.37	22.89	432	.34	17.9	↓	↓

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: ANDREW BALLOON / ZACK PATTERSON	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 11:48	SAMPLING ENDED AT: 11:58
PUMP OR TUBING DEPTH IN WELL (feet): 177.35	TUBING MATERIAL CODE: T	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y N (Dedicated)	TUBING Y N (Dedicated)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)

SEE C.O.C. FOR SAMPLE ANALYSIS DBP = Dedicated bladder pump

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 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Southeast County Landfill IAMP	SITE LOCATION:	Lithia, FL		
WELL NO:	FIELD BLANK	SAMPLE ID:	FIELD BLANK	DATE:	10-7-14

PURGING DATA

WELL DIAMETER (inches): N/A	TUBING DIAMETER (inches): N/A	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): N/A	PURGE PUMP TYPE OR BAILER: N/A

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): N/A	FINAL PUMP OR TUBING DEPTH IN WELL (feet): N/A	PURGING INITIATED AT: N/A	PURGING ENDED AT: N/A	TOTAL VOLUME PURGED (gallons): N/A

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)

FIELD BLANK

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: ANDREW BALLOON / ZACK PATTERSON	SAMPLER(S) SIGNATURE(S): Zack Patterson	SAMPLING INITIATED AT: 10:40	SAMPLING ENDED AT: 10:50
PUMP OR TUBING DEPTH IN WELL (feet): N/A	TUBING MATERIAL CODE: T	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: ~~PUMP Y N Dedicated~~ ~~TUBING Y N Dedicated~~		DUPLICATE: Y (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			

SEE COC 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 2009

Serial Number

10/20/2014

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Tampa
6712 Benjamin Rd, Suite 100
Tampa, FL 33634
www.testamericainc.com
Phone: (813) 885 7427
Fax: (813) 885 7049

Alternate Laboratory Name/Location:
Phone:
Fax:

PROJECT REFERENCE	PROJECT NO.	PROJECT LOCATION
SELF-IAMP Monitoring Wells		Lithia, FL
TESTAMERICA (LAB) PROJECT MANAGER	P.O. NUMBER	CONTRACT NO.
Nancy Robertson		
CLIENT (SITE) PM	CLIENT PHONE	CLIENT FAX
Michael Townsel	(813) 663-3222	(813) 274-6801
CLIENT NAME	CLIENT EMAIL	
Hills. County Public Utilities	townselm@hillsboroughcounty.org	
CLIENT ADDRESS		
332 North Falkenburg Road		
COMPANY CONTRACTING THIS WORK	SAMPLER'S SIGNATURE	

PAGE ___ OF ___

STANDARD REPORT DELIVERY ○
DATE DUE ___
EXPEDITED REPORT DELIVERY (SURCHARGE) ○
DATE DUE:

NUMBER OF COOLERS SUBMITTED PER SHIPMENT:

SAMPLE DATE	SAMPLE TIME	SAMPLE IDENTIFICATION	MATRIX TYPE: COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT...)	NUMBER OF CONTAINERS SUBMITTED: Ammonia-N (H2SO4)	TDS (ice)	Chloride (ice)	As, Fe, Na (HNO3)	REMARKS
10-8-14		TH-72	G	X				X	X	X	X	
↓	10:47	TH-78						X	X	X	X	
↓	—	Duplicate						X	X	X	X	

660-63267 Chain of Custody

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	10-8-14	1400						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT YES ○ NO ○	CUSTODY SEAL NO.	STL LOG NO.	LABORATORY REMARKS:
	10/8/14	1400				4.0/4.0 CU-09

FCU036:12.20.00:2

Original - Return to Laboratory with Sample(s)

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Southeast County Landfill IAMP	SITE LOCATION:.	Lithia, Florida
WELL NO:	TH-72	SAMPLE ID:	TH-72
DATE:	10.8.14		

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
2	0.5	180 feet to 190 feet	88.89	DBP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (190 feet – 88.89 feet) X .16 gallons/foot = 16.18 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
189	189	11:15	12:06	25.50

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. µS/cm	DISSOLVED OXYGEN mg/L	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
11:48	16.50	16.50	.50	88.89	6.79	23.59	2253	.22	.92	NONE	NONE
11:57	4.50	21.00	.50	88.89	6.77	23.57	2283	.19	.86		
12:06	4.50	25.50	.50	88.89	6.78	23.59	2300	.18	.79	↓	↓

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:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
ANDREW BALLOON / ZACK PATTERSON		12:06	12:16

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
189	T		

FIELD DECONTAMINATION: PUMP Y N (Dedicated) TUBING Y N (Dedicated) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)

SEE C.O.C. FOR SAMPLE ANALYSIS

DBP =Dedicated Bladder Pump

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 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Southeast County Landfill IAMP	SITE LOCATION:	Lithia, FL
WELL NO:	TH-78	SAMPLE ID:	TH-78
DATE:	10.8.14		

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/8	WELL SCREEN INTERVAL DEPTH:	163.14 feet to 178.14 feet	STATIC DEPTH TO WATER (feet):	73.45	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)
= (178.14 feet – 73.45 feet) X .16 gallons/foot = 16.76 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	177.14	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	177.14	PURGING INITIATED AT:	9.55	PURGING ENDED AT:	10:47	TOTAL VOLUME PURGED (gallons):	26

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 mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
10:29	17.0	17.0	.50	73.54	8.39	23.33	507	.30	1.25	NONE	NONE
10:38	4.5	21.5	.50	73.54	8.38	23.35	507	.31	1.21	↓	↓
10:47	4.5	26.0	.50	73.54	8.39	23.35	508	.30	1.12	↓	↓

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:	ANDREW BALLOON / ZACK PATTERSON	SAMPLER(S) SIGNATURE(S):	Zack Patterson	SAMPLING INITIATED AT:	10:47	SAMPLING ENDED AT:	10:57
PUMP OR TUBING DEPTH IN WELL (feet):	177.14	TUBING MATERIAL CODE:	T	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION:	PUMP Y N (Dedicated)	TUBING	Y N (Dedicated)	DUPLICATE:	(Y) (N) ZP		

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)

SEE COC 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 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	Southeast County Landfill IAMP	SITE LOCATION:	Lithia, FL	
WELL NO:	Duplicate	SAMPLE ID:	Duplicate	DATE: 10.8.14

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
N/A	N/A		N/A	N/A

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
N/A	N/A	N/A	N/A	N/A

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)

DUPLICATE

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:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
ANDREW BALLOON / ZACK PATTERSON		N/A	N/A

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
N/A	T		

FIELD DECONTAMINATION: ~~PUMP Y N Dedicated~~ ~~TUBING Y N Dedicated~~ DUPLICATE: (Y) N

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)

SEE COC 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 2009

TestAmerica Tampa
6712 Benjamin Road Suite 100
Tampa, FL 33634
Phone (813) 885-7427 Fax (813) 885-7049

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Robertson, Nancy	Carrier Tracking No(s):	COC No: 660-72531.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: nancy.robertson@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Analysis Requested		Job #: 660-63242-1
Address: 5102 LaRoche Avenue, ,	Due Date Requested: 10/16/2014			Preservation Codes:
City: Savannah	TAT Requested (days):			A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2SO3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - ph 4-5 L - EDA Z - other (specify)
State, Zip: GA, 31404				
Phone: 912-354-7858(Tel) 912-352-0165(Fax)	PO #:			Other:
Email:	WO #:			
Project Name: SELF IAMP Monitoring Wells	Project #: 66003915			
Site: Southeast Landfill	SSOW#:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300_ORGFM_28D/ Chloride	350.1/ Nitrogen, Ammonia	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
TH- 77 (660-63242-1)	10/7/14	12:53 Eastern		Water			X	X	2	
TH- 76 (660-63242-2)	10/7/14	11:48 Eastern		Water			X	X	2	
FIELD BLANK (660-63242-3)	10/7/14	10:40 Eastern		Water			X	X	2	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	10/7/14 1600	TA TPA			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: [signature]	Date/Time: 10/08/14 0907	Company TA TPA

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.8°C

10/20/2014

TestAmerica Tampa
6712 Benjamin Road Suite 100
Tampa, FL 33634
Phone (813) 885-7427 Fax (813) 885-7049

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Robertson, Nancy	Carrier Tracking No(s):	COC No: 660-72554.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: nancy.robertson@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 660-63267-1
Address: 5102 LaRoche Avenue, ,	Due Date Requested: 10/20/2014			
City: Savannah	TAT Requested (days):			
State, Zip: GA, 31404				
Phone: 912-354-7858(Tel) 912-352-0165(Fax)	PO #:			
Email:	WO #:			
Project Name: SELF MWs,SS,Private Wells,NPDES	Project #: 66003915			
Site: Southeast Landfill	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1/ Nitrogen, Ammonia	300_ORGFM_28D/ Chloride	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
TH-72 (660-63267-1)	10/8/14	12:06 Eastern		Water			X	X	2	
TH-78 (660-63267-2)	10/8/14	10:47 Eastern		Water			X	X	2	
DUPLICATE (660-63267-3)	10/8/14	Eastern		Water			X	X	2	

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify)	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time	Company	Received by:	Date/Time	Company
Relinquished by: Kristi Sautter	10/8/14 1600	TA TRA	Received by:	10/09/14 0800	TAS
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.2c

10/20/2014

Login Sample Receipt Checklist

Client: Hillsborough Co Public Utilities Dept

Job Number: 660-63242-1

Login Number: 63242

List Source: TestAmerica Tampa

List Number: 1

Creator: Monterroso, Giovanni A

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").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Hillsborough Co Public Utilities Dept

Job Number: 660-63242-1

Login Number: 63242
List Number: 2
Creator: Conner, Keaton

List Source: TestAmerica Savannah
List Creation: 10/08/14 10:49 AM

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?	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	

Login Sample Receipt Checklist

Client: Hillsborough Co Public Utilities Dept

Job Number: 660-63242-1

Login Number: 63267

List Source: TestAmerica Tampa

List Number: 1

Creator: Southers, Kristin B

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.	N/A	

Login Sample Receipt Checklist

Client: Hillsborough Co Public Utilities Dept

Job Number: 660-63242-1

Login Number: 63267
List Number: 2
Creator: Banda, Christy S

List Source: TestAmerica Savannah
List Creation: 10/09/14 08:56 AM

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?	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.	N/A	
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.	N/A	