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June 26, 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. 45 – May 2014

Dear Mr. Morris:

The Hillsborough County Public Utilities Department (County) is pleased to provide the analytical results from the May 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 Southwest District Office (Department), three (3) upper Floridan/Limestone aquifer monitoring wells, designated as TH-72, TH-76 and TH-77 are sampled on a monthly schedule and three (3) surficial aquifer monitoring wells, designated as TH-73, TH-74, and TH-75 are sampled on a quarterly schedule. Representative samples were collected from each of these six (6) monitoring wells on May 6-7, 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.

Turbidity

Turbidity values in the surficial aquifer monitoring wells TH-73, TH-74, and TH-75 were recorded at 4.01, 3.93, 3.01 Nephelometric Turbidity Units (NTUs). Turbidity values in upper Floridan / Limestone aquifer monitoring wells TH-72, TH-76, and TH-77 were recorded at 1.22, 12.7, and 1.01 NTUs, respectively. No significant changes in turbidity values were noted in the data set from this sampling event.

Conductivity

The conductivity values in TH-73, TH-74, and TH-75 were recorded at 340, 549, and 341 micromhos per centimeter (umhos/cm), and the values in TH-72, TH-76, and TH-77 were recorded at 2247, 427, and 414 umhos/cm, respectively. Monitoring well TH-72 is the closest UFA monitoring well to the sinkhole, and it continues to exhibit groundwater impacts similar to those observed over the past year. The elevated conductivity observed is likely attributable to the waste in the throat and bottom voids of the sinkhole and the large amounts of grout materials and fluids injected into the subsurface as part of the sinkhole stabilization process. Conductivity values in TH-76 and TH-77 are relatively low and appear to be consistent with the unaffected deep wells across the site.

Total Dissolved Solids (TDS)

The TDS in TH-73, TH-74, and TH-75 were all within the Secondary Drinking Water Standard (SDWS) of 500 mg/l. However, TDS in TH-72 was observed at 1,400 mg/l and continues to be above the SDWS. The two down gradient monitoring wells, TH-76 and TH-77 both exhibited a TDS value of 220 mg/l, which is consistent with the water quality historically observed in the unaffected deep wells across the site.

Chloride

Chloride concentrations in the surficial aquifer wells were all below 100 mg/l. A concentration of 590 mg/l was observed in TH-72, which is well above the SDWS of 250 mg/l. Chloride values in TH-76 and TH-77 were observed at 12 mg/l and 9.7 mg/l, which is consistent with the unaffected deep wells across the site.

Iron

Iron concentrations in TH-73, TH-74, and TH-75 were observed at 4, 29, and 6.1 mg/l, respectively. Concentrations in TH-72, TH-76, and TH-77 were observed at 0.64, 0.65, and 0.19 mg/l, respectively. The elevated iron concentrations observed at specific locations across the site are consistent with background water quality, and are likely naturally occurring and/or the result of past strip mining activities at the site.

Sodium

Sodium was observed at a concentration of 230 mg/l in 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 activities. Sodium values in TH-76 and TH-77 were observed at 21 and 17 mg/l, which is consistent with the unaffected deep wells across the site.

Groundwater Elevations and Direction of Flow

On May 5, 2014, the County collected groundwater and surface water elevation data at sixty-five (65) points across the site, including twenty eight (28) surficial aquifer wells, seven (7) upper Floridan (limestone) aquifer wells, twenty three (23) piezometers, and six (6) surface water sites. 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 be unexpected. However, the overall direction of flow within the surficial aquifer remains toward the west/northwest across the site.

A contour diagram of the upper Floridan / Limestone aquifer has been prepared for the general area around the sinkhole and is included with this submittal. This diagram was generated manually in AutoCad ™ utilizing only the three data points closest to the sinkhole. During this sampling event, the change in elevation between TH-72 and TH-76 is - 0.05 ft., and the change between TH-72 and TH-77 is + 0.12 ft. The diagram indicates that flow within the UFA in the area of the former sinkhole continues to be in a north/northwest direction, but at what appears to be a very slow rate. Based on the consistency of the direction of flow, the County has installed an additional upper Floridan / Limestone aquifer groundwater monitoring well down gradient of the sinkhole. This monitoring well, designated as TH-78, shall be completed in June, and sampled during the July IAMP sampling event and each month thereafter.

Conclusions

The water quality observed in the May 2014 IAMP sampling event indicates that the upper Floridan / Limestone well TH-72, which is closest to the sinkhole, continues to exhibit impacts to water quality. The impacts observed in TH-72 include elevated conductivity, TDS, chloride, iron and sodium. These impacts are not unexpected within the upper Floridan / Limestone aquifer in the immediate vicinity of the sinkhole feature. Upper Floridan / Limestone aquifer monitoring wells, TH-76 and TH-77 continue to exhibit good water quality with no evidence of impact from the sinkhole. Conductivity values, TDS, and chloride are all very low and consistent with the historical data set for the unaffected upper Floridan aquifer groundwater monitoring wells at the SCLF, which supports the position that the impacts from the sinkhole are limited in extent and do not appear to be migrating beyond the area close to the feature.

Recommendations

The County continues to move forward with implementation of the IAMP, which includes the monthly sampling of the three upper Floridan / Limestone aquifer groundwater monitoring wells, TH-72, TH-76, and TH-77, and the quarterly sampling of the three surficial aquifer monitoring wells, TH-73, TH-74, and TH-75. Additionally, the County will also begin monthly monitoring of upper Floridan / Limestone aquifer groundwater monitoring well TH-78. We 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. The monitoring activities have been conducted for over three years and the consistency of the data set supports a significant reduction

in the frequency. The County intends to propose this reduction in the number of monitoring wells sampled and the frequency of sampling and reporting in a separate correspondence. If the Department has any specific concerns with this position, we would welcome any guidance.

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 6/26/2014

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

DAVID S. ADAMS
LICENSE
NO 1827
STATE OF
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xc: John Lyons, Director, Public Works Department
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Andy Schipfer, EPC
Ernest Ely, WMI
Brian Miller, DOH
Rich Siemering, HDR
Joe O'Neill, CDS

OFFSITE OUTFALL (001) FOR NPDES SAMPLING
3C2**
PROPERTY LINE
MINE CUT #3
MC3**
TH-35A
TH-34A
TH-35
TH-42
WETLANDS
P-5D
P-17S
P-17D
P-17I
TH-32
200'
P-6D
POND "D"
BORROW AREA
(FOR OWNER USE ONLY)
2A**
MINE CUT #2
**3B2B
WASTE TIRE
PROCESSING FACILITY
200'
EXISTING LEACHATE
TREATMENT AND
RECLAMATION FACILITY
P-16S
P-16D
P-16I
TH-71A
SUP-4
P-4D
P-4S
TH-30
SINKHOLE
LOCATION
P-18S
001
SUP-3
TH-36A
TH-75
TH-56A
TH-70A
SECTION
9
SECTION
8
P-7D
TH-74
TH-73
TH-72
TH-58
PHASE V
TH-69A
TH-68
1D**
TH-19
TH-19A
P-15S
009
SECTION
7
P-14S
1A**
POND "C"
TH-76
TH-28A
PHASE VI
007
TH-64
P-11D
P-13S
SITE A
CAPACITY
EXPANSION
AREA (147
AC.)
PHASE III
TH-57
P-8D
TH-61
TH-61A
TH-77
PHASE IV
P-12S
EXISTING EFFLUENT HOLDING
BASIN AND MAIN LEACHATE
PUMP STATION
POND "A"
PHASE II
TH-65
MINE CUT #1
TH-26
PHASE I
TH-66A
TH-66
TH-38B
EXISTING
EFFLUENT/LEACHATE
STORAGE POND (POND B)
TH-40*
SUP-2
TH-41
TH-67
SUP-1
TH-22/
TH-22A
TH-20B
TH-20A
3A**
TH-24
POND "B"
LANDFILL SCALEHOUSE

N 1254000.00
N 1253000.00
N 1252000.00
N 1251000.00
N 1250000.00
N 1249000.00
E 594000.00
E 595000.00
E 596000.00
E 597000.00
E 598000.00
E 599000.00
E 600000.00
E 601000.00

N

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 JAN 2013.

Hillsborough County
Florida

SHEET TITLE

IAMP WELL LOCATIONS
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA

PROJECT NUMBER	REFERENCE SHEET
SCALE	DRAWING NAME
DATE MAY. 2013	EXHIBIT NUMBER 1

C:\pwworking\tpa\d0266713\Well Location Map.dwg, Plot, 5/20/2013 3:03:58 PM, lrodrigu

Southeast County Landfill
Laboratory Analytical Data
Surficial and Upper Floridan Aquifer Groundwater Monitoring Wells
May 6-7, 2014

GENERAL (mg/l)	Surficial Aquifer Wells			Upper Floridan Wells				(MCL) STANDARD
PARAMETERS	**TH-73**	**TH-74**	**TH-75**	**TH-72**	**TH-76**	**TH-77**	**Duplicate**	
conductivity (umhos/cm) (field)	340	549	341	2247	427	414	NA	**NS**
dissolved oxygen (mg/l) (field)	1.13	0.57	0.37	0.46	0.24	0.34	NA	**NS**
pH (field)	**5.05**	**5.56**	**5.67**	6.81	7.56	7.52	NA	**(6.5 - 8.5)****
temperature (°C) (field)	25.59	22.06	22.61	23.50	22.85	23.47	NA	**NS**
turbidity (NTU) (field)	4.01	3.93	3.01	1.22	12.7	1.01	NA	**NS**
total dissolved solids (mg/l)	210	310	200	**1400**	220	220	220	**500****
chloride (mg/l)	90	92	27	**590**	12	9.7	9.8	**250****
ammonia nitrogen (mg/l as N)	3.3	3.1	1.8	24	0.38	0.59	0.63	**NS**
								(MCL) STANDARD
Metals: (mg/l)	**TH-73**	**TH-74**	**TH-75**	**TH-72**	**TH-76**	**TH-77**	**Duplicate**	
arsenic	0.004 u	0.004 u	0.0066 i	0.004 u	0.004 u	0.004 u	0.004 u	**0.01***
iron	**4**	**31**	**6.1 j3**	**0.64**	**0.65**	0.19 i	0.18 i	**0.3****
sodium	31	40	18	**230**	21	17	17	**160***
MCL=Maximum Contaminant Level								
NA =Not Analyzed								
NS=No Standard								
NTU = Nephelometric Turbidity Units								
i = reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.								
u = parameter was analyzed but not detected.								
j3 = estimated value, value may not be accurate. Spike recovery or RPD outside of criteria.								
*=Denotes Primary Drinking Water Standard as per Chapter 62-550.310, F.A.C.								
**=Denotes Secondary Drinking Water Standard as per Chapter 62-550.320, F.A.C.								
*** = Denotes Groundwater Cleanup Target Levels as per Chapter 62,777, F.A.C.								
5.05	Exceeds Standard							
mg/l=milligrams per liter								
ug/l = Micrograms per liter								

Southeast County Landfill
Groundwater and Surface Water Elevations
May 5, 2014

Measuring Point I.D.	T.O.C. Elevations (NGVD)	W.L. B.T.O.C.	W.L. (NGVD)	Time
P-4D	140.78	22.67	118.11	12:49 PM
P-4S	140.95	9.52	131.43	12:48 PM
P-5D	151.94	Dry	151.94	11:08 AM
P-6D-A	148.01	26.52	121.49	11:18 AM
P-7D	138.92	17.96	120.96	11:51 AM
P-8D	138.34	18.19	120.15	12:14 PM
P-11D	138.02	17.97	120.05	12:34 PM
P-12S	134.97	14.50	120.47	12:16 PM
P-13S	140.21	18.16	122.05	12:01 PM
P-14S	138.56	17.34	121.22	11:57 AM
P-15S	139.19	18.50	120.69	11:54 AM
P-16S	143.38	15.80	127.58	11:27 AM
P-16I	144.15	23.87	120.28	11:27 AM
P-16D	143.84	23.61	120.23	11:28 AM
P-17S	137.35	14.80	122.55	11:34 AM
P-17I	137.32	15.95	121.37	11:34 AM
P-17D	137.22	16.09	121.13	11:35 AM
P-18S	129.86	18.49	111.37	10:36 AM
P-19	133.36	13.51	119.85	11:15 AM
P-20	132.38	12.11	120.27	11:22 AM
P-21	122.79	2.95	119.84	1:06 PM
P-22	128.35	8.33	120.02	1:07 PM
P-23	143.13	23.49	119.64	1:11 PM
TH-19*	130.27	101.69	28.58	11:44 AM
TH-20A	131.86	9.01	122.85	12:26 PM
TH-20B	132.57	10.02	122.55	12:25 PM
TH-22	128.82	4.51	124.31	9:39 AM
TH-22A	129.27	5.13	124.14	9:40 AM
TH-24A	128.23	4.02	124.21	9:43 AM
TH-28A	131.10	27.74	103.36	10:47 AM
TH-30	128.88	23.88	105.00	10:40 AM
TH-32	129.90	15.08	114.82	10:32 AM
TH-35	145.98	28.34	117.64	11:12 AM
TH-36A	152.70	32.71	119.99	11:48 AM
TH-38A	130.68	10.15	120.53	12:29 PM
TH-38B	131.81	12.67	119.14	12:30 PM
TH-40*	124.99	96.80	28.19	9:53 AM
TH-41*	125.00	102.89	22.11	9:52 AM
TH-42*	116.74	75.39	41.35	10:29 AM
TH-57	128.36	18.90	109.46	10:50 AM
TH-58	127.88	27.98	99.90	10:42 AM
TH-61	138.73	17.30	121.43	12:10 PM
TH-61A	139.45	18.10	121.35	12:11 PM
TH-64	139.64	17.42	122.22	11:59 AM
TH-65	135.40	14.70	120.70	12:19 PM
TH-66	130.58	8.70	121.88	12:22 PM
TH-66A	130.66	9.04	121.62	12:21 PM
TH-67	129.51	5.49	124.02	12:23 PM
TH-68	140.01	18.78	121.23	11:53 AM
TH-69A	144.97	25.89	119.08	12:39 PM
TH-70A	146.63	26.89	119.74	12:46 PM
TH-71A	146.95	27.42	119.53	1:00 PM
TH-72*	130.96	100.22	30.74	10:52 AM
TH-73	131.07	30.66	100.41	10:51 AM
TH-74	109.08	9.22	99.86	10:53 AM
TH-75	106.92	7.63	99.29	10:58 AM
TH-76*	111.21	80.52	30.69	10:03 AM
TH-77*	119.88	89.02	30.86	9:59 AM
SW-3A	3.0'=125.53'	0.74	123.27	9:28 AM
SW-3B2B	3.0'=97.97'	1.80	96.77	10:12 AM
SW-3C2	6.0'=92.33'	1.66	87.99	10:18 AM
Mine Cut #1	4.0'=122.14'	2.56	120.70	12:05 PM
Mine Cut #2	6.0'=123.47'	2.79	120.26	11:13 AM
Mine Cut #3	4.0'=112.27'	2.45	110.72	10:26 AM
Mine Cut #4	5.0'=97.54'	1.88	94.42	10:24 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 - Sampling Location Dry**
W.L.	**= Water Level**

Southeast County Landfill

Groundwater Elevation Contour Diagram – May 5, 2014

MAY 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**

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-73

Date	Depth to Water (feet)	Water Table Elevation (NGVD)	conductivity (umhos/cm) (field)	dissolved oxygen (mg/l) (field)	pH (field)	temperature (°C) (field)	turbidity (NTU) (field)	total dissolved solids (mg/l)	chloride (mg/l)	ammonia nitrogen (mg/l as N)	arsenic (mg/l)	iron (mg/l)	sodium (mg/l)
01/27/2011	30.99	100.08	440	1.7	**5.53**	25.01	22.2	180	69	2.3	0.004 u	**15**	38
02/03/2011	30.85	100.22	400	1.78	**5.62**	26.12	17.6	140	56	1.9	0.004 u	**31**	26
02/10/2011	30.76	100.31	336	1.44	**5.62**	25.86	12	160	56	2	0.004 u	**26**	27
02/14/2011	30.82	100.25	312	0.56	**5.54**	26	15.5	190	55	2.6	0.004 u	**34**	24
02/24/2011	30.78	100.29	340	0.38	**5.62**	26.15	16.4	170	61	3	0.004 u	**17**	28
03/03/2011	30.87	100.20	382	0.53	**5.56**	26	19.4	200	61	2.1	0.004 u	**21**	29
03/10/2011	30.87	100.20	371	0.66	**5.56**	25.97	8.3	170	60	1.7	0.004 u	**21**	27
03/17/2011	30.76	100.31	266	1.22	**5.35**	26	14.3	150	69	2.1	0.004 u	**12**	33
03/24/2011	30.78	100.29	346	0.61	**5.47**	26.02	8	140	63	2	0.004 u	**13**	27
04/01/2011	31.11	99.96	366	0.78	**5.53**	25.89	19.8	160	68	1.7	0.004 u	**14**	29
04/08/2011	30.65	100.42	331	0.62	**5.35**	25.97	18	140	66	2.1	0.004 u	**11**	30
05/05/2011	31.70	99.37	361	0.4	**5.34**	25.64	12.2	150	66	2	0.004 u	**20**	28
06/08/2011	32.54	98.53	391	0.7	**5.41**	25.69	14	150	63	2.2	0.004 u	**14**	27
07/07/2011	31.55	99.52	306	0.35	**5.13**	25.34	19.2	350	33	0.52	0.004 u	0.22	31
08/04/2011	31.40	99.67	262	0.89	**5.12**	25.44	19.9	140	60	1.2	0.004 u	**8.2**	24
09/08/2011	30.66	100.41	259	0.49	**5.24**	25.41	28.1	170	62	1.9	0.004 u	**8.5**	27
10/04/2011	31.16	99.91	345	0.89	**5.2**	25.48	12	220	96	1.8	0.004 u	**9.1**	33
11/03/2011	31.27	99.80	1273	0.3	**5.21**	25.55	8.16	**720**	**360**	**7.3**	0.004 u	**22**	97
12/08/2011	31.96	99.11	1499	0.62	**5.3**	25.24	2.64	**820**	**500**	**3**	0.004 u	**26**	110
01/05/2012	32.31	98.76	1188	0.71	**5.16**	25.18	2.05	**750**	**350**	**3.3**	0.004 u	**19**	80
02/10/2012	32.25	98.82	304	0.55	**5.28**	25.24	3.31	190	67	1.6	0.004 u	**4.9**	23
03/07/2012	32.42	98.65	312	1.08	**5.22**	25.24	3.3	150	56	1.2	0.004 u	**4.7**	22
04/05/2012	32.63	98.44	231	0.79	**5.06**	24.94	4.39	120	50	1.1	0.004 u	**4.1**	20
05/03/2012	32.74	98.33	283	0.99	**4.8**	24.88	6.47	160	63	1.9	0.004 u	**4.5**	22
06/07/2012	32.40	98.67	224	0.87	**4.82**	24.64	5.6	140	48	1.6	0.004 u	**3.3**	18
07/05/2012	31.51	99.56	232	0.31	**4.77**	24.63	9	140	50	1.7	0.004 u	**4**	18
08/03/2012	32.09	98.98	201	0.71	**5.02**	24.63	5.13	160	52	1.7	0.004 u	**3.8**	19
09/06/2012	31.22	99.76	242	0.5	**5.06**	24.67	7.39	140	47	1.3	0.004 u	**3.6**	18
10/04/2012	31.46	99.61	222	0.18	**4.86**	24.68	7.56	130	43	1.2	0.004 u	**3.4**	16
11/07/2012	31.84	99.23	231	0.39	**5.06**	24.75	5.54	130	45	0.94	0.004 u	**3.6**	16
12/05/2012	32.14	98.93	237	0.2	**5.03**	24.9	3.26	110	46	0.84	0.004 u	**3.5**	17
01/03/2013	31.91	99.16	237	0.49	**4.95**	24.84	2.47	130	45	1.1	0.004 u	**3.2**	16
02/07/2013	32.11	98.96	221	0.69	**4.84**	24.79	4.8	120	47	0.84	0.004 u	**3**	15
03/07/2013	32.41	98.66	179	0.23	**4.78**	24.46	2.64	110	45	1.2	0.004 u	**3.1**	17
04/04/2013	32.41	98.66	191	0.2	**4.73**	24.42	2.49	140	53	1.1	0.004 u	**3.4**	20
05/02/2013	31.40	99.67	240	0.24	**5.12**	24.43	8.82	120	52	0.99	0.004 u	**3.4**	16
08/02/2013	ND	ND	395	0.23	**5.13**	24.85	10.4	270	130	2.3	0.004 u	**7.8**	38
11/06/2013	30.36	100.71	319	0.62	**5.01**	25.54	6.35	200	76	2.2	0.004 u	**3.8**	25
03/04/2014	30.78	100.29	381	0.39	**4.92**	25.11	6.23	230	96	1.9	0.004 u	**4.6**	31

New survey data beginning with 10/4/2012.
u = parameter was analyzed but not detected
NS = No Sample Collected (Surficial wells are now sampled quarterly)
ND = No Data - water levels collected during quarterly ADR.
5.53 EXCEEDS STANDARD

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

Date	Depth to Water (feet)	Water Table Elevation (NGVD)	conductivity (umhos/cm) (field)	dissolved oxygen (mg/l) (field)	pH (field)	temperature (°C) (field)	turbidity (NTU) (field)	total dissolved solids (mg/l)	chloride (mg/l)	ammonia nitrogen (mg/l as N)	arsenic (mg/l)	iron (mg/l)	sodium (mg/l)
11/03/2011	9.65	ND	485	0.51	**5.56**	23.62	5.45	280	48	2.9	0.004 u	**26**	20
12/08/2011	10.11	98.97	445	0.89	**5.64**	22.9	14.7	270	40	2.3	0.0042 i	**27**	21
01/05/2012	10.30	98.78	474	0.66	**5.66**	21.97	16.8	240	59	1.8	0.004 u	**30**	26
02/10/2012	10.22	98.86	501	0.6	**5.42**	21.48	9.99	350	95	2.5	0.004 u	**34**	22
03/07/2012	10.40	98.68	618	0.53	**5.24**	21.57	8.7	210	120	2.3	0.004 u	**38**	22
04/05/2012	10.53	98.55	592	0.79	**5.13**	21.74	13.7	270	120	2.8	0.004 u	**40**	24
05/03/2012	10.71	98.37	602	0.86	**5.15**	21.93	12.5	330	110	2.8	0.004 u	**38**	25
06/07/2012	10.45	98.63	334	0.75	**5.35**	22.48	6.92	210	37	3	0.004 u	**20**	16
07/05/2012	9.45	99.63	495	0.32	**4.99**	23.09	5.33	240	73	2.1	0.004 u	**11**	27
08/03/2012	9.99	99.09	261	0.37	**5.18**	23.63	6.12	210	47	3	0.004 u	**19**	15
09/06/2012	9.36	99.66	578	0.24	**5.33**	24.08	2.37	330	110	2.8	**0.012**	**21**	36
10/04/2012	9.53	99.55	369	0.25	**5.36**	24.12	3.98	260	76	3.5	0.0055 i	**19**	22
11/07/2012	9.91	99.17	385	0.36	**5.47**	23.53	3.21	240	60	1.9	0.0045 i	**18**	20
12/05/2012	10.14	98.94	398	0.34	**5.44**	22.82	3.08	230	59	2.7	0.004 u	**21**	19
01/03/2013	9.96	99.12	418	0.31	**5.43**	22.03	3.03	280	59	2.7	0.004 u	**20**	20
02/07/2013	10.16	98.92	394	0.34	**5.43**	21.66	1.95	200	45	1.9	0.004 u	**20**	16
03/07/2013	10.23	98.85	363	0.35	**5.38**	21.06	1.24	180	47	3	0.004 u	**20**	17
04/04/2013	10.52	98.56	273	0.38	**5.34**	20.75	5.85	210	43	1.9	0.004 u	**20**	16
05/02/2013	9.94	99.14	357	0.39	**5.61**	21.28	2.62	190	37	2.8	0.004 u	**21**	14
08/02/2013	ND	ND	508	0.29	**5.55**	23.26	1.3	240	63	3.2	0.004 u	**31**	20
11/06/2013	9.37	99.71	1,348	1.41	**5.43**	23.98	9.71	**890**	**370**	3.2	0.004 u	**60**	78
03/04/2014	9.52	99.56	570	0.58	**5.55**	21.83	2.26	**370**	95	3.5	0.004 u	**29**	44

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.
NS = No Sample Collected (Surficial wells are now sampled quarterly)
ND = No Data - water levels collected during quarterly ADR.
5.56 EXCEEDS STANDARD

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

Date	Depth to Water (feet)	Water Table Elevation (NGVD)	conductivity (umhos/cm) (field)	dissolved oxygen (mg/l) (field)	pH (field)	temperature (°C) (field)	turbidity (NTU) (field)	total dissolved solids (mg/l)	chloride (mg/l)	ammonia nitrogen (mg/l as N)	arsenic (mg/l)	iron (mg/l)	sodium (mg/l)
11/03/2011	7.68	ND	396	0.25	**5.65**	23.63	11.6	220	49	1.4	0.0085 i	**11**	14
12/08/2011	7.90	99.02	301	0.46	**5.57**	22.9	20.1	150	23	1.1	**0.011**	**8.9**	11
01/05/2012	8.01	98.91	300	0.92	**5.58**	21.69	18.9	180	25	1.1	0.0071 i	**8.6**	10
02/10/2012	8.00	98.92	422	0.51	**5.48**	21.5	17.9	280	81	1.1	0.0072 i	**12**	20
03/07/2012	8.14	98.78	495	0.26	**5.39**	21.5	19.6	220	79	0.96	0.0079 i	**13**	22
04/05/2012	8.15	98.77	584	0.33	**5.37**	21.76	4.94	300	130	1.3	0.0063 i	**16**	26
05/03/2012	8.27	98.65	588	0.28	**5.32**	22.06	0.0	350	120	1.9	0.0078 i	**16**	33
06/07/2012	8.14	98.78	702	0.39	**5.61**	22.87	5.69	480	140	1.5	0.0095 i	**10**	40
07/05/2012	7.36	99.56	344	0.22	**5.35**	23.52	6.48	180	37	2	0.01	**9.8**	15
08/03/2012	7.80	99.12	241	0.28	**5.28**	24.07	4.21	190	25	1.8	0.008 i	**8.3**	14
09/06/2012	7.42	99.50	360	0.18	**5.41**	24.5	4.41	200	40	2	0.01	**9.1**	15
10/04/2012	7.55	99.37	346	0.15	**5.35**	24.54	6.73	240	51	2.5	0.0084 i	**9.2**	15
11/07/2012	7.79	99.13	422	0.3	**5.48**	23.8	2.51	200	54	1.6	0.0086 i	**9.8**	17
12/05/2012	7.98	98.94	395	0.31	**5.5**	22.97	7.22	210	48	1.4	0.0067 i	**9.2**	16
01/03/2013	7.88	99.04	447	0.37	**5.53**	21.89	13.9	400	60	1.3	0.0065 i	**8.1**	21
02/07/2013	8.02	98.90	453	0.2	**5.48**	21.71	6.35	240	62	1.5	0.0076 i	**9.8**	19
03/07/2013	8.04	98.88	379	0.27	**5.4**	21.38	2.71	200	40	1.9	0.0061 i	**8**	17
04/04/2013	8.23	98.69	245	0.25	**5.34**	21.08	4.92	180	22	1.7	0.0068 i	**7.3**	14
05/02/2013	8.00	98.92	340	0.21	**5.61**	21.72	1.59	170	26	1.3	0.0071 i	**7.6**	13
08/02/2013	ND	ND	356	0.21	**5.63**	23.9	2.1	170	28	1.3	0.0096 i	**7.6**	18
11/06/2013	7.81	99.11	353	1.13	**5.78**	24.32	12.3	200	31	1.3	0.0046 i	**6.5**	14
03/04/2014	7.87	99.05	338	0.39	**5.66**	22.51	5.3	200	27	1.5	0.0067 i	**6.1**	16

New survey data beginning with 10/4/2012.
i = reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
ND = No Data - water levels collected during quarterly ADR.
5.65 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

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

u = parameter was analyzed but not detected
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

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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Tel: (813)885-7427

TestAmerica Job ID: 660-60510-1
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

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5/16/2014 12:52:27 PM

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

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Sample Summary

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

TestAmerica Job ID: 660-60510-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
660-60510-1	DUPLICATE NOT BLANK	Ground Water	05/06/14 00:00	05/06/14 14:36
660-60510-2	BLANK FIELD	Ground Water	05/06/14 09:58	05/06/14 14:36
660-60510-3	TH-77	Ground Water	05/06/14 10:09	05/06/14 14:36
660-60510-4	TH-76	Ground Water	05/06/14 11:15	05/06/14 14:36
660-60510-5	TH-72	Ground Water	05/06/14 12:33	05/06/14 14:36
660-60541-1	TH-75	Water	05/07/14 12:07	05/07/14 14:12
660-60541-2	TH-74	Water	05/07/14 11:22	05/07/14 14:12
660-60541-3	TH-73	Water	05/07/14 10:39	05/07/14 14:12

Job ID: 660-60510-1

Laboratory: TestAmerica Tampa

Narrative

Job Narrative
660-60510-1

Comments
No additional comments.

Receipt
The samples were received on 5/6/2014 2:36 PM and 5/7/2014 2:12 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.9º C and 5.1º C.

Metals
Method 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 148192 were outside control limits for iron. 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 other analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 350.1: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 328800 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 350.1: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 328800 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

No other 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.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.

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
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: 660-60510-1

Client Sample ID: DUPLICATE NOT BLANK — Lab Sample ID: 660-60510-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.8		0.50	0.25	mg/L	1		300.0	Total/NA
Iron	180	I	200	50	ug/L	1		6010B	Total Recoverable
Sodium	17		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	0.63		0.050	0.026	mg/L	1		350.1	Total/NA
Total Dissolved Solids	220		10	10	mg/L	1		SM 2540C	Total/NA

Client Sample ID: BLANK FIELD — Lab Sample ID: 660-60510-2

No Detections.

Client Sample ID: TH-77 — Lab Sample ID: 660-60510-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.7		0.50	0.25	mg/L	1		300.0	Total/NA
Iron	190	I	200	50	ug/L	1		6010B	Total Recoverable
Sodium	17		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	0.59		0.050	0.026	mg/L	1		350.1	Total/NA
Total Dissolved Solids	220		10	10	mg/L	1		SM 2540C	Total/NA
Field pH	7.52				SU	1		Field Sampling	Total/NA
Field Temperature	23.47				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.34				mg/L	1		Field Sampling	Total/NA
Specific Conductance	414				uS/cm	1		Field Sampling	Total/NA
Turbidity	1.01				NTU	1		Field Sampling	Total/NA

Client Sample ID: TH-76 — Lab Sample ID: 660-60510-4

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	650		200	50	ug/L	1		6010B	Total Recoverable
Sodium	21		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	0.38		0.050	0.026	mg/L	1		350.1	Total/NA
Total Dissolved Solids	220		10	10	mg/L	1		SM 2540C	Total/NA
Field pH	7.56				SU	1		Field Sampling	Total/NA
Field Temperature	22.85				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.24				mg/L	1		Field Sampling	Total/NA
Specific Conductance	427				uS/cm	1		Field Sampling	Total/NA
Turbidity	12.7				NTU	1		Field Sampling	Total/NA

Client Sample ID: TH-72 — Lab Sample ID: 660-60510-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	590		10	5.0	mg/L	20		300.0	Total/NA
Iron	640		200	50	ug/L	1		6010B	Total Recoverable
Sodium	230		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	24		1.0	0.52	mg/L	20		350.1	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

TestAmerica Job ID: 660-60510-1

Client Sample ID: TH-72 (Continued) — Lab Sample ID: 660-60510-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	1400		25	25	mg/L	1		SM 2540C	Total/NA
Field pH	6.81				SU	1		Field Sampling	Total/NA
Field Temperature	23.50				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.46				mg/L	1		Field Sampling	Total/NA
Specific Conductance	2247				uS/cm	1		Field Sampling	Total/NA
Turbidity	1.22				NTU	1		Field Sampling	Total/NA

Client Sample ID: TH-75 — Lab Sample ID: 660-60541-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	27		0.50	0.25	mg/L	1		300.0	Total/NA
Arsenic	6.6	I	10	4.0	ug/L	1		6010B	Total Recoverable
Iron	6100	J3	200	50	ug/L	1		6010B	Total Recoverable
Sodium	18		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	1.8		0.050	0.026	mg/L	1		350.1	Total/NA
Total Dissolved Solids	200		5.0	5.0	mg/L	1		SM 2540C	Total/NA
Field pH	5.67				SU	1		Field Sampling	Total/NA
Field Temperature	22.61				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.37				mg/L	1		Field Sampling	Total/NA
Specific Conductance	341				uS/cm	1		Field Sampling	Total/NA
Turbidity	3.01				NTU	1		Field Sampling	Total/NA

Client Sample ID: TH-74 — Lab Sample ID: 660-60541-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	92		2.0	1.0	mg/L	4		300.0	Total/NA
Iron	31000		200	50	ug/L	1		6010B	Total Recoverable
Sodium	40		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	3.1		0.10	0.052	mg/L	2		350.1	Total/NA
Total Dissolved Solids	310		10	10	mg/L	1		SM 2540C	Total/NA
Field pH	5.56				SU	1		Field Sampling	Total/NA
Field Temperature	22.06				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.57				mg/L	1		Field Sampling	Total/NA
Specific Conductance	549				uS/cm	1		Field Sampling	Total/NA
Turbidity	3.93				NTU	1		Field Sampling	Total/NA

Client Sample ID: TH-73 — Lab Sample ID: 660-60541-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	90		2.0	1.0	mg/L	4		300.0	Total/NA
Iron	4000		200	50	ug/L	1		6010B	Total Recoverable
Sodium	31		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	3.3		0.10	0.052	mg/L	2		350.1	Total/NA
Total Dissolved Solids	210		5.0	5.0	mg/L	1		SM 2540C	Total/NA
Field pH	5.05				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

TestAmerica Job ID: 660-60510-1

Client Sample ID: TH-73 (Continued) — Lab Sample ID: 660-60541-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Field Temperature	25.59				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	1.13				mg/L	1		Field Sampling	Total/NA
Specific Conductance	340				uS/cm	1		Field Sampling	Total/NA
Turbidity	4.01				NTU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

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

TestAmerica Job ID: 660-60510-1

Client Sample ID: DUPLICATE NOT BLANK

Lab Sample ID: 660-60510-1

Date Collected: 05/06/14 00:00

Matrix: Ground Water

Date Received: 05/06/14 14:36

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.8		0.50	0.25	mg/L			05/13/14 15:38	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		05/07/14 08:54	05/08/14 09:10	1
Iron	180	I	200	50	ug/L		05/07/14 08:54	05/08/14 09:10	1
Sodium	17		0.50	0.31	mg/L		05/07/14 08:54	05/08/14 09:10	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	0.63		0.050	0.026	mg/L			05/08/14 08:37	1
Total Dissolved Solids	220		10	10	mg/L			05/07/14 10:15	1

Client Sample Results

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

TestAmerica Job ID: 660-60510-1

Client Sample ID: BLANK FIELD

Lab Sample ID: 660-60510-2

Date Collected: 05/06/14 09:58

Matrix: Ground Water

Date Received: 05/06/14 14:36

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			05/13/14 15:53	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		05/07/14 08:54	05/08/14 09:14	1
Iron	50	U	200	50	ug/L		05/07/14 08:54	05/08/14 09:14	1
Sodium	0.31	U	0.50	0.31	mg/L		05/07/14 08:54	05/08/14 09:14	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	0.026	U	0.050	0.026	mg/L			05/13/14 08:45	1
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			05/07/14 10:15	1

Client Sample Results

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

TestAmerica Job ID: 660-60510-1

Client Sample ID: TH-77

Lab Sample ID: 660-60510-3

Date Collected: 05/06/14 10:09

Matrix: Ground Water

Date Received: 05/06/14 14:36

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.7		0.50	0.25	mg/L			05/13/14 16:08	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		05/07/14 08:54	05/08/14 09:17	1
Iron	190	I	200	50	ug/L		05/07/14 08:54	05/08/14 09:17	1
Sodium	17		0.50	0.31	mg/L		05/07/14 08:54	05/08/14 09:17	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	0.59		0.050	0.026	mg/L			05/07/14 16:44	1
Total Dissolved Solids	220		10	10	mg/L			05/07/14 10:15	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.52				SU			05/06/14 10:09	1
Field Temperature	23.47				Degrees C			05/06/14 10:09	1
Oxygen, Dissolved	0.34				mg/L			05/06/14 10:09	1
Specific Conductance	414				uS/cm			05/06/14 10:09	1
Turbidity	1.01				NTU			05/06/14 10:09	1

Client Sample Results

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

TestAmerica Job ID: 660-60510-1

Client Sample ID: TH-76

Lab Sample ID: 660-60510-4

Date Collected: 05/06/14 11:15
Matrix: Ground Water
Date Received: 05/06/14 14:36

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			05/13/14 16:24	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		05/07/14 08:54	05/08/14 09:20	1
Iron	650		200	50	ug/L		05/07/14 08:54	05/08/14 09:20	1
Sodium	21		0.50	0.31	mg/L		05/07/14 08:54	05/08/14 09:20	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	0.38		0.050	0.026	mg/L			05/07/14 16:44	1
Total Dissolved Solids	220		10	10	mg/L			05/07/14 10:15	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.56				SU			05/06/14 11:15	1
Field Temperature	22.85				Degrees C			05/06/14 11:15	1
Oxygen, Dissolved	0.24				mg/L			05/06/14 11:15	1
Specific Conductance	427				uS/cm			05/06/14 11:15	1
Turbidity	12.7				NTU			05/06/14 11:15	1

Client Sample Results

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

TestAmerica Job ID: 660-60510-1

Client Sample ID: TH-72

Lab Sample ID: 660-60510-5

Date Collected: 05/06/14 12:33
Matrix: Ground Water
Date Received: 05/06/14 14:36

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	590		10	5.0	mg/L			05/13/14 16:39	20

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	U	10	4.0	ug/L		05/07/14 08:54	05/08/14 09:24	1
Iron	640		200	50	ug/L		05/07/14 08:54	05/08/14 09:24	1
Sodium	230		0.50	0.31	mg/L		05/07/14 08:54	05/08/14 09:24	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	24		1.0	0.52	mg/L			05/08/14 08:46	20
Total Dissolved Solids	1400		25	25	mg/L			05/07/14 10:15	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.81				SU			05/06/14 12:33	1
Field Temperature	23.50				Degrees C			05/06/14 12:33	1
Oxygen, Dissolved	0.46				mg/L			05/06/14 12:33	1
Specific Conductance	2247				uS/cm			05/06/14 12:33	1
Turbidity	1.22				NTU			05/06/14 12:33	1

Client Sample Results

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

TestAmerica Job ID: 660-60510-1

Client Sample ID: TH-75

Lab Sample ID: 660-60541-1

Date Collected: 05/07/14 12:07

Matrix: Water

Date Received: 05/07/14 14:12

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	27		0.50	0.25	mg/L			05/13/14 19:58	1

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	6.6	I	10	4.0	ug/L		05/08/14 08:16	05/09/14 08:57	1
Iron	6100	J3	200	50	ug/L		05/08/14 08:16	05/09/14 08:57	1
Sodium	18		0.50	0.31	mg/L		05/08/14 08:16	05/09/14 08:57	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	1.8		0.050	0.026	mg/L			05/13/14 08:54	1
Total Dissolved Solids	200		5.0	5.0	mg/L			05/09/14 12:36	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.67				SU			05/07/14 12:07	1
Field Temperature	22.61				Degrees C			05/07/14 12:07	1
Oxygen, Dissolved	0.37				mg/L			05/07/14 12:07	1
Specific Conductance	341				uS/cm			05/07/14 12:07	1
Turbidity	3.01				NTU			05/07/14 12:07	1

Client Sample Results

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

TestAmerica Job ID: 660-60510-1

Client Sample ID: TH-74

Lab Sample ID: 660-60541-2

Date Collected: 05/07/14 11:22
Matrix: Water
Date Received: 05/07/14 14:12

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	92		2.0	1.0	mg/L			05/13/14 20:14	4

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	U	10	4.0	ug/L		05/08/14 08:16	05/09/14 09:07	1
Iron	31000		200	50	ug/L		05/08/14 08:16	05/09/14 09:07	1
Sodium	40		0.50	0.31	mg/L		05/08/14 08:16	05/09/14 09:07	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	3.1		0.10	0.052	mg/L			05/13/14 10:03	2
Total Dissolved Solids	310		10	10	mg/L			05/09/14 12:36	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.56				SU			05/07/14 11:22	1
Field Temperature	22.06				Degrees C			05/07/14 11:22	1
Oxygen, Dissolved	0.57				mg/L			05/07/14 11:22	1
Specific Conductance	549				uS/cm			05/07/14 11:22	1
Turbidity	3.93				NTU			05/07/14 11:22	1

Client Sample Results

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

TestAmerica Job ID: 660-60510-1

Client Sample ID: TH-73

Lab Sample ID: 660-60541-3

Date Collected: 05/07/14 10:39

Matrix: Water

Date Received: 05/07/14 14:12

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	90		2.0	1.0	mg/L			05/13/14 21:30	4

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	U	10	4.0	ug/L		05/08/14 08:16	05/09/14 09:10	1
Iron	4000		200	50	ug/L		05/08/14 08:16	05/09/14 09:10	1
Sodium	31		0.50	0.31	mg/L		05/08/14 08:16	05/09/14 09:10	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	3.3		0.10	0.052	mg/L			05/13/14 10:03	2
Total Dissolved Solids	210		5.0	5.0	mg/L			05/09/14 12:36	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.05				SU			05/07/14 10:39	1
Field Temperature	25.59				Degrees C			05/07/14 10:39	1
Oxygen, Dissolved	1.13				mg/L			05/07/14 10:39	1
Specific Conductance	340				uS/cm			05/07/14 10:39	1
Turbidity	4.01				NTU			05/07/14 10:39	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 680-328824/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 328824

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.25	U	0.50	0.25	mg/L			05/13/14 12:34	1

Lab Sample ID: LCS 680-328824/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 328824

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.2		mg/L		102	90 - 110

Lab Sample ID: LCSD 680-328824/4 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 328824

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	10.2		mg/L		102	90 - 110	0	30

Lab Sample ID: 660-60510-5 MS — **Client Sample ID: TH-72**
Matrix: Ground Water — **Prep Type: Total/NA**
Analysis Batch: 328824

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	590		200	790		mg/L		99	80 - 120

Lab Sample ID: 660-60510-5 MSD — **Client Sample ID: TH-72**
Matrix: Ground Water — **Prep Type: Total/NA**
Analysis Batch: 328824

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	590		200	792		mg/L		100	80 - 120	0	30

Lab Sample ID: MB 680-328853/24 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 328853

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.25	U	0.50	0.25	mg/L			05/13/14 17:40	1

Lab Sample ID: LCS 680-328853/25 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 328853

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.3		mg/L		103	90 - 110

Lab Sample ID: LCSD 680-328853/26 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 328853

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	10.2		mg/L		102	90 - 110	0	30

QC Sample Results

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

TestAmerica Job ID: 660-60510-1

Lab Sample ID: 660-60541-2 MS — **Client Sample ID: TH-74**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 328853

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	92		40.0	133		mg/L		101	80 - 120		

Lab Sample ID: 660-60541-2 MSD — **Client Sample ID: TH-74**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 328853

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	92		40.0	133		mg/L		103	80 - 120	1	30

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 660-148116/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 148159 — **Prep Batch: 148116**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	U	10	4.0	ug/L		05/07/14 08:54	05/08/14 08:24	1
Iron	50	U	200	50	ug/L		05/07/14 08:54	05/08/14 08:24	1
Sodium	0.31	U	0.50	0.31	mg/L		05/07/14 08:54	05/08/14 08:24	1

Lab Sample ID: LCS 660-148116/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 148159 — **Prep Batch: 148116**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic	1000	1030		ug/L		103	80 - 120		
Iron	1000	1060		ug/L		106	80 - 120		
Sodium	10.0	10.4		mg/L		104	80 - 120		

Lab Sample ID: 640-47760-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 148159 — **Prep Batch: 148116**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic	4.0	U	1000	1040		ug/L		104	80 - 120		
Iron	970		1000	2040		ug/L		108	80 - 120		
Sodium	0.86		10.0	11.1		mg/L		103	80 - 120		

Lab Sample ID: 640-47760-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 148159 — **Prep Batch: 148116**

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	1	20
Iron	970		1000	2050		ug/L		108	80 - 120	0	20
Sodium	0.86		10.0	11.0		mg/L		101	80 - 120	1	20

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

Lab Sample ID: MB 660-148149/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 148192 — **Prep Batch: 148149**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	U	10	4.0	ug/L		05/08/14 08:16	05/09/14 08:08	1
Iron	50	U	200	50	ug/L		05/08/14 08:16	05/09/14 08:08	1
Sodium	0.31	U	0.50	0.31	mg/L		05/08/14 08:16	05/09/14 08:08	1

Lab Sample ID: LCS 660-148149/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 148192 — **Prep Batch: 148149**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	1040		ug/L		104	80 - 120
Iron	1000	1070		ug/L		107	80 - 120
Sodium	10.0	10.4		mg/L		104	80 - 120

Lab Sample ID: 660-60541-1 MS — **Client Sample ID: TH-75**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 148192 — **Prep Batch: 148149**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	6.6	I	1000	1070		ug/L		106	80 - 120
Iron	6100	J3	1000	7190		ug/L		110	80 - 120
Sodium	18		10.0	28.7		mg/L		109	80 - 120

Lab Sample ID: 660-60541-1 MSD — **Client Sample ID: TH-75**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 148192 — **Prep Batch: 148149**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	6.6	I	1000	1080		ug/L		108	80 - 120	1	20
Iron	6100	J3	1000	7300	J3	ug/L		121	80 - 120	2	20
Sodium	18		10.0	28.8		mg/L		110	80 - 120	0	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 680-328075/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 328075

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	0.026	U	0.050	0.026	mg/L			05/07/14 16:44	1

Lab Sample ID: LCS 680-328075/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 328075

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia as N	1.00	0.948		mg/L		95	90 - 110

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: 660-60510-4 MS — **Client Sample ID: TH-76**
Matrix: Ground Water — **Prep Type: Total/NA**
Analysis Batch: 328075

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia as N	0.38		1.00	1.38		mg/L		100	90 - 110

Lab Sample ID: 660-60510-4 MSD — **Client Sample ID: TH-76**
Matrix: Ground Water — **Prep Type: Total/NA**
Analysis Batch: 328075

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia as N	0.38		1.00	1.38		mg/L		100	90 - 110	0	30

Lab Sample ID: 660-60510-3 DU — **Client Sample ID: TH-77**
Matrix: Ground Water — **Prep Type: Total/NA**
Analysis Batch: 328075

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia as N	0.59		0.569		mg/L		3	30

Lab Sample ID: MB 680-328799/50 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 328799

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	0.026	U	0.050	0.026	mg/L			05/13/14 10:32	1

Lab Sample ID: LCS 680-328799/32 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 328799

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia as N	1.00	0.943		mg/L		94	90 - 110

Lab Sample ID: 640-47821-F-2 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 328799

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia as N	11	J3	1.00	12.0	J3	mg/L		64	90 - 110

Lab Sample ID: 640-47821-F-2 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 328799

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia as N	11	J3	1.00	11.8	J3	mg/L		48	90 - 110	1	30

Lab Sample ID: 640-47821-F-3 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 328799

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia as N	11		10.7		mg/L		1	30

QC Sample Results

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

TestAmerica Job ID: 660-60510-1

Lab Sample ID: MB 680-328800/18 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 328800

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	0.026	U	0.050	0.026	mg/L			05/13/14 09:03	1

Lab Sample ID: LCS 680-328800/24 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 328800

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia as N	1.00	0.943		mg/L		94	90 - 110

Lab Sample ID: 680-101050-C-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 328800

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia as N	0.65	J3	1.00	0.713	J3	mg/L		6	90 - 110

Lab Sample ID: 680-101050-C-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 328800

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia as N	0.65	J3	1.00	0.725	J3	mg/L		7	90 - 110	2	30

Lab Sample ID: 660-60541-1 DU — **Client Sample ID: TH-75**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 328800

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia as N	1.8		1.82		mg/L		4	30

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

Lab Sample ID: MB 660-148122/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148122

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			05/07/14 10:15	1

Lab Sample ID: LCS 660-148122/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148122

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	10000	9880		mg/L		99	80 - 120

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

Lab Sample ID: 660-60510-5 DU — **Client Sample ID: TH-72**
Matrix: Ground Water — **Prep Type: Total/NA**
Analysis Batch: 148122

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	1400			1340		mg/L				3	20

Lab Sample ID: MB 660-148198/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148198

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			05/09/14 12:36	1

Lab Sample ID: LCS 660-148198/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148198

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids			10000	9970		mg/L		100	80 - 120		

Lab Sample ID: 660-60541-2 DU — **Client Sample ID: TH-74**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148198

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	310			328		mg/L				5	20

QC Association Summary

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

TestAmerica Job ID: 660-60510-1

HPLC/IC

Analysis Batch: 328824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-60510-1	DUPLICATE NOT BLANK	Total/NA	Ground Water	300.0	
660-60510-2	BLANK FIELD	Total/NA	Ground Water	300.0	
660-60510-3	TH-77	Total/NA	Ground Water	300.0	
660-60510-4	TH-76	Total/NA	Ground Water	300.0	
660-60510-5	TH-72	Total/NA	Ground Water	300.0	
660-60510-5 MS	TH-72	Total/NA	Ground Water	300.0	
660-60510-5 MSD	TH-72	Total/NA	Ground Water	300.0	
LCS 680-328824/3	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-328824/4	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-328824/2	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 328853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-60541-1	TH-75	Total/NA	Water	300.0	
660-60541-2	TH-74	Total/NA	Water	300.0	
660-60541-2 MS	TH-74	Total/NA	Water	300.0	
660-60541-2 MSD	TH-74	Total/NA	Water	300.0	
660-60541-3	TH-73	Total/NA	Water	300.0	
LCS 680-328853/25	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-328853/26	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-328853/24	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 148116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
640-47760-A-1-B MS	Matrix Spike	Total Recoverable	Water	3005A	
640-47760-A-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
660-60510-1	DUPLICATE NOT BLANK	Total Recoverable	Ground Water	3005A	
660-60510-2	BLANK FIELD	Total Recoverable	Ground Water	3005A	
660-60510-3	TH-77	Total Recoverable	Ground Water	3005A	
660-60510-4	TH-76	Total Recoverable	Ground Water	3005A	
660-60510-5	TH-72	Total Recoverable	Ground Water	3005A	
LCS 660-148116/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 660-148116/1-A	Method Blank	Total Recoverable	Water	3005A	

Prep Batch: 148149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-60541-1	TH-75	Total Recoverable	Water	3005A	
660-60541-1 MS	TH-75	Total Recoverable	Water	3005A	
660-60541-1 MSD	TH-75	Total Recoverable	Water	3005A	
660-60541-2	TH-74	Total Recoverable	Water	3005A	
660-60541-3	TH-73	Total Recoverable	Water	3005A	
LCS 660-148149/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 660-148149/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 148159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
640-47760-A-1-B MS	Matrix Spike	Total Recoverable	Water	6010B	148116
640-47760-A-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	148116

Metals (Continued)

Analysis Batch: 148159 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-60510-1	DUPLICATE NOT BLANK	Total Recoverable	Ground Water	6010B	148116
660-60510-2	BLANK FIELD	Total Recoverable	Ground Water	6010B	148116
660-60510-3	TH-77	Total Recoverable	Ground Water	6010B	148116
660-60510-4	TH-76	Total Recoverable	Ground Water	6010B	148116
660-60510-5	TH-72	Total Recoverable	Ground Water	6010B	148116
LCS 660-148116/2-A	Lab Control Sample	Total Recoverable	Water	6010B	148116
MB 660-148116/1-A	Method Blank	Total Recoverable	Water	6010B	148116

Analysis Batch: 148192

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-60541-1	TH-75	Total Recoverable	Water	6010B	148149
660-60541-1 MS	TH-75	Total Recoverable	Water	6010B	148149
660-60541-1 MSD	TH-75	Total Recoverable	Water	6010B	148149
660-60541-2	TH-74	Total Recoverable	Water	6010B	148149
660-60541-3	TH-73	Total Recoverable	Water	6010B	148149
LCS 660-148149/2-A	Lab Control Sample	Total Recoverable	Water	6010B	148149
MB 660-148149/1-A	Method Blank	Total Recoverable	Water	6010B	148149

General Chemistry

Analysis Batch: 148122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-60510-1	DUPLICATE NOT BLANK	Total/NA	Ground Water	SM 2540C	
660-60510-2	BLANK FIELD	Total/NA	Ground Water	SM 2540C	
660-60510-3	TH-77	Total/NA	Ground Water	SM 2540C	
660-60510-4	TH-76	Total/NA	Ground Water	SM 2540C	
660-60510-5	TH-72	Total/NA	Ground Water	SM 2540C	
660-60510-5 DU	TH-72	Total/NA	Ground Water	SM 2540C	
LCS 660-148122/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 660-148122/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 148198

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-60541-1	TH-75	Total/NA	Water	SM 2540C	
660-60541-2	TH-74	Total/NA	Water	SM 2540C	
660-60541-2 DU	TH-74	Total/NA	Water	SM 2540C	
660-60541-3	TH-73	Total/NA	Water	SM 2540C	
LCS 660-148198/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 660-148198/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 328075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-60510-1	DUPLICATE NOT BLANK	Total/NA	Ground Water	350.1	
660-60510-3	TH-77	Total/NA	Ground Water	350.1	
660-60510-3 DU	TH-77	Total/NA	Ground Water	350.1	
660-60510-4	TH-76	Total/NA	Ground Water	350.1	
660-60510-4 MS	TH-76	Total/NA	Ground Water	350.1	
660-60510-4 MSD	TH-76	Total/NA	Ground Water	350.1	
660-60510-5	TH-72	Total/NA	Ground Water	350.1	
LCS 680-328075/1	Lab Control Sample	Total/NA	Water	350.1	

General Chemistry (Continued)

Analysis Batch: 328075 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 680-328075/2	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 328799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
640-47821-F-2 MS	Matrix Spike	Total/NA	Water	350.1	
640-47821-F-2 MSD	Matrix Spike Duplicate	Total/NA	Water	350.1	
640-47821-F-3 DU	Duplicate	Total/NA	Water	350.1	
660-60510-2	BLANK FIELD	Total/NA	Ground Water	350.1	
LCS 680-328799/32	Lab Control Sample	Total/NA	Water	350.1	
MB 680-328799/50	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 328800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-60541-1	TH-75	Total/NA	Water	350.1	
660-60541-1 DU	TH-75	Total/NA	Water	350.1	
660-60541-2	TH-74	Total/NA	Water	350.1	
660-60541-3	TH-73	Total/NA	Water	350.1	
680-101050-C-1 MS	Matrix Spike	Total/NA	Water	350.1	
680-101050-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	350.1	
LCS 680-328800/24	Lab Control Sample	Total/NA	Water	350.1	
MB 680-328800/18	Method Blank	Total/NA	Water	350.1	

Field Service / Mobile Lab

Analysis Batch: 148132

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-60510-3	TH-77	Total/NA	Ground Water	Field Sampling	
660-60510-4	TH-76	Total/NA	Ground Water	Field Sampling	
660-60510-5	TH-72	Total/NA	Ground Water	Field Sampling	

Analysis Batch: 148218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-60541-1	TH-75	Total/NA	Water	Field Sampling	
660-60541-2	TH-74	Total/NA	Water	Field Sampling	
660-60541-3	TH-73	Total/NA	Water	Field Sampling	

Lab Chronicle

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

TestAmerica Job ID: 660-60510-1

Client Sample ID: DUPLICATE NOT BLANK

Lab Sample ID: 660-60510-1
Date Collected: 05/06/14 00:00
Matrix: Ground Water
Date Received: 05/06/14 14:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	328824	05/13/14 15:38	DAS	TAL SAV
Total Recoverable	Prep	3005A			148116	05/07/14 08:54	ALQ	TAL TAM
Total Recoverable	Analysis	6010B		1	148159	05/08/14 09:10	GAF	TAL TAM
Total/NA	Analysis	350.1		1	328075	05/08/14 08:37	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	148122	05/07/14 10:15	TKO	TAL TAM

Client Sample ID: BLANK FIELD

Lab Sample ID: 660-60510-2
Date Collected: 05/06/14 09:58
Matrix: Ground Water
Date Received: 05/06/14 14:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	328824	05/13/14 15:53	DAS	TAL SAV
Total Recoverable	Prep	3005A			148116	05/07/14 08:54	ALQ	TAL TAM
Total Recoverable	Analysis	6010B		1	148159	05/08/14 09:14	GAF	TAL TAM
Total/NA	Analysis	350.1		1	328799	05/13/14 08:45	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	148122	05/07/14 10:15	TKO	TAL TAM

Client Sample ID: TH-77

Lab Sample ID: 660-60510-3
Date Collected: 05/06/14 10:09
Matrix: Ground Water
Date Received: 05/06/14 14:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	328824	05/13/14 16:08	DAS	TAL SAV
Total Recoverable	Prep	3005A			148116	05/07/14 08:54	ALQ	TAL TAM
Total Recoverable	Analysis	6010B		1	148159	05/08/14 09:17	GAF	TAL TAM
Total/NA	Analysis	350.1		1	328075	05/07/14 16:44	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	148122	05/07/14 10:15	TKO	TAL TAM
Total/NA	Analysis	Field Sampling		1	148132	05/06/14 10:09		TAL TAM

Client Sample ID: TH-76

Lab Sample ID: 660-60510-4
Date Collected: 05/06/14 11:15
Matrix: Ground Water
Date Received: 05/06/14 14:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	328824	05/13/14 16:24	DAS	TAL SAV
Total Recoverable	Prep	3005A			148116	05/07/14 08:54	ALQ	TAL TAM
Total Recoverable	Analysis	6010B		1	148159	05/08/14 09:20	GAF	TAL TAM
Total/NA	Analysis	350.1		1	328075	05/07/14 16:44	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	148122	05/07/14 10:15	TKO	TAL TAM
Total/NA	Analysis	Field Sampling		1	148132	05/06/14 11:15		TAL TAM

Lab Chronicle

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

TestAmerica Job ID: 660-60510-1

Client Sample ID: TH-72

Lab Sample ID: 660-60510-5

Date Collected: 05/06/14 12:33
Matrix: Ground Water
Date Received: 05/06/14 14:36

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20	328824	05/13/14 16:39	DAS	TAL SAV
Total Recoverable	Prep	3005A			148116	05/07/14 08:54	ALQ	TAL TAM
Total Recoverable	Analysis	6010B		1	148159	05/08/14 09:24	GAF	TAL TAM
Total/NA	Analysis	350.1		20	328075	05/08/14 08:46	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	148122	05/07/14 10:15	TKO	TAL TAM
Total/NA	Analysis	Field Sampling		1	148132	05/06/14 12:33		TAL TAM

Client Sample ID: TH-75

Lab Sample ID: 660-60541-1

Date Collected: 05/07/14 12:07
Matrix: Water
Date Received: 05/07/14 14:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	328853	05/13/14 19:58	DAS	TAL SAV
Total Recoverable	Prep	3005A			148149	05/08/14 08:16	ALQ	TAL TAM
Total Recoverable	Analysis	6010B		1	148192	05/09/14 08:57	GAF	TAL TAM
Total/NA	Analysis	350.1		1	328800	05/13/14 08:54	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	148198	05/09/14 12:36	TKO	TAL TAM
Total/NA	Analysis	Field Sampling		1	148218	05/07/14 12:07		TAL TAM

Client Sample ID: TH-74

Lab Sample ID: 660-60541-2

Date Collected: 05/07/14 11:22
Matrix: Water
Date Received: 05/07/14 14:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		4	328853	05/13/14 20:14	DAS	TAL SAV
Total Recoverable	Prep	3005A			148149	05/08/14 08:16	ALQ	TAL TAM
Total Recoverable	Analysis	6010B		1	148192	05/09/14 09:07	GAF	TAL TAM
Total/NA	Analysis	350.1		2	328800	05/13/14 10:03	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	148198	05/09/14 12:36	TKO	TAL TAM
Total/NA	Analysis	Field Sampling		1	148218	05/07/14 11:22		TAL TAM

Client Sample ID: TH-73

Lab Sample ID: 660-60541-3

Date Collected: 05/07/14 10:39
Matrix: Water
Date Received: 05/07/14 14:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		4	328853	05/13/14 21:30	DAS	TAL SAV
Total Recoverable	Prep	3005A			148149	05/08/14 08:16	ALQ	TAL TAM
Total Recoverable	Analysis	6010B		1	148192	05/09/14 09:10	GAF	TAL TAM
Total/NA	Analysis	350.1		2	328800	05/13/14 10:03	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	148198	05/09/14 12:36	TKO	TAL TAM

Lab Chronicle

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

TestAmerica Job ID: 660-60510-1

Client Sample ID: TH-73

Lab Sample ID: 660-60541-3

Date Collected: 05/07/14 10:39

Matrix: Water

Date Received: 05/07/14 14:12

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Field Sampling		1	148218	05/07/14 10:39		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: 660-60510-1

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: 660-60510-1

Laboratory: TestAmerica Tampa

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E84282	06-30-14

Laboratory: TestAmerica Savannah

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

Authority	Program	EPA Region	Certification ID	Expiration Date
	AFCEE		SAVLAB	
A2LA	DoD ELAP		399.01	02-28-15
A2LA	ISO/IEC 17025		399.01	02-28-15
Alabama	State Program	4	41450	06-30-14 *
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	06-30-14 *
GA Dept. of Agriculture	State Program	4	N/A	06-30-14 *
Georgia	State Program	4	N/A	06-30-14 *
Georgia	State Program	4	803	06-30-14 *
Guam	State Program	9	09-005r	04-16-15
Hawaii	State Program	9	N/A	06-30-14 *
Illinois	NELAP	5	200022	11-30-14
Indiana	State Program	5	N/A	06-30-14 *
Iowa	State Program	7	353	07-01-15
Kentucky (DW)	State Program	4	90084	12-31-14
Kentucky (UST)	State Program	4	18	06-30-14 *
Louisiana	NELAP	6	LA100015	12-31-14
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-14
Massachusetts	State Program	1	M-GA006	06-30-14 *
Michigan	State Program	5	9925	06-30-14 *
Mississippi	State Program	4	N/A	06-30-14 *
Montana	State Program	8	CERT0081	01-01-15
Nebraska	State Program	7	TestAmerica-Savannah	06-30-14 *
New Jersey	NELAP	2	GA769	06-30-14 *
New Mexico	State Program	6	N/A	06-30-14 *
New York	NELAP	2	10842	03-31-15
North Carolina DENR	State Program	4	269	12-31-14
North Carolina DHHS	State Program	4	13701	07-31-14
Oklahoma	State Program	6	9984	08-31-14
Pennsylvania	NELAP	3	68-00474	06-30-14 *
Puerto Rico	State Program	2	GA00006	12-31-14
South Carolina	State Program	4	98001	06-30-14 *
Tennessee	State Program	4	TN02961	06-30-14 *
Texas	NELAP	6	T104704185-08-TX	11-30-14
USDA	Federal		SAV 3-04	04-07-14 *
Virginia	NELAP	3	460161	06-14-14 *
Washington	State Program	10	C805	06-10-14 *
West Virginia DEP	State Program	3	94	06-30-14 *
West Virginia DHHR	State Program	3	9950C	12-31-14
Wisconsin	State Program	5	999819810	08-31-14

* Expired certification is currently pending renewal and is 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
Wyoming	State Program	8	8TMS-L	06-30-14 *

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

Serial Number

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

TestAmerica

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: SELF-IAMP Monitoring Wells	PROJECT NO	PROJECT LOCATION: Lithia, FL
TESTAMERICA (LAB) PROJECT MANAGER: Nancy Robertson	P.O. NUMBER	CONTRACT NO
CLIENT (SITE) PM: Michael Townsel	CLIENT PHONE: (813) 663-3222	CLIENT FAX: (813) 274-6801
CLIENT NAME: Hills. County Public Utilities	CLIENT EMAIL: 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)	Ammonia-N (H_2SO_4)	TDS (Ice)	Chloride (Ice)	As, Fe, Na (HNO_3)						REMARKS
5-6-14	—	Duplicate	G	X				X	X	X	X						
	9:58	FIELD BLANK.						X	X	X	X						
	10:09	TH-77						X	X	X	X						
	11:15	TH-76						X	X	X	X						
	12.33	TH-72						X	X	X	X						

NUMBER OF CONTAINERS SUBMITTED

660-60510 Chain of Custody

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
	5-6-14	14:36						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
	5/6/14	14:36						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT YES ○ NO ○	CUSTODY SEAL NO.	STL LOG NO.	LABORATORY REMARKS:
						3.1°C/2.9°C CU-07

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill IAMP	SITE LOCATION:. Lithia, Florida
WELL NO: TH-72	SAMPLE ID: / DATE: 5-6-14

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 0.5	WELL SCREEN INTERVAL DEPTH: 180 feet to 190 feet	STATIC DEPTH TO WATER (feet): 100.15	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)
= (190 feet – 100.15 feet) X .16 gallons/foot = 14.38 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). 189	FINAL PUMP OR TUBING DEPTH IN WELL (feet). 189	PURGING INITIATED AT: 11.48	PURGING ENDED AT: 12.33	TOTAL VOLUME PURGED (gallons): 22.5

TIME	VOLUME PURGED (gallons)	CUMUL VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND µS/cm	DISSOLVED OXYGEN mg/L	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
12.17	14.5	14.5	.50	100.15	6.80	23.52	2223	.44	4.46	NONE	NONE
12.25	4.0	18.5	.50	100.15	6.81	23.55	2237	.76	1.79	↓	↓
12.33	4.0	22.5	.50	100.15	6.81	23.50	2247	.46	1.22	↓	↓

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: 12.33	SAMPLING ENDED AT: 12.45
PUMP OR TUBING DEPTH IN WELL (feet): 189	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 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	
WELL NO: TH-76	SAMPLE ID:	DATE: 5-6-14

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): 80.44	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 – 80.44 feet) X .16 gallons/foot = 15.67 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): 177.35	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 177.35	PURGING INITIATED AT: 10.29	PURGING ENDED AT: 11.15	TOTAL VOLUME PURGED (gallons): 24.38

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. µS/cm	DISSOLVED OXYGEN mg/L	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
10.59	15.90	15.90	.53	81.50	7.56	22.82	428	.28	12.8	very light cloudy	NONE
11.07	4.24	20.14	.53	81.50	7.56	22.83	427	.26	12.8	↓	↓
11.15	4.24	24.38	.53	81.50	7.56	22.85	427	.24	12.7	↓	↓

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: 11.15	SAMPLING ENDED AT: 11.27
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			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 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
WELL NO: TH-77	SAMPLE ID: / DATE: 5-6-14

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): 88.96	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 – 88.96 feet) X .16 gallons/foot = 12.84 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: 9:30	PURGING ENDED AT: 10.09	TOTAL VOLUME PURGED (gallons): 20.67

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)
9.55	13.25	13.25	.53	89.44	7.53	23.45	416	.48	1.0	NONE	NONE
10.02	3.71	16.96	.53	89.45	7.51	23.46	415	.39	.88	↓	↓
10.09	3.71	20.67	.53	89.46	7.52	23.47	414	.34	1.01	↓	↓

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: 10.09	SAMPLING ENDED AT: 10.20
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			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 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: Duplicate	SAMPLE ID: / DATE: 5-6-14

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)

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

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County landfill IAMP		SITE LOCATION: Lithia, FL	
WELL NO: Field Blank	SAMPLE ID:		DATE: 5-6-14

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 mS/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): [signature]	SAMPLING INITIATED AT: 9.58	SAMPLING ENDED AT: 10:10
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

5/16/2014

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: Nancy Robertson	P.O. NUMBER	CONTRACT NO.
CLIENT (SITE) PM: Michael Townsel	CLIENT PHONE: (813) 663-3222	CLIENT FAX: (813) 274-6801
CLIENT NAME: Hills. County Public Utilities	CLIENT EMAIL: townselm@hillsboroughcounty.org	
CLIENT ADDRESS: 332 North Falkenburg Road		
COMPANY CONTRACTING THIS WORK	SAMPLER'S SIGNATURE: Todd Patterson	

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...)	Ammonia-N (H2SO4)	TDS (Ice)	Chloride (Ice)	As, Fe, Na (HNO3)	REMARKS
5-7-14	12:07	TH-75	G	X				X	X	X	X	
↓	11:22	TH-74	↓	↓				X	X	X	X	
↓	10:39	TH-73	↓	↓				X	X	X	X	

NUMBER OF CONTAINERS SUBMITTED

660-60541 Chain of Custody

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	5/7/14	1412						
RECEIVED BY: (SIGNATURE) Carol McNulty	DATE 5/7/14	TIME 1412	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:
						5.3/5.1 CO-07

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, FL	
WELL NO: TH-75	SAMPLE ID:		DATE: 5-7-14

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH: 7 feet to 17 feet	STATIC DEPTH TO WATER (feet): 7.72	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)
= (17 feet – 7.72 feet) X .16 gallons/foot = 1.49 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): 16	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 16	PURGING INITIATED AT: 11.46	PURGING ENDED AT: 12.07	TOTAL VOLUME PURGED (gallons): 2.1

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)
12.01	1.5	1.5	.10	7.94	5.67	22.61	342	.38	3.90	NONE	NONE
12.04	.3	1.8	.10	7.94	5.66	22.61	342	.38	3.21	↓	↓
12.07	.3	2.1	.10	7.94	5.67	22.61	341	.37	3.01	↓	↓

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): [signature]	SAMPLING INITIATED AT: 12.07	SAMPLING ENDED AT: 12.19
PUMP OR TUBING DEPTH IN WELL (feet): 16	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

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County landfill IAMP		SITE LOCATION: LITHIA, FL	
WELL NO: TH-74	SAMPLE ID:		DATE: 5-7-14

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH: 7 feet to 17 feet	STATIC DEPTH TO WATER (feet): 9.35	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)
= (17 feet – 9.35 feet) X .16 gallons/foot = 1.23 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): 16	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 16	PURGING INITIATED AT: 11.03	PURGING ENDED AT: 11.22	TOTAL VOLUME PURGED (gallons): 1.9

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)
11.16	1.3	1.3	.1	9.72	5.54	22.14	542	.74	2.88	NONE	NONE
11.19	.3	1.6	.1	9.72	5.55	22.10	545	.63	3.29	↓	↓
11.22	.3	1.9	.1	9.72	5.56	22.06	549	.57	3.93	↓	↓

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: 11.22	SAMPLING ENDED AT: 11.34
PUMP OR TUBING DEPTH IN WELL (feet): 16	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

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: Southeast County Landfill IAMP		SITE LOCATION: LITHIA, FL	
WELL NO: TH-73	SAMPLE ID:		DATE: 5-7-14

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH 33.4 feet to 43.4 feet	STATIC DEPTH TO WATER (feet): 30.74	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)
= (~~43.4~~ feet – ~~30.~~ 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)
= .08 gallons + (.01 gallons/foot X 45.4 feet) + .30 .84 x3= 2.52 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 42.4	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 42.4	PURGING INITIATED AT: 10.20	PURGING ENDED AT: 10.39	TOTAL VOLUME PURGED (gallons): 3.8

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)
10.33	2.6	2.6	.2	31.19	5.10	25.59	355	1.29	3.79	NONE	NONE
10.36	.6	3.2	.2	31.19	5.07	25.61	344	1.18	3.52	↓	↓
10.39	.6	3.8	.2	31.19	5.05	25.59	340	1.13	4.01	↓	↓

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: 10.39	SAMPLING ENDED AT: 10.50
PUMP OR TUBING DEPTH IN WELL (feet): 42.4	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

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: 660-67679.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: nancy.robertson@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 660-60510-1
Address: 5102 LaRoche Avenue, ,	Due Date Requested: 5/16/2014			
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
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2SO3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - ph 4-5
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)	300_ORGFM_28D/ Chloride	350.1/ Nitrogen, Ammonia	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
DUPLICATE NOT BLANK (660-60510-1)	5/6/14	Eastern		Water			X	X	2	
BLANK FIELD (660-60510-2)	5/6/14	09:58 Eastern		Water			X	X	2	
TH-77 (660-60510-3)	5/6/14	10:09 Eastern		Water			X	X	2	
TH-76 (660-60510-4)	5/6/14	11:15 Eastern		Water			X	X	2	
TH-72 (660-60510-5)	5/6/14	12:33 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: [signature]	Date/Time: 5/6/14	Company 16:10	Received by: [signature]	Date/Time: 05-07-14 0810	Company 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: 1.0°C

TestAmerica Tampa
6712 Benjamin Road Suite 100
Tampa, FL 33634
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Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)
Client Contact: Shipping/Receiving
Company: TestAmerica Laboratories, Inc.
Address: 5102 LaRoche Avenue, ,
City: Savannah
State, Zip: GA, 31404
Phone: 912-354-7858(Tel) 912-352-0165(Fax)
Email:
Project Name: SELF MWs,SS,Private Wells,NPDES
Site: Southeast Landfill

Sampler:
Phone:
Due Date Requested: 5/19/2014
TAT Requested (days):
PO #:
WO #:
Project #: 66003915
SSOW#:

Lab PM: Robertson, Nancy
E-Mail: nancy.robertson@testamericainc.com
Carrier Tracking No(s):
COC No: 660-67743.1
Page: Page 1 of 1
Job #: 660-60541-1

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, 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)	300_ORGFM_28D/ Chloride	350.1/ Nitrogen, Ammonia	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
TH-75 (660-60541-1)	5/7/14	12:07 Eastern		Water			X	X	2	
TH-74 (660-60541-2)	5/7/14	11:22 Eastern		Water			X	X	2	
TH-73 (660-60541-3)	5/7/14	10:39 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
RPRICE	5-7-14 1617		J West	5/8/14 7:50	TA

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 1.4

Login Sample Receipt Checklist

Client: Hillsborough Co Public Utilities Dept

Job Number: 660-60510-1

Login Number: 60510

List Source: TestAmerica Tampa

List Number: 1

Creator: Williams, Jennifer

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.	False	Check done at department level as required.

Login Sample Receipt Checklist

Client: Hillsborough Co Public Utilities Dept

Job Number: 660-60510-1

Login Number: 60510
List Number: 1
Creator: Banda, Christy S

List Source: TestAmerica Savannah
List Creation: 05/07/14 08:44 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	

Login Sample Receipt Checklist

Client: Hillsborough Co Public Utilities Dept

Job Number: 660-60510-1

Login Number: 60541

List Source: TestAmerica Tampa

List Number: 1

Creator: McNulty, Carol

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

Login Sample Receipt Checklist

Client: Hillsborough Co Public Utilities Dept

Job Number: 660-60510-1

Login Number: 60541
List Number: 1
Creator: West, Lauren H

List Source: TestAmerica Savannah
List Creation: 05/08/14 06:10 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	