BOARD OF COUNTY COMMISSIONERS
Kevin Beckner
Victor D. Crist
Ken Hagan
Al Higginbotham
Lesley "Les" Miller, Jr.
Sandra L. Murman
Mark Sharpe

Hillsborough County
Florida

Office of the County Administrator
Michael S. Merrill

CHIEF ADMINISTRATIVE OFFICER
Helene Marks

CHIEF FINANCIAL ADMINISTRATOR
Bonnie M. Wise

DEPUTY COUNTY ADMINISTRATORS
Lucia E. Garsys
Sharon D. Subadan

October 2, 2013

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

RE: **Southeast County Landfill**
Laboratory Analytical Results
Initial Assessment Monitoring Plan
Report No. 36 – August 2013

Dear Mr. Morris:

The Hillsborough County Public Utilities Department (County) is pleased to provide the analytical results from the August 2013 sampling event conducted as part of our continuation of the Initial Assessment Monitoring Plan (IAMP). The IAMP was developed to address the potential impacts to groundwater from the sinkhole 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 August 1-2, 2013 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 ranged from 1.3 to 10.4 Nephelometric Turbidity Units (NTUs), and 0.2 to 42.9 NTUs in the upper Floridan / Limestone aquifer monitoring wells. Slightly elevated turbidity values continue to be observed in the two newer wells, TH-76 and TH-77. The County believes that the turbidity values at these two locations will continue to decrease over time as they are pumped during the monthly sampling activities.

Conductivity
The conductivity values observed in the surficial aquifer monitoring wells ranged from 356 to 508 micromhos per centimeter (umhos/cm). The conductivity in the upper Floridan/Limestone aquifer monitoring wells ranged from 334 to 1,256 umhos/cm, with the one elevated reading observed in TH-72. Monitoring well TH-72 is located adjacent to the sinkhole and continues to exhibit groundwater impacts from the buried wastes within the sinkhole and the grout materials pumped into the subsurface. The values observed in TH-76 and TH-77 are consistent with the unaffected deep wells across the site.

Total Dissolved Solids (TDS)
TDS was observed in TH-72 above the Secondary Drinking Water Standard (SDWS) of 500 mg/l at a concentration of 800 mg/l. The other two upper Floridan wells both had a TDS value of 230 mg/l. The surficial aquifer wells exhibited TDS values ranging from 170 to 270 mg/l.

Chloride
The chloride value in TH-72 was observed at 290 mg/l, which is above the Primary Dinking Water Standard (PDWS) of 250 mg/l. The remaining monitoring wells exhibited chloride values ranging from 9.2 mg/l to 130 mg/l It is apparent that the elevated chloride values observed in TH-72 are attributable to waste that entered the sinkhole and/or grouting activities, but these impacts appear to be limited to the area in the immediate vicinity of the sinkhole.

Iron
Total iron concentrations in each of the surficial and upper Floridan aquifer monitoring wells exceeded the SDWS of 0.3 mg/l. The surficial aquifer monitoring wells exhibited values ranging from 7.6 mg/l to 31 mg/l and the upper Floridan/Limestone aquifer monitoring wells exhibited values from 0.72 mg/l to 1.6 mg/l. Results show that the iron observed in TH-72 is lower than the concentrations in TH-76 and TH-77. 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.

Total Ammonia

Surficial aquifer monitoring well TH-74 and upper Floridan well TH-72 exhibited ammonia above the former GCTL of 2.8 mg/l at concentrations of 3.2 mg/l and 6.8 mg/l. The other two upper Floridan wells, TH-76 and TH-77 were observed at 0.26 and 0.36 mg/l, respectively.

Groundwater Elevations and Direction of Flow

The County did not collect groundwater and surface water elevation data from the site during the IAMP sampling event.. The County elected to not collect groundwater elevation data at the sixty-five data points on site as part of the IAMP sampling events in the same month that the semi-annual sampling is conducted in accordance with the Operations Permit No. 35435-014-SO/01 (modified 020-SO/MM). The decision was made to reduce duplication of field assignments during the same month when the sampling event is conducted. Therefore only an upper Floridan aquifer contour diagram is provided in this report. It should be noted that no significant changes to the patterns of flow in the surficial aquifer have been noted over the period of record, and the upper Floridan contour diagram continues to exhibit flow to the northwest.

Conclusions

The water quality observed in the August 2013 IAMP sampling event indicates that the upper Floridan / Limestone well TH-72, which is closest to the sinkhole, continues to exhibit changes in water quality. The impacts observed in TH-72 include elevated conductivity, TDS, chloride, ammonia, iron and sodium. These impacts are not unexpected within the upper Floridan / Limestone aquifer in the immediate vicinity of the sinkhole feature. The two recently installed upper Floridan / Limestone aquifer monitoring wells, TH-76 and TH-77 exhibit good water quality with no evidence of impact from the sinkhole. Conductivity values, TDS, chloride and ammonia are all very low and consistent with the historical data set for the unaffected upper Floridan monitoring wells at the SCLF.

Based on the groundwater elevations in TH-72, TH-76, and TH-77, the direction of flow within the upper Floridan aquifer in the vicinity of the sinkhole again appears to be towards the northwest. The County will continue to evaluate the direction of flow in this area, and if no significant seasonal changes are observed, an additional upper Floridan well may need to be installed in an appropriate down gradient location northwest of the sinkhole.

Recommendations

The County continues to move forward with the optimized IAMP, which includes the monthly sampling of the three upper Floridan / Limestone aquifer 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. We will continue to evaluate any water quality changes in both the surficial and upper Floridan wells, and present the findings in the monthly IAMP report.

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 the August 2013 sampling event, a groundwater elevation data table, groundwater contour and flow diagrams for the surficial and upper Floridan / Limestone aquifers, the historical data tables for each well 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,

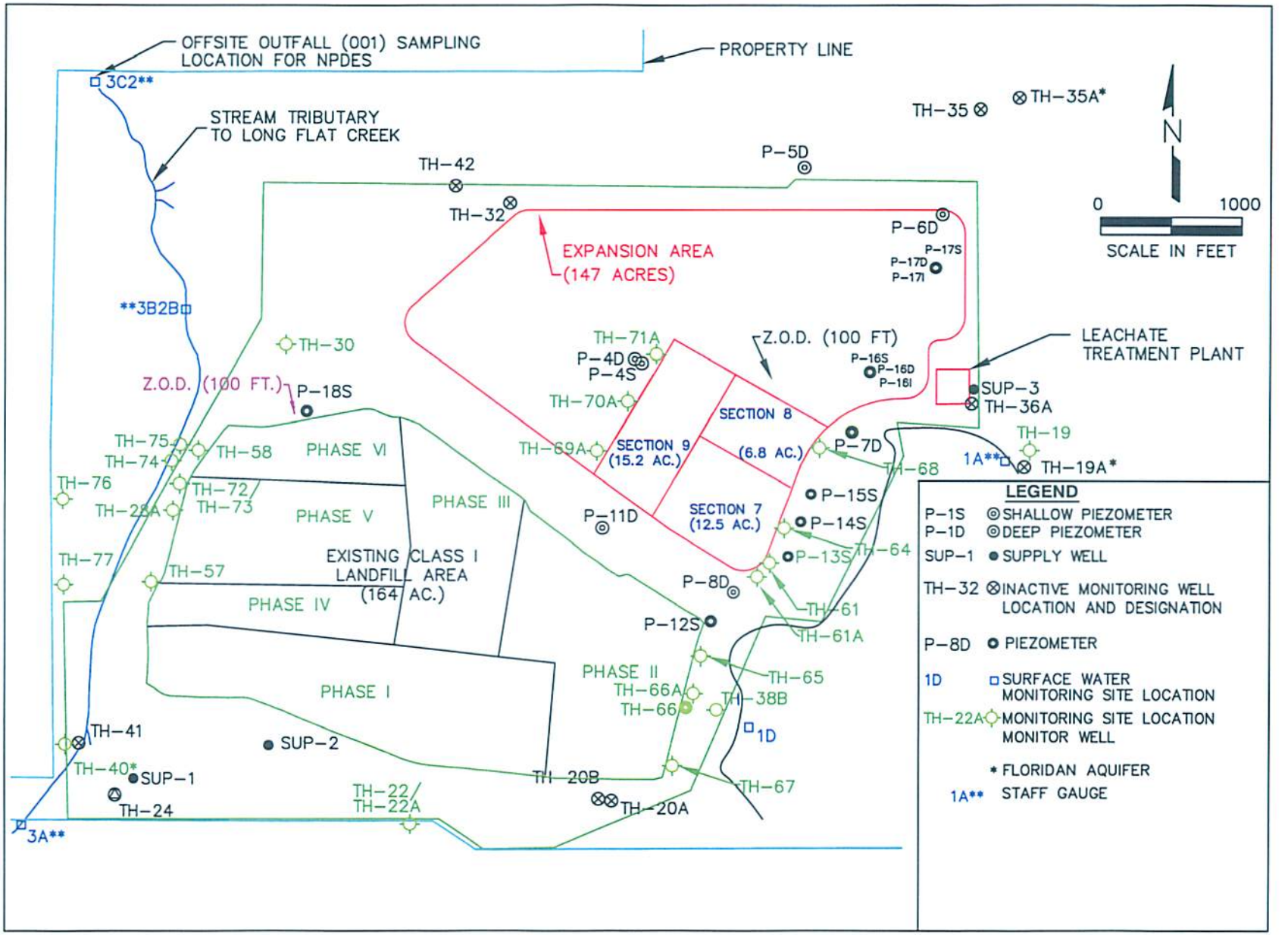
David S. Adams 10/2/2013

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

DAVID S. ADAMS
LICENSE
№ 1827
STATE OF
FLORIDA
PROFESSIONAL GEOLOGIST

xc: John Lyons, Director, Public Utilities Department
Patricia Berry, Public Utilities Department
Andy Berry, Public Utilities Department
Larry Ruiz, Public Utilities Department
Michelle Van Dyk, Public Utilities Department
Richard Tedder, FDEP Tallahassee
Clark Moore, FDEP Tallahassee
Jeff Greenwell, FDEP Southwest District
Susan Pelz, FDEP Southwest District
Steve Morgan, FDEP, Southwest District
Andy Schipfer, EPC
Ernest Ely, WMI
Brian Miller, DOH
Rich Siemering, HDR
Joe O'Neill, CDS

G:/enviro/self/ ADRs/IAMP Reports/ IAMP Report No.36.doc
Final copy scanned to LFS/Southeast/Sinkhole/SCLF – IAMP Report No 36.pdf



Site Map

Southeast County Landfill Facility, Hillsborough County, Florida

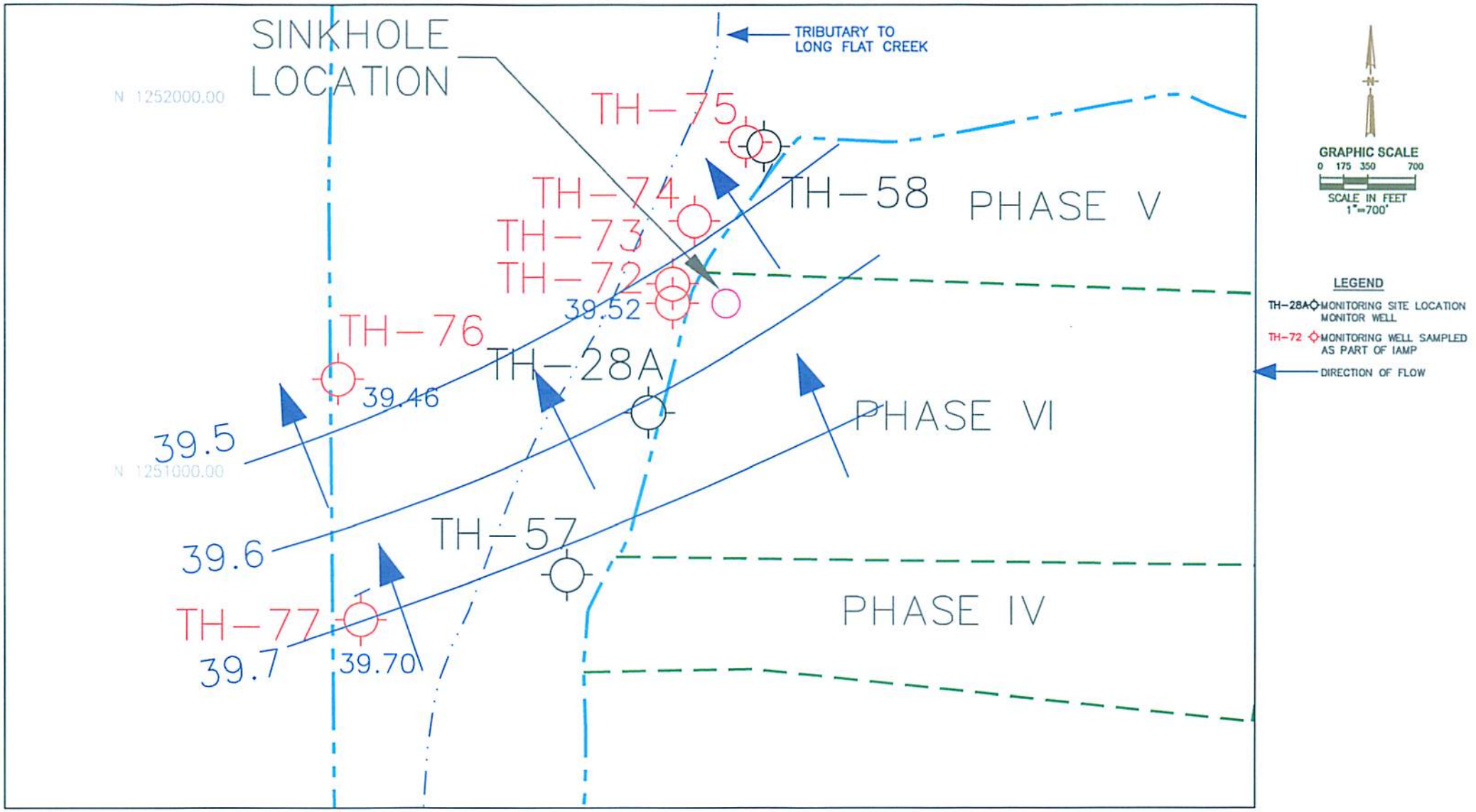
Southeast County Landfill
Laboratory Analytical Data
Surficial and Upper Floridan Aquifer Groundwater Monitoring Wells
August 2, 2013

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)	395	508	356	1256	343	334	NA	NS
dissolved oxygen (mg/l) (field)	0.23	0.29	0.21	0.46	0.22	0.47	NA	NS
pH (field)	**5.13**	**5.55**	**5.63**	6.88	7.57	7.44	NA	(6.5 - 8.5)**
temperature (°C) (field)	24.85	23.26	23.90	23.43	23.02	23.66	NA	NS
turbidity (NTU) (field)	10.4	1.3	2.1	0.2	42.2	42.9	NA	NS
total dissolved solids (mg/l)	270	240	170	**800**	230	230	220	500**
chloride (mg/l)	130	63	28	**290**	13	9.2	13	250**
ammonia nitrogen (mg/l as N)	2.3	**3.2**	1.3	**6.8**	0.26	0.36	0.31	2.8***
								(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	0.0096 i	0.004 u	0.004 u	0.004 u	0.004 u	0.01*
iron	**7.8**	**31**	**7.6**	**0.72**	**1.6**	**1.1**	**1.5**	0.3**
sodium	38	20	18	120	21	18	21	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.
*=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.

5.13 Exceeds Standard

mg/l=milligrams per liter
ug/l = Micrograms per liter



AUGUST 2013
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

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.

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
06/04/2013	31.14	99.93	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
07/03/2013	30.22	100.85	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

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)

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
06/04/2013	9.91	99.17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
07/03/2013	8.90	100.18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

ND = NO DATA (Not analyzed)
New survey data beginning with 10/4/2012.
u = parameter was analyzed but not detected
i = reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
NS = No Sample Collected (Surficial wells are now sampled quarterly)
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
06/04/2013	7.85	99.07	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
07/03/2013	7.34	99.58	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

New survey data beginning with 10/4/2012.

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

5.65 EXCEEDS STANDARD

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

u = parameter was analyzed but not detected

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

u = parameter was analyzed but not detected

1.2 EXCEEDS STANDARD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 660-55763-1
Client Project/Site: SELF-IAMP Monitoring Wells

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

Attn: David Adams

Authorized for release by:
8/15/2013 2:49:59 PM

Nancy Robertson, Project Manager II
nancy.robertson@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

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

Table of Contents

Cover Page 1
Table of Contents 2
Sample Summary 3
Case Narrative 4
Definitions/Glossary 5
Detection Summary 6
Client Sample Results 9
QC Sample Results 17
QC Association Summary 22
Lab Chronicle 25
Method Summary 28
Certification Summary 29
Chain of Custody 31
Receipt Checklists 45

Sample Summary

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

TestAmerica Job ID: 660-55763-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
660-55763-1	BLANK EQUIPMENT	Ground Water	08/01/13 10:25	08/01/13 15:40
660-55763-2	TH-77	Ground Water	08/01/13 10:55	08/01/13 15:40
660-55763-3	TH-76	Ground Water	08/01/13 11:55	08/01/13 15:40
660-55763-4	TH-73	Ground Water	08/01/13 12:55	08/01/13 15:40
660-55763-5	TH-72	Ground Water	08/01/13 13:55	08/01/13 15:40
660-55763-6	DUPLICATE NOT BLANK	Ground Water	08/01/13 00:00	08/01/13 15:40
660-55778-1	TH-74	Water	08/02/13 10:00	08/02/13 14:20
660-55778-2	TH-75	Water	08/02/13 10:30	08/02/13 14:20

Job ID: 660-55763-1

Laboratory: TestAmerica Tampa

Narrative

Job Narrative
660-55763-1

Comments
No additional comments.

Receipt
The samples were received on 8/1/2013 3:40 PM and 8/2/2013 2:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 4.7º C and 5.1º C.

Metals
Method 6010B: The matrix spike (MS) recoveries for batch 140069 was outside control limits. Parent sample was four times greater than spike added. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

General Chemistry
Method 300.0: Due to the high concentration of Chloride, the matrix spike (MS) for batch 288422 could not be evaluated for accuracy. The associated laboratory control sample (LCS) met acceptance criteria.

Method 350.1: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 287923 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
L	Off-scale high. Actual value is known to be greater than the value given.
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.
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
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 County Public Utilities Dep
Project/Site: SELF-IAMP Monitoring Wells

TestAmerica Job ID: 660-55763-1

Client Sample ID: BLANK EQUIPMENT — Lab Sample ID: 660-55763-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ammonia as N	0.030	I	0.050	0.026	mg/L	1		350.1	Total/NA

Client Sample ID: TH-77 — Lab Sample ID: 660-55763-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	9.2		0.50	0.25	mg/L	1		300.0	Total/NA
Iron	1100		200	50	ug/L	1		6010B	Total Recoverable
Sodium	18		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	0.36		0.050	0.026	mg/L	1		350.1	Total/NA
Total Dissolved Solids	230		10	10	mg/L	1		SM 2540C	Total/NA
Field pH	7.44				SU	1		Field Sampling	Total/NA
Field Temperature	23.66				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.47				mg/L	1		Field Sampling	Total/NA
Specific Conductance	334				uS/cm	1		Field Sampling	Total/NA
Turbidity	42.9				NTU	1		Field Sampling	Total/NA

Client Sample ID: TH-76 — Lab Sample ID: 660-55763-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		0.50	0.25	mg/L	1		300.0	Total/NA
Iron	1600		200	50	ug/L	1		6010B	Total Recoverable
Sodium	21		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	0.26		0.050	0.026	mg/L	1		350.1	Total/NA
Total Dissolved Solids	230		10	10	mg/L	1		SM 2540C	Total/NA
Field pH	7.57				SU	1		Field Sampling	Total/NA
Field Temperature	23.02				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.22				mg/L	1		Field Sampling	Total/NA
Specific Conductance	343				uS/cm	1		Field Sampling	Total/NA
Turbidity	42.2				NTU	1		Field Sampling	Total/NA

Client Sample ID: TH-73 — Lab Sample ID: 660-55763-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	130		2.0	1.0	mg/L	4		300.0	Total/NA
Iron	7800		200	50	ug/L	1		6010B	Total Recoverable
Sodium	38		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	2.3		0.10	0.052	mg/L	2		350.1	Total/NA
Total Dissolved Solids	270		10	10	mg/L	1		SM 2540C	Total/NA
Field pH	5.13				SU	1		Field Sampling	Total/NA
Field Temperature	24.85				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.23				mg/L	1		Field Sampling	Total/NA
Specific Conductance	395				uS/cm	1		Field Sampling	Total/NA
Turbidity	10.4				NTU	1		Field Sampling	Total/NA

Client Sample ID: TH-72 — Lab Sample ID: 660-55763-5

This Detection Summary does not include radiochemical test results.

Detection Summary

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

TestAmerica Job ID: 660-55763-1

Client Sample ID: TH-72 (Continued) — Lab Sample ID: 660-55763-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	290		5.0	2.5	mg/L	10		300.0	Total/NA
Iron	720		200	50	ug/L	1		6010B	Total Recoverable
Sodium	120		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	6.8		0.25	0.13	mg/L	5		350.1	Total/NA
Total Dissolved Solids	800		25	25	mg/L	1		SM 2540C	Total/NA
Field pH	6.88				SU	1		Field Sampling	Total/NA
Field Temperature	23.43				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.46				mg/L	1		Field Sampling	Total/NA
Specific Conductance	1256				uS/cm	1		Field Sampling	Total/NA
Turbidity	0.20				NTU	1		Field Sampling	Total/NA

Client Sample ID: DUPLICATE NOT BLANK — Lab Sample ID: 660-55763-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	13		0.50	0.25	mg/L	1		300.0	Total/NA
Iron	1500		200	50	ug/L	1		6010B	Total Recoverable
Sodium	21		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	0.31		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: TH-74 — Lab Sample ID: 660-55778-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	63		2.0	1.0	mg/L	4		300.0	Total/NA
Iron	31000		200	50	ug/L	1		6010B	Total Recoverable
Sodium	20		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	3.2		0.10	0.052	mg/L	2		350.1	Total/NA
Total Dissolved Solids	240		10	10	mg/L	1		SM 2540C	Total/NA
Field pH	5.55				SU	1		Field Sampling	Total/NA
Field Temperature	23.26				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.29				mg/L	1		Field Sampling	Total/NA
Specific Conductance	508				uS/cm	1		Field Sampling	Total/NA
Turbidity	1.3				NTU	1		Field Sampling	Total/NA

Client Sample ID: TH-75 — Lab Sample ID: 660-55778-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	28		1.0	0.50	mg/L	2		300.0	Total/NA
Arsenic	9.6	I	10	4.0	ug/L	1		6010B	Total Recoverable
Iron	7600		200	50	ug/L	1		6010B	Total Recoverable
Sodium	18		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	1.3		0.050	0.026	mg/L	1		350.1	Total/NA
Total Dissolved Solids	170		5.0	5.0	mg/L	1		SM 2540C	Total/NA
Field pH	5.63				SU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

TestAmerica Job ID: 660-55763-1

Client Sample ID: TH-75 (Continued)

Lab Sample ID: 660-55778-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Field Temperature	23.90				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.21				mg/L	1		Field Sampling	Total/NA
Specific Conductance	356				uS/cm	1		Field Sampling	Total/NA
Turbidity	2.1				NTU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

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

TestAmerica Job ID: 660-55763-1

Client Sample ID: BLANK EQUIPMENT

Lab Sample ID: 660-55763-1

Date Collected: 08/01/13 10:25

Matrix: Ground Water

Date Received: 08/01/13 15:40

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			08/08/13 19:35	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		08/02/13 09:07	08/02/13 14:53	1
Iron	50	U	200	50	ug/L		08/02/13 09:07	08/02/13 14:53	1
Sodium	0.31	U	0.50	0.31	mg/L		08/02/13 09:07	08/02/13 14:53	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	**0.030**	**I**	0.050	0.026	mg/L			08/05/13 16:16	1
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			08/07/13 13:22	1

Client Sample Results

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

TestAmerica Job ID: 660-55763-1

Client Sample ID: TH-77

Lab Sample ID: 660-55763-2

Date Collected: 08/01/13 10:55

Matrix: Ground Water

Date Received: 08/01/13 15:40

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.2		0.50	0.25	mg/L			08/08/13 19:47	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		08/02/13 09:07	08/02/13 15:03	1
Iron	1100		200	50	ug/L		08/02/13 09:07	08/02/13 15:03	1
Sodium	18		0.50	0.31	mg/L		08/02/13 09:07	08/02/13 15:03	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	0.36		0.050	0.026	mg/L			08/05/13 16:16	1
Total Dissolved Solids	230		10	10	mg/L			08/07/13 13:22	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.44				SU			08/01/13 10:55	1
Field Temperature	23.66				Degrees C			08/01/13 10:55	1
Oxygen, Dissolved	0.47				mg/L			08/01/13 10:55	1
Specific Conductance	334				uS/cm			08/01/13 10:55	1
Turbidity	42.9				NTU			08/01/13 10:55	1

Client Sample Results

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

TestAmerica Job ID: 660-55763-1

Client Sample ID: TH-76

Lab Sample ID: 660-55763-3

Date Collected: 08/01/13 11:55

Matrix: Ground Water

Date Received: 08/01/13 15:40

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		0.50	0.25	mg/L			08/08/13 20:00	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		08/02/13 09:07	08/02/13 15:06	1
Iron	1600		200	50	ug/L		08/02/13 09:07	08/02/13 15:06	1
Sodium	21		0.50	0.31	mg/L		08/02/13 09:07	08/02/13 15:06	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	0.26		0.050	0.026	mg/L			08/05/13 16:16	1
Total Dissolved Solids	230		10	10	mg/L			08/07/13 13:22	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.57				SU			08/01/13 11:55	1
Field Temperature	23.02				Degrees C			08/01/13 11:55	1
Oxygen, Dissolved	0.22				mg/L			08/01/13 11:55	1
Specific Conductance	343				uS/cm			08/01/13 11:55	1
Turbidity	42.2				NTU			08/01/13 11:55	1

Client Sample Results

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

TestAmerica Job ID: 660-55763-1

Client Sample ID: TH-73

Lab Sample ID: 660-55763-4

Date Collected: 08/01/13 12:55

Matrix: Ground Water

Date Received: 08/01/13 15:40

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	130		2.0	1.0	mg/L			08/09/13 14:18	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		08/02/13 09:07	08/02/13 15:09	1
Iron	7800		200	50	ug/L		08/02/13 09:07	08/02/13 15:09	1
Sodium	38		0.50	0.31	mg/L		08/02/13 09:07	08/02/13 15:09	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	2.3		0.10	0.052	mg/L			08/05/13 17:15	2
Total Dissolved Solids	270		10	10	mg/L			08/07/13 13:22	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.13				SU			08/01/13 12:55	1
Field Temperature	24.85				Degrees C			08/01/13 12:55	1
Oxygen, Dissolved	0.23				mg/L			08/01/13 12:55	1
Specific Conductance	395				uS/cm			08/01/13 12:55	1
Turbidity	10.4				NTU			08/01/13 12:55	1

Client Sample Results

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

TestAmerica Job ID: 660-55763-1

Client Sample ID: TH-72

Lab Sample ID: 660-55763-5

Date Collected: 08/01/13 13:55

Matrix: Ground Water

Date Received: 08/01/13 15:40

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	290		5.0	2.5	mg/L			08/08/13 20:49	10

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		08/02/13 09:07	08/02/13 15:13	1
Iron	720		200	50	ug/L		08/02/13 09:07	08/02/13 15:13	1
Sodium	120		0.50	0.31	mg/L		08/02/13 09:07	08/02/13 15:13	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	6.8		0.25	0.13	mg/L			08/06/13 09:35	5
Total Dissolved Solids	800		25	25	mg/L			08/07/13 13:22	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.88				SU			08/01/13 13:55	1
Field Temperature	23.43				Degrees C			08/01/13 13:55	1
Oxygen, Dissolved	0.46				mg/L			08/01/13 13:55	1
Specific Conductance	1256				uS/cm			08/01/13 13:55	1
Turbidity	0.20				NTU			08/01/13 13:55	1

Client Sample Results

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

TestAmerica Job ID: 660-55763-1

Client Sample ID: DUPLICATE NOT BLANK

Lab Sample ID: 660-55763-6

Date Collected: 08/01/13 00:00

Matrix: Ground Water

Date Received: 08/01/13 15:40

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		0.50	0.25	mg/L			08/09/13 14:30	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		08/02/13 09:07	08/02/13 15:16	1
Iron	1500		200	50	ug/L		08/02/13 09:07	08/02/13 15:16	1
Sodium	21		0.50	0.31	mg/L		08/02/13 09:07	08/02/13 15:16	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	0.31		0.050	0.026	mg/L			08/05/13 17:01	1
Total Dissolved Solids	220		10	10	mg/L			08/07/13 13:22	1

Client Sample Results

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

TestAmerica Job ID: 660-55763-1

Client Sample ID: TH-74

Lab Sample ID: 660-55778-1

Date Collected: 08/02/13 10:00

Matrix: Water

Date Received: 08/02/13 14:20

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	63		2.0	1.0	mg/L			08/07/13 21:03	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		08/05/13 08:22	08/05/13 15:12	1
Iron	31000		200	50	ug/L		08/05/13 08:22	08/05/13 15:12	1
Sodium	20		0.50	0.31	mg/L		08/05/13 08:22	08/05/13 15:12	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	3.2		0.10	0.052	mg/L			08/05/13 17:15	2
Total Dissolved Solids	240		10	10	mg/L			08/07/13 13:22	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.55				SU			08/02/13 10:00	1
Field Temperature	23.26				Degrees C			08/02/13 10:00	1
Oxygen, Dissolved	0.29				mg/L			08/02/13 10:00	1
Specific Conductance	508				uS/cm			08/02/13 10:00	1
Turbidity	1.3				NTU			08/02/13 10:00	1

Client Sample Results

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

TestAmerica Job ID: 660-55763-1

Client Sample ID: TH-75

Lab Sample ID: 660-55778-2

Date Collected: 08/02/13 10:30

Matrix: Water

Date Received: 08/02/13 14:20

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	28		1.0	0.50	mg/L			08/07/13 21:15	2

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.6	I	10	4.0	ug/L		08/05/13 08:22	08/05/13 15:16	1
Iron	7600		200	50	ug/L		08/05/13 08:22	08/05/13 15:16	1
Sodium	18		0.50	0.31	mg/L		08/05/13 08:22	08/05/13 15:16	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	1.3		0.050	0.026	mg/L			08/05/13 16:25	1
Total Dissolved Solids	170		5.0	5.0	mg/L			08/07/13 13:22	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.63				SU			08/02/13 10:30	1
Field Temperature	23.90				Degrees C			08/02/13 10:30	1
Oxygen, Dissolved	0.21				mg/L			08/02/13 10:30	1
Specific Conductance	356				uS/cm			08/02/13 10:30	1
Turbidity	2.1				NTU			08/02/13 10:30	1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 680-288206/15 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 288206

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.25	U	0.50	0.25	mg/L			08/07/13 13:46	1

Lab Sample ID: LCS 680-288206/16 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 288206

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.97		mg/L		100	90 - 110

Lab Sample ID: LCSD 680-288206/17 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 288206

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	9.95		mg/L		99	90 - 110	0	30

Lab Sample ID: 660-55651-AB-8 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 288206

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	1400		500	1860		mg/L		92	80 - 120

Lab Sample ID: MB 680-288422/20 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 288422

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.25	U	0.50	0.25	mg/L			08/08/13 13:18	1

Lab Sample ID: LCS 680-288422/21 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 288422

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.93		mg/L		99	90 - 110

Lab Sample ID: LCSD 680-288422/22 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 288422

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	9.93		mg/L		99	90 - 110	0	30

Lab Sample ID: 460-60321-G-8 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 288422

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	220	J3 L	10.0	224	J3 L	mg/L		74	80 - 120

QC Sample Results

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

TestAmerica Job ID: 660-55763-1

Lab Sample ID: MB 680-288617/5 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 288617

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.25	U	0.50	0.25	mg/L			08/09/13 12:26	1

Lab Sample ID: LCS 680-288617/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 288617

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.79		mg/L		98	90 - 110

Lab Sample ID: LCSD 680-288617/7 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 288617

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	9.80		mg/L		98	90 - 110	0	30

Lab Sample ID: 680-92817-D-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 288617

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	27		20.0	48.2		mg/L		104	80 - 120

Lab Sample ID: 680-92817-D-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 288617

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	27		20.0	47.3		mg/L		99	80 - 120	2	30

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 660-140030/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 140051 — **Prep Batch: 140030**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	U	10	4.0	ug/L		08/02/13 09:07	08/02/13 14:25	1
Iron	50	U	200	50	ug/L		08/02/13 09:07	08/02/13 14:25	1
Sodium	0.31	U	0.50	0.31	mg/L		08/02/13 09:07	08/02/13 14:25	1

Lab Sample ID: LCS 660-140030/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 140051 — **Prep Batch: 140030**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	989		ug/L		99	80 - 120
Iron	1000	1020		ug/L		102	80 - 120
Sodium	10.0	10.1		mg/L		101	80 - 120

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

Lab Sample ID: 660-55762-A-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 140051 — **Prep Batch: 140030**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	4.0	U	1000	1010		ug/L		101	80 - 120
Iron	100	I	1000	1080		ug/L		98	80 - 120
Sodium	13		10.0	22.0		mg/L		94	80 - 120

Lab Sample ID: 660-55762-A-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 140051 — **Prep Batch: 140030**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	4.0	U	1000	1010		ug/L		101	80 - 120	0	20
Iron	100	I	1000	1130		ug/L		103	80 - 120	5	20
Sodium	13		10.0	23.0		mg/L		105	80 - 120	5	20

Lab Sample ID: MB 660-140069/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 140082 — **Prep Batch: 140069**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	U	10	4.0	ug/L		08/05/13 08:22	08/05/13 14:28	1
Iron	50	U	200	50	ug/L		08/05/13 08:22	08/05/13 14:28	1
Sodium	0.31	U	0.50	0.31	mg/L		08/05/13 08:22	08/05/13 14:28	1

Lab Sample ID: LCS 660-140069/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 140082 — **Prep Batch: 140069**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	1000		ug/L		100	80 - 120
Iron	1000	1050		ug/L		105	80 - 120
Sodium	10.0	10.1		mg/L		101	80 - 120

Lab Sample ID: 660-55779-A-2-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 140082 — **Prep Batch: 140069**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	7.0	I	1000	1040		ug/L		103	80 - 120
Iron	24000	J3	1000	23900	J3	ug/L		21	80 - 120
Sodium	92	J3	10.0	100	J3	mg/L		78	80 - 120

Lab Sample ID: 660-55779-A-2-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 140082 — **Prep Batch: 140069**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	7.0	I	1000	1050		ug/L		105	80 - 120	1	20
Iron	24000	J3	1000	24500		ug/L		85	80 - 120	3	20
Sodium	92	J3	10.0	103		mg/L		103	80 - 120	2	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 680-287922/37 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 287922

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			08/06/13 09:36	1

Lab Sample ID: LCS 680-287922/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 287922

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia as N	1.00	0.969		mg/L		97	90 - 110

Lab Sample ID: 640-44533-A-5 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 287922

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia as N	0.060	J3	1.00	0.851	J3	mg/L		79	90 - 110

Lab Sample ID: 640-44533-A-5 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 287922

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia as N	0.060	J3	1.00	0.846	J3	mg/L		79	90 - 110	1	30

Lab Sample ID: 400-78043-B-2 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 287922

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia as N	0.57		0.597		mg/L		6	30

Lab Sample ID: MB 680-287923/39 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 287923

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			08/06/13 09:36	1

Lab Sample ID: LCS 680-287923/15 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 287923

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia as N	1.00	0.939		mg/L		94	90 - 110

Lab Sample ID: 680-92800-C-1 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 287923

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia as N	0.084	J3	1.00	0.829	J3	mg/L		74	90 - 110

QC Sample Results

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

TestAmerica Job ID: 660-55763-1

Lab Sample ID: 680-92800-C-1 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 287923

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia as N	0.084	J3	1.00	0.837	J3	mg/L		75	90 - 110	1	30

Lab Sample ID: 640-44528-C-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 287923

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Ammonia as N	0.14			0.134		mg/L				2	30

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

Lab Sample ID: MB 660-140195/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 140195

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			08/07/13 13:22	1

Lab Sample ID: LCS 660-140195/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 140195

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids			10000	9920		mg/L		99	80 - 120		

Lab Sample ID: 640-44555-H-3 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 140195

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	180			188		mg/L				3	20

Lab Sample ID: 660-55778-1 DU — **Client Sample ID: TH-74**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 140195

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	240			268		mg/L				11	20

QC Association Summary

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

TestAmerica Job ID: 660-55763-1

HPLC/IC

Analysis Batch: 288206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-55778-1	TH-74	Total/NA	Water	300.0	
660-55778-2	TH-75	Total/NA	Water	300.0	
660-55651-AB-8 MS	Matrix Spike	Total/NA	Water	300.0	
LCS 680-288206/16	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-288206/17	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-288206/15	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 288422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-60321-G-8 MS	Matrix Spike	Total/NA	Water	300.0	
660-55763-1	BLANK EQUIPMENT	Total/NA	Ground Water	300.0	
660-55763-2	TH-77	Total/NA	Ground Water	300.0	
660-55763-3	TH-76	Total/NA	Ground Water	300.0	
660-55763-5	TH-72	Total/NA	Ground Water	300.0	
LCS 680-288422/21	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-288422/22	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-288422/20	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 288617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-55763-4	TH-73	Total/NA	Ground Water	300.0	
660-55763-6	DUPLICATE NOT BLANK	Total/NA	Ground Water	300.0	
680-92817-D-1 MS	Matrix Spike	Total/NA	Water	300.0	
680-92817-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 680-288617/6	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-288617/7	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-288617/5	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 140030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-55762-A-1-B MS	Matrix Spike	Total Recoverable	Water	3005A	
660-55762-A-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
660-55763-1	BLANK EQUIPMENT	Total Recoverable	Ground Water	3005A	
660-55763-2	TH-77	Total Recoverable	Ground Water	3005A	
660-55763-3	TH-76	Total Recoverable	Ground Water	3005A	
660-55763-4	TH-73	Total Recoverable	Ground Water	3005A	
660-55763-5	TH-72	Total Recoverable	Ground Water	3005A	
660-55763-6	DUPLICATE NOT BLANK	Total Recoverable	Ground Water	3005A	
LCS 660-140030/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 660-140030/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 140051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-55762-A-1-B MS	Matrix Spike	Total Recoverable	Water	6010B	140030
660-55762-A-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	140030
660-55763-1	BLANK EQUIPMENT	Total Recoverable	Ground Water	6010B	140030
660-55763-2	TH-77	Total Recoverable	Ground Water	6010B	140030
660-55763-3	TH-76	Total Recoverable	Ground Water	6010B	140030

Metals (Continued)

Analysis Batch: 140051 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-55763-4	TH-73	Total Recoverable	Ground Water	6010B	140030
660-55763-5	TH-72	Total Recoverable	Ground Water	6010B	140030
660-55763-6	DUPLICATE NOT BLANK	Total Recoverable	Ground Water	6010B	140030
LCS 660-140030/2-A	Lab Control Sample	Total Recoverable	Water	6010B	140030
MB 660-140030/1-A	Method Blank	Total Recoverable	Water	6010B	140030

Prep Batch: 140069

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-55778-1	TH-74	Total Recoverable	Water	3005A	
660-55778-2	TH-75	Total Recoverable	Water	3005A	
660-55779-A-2-B MS	Matrix Spike	Total Recoverable	Water	3005A	
660-55779-A-2-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
LCS 660-140069/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 660-140069/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 140082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-55778-1	TH-74	Total Recoverable	Water	6010B	140069
660-55778-2	TH-75	Total Recoverable	Water	6010B	140069
660-55779-A-2-B MS	Matrix Spike	Total Recoverable	Water	6010B	140069
660-55779-A-2-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	140069
LCS 660-140069/2-A	Lab Control Sample	Total Recoverable	Water	6010B	140069
MB 660-140069/1-A	Method Blank	Total Recoverable	Water	6010B	140069

General Chemistry

Analysis Batch: 140195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
640-44555-H-3 DU	Duplicate	Total/NA	Water	SM 2540C	
660-55763-1	BLANK EQUIPMENT	Total/NA	Ground Water	SM 2540C	
660-55763-2	TH-77	Total/NA	Ground Water	SM 2540C	
660-55763-3	TH-76	Total/NA	Ground Water	SM 2540C	
660-55763-4	TH-73	Total/NA	Ground Water	SM 2540C	
660-55763-5	TH-72	Total/NA	Ground Water	SM 2540C	
660-55763-6	DUPLICATE NOT BLANK	Total/NA	Ground Water	SM 2540C	
660-55778-1	TH-74	Total/NA	Water	SM 2540C	
660-55778-1 DU	TH-74	Total/NA	Water	SM 2540C	
660-55778-2	TH-75	Total/NA	Water	SM 2540C	
LCS 660-140195/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 660-140195/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 287922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
400-78043-B-2 DU	Duplicate	Total/NA	Water	350.1	
640-44533-A-5 MS	Matrix Spike	Total/NA	Water	350.1	
640-44533-A-5 MSD	Matrix Spike Duplicate	Total/NA	Water	350.1	
660-55763-1	BLANK EQUIPMENT	Total/NA	Ground Water	350.1	
660-55763-2	TH-77	Total/NA	Ground Water	350.1	
660-55763-3	TH-76	Total/NA	Ground Water	350.1	
660-55763-4	TH-73	Total/NA	Ground Water	350.1	

General Chemistry (Continued)

Analysis Batch: 287922 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-55763-5	TH-72	Total/NA	Ground Water	350.1	
660-55778-1	TH-74	Total/NA	Water	350.1	
660-55778-2	TH-75	Total/NA	Water	350.1	
LCS 680-287922/1	Lab Control Sample	Total/NA	Water	350.1	
MB 680-287922/37	Method Blank	Total/NA	Water	350.1	

Analysis Batch: 287923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
640-44528-C-1 DU	Duplicate	Total/NA	Water	350.1	
660-55763-6	DUPLICATE NOT BLANK	Total/NA	Ground Water	350.1	
680-92800-C-1 MS	Matrix Spike	Total/NA	Water	350.1	
680-92800-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	350.1	
LCS 680-287923/15	Lab Control Sample	Total/NA	Water	350.1	
MB 680-287923/39	Method Blank	Total/NA	Water	350.1	

Field Service / Mobile Lab

Analysis Batch: 140186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-55763-2	TH-77	Total/NA	Ground Water	Field Sampling	
660-55763-3	TH-76	Total/NA	Ground Water	Field Sampling	
660-55763-4	TH-73	Total/NA	Ground Water	Field Sampling	
660-55763-5	TH-72	Total/NA	Ground Water	Field Sampling	
660-55778-1	TH-74	Total/NA	Water	Field Sampling	
660-55778-2	TH-75	Total/NA	Water	Field Sampling	

Lab Chronicle

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

TestAmerica Job ID: 660-55763-1

Client Sample ID: BLANK EQUIPMENT — Lab Sample ID: 660-55763-1

Date Collected: 08/01/13 10:25 — **Matrix: Ground Water**
Date Received: 08/01/13 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	288422	08/08/13 19:35	PAT	TAL SAV
Total Recoverable	Prep	3005A			140030	08/02/13 09:07	GAF	TAL TAM
Total Recoverable	Analysis	6010B		1	140051	08/02/13 14:53	GAF	TAL TAM
Total/NA	Analysis	SM 2540C		1	140195	08/07/13 13:22	TKO	TAL TAM
Total/NA	Analysis	350.1		1	287922	08/05/13 16:16	JME	TAL SAV

Client Sample ID: TH-77 — Lab Sample ID: 660-55763-2

Date Collected: 08/01/13 10:55 — **Matrix: Ground Water**
Date Received: 08/01/13 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	288422	08/08/13 19:47	PAT	TAL SAV
Total Recoverable	Prep	3005A			140030	08/02/13 09:07	GAF	TAL TAM
Total Recoverable	Analysis	6010B		1	140051	08/02/13 15:03	GAF	TAL TAM
Total/NA	Analysis	SM 2540C		1	140195	08/07/13 13:22	TKO	TAL TAM
Total/NA	Analysis	350.1		1	287922	08/05/13 16:16	JME	TAL SAV
Total/NA	Analysis	Field Sampling		1	140186	08/01/13 10:55		TAL TAM

Client Sample ID: TH-76 — Lab Sample ID: 660-55763-3

Date Collected: 08/01/13 11:55 — **Matrix: Ground Water**
Date Received: 08/01/13 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	288422	08/08/13 20:00	PAT	TAL SAV
Total Recoverable	Prep	3005A			140030	08/02/13 09:07	GAF	TAL TAM
Total Recoverable	Analysis	6010B		1	140051	08/02/13 15:06	GAF	TAL TAM
Total/NA	Analysis	SM 2540C		1	140195	08/07/13 13:22	TKO	TAL TAM
Total/NA	Analysis	350.1		1	287922	08/05/13 16:16	JME	TAL SAV
Total/NA	Analysis	Field Sampling		1	140186	08/01/13 11:55		TAL TAM

Client Sample ID: TH-73 — Lab Sample ID: 660-55763-4

Date Collected: 08/01/13 12:55 — **Matrix: Ground Water**
Date Received: 08/01/13 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		4	288617	08/09/13 14:18	PAT	TAL SAV
Total Recoverable	Prep	3005A			140030	08/02/13 09:07	GAF	TAL TAM
Total Recoverable	Analysis	6010B		1	140051	08/02/13 15:09	GAF	TAL TAM
Total/NA	Analysis	SM 2540C		1	140195	08/07/13 13:22	TKO	TAL TAM
Total/NA	Analysis	350.1		2	287922	08/05/13 17:15	JME	TAL SAV
Total/NA	Analysis	Field Sampling		1	140186	08/01/13 12:55		TAL TAM

Lab Chronicle

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

TestAmerica Job ID: 660-55763-1

Client Sample ID: TH-72

Lab Sample ID: 660-55763-5

Date Collected: 08/01/13 13:55
Matrix: Ground Water
Date Received: 08/01/13 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		10	288422	08/08/13 20:49	PAT	TAL SAV
Total Recoverable	Prep	3005A			140030	08/02/13 09:07	GAF	TAL TAM
Total Recoverable	Analysis	6010B		1	140051	08/02/13 15:13	GAF	TAL TAM
Total/NA	Analysis	SM 2540C		1	140195	08/07/13 13:22	TKO	TAL TAM
Total/NA	Analysis	350.1		5	287922	08/06/13 09:35	JME	TAL SAV
Total/NA	Analysis	Field Sampling		1	140186	08/01/13 13:55		TAL TAM

Client Sample ID: DUPLICATE NOT BLANK

Lab Sample ID: 660-55763-6

Date Collected: 08/01/13 00:00
Matrix: Ground Water
Date Received: 08/01/13 15:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	288617	08/09/13 14:30	PAT	TAL SAV
Total Recoverable	Prep	3005A			140030	08/02/13 09:07	GAF	TAL TAM
Total Recoverable	Analysis	6010B		1	140051	08/02/13 15:16	GAF	TAL TAM
Total/NA	Analysis	SM 2540C		1	140195	08/07/13 13:22	TKO	TAL TAM
Total/NA	Analysis	350.1		1	287923	08/05/13 17:01	JME	TAL SAV

Client Sample ID: TH-74

Lab Sample ID: 660-55778-1

Date Collected: 08/02/13 10:00
Matrix: Water
Date Received: 08/02/13 14:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		4	288206	08/07/13 21:03	PAT	TAL SAV
Total Recoverable	Prep	3005A			140069	08/05/13 08:22	RAG	TAL TAM
Total Recoverable	Analysis	6010B		1	140082	08/05/13 15:12	RAG	TAL TAM
Total/NA	Analysis	SM 2540C		1	140195	08/07/13 13:22	TKO	TAL TAM
Total/NA	Analysis	350.1		2	287922	08/05/13 17:15	JME	TAL SAV
Total/NA	Analysis	Field Sampling		1	140186	08/02/13 10:00		TAL TAM

Client Sample ID: TH-75

Lab Sample ID: 660-55778-2

Date Collected: 08/02/13 10:30
Matrix: Water
Date Received: 08/02/13 14:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		2	288206	08/07/13 21:15	PAT	TAL SAV
Total Recoverable	Prep	3005A			140069	08/05/13 08:22	RAG	TAL TAM
Total Recoverable	Analysis	6010B		1	140082	08/05/13 15:16	RAG	TAL TAM
Total/NA	Analysis	SM 2540C		1	140195	08/07/13 13:22	TKO	TAL TAM
Total/NA	Analysis	350.1		1	287922	08/05/13 16:25	JME	TAL SAV
Total/NA	Analysis	Field Sampling		1	140186	08/02/13 10:30		TAL TAM

Lab Chronicle

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

TestAmerica Job ID: 660-55763-1

Laboratory References:

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

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

Method Summary

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

TestAmerica Job ID: 660-55763-1

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 County Public Utilities Dep
Project/Site: SELF-IAMP Monitoring Wells

TestAmerica Job ID: 660-55763-1

Laboratory: TestAmerica Tampa

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

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

Laboratory: TestAmerica Savannah

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

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	ISO/IEC 17025		399.01	02-28-15
Alabama	State Program	4	41450	06-30-13 *
Arkansas DEQ	State Program	6	88-0692	02-01-14 *
California	NELAP	9	3217CA	07-31-14 *
Colorado	State Program	8	N/A	12-31-13
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	12-31-13
Georgia	State Program	4	N/A	06-30-14
Georgia	State Program	4	803	06-30-14
Guam	State Program	9	09-005r	06-17-14
Hawaii	State Program	9	N/A	06-30-14
Illinois	NELAP	5	200022	11-30-13
Iowa	State Program	7	353	07-01-15
Kentucky	State Program	4	90084	12-31-13
Kentucky (UST)	State Program	4	18	06-30-14
Louisiana	NELAP	6	30690	06-30-14
Louisiana	NELAP	6	LA100015	12-31-13
Maine	State Program	1	GA00006	08-16-14
Maryland	State Program	3	250	12-31-13
Massachusetts	State Program	1	M-GA006	06-30-14
Michigan	State Program	5	9925	06-30-14
Mississippi	State Program	4	N/A	06-30-14
Montana	State Program	8	CERT0081	01-01-14
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	04-01-14
North Carolina DENR	State Program	4	269	12-31-13
North Carolina DHHS	State Program	4	13701	07-31-14
Oklahoma	State Program	6	9984	08-31-13
Pennsylvania	NELAP	3	68-00474	06-30-14
Puerto Rico	State Program	2	GA00006	01-01-14
South Carolina	State Program	4	98001	06-30-13 *
Tennessee	State Program	4	TN02961	06-30-14
Texas	NELAP	6	T104704185-08-TX	11-30-13
USDA	Federal		SAV 3-04	04-07-14
Virginia	NELAP	3	460161	06-14-14
Washington	State Program	10	C1794	06-10-14
West Virginia	State Program	3	9950C	12-31-13
West Virginia DEP	State Program	3	94	09-30-13

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

Certification Summary

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

TestAmerica Job ID: 660-55763-1

Laboratory: TestAmerica Savannah (Continued)

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

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

* 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	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT...)	H2SO4 Ammonia-N	ice TDS	Ice Chloride	HNO3 As, Fe, Na							REMARKS
8-1-13	10.25	EQ. BLANK	G	X				X	X	X	X							
8-1-13	10.55	TH-77	G	X				X	X	X	X							
8-1-13	11.55	TH-76	G	X				X	X	X	X							
		~~TH-75~~	G	X														
		~~TH-74~~	G	X														
8-1-13	12.55	TH-73	G	X				X	X	X	X							
8-1-13	13.55	TH-72	G	X				X	X	X	X							
8-1-13	/	Dupe	G	X				X	X	X	X							

NUMBER OF CONTAINERS SUBMITTED

660-55763 Chain of Custody

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
Todd Patterson	8-1-13	15:40						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**
Carol McNulty	8/1/13	1540						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT YES ( ) NO ( )	CUSTODY SEAL NO.	STL LOG NO.	LABORATORY REMARKS:
						5.1° C Cy07

FCU036:12.20.00:2

Original - Return to Laboratory with Sample(s)

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: SELF IAMP (Sinkhole)		SITE LOCATION:	
WELL NO: TH-77	SAMPLE ID:		DATE: 8-1-13

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH 154.2 feet to 169.2 feet	STATIC DEPTH TO WATER (feet): 80.18	PURGE PUMP TYPE OR BAILER: BP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (169.2 feet – 80.18 feet) X .16 ~~14.24~~ 24 gallons/foot = 14.24 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 new 8-7-13

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 169.2	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 169.2	PURGING INITIATED AT: 10.15	PURGING ENDED AT: 10.53	TOTAL VOLUME PURGED (gallons): ~~19.0~~ 17.5

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
10.44	14.5	14.5	.50	80.62	7.45	23.58	334	.45	41.6	cloudy	NONE
10.47	1.5	16.0	.50	80.62	7.45	23.62	334	.47	40.7	↓	↓
10.50	1.5	17.5	.50	80.62	7.44	23.66	334	.47	42.9	↓	↓

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: APPALACHIAN BALLOON ZACK PATTERSON	SAMPLER(S) SIGNATURE(S): [signature] Zack Patterson	SAMPLING INITIATED AT: 10.55	SAMPLING ENDED AT: 11.00
PUMP OR TUBING DEPTH IN WELL (feet): 169.2	TUBING MATERIAL CODE: T	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y DEDICATED TUBING Y N (replaced)		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			
	1	Plastic	250ml	Nitric	250ml	7.44	6018B-AS, FE, NA	BP	.50 gpm
	1	↓	125ml	NONE	125ml	↓	300.0-28D chloride	↓	↓
	1	↓	500 ml	NONE	500 ml	↓	2540C-TDS	↓	↓
	1	↓	250ml	Sulfuric	250ml	↓	350.1-Ammonia N	↓	↓

REMARKS:

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

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

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

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: SELF IAMP		SITE LOCATION:	
WELL NO: TH-76	SAMPLE ID:		DATE: 8-1-13

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH: 163.35 feet to 178.35 feet	STATIC DEPTH TO WATER (feet): 71.75	PURGE PUMP TYPE OR BAILER: BP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (178.35 feet – 71.75 feet) X .16 gallons/foot = 17.05 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

rev 8-7-13

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 178.35	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 178.35	PURGING INITIATED AT: 11.07	PURGING ENDED AT: 11.54	TOTAL VOLUME PURGED (gallons): ~~23.5~~ 22

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)
11.42	17.5	17.5	.50	73.50	7.60	23.03	341	.17	35.3	cloudy	NONE
11.45	1.5	19.0	.50	73.50	7.58	23.03	342	.19	41.2	↓	↓
11.48	1.5	20.5	.50	73.50	7.57	23.02	343	.19	39.0		
11.51	1.5	22.0	.50	73.50	7.57	23.02	343	.22	42.2		

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 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 BALLOW ZACK PATTERSON	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: 11.55	SAMPLING ENDED AT: 12.00
PUMP OR TUBING DEPTH IN WELL (feet): 178.35	TUBING MATERIAL CODE: T	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y DEDICATED TUBING Y N (replaced)		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			
	1	Plastic	250ml	Nitric	250ml	7.57	6018B - AS, FE, NA	BP	.50gpm
	1	↓	125ml	NONE	125ml		300.0-28D chloride	↓	↓
	1		500ml	NONE	500ml	↓	2540c - TDS		
	1		250ml	Sulfuric	250ml		350.1 - Ammonia N		

REMARKS:

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

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

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

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: SELF JAMD		SITE LOCATION:	
WELL NO: TH-73	SAMPLE ID: 27754		DATE: 8-1-13

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): 30.06	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 – 30.06 feet) X .16 gallons/foot = 2.13 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): 42.4	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 42.4	PURGING INITIATED AT: 12.31	PURGING ENDED AT: 12.54	TOTAL VOLUME PURGED (gallons): ~~6.96~~

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)
12.45	4.2	4.2	.30	32.09	5.14	24.85	394	.27	15.4	light cloudy	NONE
12.48	.90	5.1	.30	32.09	5.13	24.84	395	.25	11.7	↓	↓
12.51	.90	6.0	.30	3209	5.13	24.85	395	.23	10.4	↓	↓

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 BALLOU ZACK PATTERSON	SAMPLER(S) SIGNATURE(S): AB Zack Patterson	SAMPLING INITIATED AT: 12.55	SAMPLING ENDED AT: 13.00
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 (replaced)		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			
	1	Plastic	250 ml	Nitric	250ml		6018B - AS, FE, NA	BP	.30gpm
	1	↓	125ml	NONE	125ml		300.0-28D chloride	↓	↓
	1		500 ml	NONE	500ml		2540c - TDS		
	1		250ml	Sulfuric	250ml		350.1 - Ammonia N		

REMARKS:

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

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

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

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: SELF IAMP	SITE LOCATION:	
WELL NO: TH-72	SAMPLE ID: 27753	DATE: 8-1-13

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 1/2	WELL SCREEN INTERVAL DEPTH: 180 feet to 190 feet	STATIC DEPTH TO WATER (feet): 91.44	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)
= (190 feet – 91.44 feet) X .16 gallons/foot = 15.76 gallons

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

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 189	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 189	PURGING INITIATED AT: 13.10	PURGING ENDED AT: 13.51	TOTAL VOLUME PURGED (gallons): ~~20.5~~ 19

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 (S/cm)	DISSOLVED OXYGEN (circle units) (mg/l) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
13.42	16.0	16.0	.50	91.43	6.87	23.43	1261	.45	.40	NONE	NONE
13.45	1.5	17.5	.50	91.43	6.87	23.44	1259	.44	.40	↓	↓
13.48	1.5	19.0	.50	91.43	6.88	23.43	1256	.46	.20	↓	↓

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 GALLOWAY ZACK PATTERSON	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 13.55	SAMPLING ENDED AT: 14.00
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 DEDICATED (Y/N)	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					

REMARKS:

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

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

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

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: SELF IAMP	SITE LOCATION:	
WELL NO: EQ BLANK	SAMPLE ID: EQ BLANK	DATE: 8-1-13

PURGING DATA

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

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

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

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

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)

EQ 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: ARONE w BALLOON-ZACK PATTERSON	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 10.25	SAMPLING ENDED AT: 10.30
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y N	TUBING Y N (replaced)	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			
EQ BLANK	1	Plastic	280ml	Nitric Acid	250ml	✓	6018B AS, FE, NA	BP	✓
↓	1	↓	125ml	NONE	125ml	✓	300.0_280 Chloride	BP	✓
	1		500ml	NONE	500ml	✓	2540C - TDS	BP	✓
	1		250ml	Sulfuric	250ml	✓	350.1 - Ammonia N	BP	✓

REMARKS:

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

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

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

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: SELF IAMP (SINKHOLE)	SITE LOCATION:
WELL NO: Dupe	SAMPLE ID: / DATE:

PURGING DATA

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

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

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

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

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)

Dupe

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
HALEW BALLO ZACK PATTERSON			
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: T	FIELD-FILTERED: Y N / Filtration Equipment Type:	FILTER SIZE: ____ µm

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

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
	1	250ml	Plastic	Nitric	250ml		6018B-AS, FE, NA	BP	
	1	125ml		NONE	125ml		300.0-28D chloride		
	1	500ml		NONE	500 ml		2540c - TDS		
	1	250ml		Sulfuric	250 ml		350.1 - Ammonia N		

REMARKS:

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

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

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

Revision Date: February 12, 2009

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: [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	COMPOSITE (C) OR GRAB (G) INDICATE	AQUEOUS (WATER)	SOLID OR SEMISOLID	AIR	NONAQUEOUS LIQUID (OIL, SOLVENT...)	H2SO4 Ammonia-N	Ice TDS	Ice Chloride	HNO3 As, Fe, Na							REMARKS
8.2.13	10.00	TH.74	G	X				x	x	x	x							
8.2.13	10.30	TH.~~73~~ 75 [illegible] 8-6-13	G	x				x	x	x	x							

NUMBER OF CONTAINERS SUBMITTED

660-55778 Chain of Custody

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	8.2.13	1420						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
[signature]	8/2/13	1420						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT YES ( ) NO ( )	CUSTODY SEAL NO.	STL LOG NO.	LABORATORY REMARKS:
						4.7°C cu07

FCU036:12.20.00:2

Original - Return to Laboratory with Sample(s)

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: SELF IAMP	SITE LOCATION:	
WELL NO: TH-74	SAMPLE ID: 28307	DATE: 8-2-13

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): 9.02	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 – 9.02 feet) X .16 gallons/foot = 1.27 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: 9.39	PURGING ENDED AT: 9.58	TOTAL VOLUME PURGED (gallons): ~~4.75~~ 4

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)
9.49	2.5	2.5	.25	9.85	5.55	23.29	501	.47	2.66	NONE	NONE
9.52	.75	3.25	.25	9.85	5.55	23.27	507	.32	1.62	↓	↓
9.55	.75	4.00	.25	9.85	5.55	23.26	508	.29	1.3	↓	↓

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: APGREW BALLOOM ZACK PATTERSON	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: 10.00	SAMPLING ENDED AT: 10.05
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 (replaced) 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					

REMARKS:

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

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

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

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: SELF JAMD		SITE LOCATION:	8-6-13
WELL NO: TH-75	SAMPLE ID: 28308	DATE: 8-7-13	

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): 7.52	PURGE PUMP TYPE OR BAILER: BP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (17 feet – 7.52 feet) X .16 gallons/foot = 1.51 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: 10.10	PURGING ENDED AT: 10.29	TOTAL VOLUME PURGED (gallons): ~~4.75~~ 4 8-7-13

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)
10:20	2.5	2.5	.25	7.95	5.63	23.91	347	.26	3.4	NONE	NONE
10:23	.75	3.25	.25	7.95	5.64	23.90	353	.23	2.6	↓	↓
10:26	.75	4.00	.25	7.95	5.63	23.90	356	.21	2.1		

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 BALLOW ZACK PATTERSON	SAMPLER(S) SIGNATURE(S): [signature]	SAMPLING INITIATED AT: 10.30	SAMPLING ENDED AT: 10.35
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 (replaced)		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					

REMARKS:

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

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

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

Revision Date: February 12, 2009

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 1 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
8-1-13	10.25	EQ. BLANK	G	X				X	X	X	X	
8-1-13	10.55	TH-77	G	X				X	X	X	X	
8-1-13	11.55	TH-76	G	X				X	X	X	X	
~~—~~		~~TH-75~~	~~G~~	~~X~~								
~~—~~		~~TH-74~~	~~G~~	~~X~~								
8-1-13	12.55	TH-73	G	X				X	X	X	X	
8-1-13	13.55	TH-72	G	X				X	X	X	X	
8-1-13	/	Dupe	G	X				X	X	X	X	

NUMBER OF CONTAINERS SUBMITTED

660-55763 Chain of Custody

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
Nancy Robertson	8-1-13	15:40						
RECEIVED BY: (SIGNATURE)	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**	**RECEIVED BY: (SIGNATURE)**	**DATE**	**TIME**
Carol McNulty	8/1/13	1540						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT YES ○ NO ○	CUSTODY SEAL NO.	STL LOG NO.	LABORATORY REMARKS:
						5.1° C Cu07

FCU036:12.20.00:2

Original - Return to Laboratory with Sample(s)

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	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: [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 (H2SO4)	TDS (Ice)	Chloride (Ice)	As, Fe, Na (HNO3)	REMARKS
8-2-13	10.00	TH-74	G	X				x	x	x	x	
8-2-13	10.30	TH-73	G	x				x	x	x	x	

NUMBER OF CONTAINERS SUBMITTED

660-55778 Chain of Custody

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RELINQUISHED BY: (SIGNATURE)	DATE	TIME
[signature]	8-2-13	14:20						
RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME
[signature]	8/2/13	1420						

LABORATORY USE ONLY

RECEIVED FOR LABORATORY BY: (SIGNATURE)	DATE	TIME	CUSTODY INTACT YES ○ NO ○	CUSTODY SEAL NO.	STL LOG NO.	LABORATORY REMARKS:
						4.7°C CU07

FCU036:12.20.00:2

Original - Return to Laboratory with Sample(s)

8/15/2013

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: 660-58492.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: nancy.robertson@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 660-55763-1
Address: 5102 LaRoche Avenue, ,	Due Date Requested: 8/8/2013			
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:							
BLANK EQUIPMENT (660-55763-1)	8/1/13	10:25 Eastern		Water			X	X	2	
TH-77 (660-55763-2)	8/1/13	10:55 Eastern		Water			X	X	2	
TH-76 (660-55763-3)	8/1/13	11:55 Eastern		Water			X	X	2	
TH-73 (660-55763-4)	8/1/13	12:55 Eastern		Water			X	X	2	
TH-72 (660-55763-5)	8/1/13	13:55 Eastern		Water			X	X	2	
DUPLICATE NOT BLANK (660-55763-6)	8/1/13	Eastern		Water			X	X	2	

Possible Hazard Identification
Unconfirmed

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

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

Special Instructions/QC Requirements:

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	8-2-13 @ 1600	TA TPA	[signature]	08/03/13 0820	TA SW
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: 3.2°C

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: 660-58520.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: nancy.robertson@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 660-55778-1
Address: 5102 LaRoche Avenue, ,	Due Date Requested: 8/9/2013			
City: Savannah	TAT Requested (days):			
State, Zip: GA, 31404				
Phone: 912-354-7858(Tel) 912-352-0165(Fax)	PO #:			
Email:	WO #:			
Project Name: SELF MWs,SS,Private Wells,NPDES	Project #: 66003915			
Site: Southeast Landfill	SSOW#:			

Analysis Requested

Preservation Codes:

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

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	350.1/ Nitrogen, Ammonia	300_ORGFM_28D/ Chloride	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
TH-74 (660-55778-1)	8/2/13	10:00 Eastern		Water			X	X	2	
TH-73 (660-55778-2)	8/2/13	10:30 Eastern		Water			X	X	2	

Possible Hazard Identification
Unconfirmed

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

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by: [signature]	Date/Time: 8-2-13@ 1600	Company: TA-TPA	Received by: [signature]	Date/Time: 08/03/13 0810	Company: TA SV
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: 3.2°C

Login Sample Receipt Checklist

Client: Hillsborough County Public Utilities Dep

Job Number: 660-55763-1

Login Number: 55763
List Number: 1
Creator: McNulty, Carol

List Source: TestAmerica Tampa

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 County Public Utilities Dep

Job Number: 660-55763-1

Login Number: 55763
List Number: 1
Creator: Conner, Keaton

List Source: TestAmerica Savannah
List Creation: 08/03/13 09:17 AM

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

Login Sample Receipt Checklist

Client: Hillsborough County Public Utilities Dep

Job Number: 660-55763-1

Login Number: 55778
List Number: 1
Creator: McNulty, Carol

List Source: TestAmerica Tampa

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 County Public Utilities Dep

Job Number: 660-55763-1

Login Number: 55778
List Number: 1
Creator: Conner, Keaton

List Source: TestAmerica Savannah
List Creation: 08/03/13 09:17 AM

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