



Public Utilities

September 15, 2014

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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. 48 – August 2014**

Dear Mr. Morris:

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

As part of the agreement between the County and Florida Department of Environmental Protection Southwest District Office (Department), three (3) surficial aquifer and four (4) upper Floridan/Limestone aquifer monitoring wells, designated as TH-73, TH-74, TH-75 are sampled on a quarterly schedule and TH-72, TH-76, TH-77, and TH-78 are sampled on a monthly schedule. Representative samples were collected from each of these seven (7) monitoring wells on August 12-13, 2014 and analyzed for total dissolved solids (TDS), chloride, total ammonia, arsenic, iron, sodium, and five (5) field parameters. Each sample collected was analyzed by our contracted laboratory, Test America, Inc. The following paragraphs summarize the parameter specific results pertinent to the evaluation of potential water quality impacts from the sinkhole at the SCLF.

pH

pH was observed at 9.55 pH units in new upper Floridan aquifer (UFA) monitoring well, TH-78, which is above the Secondary Drinking Water Standard (SDWS) acceptable range of 6.5 - 8.5 pH units. The elevated pH value observed does not appear to be representative of the unaffected UFA. The County believes the elevated pH values observed in this well are likely due to the grout materials utilized during construction of this well, and they should recede over time. The pH values in down gradient monitoring wells TH-72, TH-76, and TH-77 were recorded at 6.87, 7.37, and 7.44 pH units. The pH values in the surficial aquifer groundwater monitoring wells, TH-73, TH-74 and TH-75 were recorded at 4.76, 5.43, and 5.43 pH units, respectively.

Turbidity

Turbidity values in the surficial aquifer monitoring wells TH-73, TH-74, and TH-75 were recorded at 3.38, 4.87, and 2.84 Nephelometric Turbidity Units (NTUs). Turbidity in the upper Floridan / Limestone aquifer monitoring wells TH-72, TH-76, TH-77, and TH-78 were recorded at 0.81, 17, 0.61, and 7.37 NTUs, respectively.

Conductivity

The conductivity values in TH-73, TH-74, and TH-75 were recorded at 426, 466, and 343 micromhos per centimeter (umhos/cm). Conductivity values in TH-72, TH-76, and TH-77 were recorded at 2,375, 445, 436, and 467 umhos/cm, respectively. Monitoring well TH-72 is the closest UFA monitoring well to the sinkhole, and it continues to exhibit groundwater impacts similar to those observed over the last year. Conductivity values in TH-76, TH-77, and TH-78 are relatively low and consistent with the unaffected deep wells across the site.

Total Dissolved Solids (TDS)

The TDS in monitoring well TH-72 was observed at 1,300 mg/l, which continues to be above the SDWS of 500 mg/l. The remaining three (3) down gradient UFA monitoring wells, TH-76, TH-77, and TH-78 exhibited TDS values of 240, 260, and 240 mg/l, respectively, which is consistent with the water quality of the unaffected deep wells across the site. The TDS in the surficial aquifer monitoring wells TH-73, TH-74, and TH-75 were all below the Secondary Drinking Water Standard (SDWS) of 500 mg/l.

Chloride

Chloride was observed at 540 mg/l in monitoring well TH-72, which is above the SDWS of 250 mg/l. The elevated chloride value observed is likely attributable to waste in the sinkhole and the extensive amounts of grout injected into the subsurface as part of the sinkhole stabilization. Chloride values in the down gradient monitoring wells TH-76, TH-77, and TH-78 were observed at 12, 9.5, and 38 mg/l, which is consistent with the unaffected deep wells across the site. The highest value of 38 is likely attributable to the grouting of the well casing in the new well TH-78. Chloride concentrations in the surficial aquifer wells, TH-73, TH-74 and TH-75 were observed at 93, 26, and 18 mg/l, respectively, which are all below the SDWS. TH-73 is close to the sinkhole area and the 93 mg/l value is likely attributable to the waste and grout materials in the sinkhole area.

Iron

Total iron concentrations in three (3) of the four (4) upper Floridan/Limestone aquifer monitoring wells were observed above the SDWS of 0.3 mg/l. Monitoring wells TH-72, TH-76, and TH-78 exhibited iron at 0.62, 0.7, and 0.48 mg/l, respectively. Monitor well TH-77 exhibited iron below the SDWS at 0.16i mg/l. The iron concentrations observed have been consistent, and the iron appears to be naturally occurring in some areas of the limestone formation, and may be the result of impacts from the past strip mining activities in area. Total iron in monitoring wells TH-73, TH-74, and TH-75 was observed at 4.5, 26, and 7.5 mg/l, respectively, and these values exceed the Secondary Drinking Water Standard (SDWS) of 0.3 mg/l. Iron is consistent with historical water quality values across the site, and is likely naturally occurring or a result of past strip mining.

Sodium

Sodium was observed at a concentration of 200 mg/l in monitoring well TH-72, which is above the PDWS of 160 mg/l. The elevated sodium value is likely attributable to the waste in the sinkhole and/or the grouting activities. Sodium values in down gradient monitoring wells TH-76, TH-77, and TH-78 were observed at 20, 16, and 34 mg/l, which is consistent with the unaffected deep wells across the site. Sodium values in the surficial aquifer monitor wells were all well below the standard.

Groundwater Elevations and Direction of Flow

On August 15, 2014, the County collected groundwater and surface water elevation data at eleven (11) locations along the western portion of Phases 1-6 at the landfill site, including seven (7) surficial aquifer wells and four (4) upper Floridan (limestone) aquifer wells. No significant changes to the patterns of flow in the surficial aquifer were noted in the data set, and the flow diagram provided is consistent with the observations over the extensive period of record. The elevations observed within the wells closest to the sinkhole indicate that flow patterns continue to be affected in that area, which has not been unexpected. However, the overall direction of flow within the surficial aquifer remains toward the west/northwest.

A contour diagram of the upper Floridan / Limestone aquifer has been prepared for the general area around the sinkhole and is included with this submittal. This diagram was generated manually in AutoCad™ utilizing the four data points closest to the sinkhole. During this sampling event, the changes in elevations between TH-72 and TH-76 is - 0.07 ft., and TH-72 and TH-77 is + 0.13 ft. Elevation of newly installed monitor well TH-78 indicated an elevation of approximately 5 feet higher than those elevations recorded at TH-72, TH-76, and TH-77. This anomaly in the groundwater elevation indicates that TH-78 may be influenced by the surface water body in this area, or some other geologic formation may be creating the potentiometric high. The County believes that the well provides a valuable data point, and will continue to evaluate the water quality and elevations at this site. However, the UFA contour did include the anomalous elevation data from TH-78. Of note, there was consideration that the survey data from HSA Golden may have been incorrect, so the County had Pickett resurvey to confirm the measuring point elevation, which was found to be correct.

Conclusions

The water quality observed in the August 2014 IAMP sampling event indicates that monitoring well TH-72, which is closest to the sinkhole, continues to exhibit impacts to water quality in the upper Floridan aquifer. The impacts observed include elevated conductivity, TDS, chloride, iron and sodium, and the values are stable and do not appear to be migrating. These impacts were not unexpected in the immediate vicinity of the sinkhole, and TH-72 is less than fifty feet away from the former surface expression, and likely even closer to the subsurface karst feature where waste and grout materials are likely present. Down gradient monitoring wells, TH-76 and TH-77, and TH-78 exhibit good water quality with no evidence of impact from the sinkhole. Monitor well TH-78 exhibited a pH value exceeding the SDWS and the County believes this may partially due to the grouting activities during the well installation. Conductivity values, TDS, sodium and chloride are all very low and consistent with the historical data sets for the unaffected upper Floridan aquifer groundwater monitoring wells at the SCLF. The water quality observations continue to support the position that the impacts from the sinkhole are limited in extent and do not appear to be migrating beyond the area in close proximity to the former sinkhole.

Recommendations

The County continues to move forward with implementation of the IAMP, which includes the monthly sampling of the four upper Floridan / Limestone aquifer groundwater monitoring wells, TH-72, TH-76, TH-77, and TH-78, and quarterly sampling of the three surficial aquifer wells, TH-73, TH-74, and TH-75. The County will continue to evaluate any water quality changes in both the surficial and upper Floridan aquifer wells, and present the findings in the monthly IAMP reports. Monthly sampling shall continue for the short term.

However, it should be noted the IAMP has been conducted for over three and half years, and the consistency of the data set supports complete closure of this monitoring plan. A select group of the IAMP wells, designed to provide long term protectiveness, should be included in the semi-annual sampling required by the Landfill Operations Permit No. 35435-022-SO/01. It is anticipated that an application for modification of the permit will include this proposed approach. If you have any specific concerns with this concept, please provide your feedback as soon as possible, so we can incorporate any suggestions into our strategy moving forward.

Enclosed for your review please find a site location map depicting the location of the monitoring wells sampled, the water quality data summary table for this sampling event, a groundwater elevation data table, groundwater contour and flow diagrams for the surficial and upper Floridan / Limestone aquifers, the historical data summary tables for the wells sampled this month, and the complete analytical data report from our contracted laboratory, Test America, Inc.

Mr. John Morris, P.G.
September 15, 2014
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Should you have any questions or require any additional information please feel free to call me at (813) 663-3221.

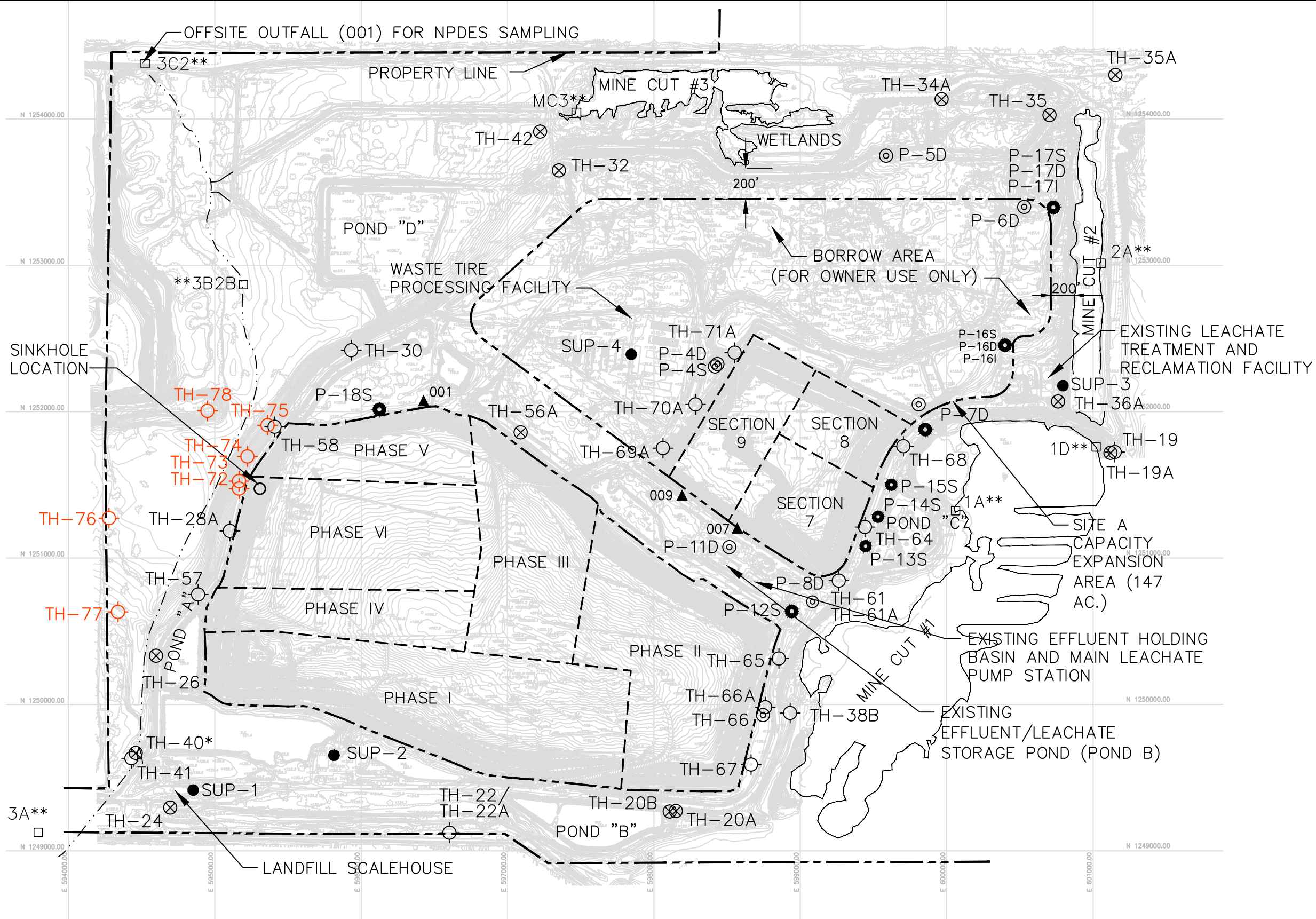
Respectfully submitted,

David S. Adams 9/15/2014

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



xc: John Lyons, Director, Public Works Department
Kim Byer, Public Works Department, Solid Waste Division
Larry Ruiz, Public Works Department, Solid Waste Division
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Steve Morgan, FDEP, Southwest District
Andy Schipfer, EPC
Ernest Ely, WMI
Brian Miller, DOH
Rich Siemering, HDR
Bob Curtis, HDR
Joe O'Neill, CDS



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

NOTES:
1. TOPOGRAPHICAL INFORMATION COMPLIED FROM EXISTING CONDITIONS SURVEY PERFORM BY PICKETT & ASSOCIATES DATED JAN 2013.



SHEET TITLE

**IAMP WELL LOCATIONS
SOUTHEAST COUNTY LANDFILL
HILLSBOROUGH COUNTY, FLORIDA**

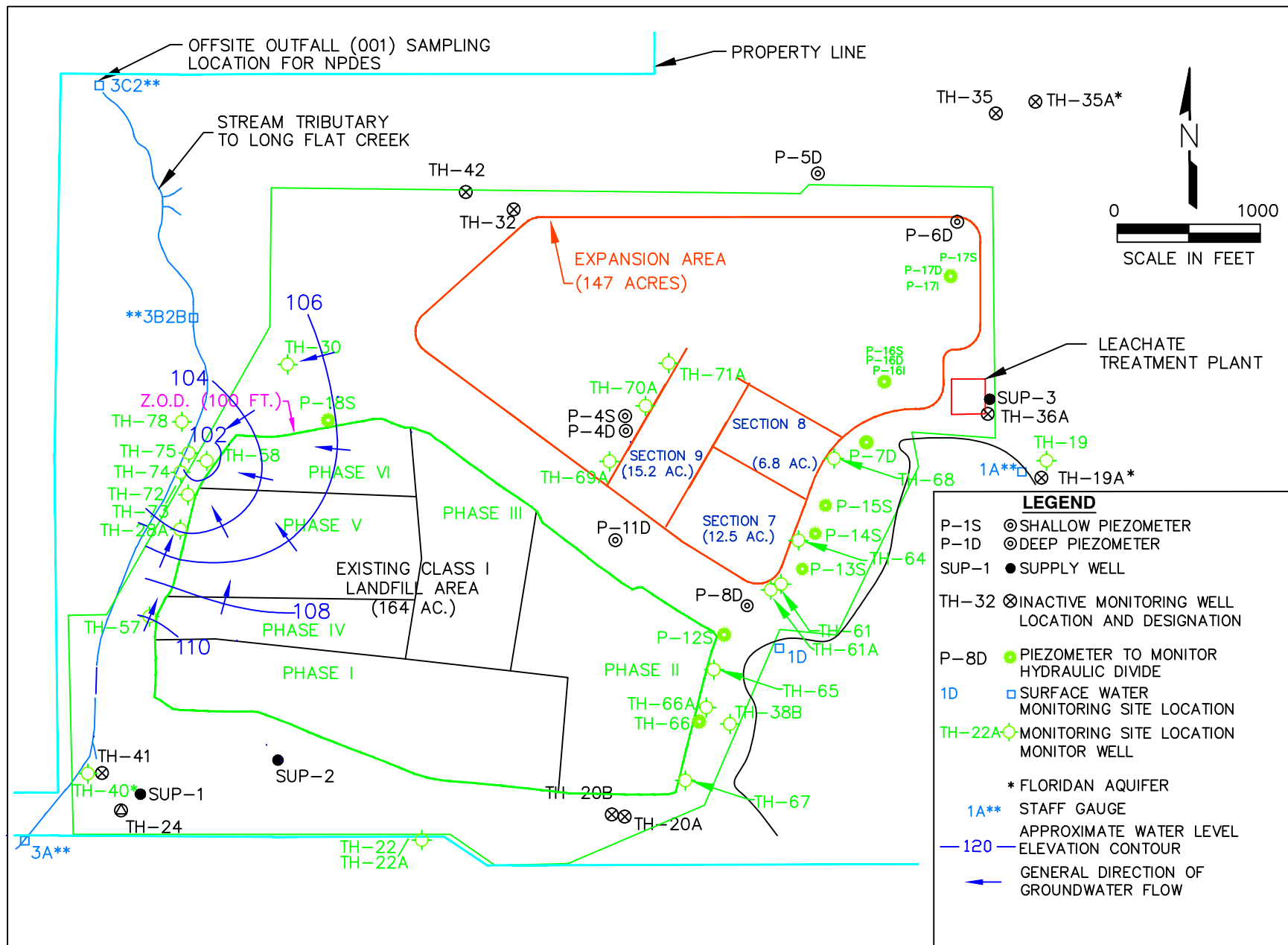
PROJECT NUMBER	REFERENCE SHEET
SCALE	DRAWING NAME
DATE JULY, 2014	EXHIBIT NUMBER 1

Southeast County Landfill

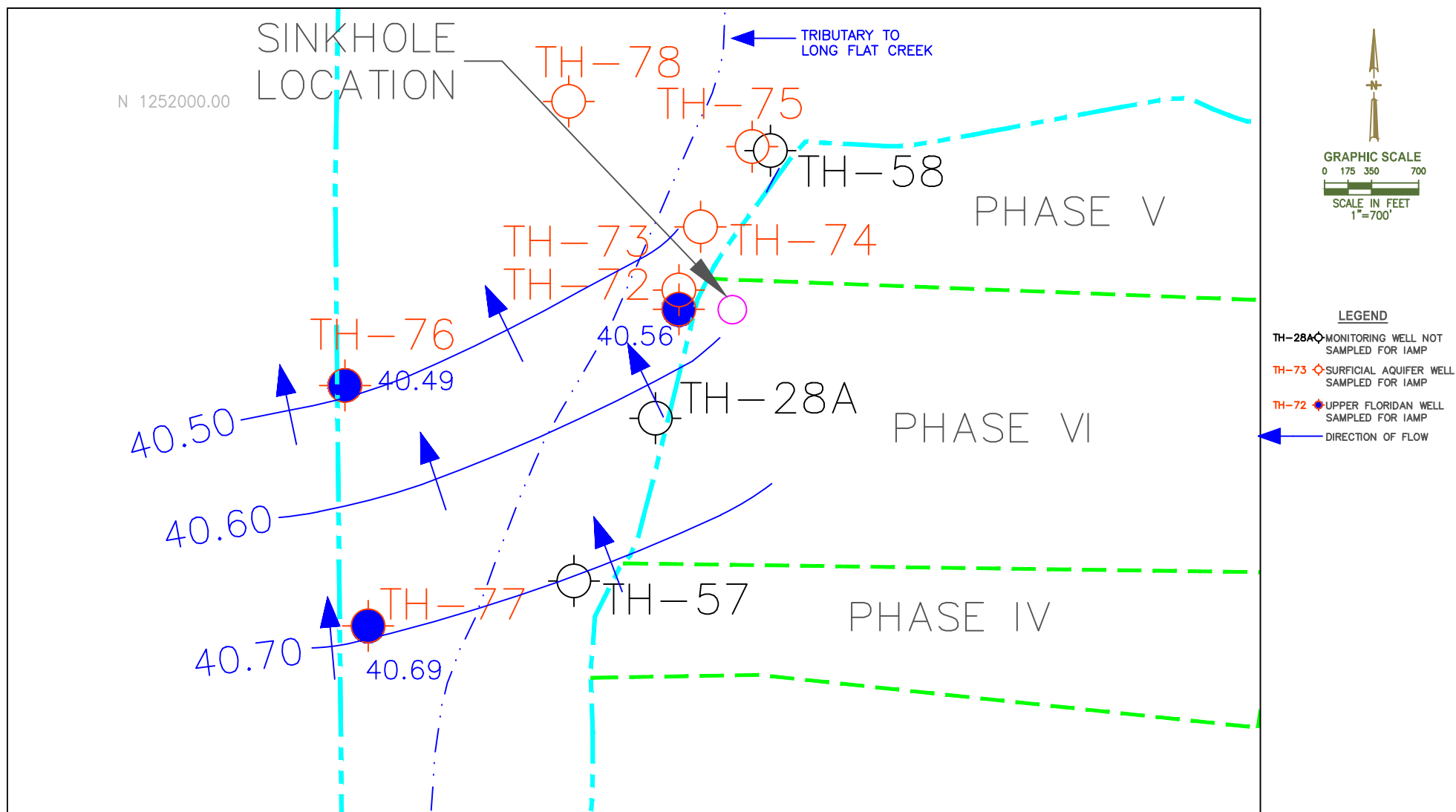
Groundwater Elevations

August 15, 2014

Measuring Point I.D.	T.O.C. Elevations (NGVD)	W.L. B.T.O.C.	W.L. (NGVD)	Time
TH-28A	131.10	27.69	103.41	12:19 PM
TH-30	128.88	23.78	105.10	12:10 PM
TH-57	128.36	18.52	109.84	12:22 PM
TH-58	127.88	27.66	100.22	12:13 PM
TH-72*	130.96	90.40	40.56	12:17 PM
TH-73	131.07	30.22	100.85	12:16 PM
TH-74	109.08	8.99	100.09	12:26 PM
TH-75	106.92	7.54	99.38	12:29 PM
TH-76*	111.21	70.72	40.49	12:46 PM
TH-77*	119.88	79.19	40.69	12:49 PM
TH-78*	120.75	75.51	45.24	12:41 PM
NGVD = National Geodetic Vertical Datum				
T.O.C. = Top of Casing				
B.T.O.C. = Below Top of Casing				
* = Floridan Well				
ND = No Data - Potential Error in Survey				
W.L. = Water Level				



Southeast County Landfill
Groundwater Elevation Contour Diagram – August 15, 2014



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

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: 660-62196-1

Client Project/Site: SELF -IAMP Monitoring Wells

For:

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

Attn: David Adams



Authorized for release by:
8/25/2014 2:01:41 PM

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

LINKS

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results through
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Have a Question?



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.

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Sample Summary

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

TestAmerica Job ID: 660-62196-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
660-62196-1	BLANK FIELD	Ground Water	08/12/14 11:30	08/12/14 15:20
660-62196-2	TH-72	Ground Water	08/12/14 13:48	08/12/14 15:20
660-62196-3	TH-78	Ground Water	08/12/14 12:28	08/12/14 15:20
660-62236-1	DUPLICATE NOT BLANK	Ground Water	08/13/14 00:00	08/13/14 15:15
660-62236-2	TH-77	Ground Water	08/13/14 10:43	08/13/14 15:15
660-62236-3	TH-76	Ground Water	08/13/14 11:54	08/13/14 15:15
660-62236-4	TH-73	Ground Water	08/13/14 14:02	08/13/14 15:15
660-62236-5	TH-74	Ground Water	08/13/14 12:39	08/13/14 15:15
660-62236-6	TH-75	Ground Water	08/13/14 13:18	08/13/14 15:15

Case Narrative

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

TestAmerica Job ID: 660-62196-1

Job ID: 660-62196-1

Laboratory: TestAmerica Tampa

Narrative

Job Narrative 660-62196-1

Comments

No additional comments.

Receipt

The samples were received on 8/12/2014 3:20 PM and 8/13/2014 3:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 4.7° C and 11.4° C.

Metals

Method 6010B: Due to the high concentration of sodium, the matrix spike / matrix spike duplicate (MS/MSD) for batch 150880 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria. The sample is flagged with J3.

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

General Chemistry

Method 350.1: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 344651 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. The sample is flagged with J3.

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

Definitions/Glossary

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

TestAmerica Job ID: 660-62196-1

Qualifiers

HPLC/IC

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

Metals

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.

General Chemistry

Qualifier	Qualifier Description
U	Indicates that the compound was analyzed for but not detected.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.

Glossary

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

Detection Summary

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

TestAmerica Job ID: 660-62196-1

Client Sample ID: BLANK FIELD

Lab Sample ID: 660-62196-1

No Detections.

Client Sample ID: TH-72

Lab Sample ID: 660-62196-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	540		10	5.0	mg/L	20			300.0	Total/NA
Iron	620		200	50	ug/L	1			6010B	Total Recoverable
Sodium	200	J3	0.50	0.31	mg/L	1			6010B	Total Recoverable
Ammonia as N	23		1.0	0.52	mg/L	20			350.1	Total/NA
Total Dissolved Solids	1300		25	25	mg/L	1			SM 2540C	Total/NA
Field pH	6.87				SU	1			Field Sampling	Total/NA
Field Temperature	23.55				Degrees C	1			Field Sampling	Total/NA
Oxygen, Dissolved	0.28				mg/L	1			Field Sampling	Total/NA
Specific Conductance	2375				uS/cm	1			Field Sampling	Total/NA
Turbidity	0.81				NTU	1			Field Sampling	Total/NA

Client Sample ID: TH-78

Lab Sample ID: 660-62196-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	38		0.50	0.25	mg/L	1			300.0	Total/NA
Iron	480		200	50	ug/L	1			6010B	Total Recoverable
Sodium	34		0.50	0.31	mg/L	1			6010B	Total Recoverable
Ammonia as N	0.42	J3	0.050	0.026	mg/L	1			350.1	Total/NA
Total Dissolved Solids	240		10	10	mg/L	1			SM 2540C	Total/NA
Field pH	9.55				SU	1			Field Sampling	Total/NA
Field Temperature	23.56				Degrees C	1			Field Sampling	Total/NA
Oxygen, Dissolved	0.40				mg/L	1			Field Sampling	Total/NA
Specific Conductance	467				uS/cm	1			Field Sampling	Total/NA
Turbidity	7.37				NTU	1			Field Sampling	Total/NA

Client Sample ID: DUPLICATE NOT BLANK

Lab Sample ID: 660-62236-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	18		0.50	0.25	mg/L	1			300.0	Total/NA
Arsenic	9.5	I	10	4.0	ug/L	1			6010B	Total Recoverable
Iron	7600		200	50	ug/L	1			6010B	Total Recoverable
Sodium	13		0.50	0.31	mg/L	1			6010B	Total Recoverable
Ammonia as N	2.0		0.10	0.052	mg/L	2			350.1	Total/NA
Total Dissolved Solids	200		5.0	5.0	mg/L	1			SM 2540C	Total/NA

Client Sample ID: TH-77

Lab Sample ID: 660-62236-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Chloride	9.5		0.50	0.25	mg/L	1			300.0	Total/NA
Iron	160	I	200	50	ug/L	1			6010B	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Tampa

Detection Summary

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

TestAmerica Job ID: 660-62196-1

Client Sample ID: TH-77 (Continued)

Lab Sample ID: 660-62236-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	16		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	0.49		0.050	0.026	mg/L	1		350.1	Total/NA
Total Dissolved Solids	260		10	10	mg/L	1		SM 2540C	Total/NA
Field pH	7.39				SU	1		Field Sampling	Total/NA
Field Temperature	23.76				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.36				mg/L	1		Field Sampling	Total/NA
Specific Conductance	436				uS/cm	1		Field Sampling	Total/NA
Turbidity	0.61				NTU	1		Field Sampling	Total/NA

Client Sample ID: TH-76

Lab Sample ID: 660-62236-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	12		0.50	0.25	mg/L	1		300.0	Total/NA
Iron	700		200	50	ug/L	1		6010B	Total Recoverable
Sodium	20		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	0.50		0.050	0.026	mg/L	1		350.1	Total/NA
Total Dissolved Solids	240		10	10	mg/L	1		SM 2540C	Total/NA
Field pH	7.37				SU	1		Field Sampling	Total/NA
Field Temperature	22.81				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.25				mg/L	1		Field Sampling	Total/NA
Specific Conductance	445				uS/cm	1		Field Sampling	Total/NA
Turbidity	17.0				NTU	1		Field Sampling	Total/NA

Client Sample ID: TH-73

Lab Sample ID: 660-62236-4

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	93		2.5	1.3	mg/L	5		300.0	Total/NA
Iron	4500		200	50	ug/L	1		6010B	Total Recoverable
Sodium	32		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	3.1		0.10	0.052	mg/L	2		350.1	Total/NA
Total Dissolved Solids	240		5.0	5.0	mg/L	1		SM 2540C	Total/NA
Field pH	4.76				SU	1		Field Sampling	Total/NA
Field Temperature	25.08				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.18				mg/L	1		Field Sampling	Total/NA
Specific Conductance	426				uS/cm	1		Field Sampling	Total/NA
Turbidity	3.38				NTU	1		Field Sampling	Total/NA

Client Sample ID: TH-74

Lab Sample ID: 660-62236-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	26		0.50	0.25	mg/L	1		300.0	Total/NA
Iron	26000		200	50	ug/L	1		6010B	Total Recoverable
Sodium	19		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	3.4		0.10	0.052	mg/L	2		350.1	Total/NA
Total Dissolved Solids	240		10	10	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Tampa

Detection Summary

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

TestAmerica Job ID: 660-62196-1

Client Sample ID: TH-74 (Continued)

Lab Sample ID: 660-62236-5

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Field pH	5.43				SU	1		Field Sampling	Total/NA
Field Temperature	23.95				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.31				mg/L	1		Field Sampling	Total/NA
Specific Conductance	466				uS/cm	1		Field Sampling	Total/NA
Turbidity	4.87				NTU	1		Field Sampling	Total/NA

Client Sample ID: TH-75

Lab Sample ID: 660-62236-6

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	18		0.50	0.25	mg/L	1		300.0	Total/NA
Arsenic	11		10	4.0	ug/L	1		6010B	Total Recoverable
Iron	7500		200	50	ug/L	1		6010B	Total Recoverable
Sodium	12		0.50	0.31	mg/L	1		6010B	Total Recoverable
Ammonia as N	1.5		0.10	0.052	mg/L	2		350.1	Total/NA
Total Dissolved Solids	190		5.0	5.0	mg/L	1		SM 2540C	Total/NA
Field pH	5.43				SU	1		Field Sampling	Total/NA
Field Temperature	24.52				Degrees C	1		Field Sampling	Total/NA
Oxygen, Dissolved	0.23				mg/L	1		Field Sampling	Total/NA
Specific Conductance	343				uS/cm	1		Field Sampling	Total/NA
Turbidity	2.84				NTU	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Tampa

Client Sample Results

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

TestAmerica Job ID: 660-62196-1

Client Sample ID: BLANK FIELD

Lab Sample ID: 660-62196-1

Date Collected: 08/12/14 11:30

Matrix: Ground Water

Date Received: 08/12/14 15:20

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			08/18/14 17:20	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		08/13/14 10:05	08/20/14 12:50	1
Iron	50	U	200	50	ug/L		08/13/14 10:05	08/20/14 12:50	1
Sodium	0.31	U	0.50	0.31	mg/L		08/13/14 10:05	08/20/14 12:50	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	0.026	U	0.050	0.026	mg/L			08/16/14 11:54	1
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			08/13/14 09:18	1

Client Sample Results

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

TestAmerica Job ID: 660-62196-1

Client Sample ID: TH-72

Date Collected: 08/12/14 13:48

Date Received: 08/12/14 15:20

Lab Sample ID: 660-62196-2

Matrix: Ground Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	540		10	5.0	mg/L			08/18/14 17:35	20

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	U	10	4.0	ug/L		08/13/14 10:05	08/20/14 12:37	1
Iron	620		200	50	ug/L		08/13/14 10:05	08/20/14 12:37	1
Sodium	200	J3	0.50	0.31	mg/L		08/13/14 10:05	08/20/14 12:37	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	23		1.0	0.52	mg/L			08/16/14 13:48	20
Total Dissolved Solids	1300		25	25	mg/L			08/13/14 09:18	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	6.87				SU			08/12/14 13:48	1
Field Temperature	23.55				Degrees C			08/12/14 13:48	1
Oxygen, Dissolved	0.28				mg/L			08/12/14 13:48	1
Specific Conductance	2375				uS/cm			08/12/14 13:48	1
Turbidity	0.81				NTU			08/12/14 13:48	1

TestAmerica Tampa

Client Sample Results

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

TestAmerica Job ID: 660-62196-1

Client Sample ID: TH-78

Date Collected: 08/12/14 12:28

Date Received: 08/12/14 15:20

Lab Sample ID: 660-62196-3

Matrix: Ground Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	38		0.50	0.25	mg/L			08/18/14 17:49	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		08/13/14 10:05	08/20/14 12:54	1
Iron	480		200	50	ug/L		08/13/14 10:05	08/20/14 12:54	1
Sodium	34		0.50	0.31	mg/L		08/13/14 10:05	08/20/14 12:54	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	0.42	J3	0.050	0.026	mg/L			08/16/14 11:54	1
Total Dissolved Solids	240		10	10	mg/L			08/13/14 09:18	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	9.55				SU			08/12/14 12:28	1
Field Temperature	23.56				Degrees C			08/12/14 12:28	1
Oxygen, Dissolved	0.40				mg/L			08/12/14 12:28	1
Specific Conductance	467				uS/cm			08/12/14 12:28	1
Turbidity	7.37				NTU			08/12/14 12:28	1

TestAmerica Tampa

Client Sample Results

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

TestAmerica Job ID: 660-62196-1

Client Sample ID: DUPLICATE NOT BLANK

Lab Sample ID: 660-62236-1

Date Collected: 08/13/14 00:00

Matrix: Ground Water

Date Received: 08/13/14 15:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18		0.50	0.25	mg/L			08/19/14 03:00	1

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	9.5	I	10	4.0	ug/L		08/14/14 12:04	08/21/14 08:29	1
Iron	7600		200	50	ug/L		08/14/14 12:04	08/21/14 08:29	1
Sodium	13		0.50	0.31	mg/L		08/14/14 12:04	08/21/14 08:29	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	2.0		0.10	0.052	mg/L			08/16/14 13:48	2
Total Dissolved Solids	200		5.0	5.0	mg/L			08/14/14 11:00	1

Client Sample Results

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

TestAmerica Job ID: 660-62196-1

Client Sample ID: TH-77

Date Collected: 08/13/14 10:43

Date Received: 08/13/14 15:15

Lab Sample ID: 660-62236-2

Matrix: Ground Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.5		0.50	0.25	mg/L			08/18/14 19:20	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		08/14/14 12:04	08/21/14 08:32	1
Iron	160	I	200	50	ug/L		08/14/14 12:04	08/21/14 08:32	1
Sodium	16		0.50	0.31	mg/L		08/14/14 12:04	08/21/14 08:32	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	0.49		0.050	0.026	mg/L			08/16/14 11:54	1
Total Dissolved Solids	260		10	10	mg/L			08/14/14 11:00	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.39				SU			08/13/14 10:43	1
Field Temperature	23.76				Degrees C			08/13/14 10:43	1
Oxygen, Dissolved	0.36				mg/L			08/13/14 10:43	1
Specific Conductance	436				uS/cm			08/13/14 10:43	1
Turbidity	0.61				NTU			08/13/14 10:43	1

TestAmerica Tampa

Client Sample Results

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

TestAmerica Job ID: 660-62196-1

Client Sample ID: TH-76

Date Collected: 08/13/14 11:54

Date Received: 08/13/14 15:15

Lab Sample ID: 660-62236-3

Matrix: Ground Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12		0.50	0.25	mg/L			08/18/14 20:06	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		08/14/14 12:04	08/21/14 08:36	1
Iron	700		200	50	ug/L		08/14/14 12:04	08/21/14 08:36	1
Sodium	20		0.50	0.31	mg/L		08/14/14 12:04	08/21/14 08:36	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	0.50		0.050	0.026	mg/L			08/16/14 13:38	1
Total Dissolved Solids	240		10	10	mg/L			08/14/14 11:00	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	7.37				SU			08/13/14 11:54	1
Field Temperature	22.81				Degrees C			08/13/14 11:54	1
Oxygen, Dissolved	0.25				mg/L			08/13/14 11:54	1
Specific Conductance	445				uS/cm			08/13/14 11:54	1
Turbidity	17.0				NTU			08/13/14 11:54	1

TestAmerica Tampa

Client Sample Results

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

TestAmerica Job ID: 660-62196-1

Client Sample ID: TH-73

Date Collected: 08/13/14 14:02

Date Received: 08/13/14 15:15

Lab Sample ID: 660-62236-4

Matrix: Ground Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	93		2.5	1.3	mg/L			08/19/14 14:23	5

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		08/14/14 12:04	08/21/14 09:10	1
Iron	4500		200	50	ug/L		08/14/14 12:04	08/21/14 09:10	1
Sodium	32		0.50	0.31	mg/L		08/14/14 12:04	08/21/14 09:10	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	3.1		0.10	0.052	mg/L			08/16/14 13:48	2
Total Dissolved Solids	240		5.0	5.0	mg/L			08/14/14 11:00	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	4.76				SU			08/13/14 14:02	1
Field Temperature	25.08				Degrees C			08/13/14 14:02	1
Oxygen, Dissolved	0.18				mg/L			08/13/14 14:02	1
Specific Conductance	426				uS/cm			08/13/14 14:02	1
Turbidity	3.38				NTU			08/13/14 14:02	1

TestAmerica Tampa

Client Sample Results

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

TestAmerica Job ID: 660-62196-1

Client Sample ID: TH-74

Date Collected: 08/13/14 12:39

Date Received: 08/13/14 15:15

Lab Sample ID: 660-62236-5

Matrix: Ground Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	26		0.50	0.25	mg/L			08/19/14 14:39	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		08/14/14 12:04	08/21/14 08:49	1
Iron	26000		200	50	ug/L		08/14/14 12:04	08/21/14 08:49	1
Sodium	19		0.50	0.31	mg/L		08/14/14 12:04	08/21/14 08:49	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	3.4		0.10	0.052	mg/L			08/16/14 13:57	2
Total Dissolved Solids	240		10	10	mg/L			08/14/14 11:00	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.43				SU			08/13/14 12:39	1
Field Temperature	23.95				Degrees C			08/13/14 12:39	1
Oxygen, Dissolved	0.31				mg/L			08/13/14 12:39	1
Specific Conductance	466				uS/cm			08/13/14 12:39	1
Turbidity	4.87				NTU			08/13/14 12:39	1

TestAmerica Tampa

Client Sample Results

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

TestAmerica Job ID: 660-62196-1

Client Sample ID: TH-75

Date Collected: 08/13/14 13:18

Date Received: 08/13/14 15:15

Lab Sample ID: 660-62236-6

Matrix: Ground Water

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18		0.50	0.25	mg/L			08/18/14 21:23	1

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

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		10	4.0	ug/L		08/14/14 12:04	08/21/14 08:53	1
Iron	7500		200	50	ug/L		08/14/14 12:04	08/21/14 08:53	1
Sodium	12		0.50	0.31	mg/L		08/14/14 12:04	08/21/14 08:53	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	1.5		0.10	0.052	mg/L			08/16/14 13:57	2
Total Dissolved Solids	190		5.0	5.0	mg/L			08/14/14 11:00	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	5.43				SU			08/13/14 13:18	1
Field Temperature	24.52				Degrees C			08/13/14 13:18	1
Oxygen, Dissolved	0.23				mg/L			08/13/14 13:18	1
Specific Conductance	343				uS/cm			08/13/14 13:18	1
Turbidity	2.84				NTU			08/13/14 13:18	1

TestAmerica Tampa

QC Sample Results

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

TestAmerica Job ID: 660-62196-1

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 680-344644/11

Matrix: Water

Analysis Batch: 344644

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.25	U	0.50	0.25	mg/L			08/18/14 15:40	1

Lab Sample ID: LCS 680-344644/12

Matrix: Water

Analysis Batch: 344644

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	10.1		mg/L		101	90 - 110

Lab Sample ID: LCSD 680-344644/13

Matrix: Water

Analysis Batch: 344644

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	10.0		mg/L		100	90 - 110	0	30

Lab Sample ID: 660-62204-A-2 MS

Matrix: Water

Analysis Batch: 344644

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	8.0		10.0	18.2		mg/L		102	80 - 120

Lab Sample ID: 660-62204-A-2 MSD

Matrix: Water

Analysis Batch: 344644

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	8.0		10.0	18.3		mg/L		102	80 - 120	0	30

Lab Sample ID: MB 680-344689/2

Matrix: Water

Analysis Batch: 344689

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.25	U	0.50	0.25	mg/L			08/18/14 17:02	1

Lab Sample ID: LCS 680-344689/3

Matrix: Water

Analysis Batch: 344689

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.95		mg/L		100	90 - 110

Lab Sample ID: LCSD 680-344689/4

Matrix: Water

Analysis Batch: 344689

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	9.98		mg/L		100	90 - 110	0	30

TestAmerica Tampa

QC Sample Results

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

TestAmerica Job ID: 660-62196-1

Lab Sample ID: 660-62236-2 MS

Matrix: Ground Water

Analysis Batch: 344689

Client Sample ID: TH-77

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	9.5		10.0	19.5		mg/L		101	80 - 120

Lab Sample ID: 660-62236-2 MSD

Matrix: Ground Water

Analysis Batch: 344689

Client Sample ID: TH-77

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	9.5		10.0	19.5		mg/L		100	80 - 120	0	30

Lab Sample ID: MB 680-344698/29

Matrix: Water

Analysis Batch: 344698

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.25	U	0.50	0.25	mg/L			08/18/14 23:56	1

Lab Sample ID: LCS 680-344698/30

Matrix: Water

Analysis Batch: 344698

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

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

Lab Sample ID: LCSD 680-344698/31

Matrix: Water

Analysis Batch: 344698

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	10.0		mg/L		100	90 - 110	0	30

Lab Sample ID: 660-62252-B-2 MS

Matrix: Water

Analysis Batch: 344698

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	11		10.0	20.3		mg/L		98	80 - 120

Lab Sample ID: 660-62252-B-2 MSD

Matrix: Water

Analysis Batch: 344698

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	11		10.0	20.3		mg/L		97	80 - 120	0	30

Lab Sample ID: MB 680-344823/2

Matrix: Water

Analysis Batch: 344823

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.25	U	0.50	0.25	mg/L			08/19/14 13:07	1

TestAmerica Tampa

QC Sample Results

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

TestAmerica Job ID: 660-62196-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 680-344823/3

Matrix: Water

Analysis Batch: 344823

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10.0	9.99		mg/L		100	90 - 110

Lab Sample ID: LCSD 680-344823/4

Matrix: Water

Analysis Batch: 344823

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10.0	10.0		mg/L		100	90 - 110	0	30

Lab Sample ID: 680-104154-C-2 MS

Matrix: Water

Analysis Batch: 344823

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	37		40.0	75.2		mg/L		96	80 - 120

Lab Sample ID: 680-104154-C-2 MSD

Matrix: Water

Analysis Batch: 344823

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	37		40.0	75.1		mg/L		95	80 - 120	0	30

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 660-150689/1-A

Matrix: Water

Analysis Batch: 150880

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 150689

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	U	10	4.0	ug/L		08/13/14 10:05	08/20/14 12:27	1
Iron	50	U	200	50	ug/L		08/13/14 10:05	08/20/14 12:27	1
Sodium	0.31	U	0.50	0.31	mg/L		08/13/14 10:05	08/20/14 12:27	1

Lab Sample ID: LCS 660-150689/2-A

Matrix: Water

Analysis Batch: 150880

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 150689

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	998		ug/L		100	80 - 120
Iron	1000	972		ug/L		97	80 - 120
Sodium	10.0	9.33		mg/L		93	80 - 120

Lab Sample ID: 660-62196-2 MS

Matrix: Ground Water

Analysis Batch: 150880

Client Sample ID: TH-72

Prep Type: Total Recoverable

Prep Batch: 150689

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

TestAmerica Tampa

QC Sample Results

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

TestAmerica Job ID: 660-62196-1

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

Lab Sample ID: 660-62196-2 MS

Matrix: Ground Water

Analysis Batch: 150880

Client Sample ID: TH-72

Prep Type: Total Recoverable

Prep Batch: 150689

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	620		1000	1560		ug/L		94	80 - 120
Sodium	200	J3	10.0	210		mg/L		94	80 - 120

Lab Sample ID: 660-62196-2 MSD

Matrix: Ground Water

Analysis Batch: 150880

Client Sample ID: TH-72

Prep Type: Total Recoverable

Prep Batch: 150689

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	4.0	U	1000	1060		ug/L		106	80 - 120	2	20
Iron	620		1000	1590		ug/L		97	80 - 120	2	20
Sodium	200	J3	10.0	218	J3	mg/L		169	80 - 120	4	20

Lab Sample ID: MB 660-150729/1-A

Matrix: Water

Analysis Batch: 150894

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 150729

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.0	U	10	4.0	ug/L		08/14/14 12:04	08/21/14 07:24	1
Iron	50	U	200	50	ug/L		08/14/14 12:04	08/21/14 07:24	1
Sodium	0.31	U	0.50	0.31	mg/L		08/14/14 12:04	08/21/14 07:24	1

Lab Sample ID: LCS 660-150729/2-A

Matrix: Water

Analysis Batch: 150894

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 150729

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	984		ug/L		98	80 - 120
Iron	1000	1020		ug/L		102	80 - 120
Sodium	10.0	10.0		mg/L		100	80 - 120

Lab Sample ID: 640-48834-B-1-B MS

Matrix: Water

Analysis Batch: 150894

Client Sample ID: Matrix Spike

Prep Type: Total Recoverable

Prep Batch: 150729

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	4.0	U	1000	1020		ug/L		102	80 - 120
Iron	70	I	1000	1070		ug/L		100	80 - 120
Sodium	360	J3	10.0	353	J3	mg/L		-53	80 - 120

Lab Sample ID: 640-48834-B-1-C MSD

Matrix: Water

Analysis Batch: 150894

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total Recoverable

Prep Batch: 150729

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Arsenic	4.0	U	1000	1010		ug/L		101	80 - 120	1	20
Iron	70	I	1000	1060		ug/L		99	80 - 120	0	20
Sodium	360	J3	10.0	359	J3	mg/L		14	80 - 120	2	20

TestAmerica Tampa

QC Sample Results

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

TestAmerica Job ID: 660-62196-1

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 680-344651/5

Matrix: Water

Analysis Batch: 344651

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia as N	0.026	U	0.050	0.026	mg/L			08/16/14 09:42	1

Lab Sample ID: LCS 680-344651/49

Matrix: Water

Analysis Batch: 344651

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

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

Lab Sample ID: 660-62196-3 MS

Matrix: Ground Water

Analysis Batch: 344651

Client Sample ID: TH-78

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia as N	0.42	J3	1.00	1.66	J3	mg/L		124	90 - 110

Lab Sample ID: 660-62196-3 MSD

Matrix: Ground Water

Analysis Batch: 344651

Client Sample ID: TH-78

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia as N	0.42	J3	1.00	1.67	J3	mg/L		125	90 - 110	0	30

Lab Sample ID: 660-62236-2 DU

Matrix: Ground Water

Analysis Batch: 344651

Client Sample ID: TH-77

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia as N	0.49		0.474		mg/L		4	30

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

Lab Sample ID: MB 660-150677/1

Matrix: Water

Analysis Batch: 150677

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			08/13/14 09:18	1

Lab Sample ID: LCS 660-150677/2

Matrix: Water

Analysis Batch: 150677

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	10000	9910		mg/L		99	80 - 120

TestAmerica Tampa

QC Sample Results

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

TestAmerica Job ID: 660-62196-1

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

Lab Sample ID: 660-62196-3 DU

Matrix: Ground Water

Analysis Batch: 150677

Client Sample ID: TH-78

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	240		272		mg/L		11	20

Lab Sample ID: MB 660-150728/1

Matrix: Water

Analysis Batch: 150728

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			08/14/14 11:00	1

Lab Sample ID: LCS 660-150728/2

Matrix: Water

Analysis Batch: 150728

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	10000	9960		mg/L		100	80 - 120

Lab Sample ID: 660-62236-6 DU

Matrix: Ground Water

Analysis Batch: 150728

Client Sample ID: TH-75

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	190		186		mg/L		0	20

QC Association Summary

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

TestAmerica Job ID: 660-62196-1

HPLC/IC

Analysis Batch: 344644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-62196-1	BLANK FIELD	Total/NA	Ground Water	300.0	
660-62196-2	TH-72	Total/NA	Ground Water	300.0	
660-62196-3	TH-78	Total/NA	Ground Water	300.0	
660-62204-A-2 MS	Matrix Spike	Total/NA	Water	300.0	
660-62204-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 680-344644/12	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-344644/13	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-344644/11	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 344689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-62236-2	TH-77	Total/NA	Ground Water	300.0	
660-62236-2 MS	TH-77	Total/NA	Ground Water	300.0	
660-62236-2 MSD	TH-77	Total/NA	Ground Water	300.0	
660-62236-3	TH-76	Total/NA	Ground Water	300.0	
660-62236-6	TH-75	Total/NA	Ground Water	300.0	
LCS 680-344689/3	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-344689/4	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-344689/2	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 344698

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-62236-1	DUPLICATE NOT BLANK	Total/NA	Ground Water	300.0	
660-62252-B-2 MS	Matrix Spike	Total/NA	Water	300.0	
660-62252-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 680-344698/30	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-344698/31	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-344698/29	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 344823

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-62236-4	TH-73	Total/NA	Ground Water	300.0	
660-62236-5	TH-74	Total/NA	Ground Water	300.0	
680-104154-C-2 MS	Matrix Spike	Total/NA	Water	300.0	
680-104154-C-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	
LCS 680-344823/3	Lab Control Sample	Total/NA	Water	300.0	
LCSD 680-344823/4	Lab Control Sample Dup	Total/NA	Water	300.0	
MB 680-344823/2	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 150689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-62196-1	BLANK FIELD	Total Recoverable	Ground Water	3005A	
660-62196-2	TH-72	Total Recoverable	Ground Water	3005A	
660-62196-2 MS	TH-72	Total Recoverable	Ground Water	3005A	
660-62196-2 MSD	TH-72	Total Recoverable	Ground Water	3005A	
660-62196-3	TH-78	Total Recoverable	Ground Water	3005A	
LCS 660-150689/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 660-150689/1-A	Method Blank	Total Recoverable	Water	3005A	

TestAmerica Tampa

QC Association Summary

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

TestAmerica Job ID: 660-62196-1

Metals (Continued)

Prep Batch: 150729

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
640-48834-B-1-B MS	Matrix Spike	Total Recoverable	Water	3005A	
640-48834-B-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	
660-62236-1	DUPLICATE NOT BLANK	Total Recoverable	Ground Water	3005A	
660-62236-2	TH-77	Total Recoverable	Ground Water	3005A	
660-62236-3	TH-76	Total Recoverable	Ground Water	3005A	
660-62236-4	TH-73	Total Recoverable	Ground Water	3005A	
660-62236-5	TH-74	Total Recoverable	Ground Water	3005A	
660-62236-6	TH-75	Total Recoverable	Ground Water	3005A	
LCS 660-150729/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 660-150729/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 150880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-62196-1	BLANK FIELD	Total Recoverable	Ground Water	6010B	150689
660-62196-2	TH-72	Total Recoverable	Ground Water	6010B	150689
660-62196-2 MS	TH-72	Total Recoverable	Ground Water	6010B	150689
660-62196-2 MSD	TH-72	Total Recoverable	Ground Water	6010B	150689
660-62196-3	TH-78	Total Recoverable	Ground Water	6010B	150689
LCS 660-150689/2-A	Lab Control Sample	Total Recoverable	Water	6010B	150689
MB 660-150689/1-A	Method Blank	Total Recoverable	Water	6010B	150689

Analysis Batch: 150894

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
640-48834-B-1-B MS	Matrix Spike	Total Recoverable	Water	6010B	150729
640-48834-B-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	150729
660-62236-1	DUPLICATE NOT BLANK	Total Recoverable	Ground Water	6010B	150729
660-62236-2	TH-77	Total Recoverable	Ground Water	6010B	150729
660-62236-3	TH-76	Total Recoverable	Ground Water	6010B	150729
660-62236-4	TH-73	Total Recoverable	Ground Water	6010B	150729
660-62236-5	TH-74	Total Recoverable	Ground Water	6010B	150729
660-62236-6	TH-75	Total Recoverable	Ground Water	6010B	150729
LCS 660-150729/2-A	Lab Control Sample	Total Recoverable	Water	6010B	150729
MB 660-150729/1-A	Method Blank	Total Recoverable	Water	6010B	150729

General Chemistry

Analysis Batch: 150677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-62196-1	BLANK FIELD	Total/NA	Ground Water	SM 2540C	
660-62196-2	TH-72	Total/NA	Ground Water	SM 2540C	
660-62196-3	TH-78	Total/NA	Ground Water	SM 2540C	
660-62196-3 DU	TH-78	Total/NA	Ground Water	SM 2540C	
LCS 660-150677/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 660-150677/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 150728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-62236-1	DUPLICATE NOT BLANK	Total/NA	Ground Water	SM 2540C	
660-62236-2	TH-77	Total/NA	Ground Water	SM 2540C	
660-62236-3	TH-76	Total/NA	Ground Water	SM 2540C	

TestAmerica Tampa

QC Association Summary

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

TestAmerica Job ID: 660-62196-1

General Chemistry (Continued)

Analysis Batch: 150728 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-62236-4	TH-73	Total/NA	Ground Water	SM 2540C	
660-62236-5	TH-74	Total/NA	Ground Water	SM 2540C	
660-62236-6	TH-75	Total/NA	Ground Water	SM 2540C	
660-62236-6 DU	TH-75	Total/NA	Ground Water	SM 2540C	
LCS 660-150728/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 660-150728/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 344651

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-62196-1	BLANK FIELD	Total/NA	Ground Water	350.1	
660-62196-2	TH-72	Total/NA	Ground Water	350.1	
660-62196-3	TH-78	Total/NA	Ground Water	350.1	
660-62196-3 MS	TH-78	Total/NA	Ground Water	350.1	
660-62196-3 MSD	TH-78	Total/NA	Ground Water	350.1	
660-62236-1	DUPLICATE NOT BLANK	Total/NA	Ground Water	350.1	
660-62236-2	TH-77	Total/NA	Ground Water	350.1	
660-62236-2 DU	TH-77	Total/NA	Ground Water	350.1	
660-62236-3	TH-76	Total/NA	Ground Water	350.1	
660-62236-4	TH-73	Total/NA	Ground Water	350.1	
660-62236-5	TH-74	Total/NA	Ground Water	350.1	
660-62236-6	TH-75	Total/NA	Ground Water	350.1	
LCS 680-344651/49	Lab Control Sample	Total/NA	Water	350.1	
MB 680-344651/5	Method Blank	Total/NA	Water	350.1	

Field Service / Mobile Lab

Analysis Batch: 151015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-62196-2	TH-72	Total/NA	Ground Water	Field Sampling	
660-62196-3	TH-78	Total/NA	Ground Water	Field Sampling	
660-62236-2	TH-77	Total/NA	Ground Water	Field Sampling	
660-62236-3	TH-76	Total/NA	Ground Water	Field Sampling	
660-62236-4	TH-73	Total/NA	Ground Water	Field Sampling	
660-62236-5	TH-74	Total/NA	Ground Water	Field Sampling	
660-62236-6	TH-75	Total/NA	Ground Water	Field Sampling	

Lab Chronicle

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

TestAmerica Job ID: 660-62196-1

Client Sample ID: BLANK FIELD

Date Collected: 08/12/14 11:30

Date Received: 08/12/14 15:20

Lab Sample ID: 660-62196-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344644	08/18/14 17:20	DAS	TAL SAV
Total Recoverable	Prep	3005A			150689	08/13/14 10:05	ALQ	TAL TAM
Total Recoverable	Analysis	6010B		1	150880	08/20/14 12:50	GAF	TAL TAM
Total/NA	Analysis	350.1		1	344651	08/16/14 11:54	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	150677	08/13/14 09:18	TKO	TAL TAM

Client Sample ID: TH-72

Date Collected: 08/12/14 13:48

Date Received: 08/12/14 15:20

Lab Sample ID: 660-62196-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		20	344644	08/18/14 17:35	DAS	TAL SAV
Total Recoverable	Prep	3005A			150689	08/13/14 10:05	ALQ	TAL TAM
Total Recoverable	Analysis	6010B		1	150880	08/20/14 12:37	GAF	TAL TAM
Total/NA	Analysis	350.1		20	344651	08/16/14 13:48	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	150677	08/13/14 09:18	TKO	TAL TAM
Total/NA	Analysis	Field Sampling		1	151015	08/12/14 13:48	FS	TAL TAM

Client Sample ID: TH-78

Date Collected: 08/12/14 12:28

Date Received: 08/12/14 15:20

Lab Sample ID: 660-62196-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344644	08/18/14 17:49	DAS	TAL SAV
Total Recoverable	Prep	3005A			150689	08/13/14 10:05	ALQ	TAL TAM
Total Recoverable	Analysis	6010B		1	150880	08/20/14 12:54	GAF	TAL TAM
Total/NA	Analysis	350.1		1	344651	08/16/14 11:54	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	150677	08/13/14 09:18	TKO	TAL TAM
Total/NA	Analysis	Field Sampling		1	151015	08/12/14 12:28	FS	TAL TAM

Client Sample ID: DUPLICATE NOT BLANK

Date Collected: 08/13/14 00:00

Date Received: 08/13/14 15:15

Lab Sample ID: 660-62236-1

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344698	08/19/14 03:00	DAS	TAL SAV
Total Recoverable	Prep	3005A			150729	08/14/14 12:04	ALQ	TAL TAM
Total Recoverable	Analysis	6010B		1	150894	08/21/14 08:29	GAF	TAL TAM
Total/NA	Analysis	350.1		2	344651	08/16/14 13:48	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	150728	08/14/14 11:00	TKO	TAL TAM

TestAmerica Tampa

Lab Chronicle

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

TestAmerica Job ID: 660-62196-1

Client Sample ID: TH-77

Date Collected: 08/13/14 10:43

Date Received: 08/13/14 15:15

Lab Sample ID: 660-62236-2

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344689	08/18/14 19:20	DAS	TAL SAV
Total Recoverable	Prep	3005A			150729	08/14/14 12:04	ALQ	TAL TAM
Total Recoverable	Analysis	6010B		1	150894	08/21/14 08:32	GAF	TAL TAM
Total/NA	Analysis	350.1		1	344651	08/16/14 11:54	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	150728	08/14/14 11:00	TKO	TAL TAM
Total/NA	Analysis	Field Sampling		1	151015	08/13/14 10:43	FS	TAL TAM

Client Sample ID: TH-76

Date Collected: 08/13/14 11:54

Date Received: 08/13/14 15:15

Lab Sample ID: 660-62236-3

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344689	08/18/14 20:06	DAS	TAL SAV
Total Recoverable	Prep	3005A			150729	08/14/14 12:04	ALQ	TAL TAM
Total Recoverable	Analysis	6010B		1	150894	08/21/14 08:36	GAF	TAL TAM
Total/NA	Analysis	350.1		1	344651	08/16/14 13:38	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	150728	08/14/14 11:00	TKO	TAL TAM
Total/NA	Analysis	Field Sampling		1	151015	08/13/14 11:54	FS	TAL TAM

Client Sample ID: TH-73

Date Collected: 08/13/14 14:02

Date Received: 08/13/14 15:15

Lab Sample ID: 660-62236-4

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5	344823	08/19/14 14:23	DAS	TAL SAV
Total Recoverable	Prep	3005A			150729	08/14/14 12:04	ALQ	TAL TAM
Total Recoverable	Analysis	6010B		1	150894	08/21/14 09:10	GAF	TAL TAM
Total/NA	Analysis	350.1		2	344651	08/16/14 13:48	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	150728	08/14/14 11:00	TKO	TAL TAM
Total/NA	Analysis	Field Sampling		1	151015	08/13/14 14:02	FS	TAL TAM

Client Sample ID: TH-74

Date Collected: 08/13/14 12:39

Date Received: 08/13/14 15:15

Lab Sample ID: 660-62236-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344823	08/19/14 14:39	DAS	TAL SAV
Total Recoverable	Prep	3005A			150729	08/14/14 12:04	ALQ	TAL TAM
Total Recoverable	Analysis	6010B		1	150894	08/21/14 08:49	GAF	TAL TAM
Total/NA	Analysis	350.1		2	344651	08/16/14 13:57	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	150728	08/14/14 11:00	TKO	TAL TAM

TestAmerica Tampa

Lab Chronicle

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

TestAmerica Job ID: 660-62196-1

Client Sample ID: TH-74

Date Collected: 08/13/14 12:39

Date Received: 08/13/14 15:15

Lab Sample ID: 660-62236-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Field Sampling		1	151015	08/13/14 12:39	FS	TAL TAM

Client Sample ID: TH-75

Date Collected: 08/13/14 13:18

Date Received: 08/13/14 15:15

Lab Sample ID: 660-62236-6

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	344689	08/18/14 21:23	DAS	TAL SAV
Total Recoverable	Prep	3005A			150729	08/14/14 12:04	ALQ	TAL TAM
Total Recoverable	Analysis	6010B		1	150894	08/21/14 08:53	GAF	TAL TAM
Total/NA	Analysis	350.1		2	344651	08/16/14 13:57	JME	TAL SAV
Total/NA	Analysis	SM 2540C		1	150728	08/14/14 11:00	TKO	TAL TAM
Total/NA	Analysis	Field Sampling		1	151015	08/13/14 13:18	FS	TAL TAM

Laboratory References:

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

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

Method Summary

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

TestAmerica Job ID: 660-62196-1

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

Protocol References:

EPA = US Environmental Protection Agency

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

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

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

Laboratory References:

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

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

Certification Summary

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

TestAmerica Job ID: 660-62196-1

Laboratory: TestAmerica Tampa

The certifications listed below are applicable to this report.

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

Laboratory: TestAmerica Savannah

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

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

* Certification renewal pending - certification considered valid.

TestAmerica Tampa

Certification Summary

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

TestAmerica Job ID: 660-62196-1

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	08-31-14 *
Wyoming	State Program	8	8TMS-L	06-30-14 *

* Certification renewal pending - certification considered valid.

TestAmerica Tampa

[illegible]

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Form FD 9000-24

PURGING DATA

PURGING DATA

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

= (190 feet - 90.60 feet) X .16 gallons/foot = 15.91 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	189	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	189	PURGING INITIATED AT:	13.00	PURGING ENDED AT:	13.48	TOTAL VOLUME PURGED (gallons):	24
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PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

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

SAMPLING DATA

PUMP OR TUBING DEPTH IN WELL (feet):	189	TUBING MATERIAL CODE:	T	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: _____ μm
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SAMPLE CONTAINER SPECIFICATION	SAMPLE PRESERVATION	INTENDED	SAMPLING	SAMPLE PUMP
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SEE COC FOR ANALYSIS									
MATERIAL CODES:		AG = Amber Glass;	CG = Clear Glass;	PE = Polyethylene;	PP = Polypropylene;	S = Silicone;	T = Teflon;	O = Other (Specify)	
SAMPLING EQUIPMENT CODES:		APP = After Peristaltic Pump;	B = Bailer;	BP = Bladder Pump;	ESP = Electric Submersible Pump;				
		RFPP = Reverse Flow Peristaltic Pump;	SM = Straw Method (Tubing Gravity Drain);	O = Other (Specify)					

SEE COC FOR ANALYSIS

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

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

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

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

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

Revision Date: February 2009

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Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: SELF IAMP	SITE LOCATION:	
WELL NO: FIELD BLANK	SAMPLE ID: FIELD BLANK	DATE: 8.12.14

PURGING DATA

WELL DIAMETER (inches): N/A	TUBING DIAMETER (inches): N/A	WELL SCREEN INTERVAL DEPTH: — feet to — feet	STATIC DEPTH TO WATER (feet): N/A	PURGE PUMP TYPE OR BAILER: N/A
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (feet - feet) X gallons/foot = gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = gallons + (gallons/foot X feet) + gallons = gallons				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): N/A	FINAL PUMP OR TUBING DEPTH IN WELL (feet): N/A	PURGING INITIATED AT: N/A	PURGING ENDED AT: N/A	TOTAL VOLUME PURGED (gallons): N/A

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
FIELD BLANK											

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0008; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: ANDREW BALLOON / ZACK PATTERSON		SAMPLER(S) SIGNATURE: <i>Zack Patterson</i>		SAMPLING INITIATED AT: 11:30	SAMPLING ENDED AT: 11:41
PUMP OR TUBING DEPTH IN WELL (feet): N/A		TUBING MATERIAL CODE: T		FIELD-FILTERED: Y (N)	FILTER SIZE: μm
FIELD DECONTAMINATION: PUMP Y N Dedicated		TUBING Y N Dedicated		DUPLICATE: Y (N)	

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

SEE COC FOR ANALYSIS →

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

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

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

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

Revision Date: February 2009

Form FD 9000-24

SELF IAMP

TH-77

2	TUBING DIAMETER (inches):	3/8
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WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (109.2 feet - 79.31 feet) X .16 gallons/foot = 14.39 gallons

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


INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	168.2	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	168.2	PURGING INITIATED AT:	9:58	PURGING ENDED AT:	10:43	TOTAL VOLUME PURGED (gallons):	22.50
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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	OXYGEN (circle units) <u>mg/l</u> or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
14.50	14.50	.50	77.55	7.41	23.76	438	.44	.64	NONE	NONE
4.0	18.50	.50	77.55	7.40	23.70	436	.38	.50	↓	↓
4.0	22.50	.50	77.55	7.39	23.76	436	.36	.61	↓	↓

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

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: ANDREW BALLOON / ZACK PATTERSON			SAMPLER(S) SIGNATURE(S) 			SAMPLING INITIATED AT: 10:43		SAMPLING ENDED AT: 10:54	
PUMP OR TUBING DEPTH IN WELL (feet): 168.2			TUBING MATERIAL CODE: T			FIELD-FILTERED: Y (N)		FILTER SIZE: _____ µm	
FIELD DECONTAMINATION: PUMP Y N (Dedicated)			TUBING Y N (Dedicated)			DUPLICATE: Y (N)			

[illegible]

SEE COC FOR ANALYSIS

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

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

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

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

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

Revision Date: February 2009

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Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: SELF IAMP	SITE LOCATION:	DATE: 8-13-14
WELL NO: DUPLICATE	SAMPLE ID: Duplicate	

PURGING DATA

WELL DIAMETER (Inches): N/A	TUBING DIAMETER (Inches): N/A	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): N/A	PURGE PUMP TYPE OR BAILER: N/A
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): N/A	FINAL PUMP OR TUBING DEPTH IN WELL (feet): N/A	PURGING INITIATED AT: N/A	PURGING ENDED AT: N/A	TOTAL VOLUME PURGED (gallons): N/A

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (circle units) μmhos/cm or μS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
DUPLICATE											

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0008; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
 PURGING EQUIPMENT CODES: B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: ANDREW BALLOON / ZACK PATTERSON				SAMPLER(S) SIGNATURE(S): <i>[Signature]</i>				SAMPLING INITIATED AT: N/A		SAMPLING ENDED AT: N/A	
PUMP OR TUBING DEPTH IN WELL (feet): N/A				TUBING MATERIAL CODE: T				FIELD-FILTERED: Y <input checked="" type="radio"/> N <input type="radio"/>		FILTER SIZE: _____ μm	
FIELD DECONTAMINATION: PUMP Y N <input checked="" type="radio"/> Dedicated				TUBING Y N <input checked="" type="radio"/> Dedicated				DUPLICATE: Y <input checked="" type="radio"/> N <input type="radio"/>			

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

SEE COC FOR ANALYSIS

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

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

Revision Date: February 2009

Login Sample Receipt Checklist

Client: Hillsborough Co Public Utilities Dept

Job Number: 660-62196-1

Login Number: 62196

List Source: TestAmerica Tampa

List Number: 1

Creator: Redding, Charles S

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	False	Check done at department level as required.

Login Sample Receipt Checklist

Client: Hillsborough Co Public Utilities Dept

Job Number: 660-62196-1

Login Number: 62196

List Number: 2

Creator: Banda, Christy S

List Source: TestAmerica Savannah

List Creation: 08/13/14 08:41 AM

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

Login Sample Receipt Checklist

Client: Hillsborough Co Public Utilities Dept

Job Number: 660-62196-1

Login Number: 62236

List Source: TestAmerica Tampa

List Number: 1

Creator: Redding, Charles S

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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.	False	Received same day of collection; chilling process has begun.
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	False	Check done at department level as required.

Login Sample Receipt Checklist

Client: Hillsborough Co Public Utilities Dept

Job Number: 660-62196-1

Login Number: 62236

List Number: 2

Creator: West, Lauren H

List Source: TestAmerica Savannah

List Creation: 08/14/14 06:05 AM

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