## Hsu, Benjamin

| From:        | Tafuni, Steven   |
|--------------|--|
| Sent:        | Thursday, October 05, 2017 8:46 AM   |
| То:          | Hsu, Benjamin  |
| Subject:     | FW: Southeast County Landfill - OGC File No. 17-0058 - Analytical Data Report - Supplemental |
|              | Sampling Event - November 2016   |
| Attachments: | SCLF Spplemental Eval Report Nov 16.pdf; 41193_201611_SWZdd.zip                              |

Ben,

Can you check and make sure this has made it to Oculus. If not please add.

Thanks, Steve

Steven Tafuni FDEP-SWD, Government Operations Consultant, Compliance Assurance Program 13051 N. Telecom Pkwy Temple Terrace, FL 33637-0926 tel: 813-470-5792 E-mail: <u>Steven.Tafuni@dep.state.fl.us</u>

From: Adams, David [mailto:AdamsDS@HillsboroughCounty.ORG]

Sent: Tuesday, July 25, 2017 11:34 AM

To: Tafuni, Steven < Steven. Tafuni@dep.state.fl.us>

Cc: Byer, Kimberly <ByerK@hillsboroughcounty.org>; Ruiz, Larry <RuizLE@HillsboroughCounty.ORG>; Greenwell, Jeffry <GreenwellJ@hillsboroughcounty.org>; Moore, Clark B. <Clark.B.Moore@dep.state.fl.us>; ADaPT EDD <ADaPT.EDDs.and.Reports@dep.state.fl.us>; Townsel, Michael <TownselM@HillsboroughCounty.ORG>; Pelley, Cindy <PelleyCA@HillsboroughCounty.ORG>; Morgan, Steve <Steve.Morgan@dep.state.fl.us>; Madden, Melissa <Melissa.Madden@dep.state.fl.us>; Moore, Clark B. <Clark.B.Moore@dep.state.fl.us>; Curtis, Bob <BCurtis@scsengineers.com>; Guilbeault, Ken <KGuilbeault@SCSEngineers.com>; Helvenston, Edward <HelvenstonE@HillsboroughCounty.ORG>

Subject: Southeast County Landfill - OGC File No. 17-0058 - Analytical Data Report - Supplemental Sampling Event - November 2016

Dear Mr. Tafuni,

On behalf of the Public Works Department Solid Waste Management Division, we are pleased to submit the Analytical Data Report for the Supplemental Sampling Event conducted at the Southeast County Landfill in November 2016. Representative samples were collected from the select group of monitoring wells to evaluate the impacts to groundwater in the area of TH-67. In accordance with the Consent Agreement OGC File No. 17-0058 and the associated Corrective Action Plan, these sampling events will be conducted on a quarterly basis, and the reports will be submitted to you electronically. Additionally, this submittal includes the AdaPT files from this sampling event, and Clark Moore and the AdaPT mail box are copied on this e-mail. Should you have any questions or require any additional information, please feel free to contact me directly at (813) 663-3221.

Respectfully,

David S. Adams, P.G.

#### **Environmental Manager**

Public Utilities Department – Environmental Services

P: (813) 663-3221 E: <u>adamsds@HCFLGov.net</u> W: <u>HCFLGov.net</u>

# Hillsborough County

601 E. Kennedy Blvd., Tampa, FL 33602

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Please note: All correspondence to or from this office is subject to Florida's Public Records law.



PUBLIC UTILITIES PO Box 1110 Tampa, FL 33601-1110 BOARD OF COUNTY COMMISSIONERS Victor D. Crist Ken Hagan Al Higginbotham Pat Kemp Lesley "Les" Miller, Jr. Sandra L. Murman Stacy R. White COUNTY ADMINISTRATOR Michael S. Merrill COUNTY ATTORNEY Chip Fletcher INTERNAL AUDITOR Peggy Caskey

July 25, 2017

Mr. Steve Tafuni Florida Department of Environmental Protection Waste Permitting Section 13051 Telecom Parkway Temple Terrace, FL 33637

CHIEF DEVELOPMENT & INFRASTRUCTURE SERVICES ADMINISTRATOR Lucia E. Garsys

SUBJECT: Southeast County Class I Landfill WACS Facility ID No. 41193 Supplemental Groundwater Sampling Report - November 2016 Consent Agreement, OGC File No. 17-0058

Dear Mr. Tafuni:

The Hillsborough County Public Utilities Department (County) has prepared this supplemental groundwater data report in accordance with part 9(g) of the referenced Consent Agreement and Rule 62-701.510(8)(a), F.A.C. This water quality sampling event was conducted at the Southeast County Landfill (SCLF) on November 29-30, 2016 to address impacts to the surficial aquifer on the east side of the Phase II area.

Before discussing the results from this specific sampling event, a brief history of the supplemental sampling and evaluation of the impacts to groundwater east of Phase II at the SCLF is as follows:

During the February 2016 sampling event, the County observed a number of specific water quality changes in surficial aquifer groundwater well TH-67. The specific conductivity observed in TH-67 has historically been relatively low, in the 300 to 600 umhos/cm range over the period of record with seasonal fluctuations corresponding to the wet and dry seasons. However, during the February 2016 sampling event, the specific conductivity exhibited a value of 1,780 umhos/cm, which represents a significant increase from the August 2015 results. Additionally, TDS and chloride both exhibited elevated levels well above their respective drinking water

Mr. Steve Tafuni July 25, 2017 Page 2 of 5

standards of 500 mg/l and 250 mg/l, with values of 1,600 mg/l and 620 mg/l, respectively. Sodium exhibited a significant increase from historical values, but remained below the Primary Drinking Water Standard of 160 mg/l, at a concentration of 120 mg/l.

Based on our review of these results, it was determined that a re-sampling of TH-67 was warranted to confirm the changes in water quality and initiate our investigation into the potential source of the impacts.

On April 5, 2016, the County re-sampled monitoring well TH-67 to verify the water quality changes observed in the February sampling data set. The water quality results from the re-sampling exhibited an additional increase in specific conductivity with a recorded stabilized value of 3932 uhmos/cm. The TDS, chloride, and sodium concentrations also continued to be observed above their respective standards with TDS at 2,400 mg/l, chloride at 1,100 mg/l, and sodium at 440 mg/l, respectively. Based on the rapid rate of these water quality changes observed in TH-67 and the signature of the water quality observed, it was concluded that the source of the impacts was leachate within the landfill. The most likely overtopped the berm in the Phase II in the vicinity of the affected monitoring well.

After thorough discussions with FDEP in April 2016, it was mutually agreed upon that a number of monitoring wells would be sampled as part of a supplemental investigation into the source and horizontal extent of the water quality impacts in TH-67. Additionally, monitoring well TH-71A, located near the northwest corner of Section 9 would also be evaluated at the same time as the groundwater evaluation monitoring east of Phase II. Although the data set from TH-71A was included in this evaluation, it is not included as part of the Consent Agreement. Therefore, the County shall sample and report the data from TH-71A as part of the semi-annual sampling conducted in accordance with the groundwater monitoring plan within the operations permit.

On May 16, 2016, surficial aquifer groundwater monitoring wells TH-20B, TH-38B, TH-66A, and TH-67 were sampled for parameters listed in Chapter 62-701.510 (5)(b), F.A.C. Monitoring well TH-67 continued to exhibit elevated conductivity at 3,973 umhos/cm which indicated a continued presence of the observed groundwater impacts. Additionally, TDS was observed at 2,200 mg/l, chloride at 910 mg/l, and sodium at 360 mg/l, respectively. The remaining three (3) surficial aquifer monitoring wells exhibited no unusual changes in conductivity, TDS, chloride, and sodium with each of the wells exhibiting water quality within the applicable water quality standards.

The permit required semi-annual sampling of the Southeast County Landfill was conducted from August 8-11, 2016, and representative samples were collected from TH-66A and TH-67. TH-67 exhibited a conductivity value of 1864 uhmos/cm, a TDS at 980 mg/l, chloride at 400 mg/l, and sodium at 190 mg/l. The observed reductions in concentrations were concluded to likely be the result of dilution of the groundwater from infiltration of storm water that

Mr. Steve Tafuni July 25, 2017 Page 3 of 5

accumulates right around TH-67, which is topographically the lowest area in the southeast corner of the landfill.

The November 2016 supplemental sampling event included the collection of representative samples from TH-20B, TH-38B, TH-66A, TH-67, and the newly installed surficial aquifer monitoring well TH-79. The samples collected were analyzed for TDS, chloride, sodium and ammonia. Each of the groundwater samples collected were analyzed by our contract laboratory, Advanced Environmental Laboratories, Inc. (AEL). The following paragraphs provide a brief discussion of the parameter-specific water quality observations in the monitoring wells sampled.

## Water Quality - Surficial Aquifer Monitoring Wells

## <u>рН</u>

Each of the five (5) surficial aquifer monitoring wells continue to exhibit pH values below the Secondary Drinking Water Standard (SDWS) acceptable range of 6.5 to 8.5 pH units. The pH values in the surficial aquifer across the SCLF have historically been observed below the acceptable range. Background water quality recorded prior to construction and operation of the landfill established these pH values within the surficial aquifer at and around the landfill. The pH values during this monitoring event range from 4.73 to 6.21 pH units, and the data remains consistent with the historical data set and background water quality.

## **Conductivity**

The conductivity observed within the surficial aquifer at these sampling locations ranged from 61 to 2,740 umhos/cm, with elevated values of 2166 and 2740 umhos/cm recorded at TH-67 and TH-79, respectively.

## **Total Dissolved Solids (TDS)**

TDS values from these five monitoring wells ranged from 45 to 1,500 mg/l. Surficial aquifer monitoring wells, TH-67 and TH-79, exhibited elevated TDS with values of 1,400 and 1,500 mg/l, respectively. Both continue to exceed the SDWS of 500 mg/l.

## **Chloride**

Chloride values observed in the five wells ranged from 4.2i to 600 mg/l. TH-67 and TH-79 exhibited concentrations of 600 and 500 mg/l, respectively, which continues to exceed the SDWS.

Mr. Steve Tafuni July 25, 2017 Page 4 of 5

## <u>Sodium</u>

Sodium values range from 3 to 140 mg/l, and surficial aquifer monitoring wells TH-67 and TH-79 exhibited concentrations of sodium at 49 and 140 mg/l, which were both below the Primary Drinking Water Standard (PDWS) of 160 mg/l.

## **Groundwater Elevation and Flow**

Groundwater elevations were not recorded prior to sampling the five (5) surficial aquifer groundwater monitoring wells. Elevation data was collected from wells TH-66A, TH-67, and TH-38B on November 29, 2016. The County utilized this data and prepared a representative surficial aquifer groundwater elevation and contour diagram from the area. The County did not utilize elevation data from monitoring well TH-20B and TH-79 as these wells were sampled on the following day. Future sampling events conducted as part of this evaluation will include collection of water levels from all the monitoring wells sampled prior to beginning the collection of groundwater samples.

A groundwater flow diagram for this sampling event was prepared to evaluate the general direction of flow at and around the affected area. The direction of flow in the surficial aquifer appears to be generally to the east-northeast, which is relatively consistent with the historical evaluations of flow within this area at the Southeast County Landfill. It should be noted that the groundwater elevations and the direction of flow in this area are affected by the infiltration of storm water in the topographically low area surrounding TH-67, the close proximity of Mine Cut 1, and the fluctuations in surface water elevations in Mine Cut 1.

## **Conclusions**

The water quality observed in surficial aquifer monitoring well TH-67 and TH-79 along the east side of Phase II indicates impacts from what appears to be leachate originating from the landfill. Concentrations of pH, chloride and TDS exceeding their respective drinking water standards continued to be observed during this sampling event. The County continues the ongoing evaluation of these impacts, and implementation of corrective actions to address the levels of leachate within the landfill footprint. The area of impacted groundwater appears to have been delineated by the installation of additional monitoring wells and geophysical investigations.

Enclosed for your review please find a detailed site location map, the data summary tables of the detections observed in the groundwater monitoring wells, groundwater elevation data summary table, a surficial aquifer groundwater elevation and contour diagram, historical data tables of the detections, and the complete laboratory analytical data report from AEL. Mr. Steve Tafuni July 25, 2017 Page 5 of 5

Should you have any questions, require any additional information, or would like to discuss the information provided within this submittal, please feel free to contact us at (813) 663-3222 or (813) 663-3221.

Respectfully submitted, 25/17 Michael D. Townsel

Senior Hydrologist Environmental Services Public Utilities Department

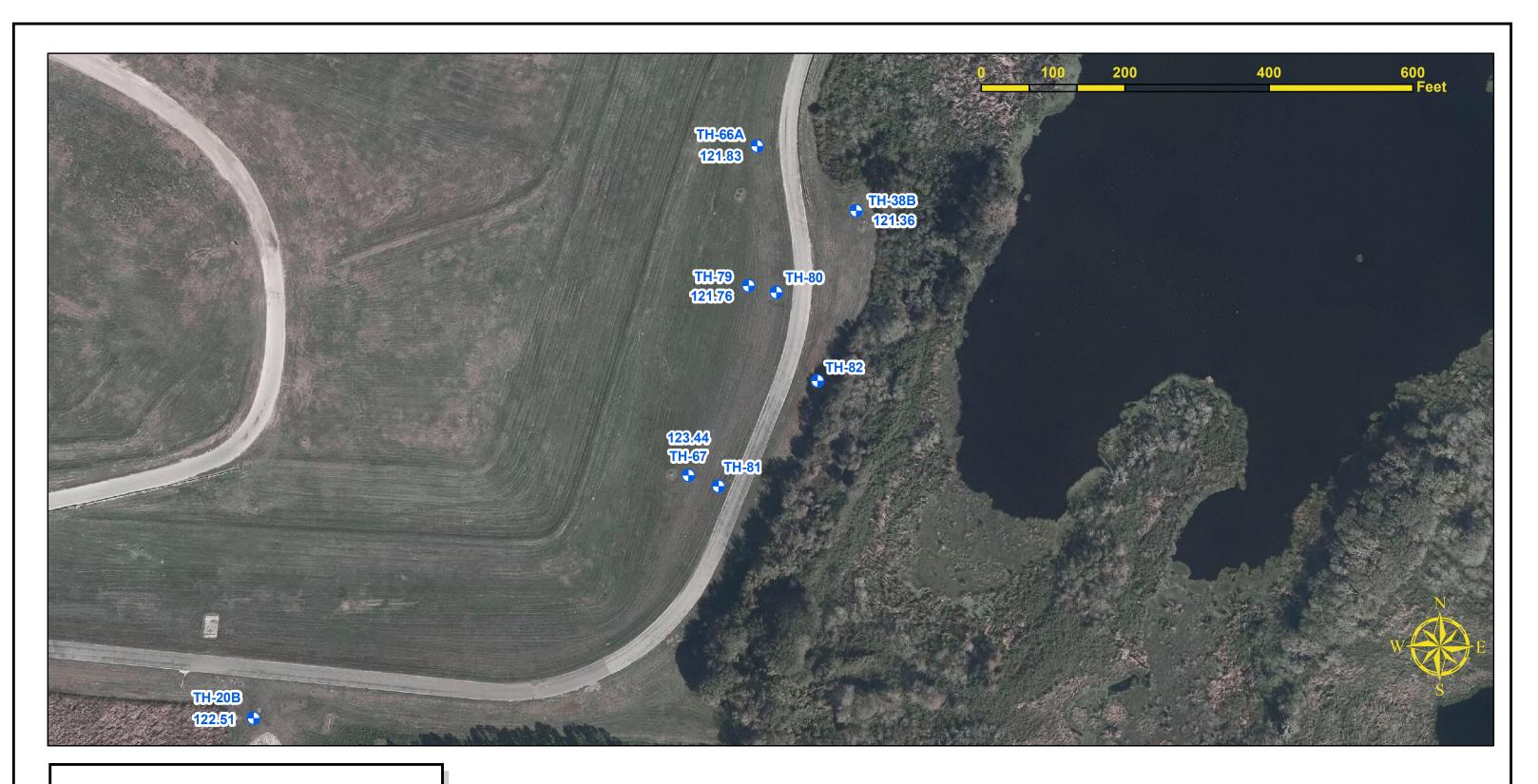
David S. Adams, P.G. Environmental Manager Environmental Services Public Utilities Department

DSA/mdt

j:\operations\environmental\solid waste\enviro\Southeast\TH-67 Evaluation\Reports\SELF Eval Report 11-16.pdf

#### Enclosures

Kim Byer, Director, Solid Waste Management Division
Larry Ruiz, Landfill Manager, Solid Waste Management Division
Jeffry Greenwell, GMIII, Public Utilities, Environmental Services Section
Joe O'Neill, Professional Engineer II, Solid Waste Management Division
Ernest Ely, Manager, WMI, Southeast County Landfill
Clark Moore, Florida Department of Environmental Protection
Andy Schipfer, HC Environmental Protection Commission
Bruce Clark, SCS Engineers
Bob Curtis, SCS Engineers, Inc.



SOUTHEAST COUNTY LANDFILL SURFICIAL AQUIFER GROUNDWATER CONTOUR MAP NOVEMBER 2016

2016 AERIAL PHOTO

Exisiting Monitoring Wells

Legend



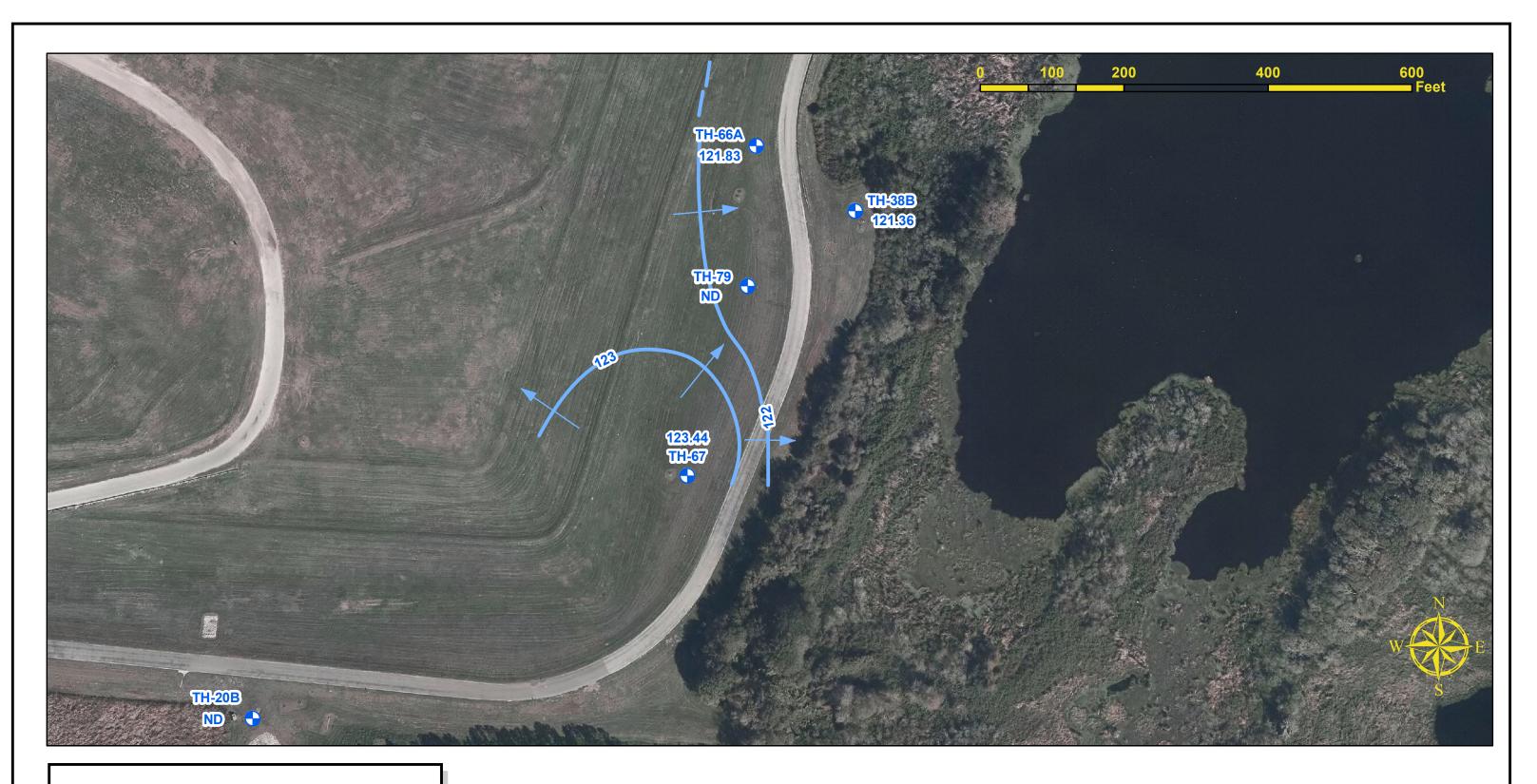
Hillsborough County Florida

## Southeast County Landfill Supplemental Site Assessment Data November 29-30, 2016

|  |                                     | Surfici             | al Aquifer W      | ells             |           | MCL Standard  |
|--|-------------------------------------|---------------------|-------------------|------------------|-----------|---------------|
| General Parameters Detected  | TH-20B                              | TH-38B              | <b>TH-66A</b>     | TH-67            | TH-79     |               |
| well type  | Background                          | Background          | Detection         | Detection        | Detection |               |
| conductivity (umhos/cm) (field)  | 332                                 | 61                  | 512               | 2166             | 2740      | NS            |
| dissolved oxygen (mg/l) (field)  | 0.27                                | 0.76                | 0.33              | 3.04             | 0.25      | NS            |
| ORP (mV)   | -31.2                               | -22.9               | -3                | -99.5            | 1.4       | NS            |
| temperature (°C) (field)   | 25.47                               | 25.37               | 25.44             | 25.23            | 24.03     | NS            |
| turbidity (NTU) (field)  | 4.14                                | 16                  | 0.49              | 5.29             | 27.6      | NS            |
| pH (SU) (field)  | 5.43                                | 4.73                | 5.82              | 6.21             | 6.09      | (6.5 - 8.5)** |
| ammonia nitrogen (mg/l as N)   | 1.5                                 | 0.66                | 0.44              | 11               | 30        | NS            |
| chloride (mg/l)  | 63                                  | 4.2i                | 92                | 600              | 500       | 250**         |
| total dissolved solids (mg/l)  | 200                                 | 45                  | 320               | 1400             | 1500      | 500**         |
| Metals Detected (mg/l)   |                                     |                     |                   |                  |           | MCL Standard  |
| sodium   | 15                                  | 3                   | 21                | 49               | 140       | 160*          |
| Notes: Reference Groundwater Guidance Conce<br>NS=No Standard                                | ntrations, FDEP 2                   | 2012                |                   |                  |           |               |
| MCL=Maximum Contaminant Level (Groundwa  | ater Standards)                     |                     |                   |                  |           |               |
| *= Primary Drinking Water Standards as per Ca  | •                                   |                     |                   |                  |           |               |
| **=Secondary Drinking Water Standards as per<br>***=Groundwater Cleanup Target Levels as per | Chapter 62-550.3<br>Chapter 62-777, | 320, F.A.C.<br>FAC  |                   |                  |           |               |
| 5.67   | Exceeds Standar                     | ·d                  |                   |                  |           |               |
| NTU=Nephelometric Turbidity Units  |                                     |                     |                   |                  |           |               |
| i = reported value is between the laboratory method  | nod detection limit                 | it and the laborate | ry practical quar | ntitation limit. |           |               |
| u = parameter was analyzed but not detected.   |                                     |                     |                   |                  |           |               |
| ug/l=micrograms per liter  |                                     |                     |                   |                  |           |               |
| mg/l=milligrams per liter  |                                     |                     |                   |                  |           |               |
| mV = millivolts  |                                     |                     |                   |                  |           |               |

# Southeast County Landfill Surficial Aquifer Groundwater Elevations November 29, 2016

| Measuring Point | T.O.C. Elevations      | W.L.                    | W.L.           |
|-----------------|------------------------|-------------------------|----------------|
| I.D.            | (NGVD)                 | B.T.O.C.                | (NGVD)         |
| TH-20B          | 132.57                 | DNU                     | DNU            |
| TH-38B          | 131.81                 | 10.45                   | 121.36         |
| TH-66A          | 130.66                 | 8.83                    | 121.83         |
| TH-67           | 129.51                 | 6.07                    | 123.44         |
| TH-79           | 129.60                 | DNU                     | DNU            |
| NGVD            | = National Geodetic V  | ertical Datum           |                |
| т.о.с.          | = Top of Casing        |                         |                |
| B.T.O.C.        | = Below Top of Casing  | S                       |                |
| DNU             | = Did Not Utilize (Wat | ter level collected the | following day) |
| W.L.            | = Water Level          |                         |                |



SOUTHEAST COUNTY LANDFILL SURFICIAL AQUIFER GROUNDWATER CONTOUR MAP NOVEMBER 2016

2016 AERIAL PHOTO

Legend

• Exisiting Monitoring Wells



Hillsborough County Florida



Advanced Environmental Laboratories, Inc 9610 Princess Palm Ave Tampa, FL 33619 Payments: PO. Box 551580 Jacksonville, FL32255-1580

> Phone: (813)630-9616 Fax: (813)630-4327

December 21, 2016

David Adams Hillsborough Co Public Utilites 332 North Falkenburg Rd Tampa, FL 33619

RE: Workorder: T1618995 SELF Supplemental Site Assm

Dear David Adams:

Enclosed are the analytical results for sample(s) received by the laboratory between Tuesday, November 29, 2016 and Wednesday, November 30, 2016. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report. The analytical results for the samples contained in this report were submitted for analysis as outlined by the Chain of Custody and results pertain only to these samples.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

OBuch

Heidi Brooks - Project Manager HBrooks@AELLab.com

Enclosures

Report ID: 458345 - 7877234

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#### **CERTIFICATE OF ANALYSIS**





#### SAMPLE SUMMARY

Workorder: T1618995 SELF Supplemental Site Assm

| Lab ID      | Sample ID   | Matrix | Date Collected   | Date Received    |
|-------------|-------------|--------|------------------|------------------|
| T1618995001 | Field Blank | Water  | 11/29/2016 09:55 | 11/29/2016 12:55 |
| T1618995002 | TH-66A      | Water  | 11/29/2016 10:15 | 11/29/2016 12:55 |
| T1618995003 | TH-67       | Water  | 11/29/2016 11:21 | 11/29/2016 12:55 |
| T1618995004 | TH-38B      | Water  | 11/29/2016 12:04 | 11/29/2016 12:55 |
| T1618995005 | TH-79       | Water  | 11/30/2016 13:08 | 11/30/2016 14:17 |
| T1618995006 | TH-20B      | Water  | 11/30/2016 12:14 | 11/30/2016 14:17 |
| 11010335000 | 111 200     | Water  | 11/00/2010 12:14 |                  |

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#### **CERTIFICATE OF ANALYSIS**





#### ANALYTICAL RESULTS

Workorder: T1618995 SELF Supplemental Site Assm

| Lab ID: T1618995001<br>Sample ID: Field Blank  |         |           |            | Date Received:<br>Date Collected: |                 | Matrix:         | Water           |     |
|--|---------|-----------|------------|-----------------------------------|-----------------|-----------------|-----------------|-----|
| Sample Description:                            |         |           |            | Location:                         |                 |                 |                 |     |
| Parameters                                     | Results | Qual      | Units      | DF                                | Adjusted<br>PQL | Adjusted<br>MDL |                 | Lab |
| METALS   |         |           |            |                                   |                 |                 |                 |     |
| Analysis Desc: SW846 6010B<br>Analysis,Water   | Prep    | aration I | Method: S  | W-846 3010A                       |                 |                 |                 |     |
| Analysis, Water                                | Anal    | ytical Me | ethod: SW  | -846 6010                         |                 |                 |                 |     |
| Sodium   | 0.042   | U         | mg/L       | 1                                 | 0.20            | 0.042           | 12/2/2016 14:40 | Т   |
| WET CHEMISTRY                                  |         |           |            |                                   |                 |                 |                 |     |
| Analysis Desc: Ammonia,E350.1,Water            | Anal    | ytical Me | ethod: EPA | 350.1                             |                 |                 |                 |     |
| Ammonia (N)                                    | 0.02    | U         | mg/L       | 1                                 | 0.10            | 0.02            | 12/2/2016 11:20 | Т   |
| Analysis Desc: Tot Dissolved<br>Solids,SM2540C | Anal    | ytical Me | ethod: SM  | 2540 C                            |                 |                 |                 |     |
| Total Dissolved Solids                         | 12      | U         | mg/L       | 1.25                              | 12              | 12              | 12/1/2016 15:30 | Т   |
| Analysis Desc: Chlorides,SM4500-Cl-<br>E,Water | Anal    | ytical Me | ethod: SM  | 4500-CI-E                         |                 |                 |                 |     |
| Chloride                                       | 2.6     | U         | mg/L       | 1                                 | 5.0             | 2.6             | 12/8/2016 15:57 | Т   |

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#### ANALYTICAL RESULTS

Workorder: T1618995 SELF Supplemental Site Assm

| Lab ID: <b>T1618995002</b><br>Sample ID: <b>TH-66A</b>                           |  |             |  | Date Received:<br>Date Collected: |                 | Matrix:         | Water  |     |
|--|--|-------------|--|-----------------------------------|-----------------|-----------------|--|-----|
| Sample Description:  |  |             |  | Location:                         |                 |                 |  |     |
| Parameters   | Results                                    | Qual        | Units                                    | DF                                | Adjusted<br>PQL | Adjusted<br>MDL | Analyzed   | Lab |
| FIELD PARAMETERS   |  |             |  |                                   |                 |                 |  |     |
| Analysis Desc: Data entry of fie<br>measurements                                 | eld Ana                                    | lytical Me  | thod: Field                              | d Measurements                    |                 |                 |  |     |
| Conductivity<br>Dissolved Oxygen<br>ORP-2580BW<br>Temperature<br>Turbidity<br>pH | 512<br>0.33<br>-3<br>25.44<br>0.49<br>5.82 |             | umhos/o<br>mg/L<br>mV<br>°C<br>NTU<br>SU | cm 1<br>1<br>1<br>1<br>1<br>1     |                 |                 | 11/29/2016 10:15<br>11/29/2016 10:15<br>11/29/2016 10:15<br>11/29/2016 10:15<br>11/29/2016 10:15<br>11/29/2016 10:15 |     |
| METALS   |  |             |  |                                   |                 |                 |  |     |
| Analysis Desc: SW846 6010B<br>Analysis,Water                                     | Ana  |             | thod: SW-                                |                                   | 0.00            | 0.040           |  | Ŧ   |
| Sodium   | 21   |             | mg/L                                     | 1                                 | 0.20            | 0.042           | 12/2/2016 14:44  | Т   |
| WET CHEMISTRY<br>Analysis Desc: Ammonia,E350                                     | .1,Water Ana                               | lytical Me  | thod: EPA                                | .350.1                            |                 |                 |  |     |
| Ammonia (N)  | 0.44                                       |             | mg/L                                     | 1                                 | 0.10            | 0.02            | 12/2/2016 11:20  | т   |
| Analysis Desc: Tot Dissolved<br>Solids,SM2540C                                   | Ana  | llytical Me | thod: SM                                 | 2540 C                            |                 |                 |  |     |
| Total Dissolved Solids   | 320  |             | mg/L                                     | 1.25                              | 12              | 12              | 12/1/2016 15:30  | т   |
| Analysis Desc: Chlorides,SM45<br>E,Water   | 500-CI- Ana                                | lytical Me  | thod: SM                                 | 4500-CI-E                         |                 |                 |  |     |
| Chloride   | 92   |             | mg/L                                     | 1                                 | 5.0             | 2.6             | 12/8/2016 15:57  | т   |

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#### **CERTIFICATE OF ANALYSIS**





#### ANALYTICAL RESULTS

Workorder: T1618995 SELF Supplemental Site Assm

| Lab ID:<br>Sample ID:   | T1618995003<br>TH-67       |  |           |  | Date Received:<br>Date Collected: |                 | Matrix:         | Water  |     |
|---|----------------------------|--|-----------|--|-----------------------------------|-----------------|-----------------|--|-----|
| Sample Descr  | ription:                   |  |           |  | Location:                         |                 |                 |  |     |
| Parameters  |                            | Results  | Qual      | Units                                  | DF                                | Adjusted<br>PQL | Adjusted<br>MDL | Analyzed   | Lab |
| FIELD PARAM   | METERS                     |  |           |  |                                   |                 |                 |  |     |
| Analysis Desc<br>measurements   | : Data entry of field<br>s | Anal   | ytical Me | thod: Field                            | d Measurements                    |                 |                 |  |     |
| Conductivity<br>Dissolved Oxy<br>ORP-2580BW<br>Temperature<br>Turbidity<br>pH |                            | 2166<br>3.04<br>-99.5<br>25.23<br>5.29<br>6.21 |           | umhos/<br>mg/L<br>mV<br>℃<br>NTU<br>SU | cm 1<br>1<br>1<br>1<br>1<br>1     |                 |                 | 11/29/2016 11:21<br>11/29/2016 11:21<br>11/29/2016 11:21<br>11/29/2016 11:21<br>11/29/2016 11:21<br>11/29/2016 11:21 |     |
| METALS  |                            |  |           |  |                                   |                 |                 |  |     |
|   | :: SW846 6010B             | Prep   | aration I | Method: SN                             | N-846 3010A                       |                 |                 |  |     |
| Analysis,Wate   | ۶ <b>۲</b>                 | Anal   | ytical Me | ethod: SW-                             | -846 6010                         |                 |                 |  |     |
| Sodium  |                            | 49   |           | mg/L                                   | 1                                 | 0.20            | 0.042           | 12/5/2016 14:43  | Т   |
| WET CHEMIS  | STRY                       |  |           |  |                                   |                 |                 |  |     |
| Analysis Desc   | : Ammonia,E350.1,Water     | Anal   | ytical Me | ethod: EPA                             | 350.1                             |                 |                 |  |     |
| Ammonia (N)   |                            | 11   |           | mg/L                                   | 15                                | 1.50            | 0.37            | 12/2/2016 11:20  | Т   |
| Analysis Desc<br>Solids,SM254   | : Tot Dissolved<br>0C      | Anal   | ytical Me | ethod: SM                              | 2540 C                            |                 |                 |  |     |
| Total Dissolve  | d Solids                   | 1400   |           | mg/L                                   | 1.25                              | 12              | 12              | 12/1/2016 15:30  | Т   |
| Analysis Desc<br>E,Water  | : Chlorides,SM4500-Cl-     | Anal   | ytical Me | ethod: SM                              | 4500-CI-E                         |                 |                 |  |     |
| Chloride  |                            | 600  |           | mg/L                                   | 25                                | 120             | 64              | 12/8/2016 16:39  | Т   |

Report ID: 458345 - 7877234

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#### **CERTIFICATE OF ANALYSIS**





#### ANALYTICAL RESULTS

Workorder: T1618995 SELF Supplemental Site Assm

| Lab ID:<br>Sample ID:   | T1618995004<br>TH-38B  |  |           |   | Date Received:<br>Date Collected: |                 | Matrix:         | Water  |     |
|---|------------------------|--|-----------|---|-----------------------------------|-----------------|-----------------|--|-----|
| Sample Descr  | iption:                |  |           |   | Location:                         |                 |                 |  |     |
| Parameters  |                        | Results                                    | Qual      | Units                                     | DF                                | Adjusted<br>PQL | Adjusted<br>MDL |  | Lab |
|   | /ETERS                 |  |           |   |                                   |                 |                 |  |     |
| Analysis Desc<br>measurements   | : Data entry of field  | Anal                                       | ytical Me | ethod: Field I                            | Measurements                      |                 |                 |  |     |
| Conductivity<br>Dissolved Oxy<br>ORP-2580BW<br>Temperature<br>Turbidity<br>pH | -                      | 61<br>0.76<br>-22.9<br>25.37<br>16<br>4.73 |           | umhos/cr<br>mg/L<br>mV<br>°C<br>NTU<br>SU | n 1<br>1<br>1<br>1<br>1<br>1      |                 |                 | 11/29/2016 12:04<br>11/29/2016 12:04<br>11/29/2016 12:04<br>11/29/2016 12:04<br>11/29/2016 12:04<br>11/29/2016 12:04 |     |
| METALS  |                        |  |           |   |                                   |                 |                 |  |     |
| Analysis Desc<br>Analysis,Wate  | : SW846 6010B<br>r     |  |           | Method: SW-                               |                                   |                 |                 |  |     |
| Sodium  |                        | 3.0  |           | mg/L                                      | 1                                 | 0.20            | 0.042           | 12/2/2016 14:51  | Т   |
| WET CHEMIS  | TRY                    |  |           |   |                                   |                 |                 |  |     |
| Analysis Desc   | : Ammonia,E350.1,Water | Anal                                       | ytical Me | ethod: EPA 3                              | 50.1                              |                 |                 |  |     |
| Ammonia (N)   |                        | 0.66                                       |           | mg/L                                      | 1                                 | 0.10            | 0.02            | 12/2/2016 11:20  | Т   |
| Analysis Desc<br>Solids,SM2540  |                        | Anal                                       | ytical Me | ethod: SM 28                              | 540 C                             |                 |                 |  |     |
| Total Dissolved   | d Solids               | 45   |           | mg/L                                      | 1.25                              | 12              | 12              | 12/1/2016 15:30  | Т   |
| Analysis Desc<br>E,Water  | : Chlorides,SM4500-Cl- | Anal                                       | ytical Me | ethod: SM 45                              | 500-CI-E                          |                 |                 |  |     |
| Chloride  |                        | 4.2  | I         | mg/L                                      | 1                                 | 5.0             | 2.6             | 12/8/2016 15:59  | Т   |

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#### **CERTIFICATE OF ANALYSIS**





#### ANALYTICAL RESULTS

Workorder: T1618995 SELF Supplemental Site Assm

| Lab ID:<br>Sample ID:   | T1618995005<br>TH-79       |  |            |  | Date Received:<br>Date Collected: |                 | Matrix:         | Water  |     |
|---|----------------------------|--|------------|--|-----------------------------------|-----------------|-----------------|--|-----|
| Sample Descr  | ription:                   |  |            |  | Location:                         |                 |                 |  |     |
| Parameters  |                            | Results                                      | Qual       | Units                                    | DF                                | Adjusted<br>PQL | Adjusted<br>MDL |  | Lab |
| FIELD PARAM   | METERS                     |  |            |  |                                   |                 |                 |  |     |
| Analysis Desc<br>measurements   | : Data entry of field<br>s | Ana  | lytical Me | ethod: Field                             | Measurements                      |                 |                 |  |     |
| Conductivity<br>Dissolved Oxy<br>ORP-2580BW<br>Temperature<br>Turbidity<br>pH | •                          | 2740<br>0.25<br>1.4<br>24.03<br>27.6<br>6.09 |            | umhos/d<br>mg/L<br>mV<br>°C<br>NTU<br>SU | m 1<br>1<br>1<br>1<br>1<br>1      |                 |                 | 11/30/2016 13:08<br>11/30/2016 13:08<br>11/30/2016 13:08<br>11/30/2016 13:08<br>11/30/2016 13:08<br>11/30/2016 13:08 |     |
| METALS<br>Analysis Desc<br>Analysis,Wate                                      | :: SW846 6010B<br>er       |  |            | Method: SV<br>ethod: SW-{                | V-846 3010A<br>346 6010           |                 |                 |  |     |
| Sodium  |                            | 140  |            | mg/L                                     | 2                                 | 0.40            | 0.084           | 12/7/2016 12:47  | Т   |
| WET CHEMIS  | STRY                       |  |            |  |                                   |                 |                 |  |     |
| Analysis Desc   | : Ammonia,E350.1,Water     | Ana  | lytical Me | ethod: EPA                               | 350.1                             |                 |                 |  |     |
| Ammonia (N)   |                            | 30   |            | mg/L                                     | 10                                | 1.00            | 0.25            | 12/2/2016 11:20  | т   |
| Analysis Desc<br>Solids,SM254   | :: Tot Dissolved<br>0C     | Anal   | lytical Me | ethod: SM 2                              | 2540 C                            |                 |                 |  |     |
| Total Dissolve  | d Solids                   | 1500   |            | mg/L                                     | 1.25                              | 12              | 12              | 12/2/2016 17:00  | Т   |
| Analysis Desc<br>E,Water  | :: Chlorides,SM4500-Cl-    | Ana  | lytical Me | ethod: SM 4                              | 1500-CI-E                         |                 |                 |  |     |
| Chloride  |                            | 500  |            | mg/L                                     | 5                                 | 25              | 13              | 12/8/2016 16:40  | Т   |

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#### **CERTIFICATE OF ANALYSIS**





#### ANALYTICAL RESULTS

Workorder: T1618995 SELF Supplemental Site Assm

| Lab ID:<br>Sample ID:         | T1618995006<br>TH-20B        |                |           |            | Date Received:<br>Date Collected: |          | Matrix:  | Water                                |     |
|-------------------------------|------------------------------|----------------|-----------|------------|-----------------------------------|----------|----------|--------------------------------------|-----|
| Sample Desci                  | ription:                     |                |           |            | Location:                         |          |          |                                      |     |
|                               |                              |                | <u> </u>  |            | 55                                | Adjusted | Adjusted |                                      | Lab |
| Parameters                    |                              | Results        | Qual      | Units      | DF                                | PQL      | MDL      | Analyzed                             | Lab |
| FIELD PARA                    |                              |                |           |            |                                   |          |          |                                      |     |
| Analysis Desc<br>measurement  | c: Data entry of field<br>ts | Anal           | ytical Me | thod: Fiel | d Measurements                    |          |          |                                      |     |
| Conductivity                  |                              | 332            |           | umhos/     |                                   |          |          | 11/30/2016 12:14                     |     |
| Dissolved Oxy                 |                              | 0.27<br>-31.2  |           | mg/L       | 1                                 |          |          | 11/30/2016 12:14                     |     |
| ORP-2580BW<br>Temperature     | V                            | -31.2<br>25.47 |           | mV<br>℃    | 1<br>1                            |          |          | 11/30/2016 12:14<br>11/30/2016 12:14 |     |
| Turbidity                     |                              | 25.47<br>4.14  |           | NTU        | 1                                 |          |          | 11/30/2016 12:14                     |     |
| рН                            |                              | 5.43           |           | SU         | 1                                 |          |          | 11/30/2016 12:14                     |     |
| METALS                        |                              |                |           |            |                                   |          |          |                                      |     |
| Analysis Desc                 | c: SW846 6010B               | Prep           | aration I | Method: S  | W-846 3010A                       |          |          |                                      |     |
| Analysis,Wate                 | er                           | Anal           | ytical Me | ethod: SW  | -846 6010                         |          |          |                                      |     |
| Sodium                        |                              | 15             |           | mg/L       | 1                                 | 0.20     | 0.042    | 12/7/2016 02:09                      | Т   |
| WET CHEMIS                    | STRY                         |                |           |            |                                   |          |          |                                      |     |
| Analysis Desc                 | c: Ammonia,E350.1,Water      | Anal           | ytical Me | ethod: EPA | 350.1                             |          |          |                                      |     |
| Ammonia (N)                   |                              | 1.5            |           | mg/L       | 1                                 | 0.10     | 0.02     | 12/2/2016 11:20                      | Т   |
| Analysis Desc<br>Solids,SM254 | c: Tot Dissolved<br>IOC      | Anal           | ytical Me | ethod: SM  | 2540 C                            |          |          |                                      |     |
| Total Dissolve                | ed Solids                    | 200            |           | mg/L       | 1.25                              | 12       | 12       | 12/2/2016 17:00                      | Т   |
| Analysis Desc<br>E,Water      | c: Chlorides,SM4500-Cl-      | Anal           | ytical Me | ethod: SM  | 4500-CI-E                         |          |          |                                      |     |
| Chloride                      |                              | 63             |           | mg/L       | 1                                 | 5.0      | 2.6      | 12/8/2016 16:00                      | Т   |

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#### **CERTIFICATE OF ANALYSIS**





#### ANALYTICAL RESULTS QUALIFIERS

Workorder: T1618995 SELF Supplemental Site Assm

#### PARAMETER QUALIFIERS

- U 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.

#### LAB QUALIFIERS

- T DOH Certification #E84589(AEL-T)(FL NELAC Certification)
- T^ Not Certified

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#### **CERTIFICATE OF ANALYSIS**





| QC Batch:                                | DGMt/2178                   |                    |                        | Analysis M                            | ethod:        | SW-8        | 46 6010           |                |     |            |            |
|--|-----------------------------|--------------------|------------------------|---------------------------------------|---------------|-------------|-------------------|----------------|-----|------------|------------|
| QC Batch Method:                         | SW-846 3010A                |                    |                        | Prepared:                             |               | 12/01       | /2016 10:0        | 0              |     |            |            |
| Associated Lab Sampl                     | es: T161899500              | 1, T161899         | 5002, T16 <sup>-</sup> | 18995003, T <sup>2</sup>              | 1618995004    | 4           |                   |                |     |            |            |
| METHOD BLANK: 221                        | 10341                       |                    |                        |                                       |               |             |                   |                |     |            |            |
| Parameter                                | Units                       |                    | Blank<br>Result        | Reporting<br>Limit                    | Qualifiers    |             |                   |                |     |            |            |
| METALS<br>Sodium                         | mg/L                        |                    | 0.042                  | 0.042                                 | U             |             |                   |                |     |            |            |
| LABORATORY CONT                          | ROL SAMPLE: 22              | 10342              |                        |                                       |               |             |                   |                |     |            |            |
| Parameter                                | Units                       |                    | oike<br>onc.           | LCS<br>Result                         | L(<br>% R     | CS<br>Rec   | % Rec<br>Limits C | Qualifiers     |     |            |            |
| METALS                                   |                             |                    |                        |                                       |               |             |                   |                |     |            |            |
| Sodium                                   | mg/L                        |                    | 50                     | 51                                    | 1             | 01          | 80-120            |                |     |            |            |
| MATRIX SPIKE & MAT                       | RIX SPIKE DUPLIC            | CATE: 2210         | )343                   | 22103                                 | 344           | Orig        | inal: T161        | 9032001        |     |            |            |
| Parameter                                | Units                       | Original<br>Result | Spike<br>Conc.         | MS<br>Result                          | MSD<br>Result | MS<br>% Rec | MSD<br>% Rec      | % Rec<br>Limit | RPD | Max<br>RPD | Qualifiers |
| METALS<br>Sodium                         | mg/L                        | 76                 | 51                     | 120                                   | 130           | 96          | 98                | 75-125         | 1   | 20         |            |
|  | WCAt/5983                   |                    |                        | Analysis M                            | ethod:        | SM 2        | 540 C             |                |     |            |            |
| QC Batch Method:<br>Associated Lab Sampl | SM 2540 C<br>es: T161899500 | 1, T161899         | 5002, T16 <sup>-</sup> | Prepared:<br>18995003, T <sup>2</sup> | 1618995004    | 4           |                   |                |     |            |            |
| METHOD BLANK: 221                        | 10810                       |                    |                        |                                       |               |             |                   |                |     |            |            |
|  |                             |                    | Blank                  | Reporting                             | Qualifiers    |             |                   |                |     |            |            |
| Parameter                                | Units                       | 1                  | Result                 | Limit                                 | Qualifiers    |             |                   |                |     |            |            |

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| LABORATORY CONTROL                      | SAMPLE: 2210     | 1811            |                      |                |                            |
|---|------------------|-----------------|----------------------|----------------|----------------------------|
| LABORATORT CONTROL                      | LOAIVIFLE. 22 IU |                 |                      |                |                            |
| Parameter                               | Units            | Spike<br>Conc.  | LCS<br>Result        | LCS<br>% Rec   | % Rec<br>Limits Qualifiers |
| WET CHEMISTRY                           |                  |                 |                      |                |                            |
| Total Dissolved Solids                  | mg/L             | 660             | 640                  | 97             | 75-125                     |
| SAMPLE DUPLICATE: 2                     | 210812           |                 | Original: T161       | 8945001        |                            |
|   |                  | Original        | DUP                  |                | Max                        |
| Parameter                               | Units            | Result          | Result               | RPD            | RPD Qualifiers             |
| WET CHEMISTRY<br>Total Dissolved Solids | mg/L             | 26180           | 26000                | 1              | 10                         |
| SAMPLE DUPLICATE: 2                     | 210813           |                 | Original: T161       | 9039002        |                            |
|   |                  | Original        | DUP                  |                | Max                        |
| Parameter                               | Units            | Result          | Result               | RPD            | RPD Qualifiers             |
| WET CHEMISTRY<br>Total Dissolved Solids | mg/L             |                 | 190                  | 7              | 10                         |
| QC Batch: WC                            | At/5992          |                 | Analysis Met         | hod: EF        | PA 350.1                   |
| QC Batch Method: EPA                    | 350.1            |                 | Prepared:            |                |                            |
| Associated Lab Samples:                 | T1618995001,     | T1618995002, T1 | 618995003, T16       | 18995004, T161 | 18995005, T1618995006      |
| METHOD BLANK: 22115                     | 33               |                 |                      |                |                            |
| Parameter                               | Units            | Blank<br>Result | Reporting<br>Limit Q | ualifiers      |                            |
| WET CHEMISTRY<br>Ammonia (N)            | mg/L             | 0.02            | 0.02 U               |                |                            |
| LABORATORY CONTROL                      | SAMPLE: 2211     | 534             |                      |                |                            |
|   | Units            | Spike<br>Conc.  | LCS<br>Result        | LCS<br>% Rec   | % Rec<br>Limits Qualifiers |
| Parameter                               |                  |                 |                      |                |                            |
| Parameter<br>WET CHEMISTRY              |                  |                 |                      |                |                            |

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#### **CERTIFICATE OF ANALYSIS**





| Workorder: T1618995 SE                  | LF Supplement     | al Site Assm       |                |                          |               |             |                   |                |     |            |            |
|---|-------------------|--------------------|----------------|--------------------------|---------------|-------------|-------------------|----------------|-----|------------|------------|
| MATRIX SPIKE & MATRIX                   | SPIKE DUPLI       | CATE: 22115        | 537            | 22115                    | 38            | Origii      | nal: T1618        | 3910002        |     |            |            |
| Parameter                               | Units             | Original<br>Result | Spike<br>Conc. | MS<br>Result             | MSD<br>Result | MS<br>% Rec | MSD<br>% Rec      | % Rec<br>Limit | RPD | Max<br>RPD | Qualifiers |
| WET CHEMISTRY<br>Ammonia (N)            | mg/L              | 0                  | 1              | 1.0                      | 1.0           | 105         | 105               | 90-110         | 0   | 10         |            |
| MATRIX SPIKE & MATRIX                   | SPIKE DUPLI       | CATE: 22115        | 539            | 22115                    | 40            | Origii      | nal: T1619        | 9085002        |     |            |            |
| Parameter                               | Units             | Original<br>Result | Spike<br>Conc. | MS<br>Result             | MSD<br>Result | MS<br>% Rec | MSD<br>% Rec      | % Rec<br>Limit | RPD | Max<br>RPD | Qualifiers |
| WET CHEMISTRY<br>Ammonia (N)            | mg/L              | 0                  | 1              | 1.1                      | 1.0           | 106         | 103               | 90-110         | 2   | 10         |            |
| QC Batch Method: SM                     | At/6009<br>2540 C |                    |                | Analysis Me<br>Prepared: | ethod:        | SM 25       | 540 C             |                |     |            |            |
| Associated Lab Samples:                 |                   | 05, T16189950      | 006            |                          |               |             |                   |                |     |            |            |
| METHOD BLANK: 221220<br>Parameter       | J3<br>Units       |                    | llank<br>esult | Reporting<br>Limit       | Qualifiers    |             |                   |                |     |            |            |
| WET CHEMISTRY<br>Total Dissolved Solids | mg/L              |                    | 10             | 10                       | U             |             |                   |                |     |            |            |
| LABORATORY CONTROL                      | SAMPLE: 22        | 212204             |                |                          |               |             |                   |                |     |            |            |
| Parameter                               | Units             | Spi<br>Cor         |                | LCS<br>Result            | LC:<br>% Re   |             | % Rec<br>Limits Q | ualifiers      |     |            |            |
| WET CHEMISTRY<br>Total Dissolved Solids | mg/L              | 6                  | 60             | 620                      | 9             | 4           | 75-125            |                |     |            |            |
| SAMPLE DUPLICATE: 22                    | 212205            |                    |                | Original: T16            | 619115001     |             |                   |                |     |            |            |
| Parameter                               | Units             | Origir<br>Res      |                | DUP<br>Result            | RPI           | D           | Max<br>RPD Q      | ualifiers      |     |            |            |
| WET CHEMISTRY<br>Total Dissolved Solids | mg/L              |                    | 70             | 65                       |               | 7           | 10                |                |     |            |            |

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#### **CERTIFICATE OF ANALYSIS**





| QC Batch:  | DGMt/2202                                    |                    |                        | Analysis M                              | ethod:        | SW-8        | 46 6010                |                |     |            |            |
|--|--|--------------------|------------------------|---|---------------|-------------|------------------------|----------------|-----|------------|------------|
| QC Batch Method:                                     | SW-846 3010A                                 |                    |                        | Prepared:                               |               | 12/06       | /2016 10:0             | 0              |     |            |            |
| Associated Lab Samp                                  | oles: T16189950                              | 05, T1618995       | 5006                   |   |               |             |                        |                |     |            |            |
| METHOD BLANK: 22                                     | :14718                                       |                    |                        |   |               |             |                        |                |     |            |            |
| Parameter  | Units  |                    | Blank<br>Result        | Reporting<br>Limit                      | Qualifiers    |             |                        |                |     |            |            |
| METALS<br>Sodium                                     | mg/L   |                    | 0.042                  | 0.042                                   | U             |             |                        |                |     |            |            |
| LABORATORY CONT                                      | ROL SAMPLE: 2                                | 214719             |                        |   |               |             |                        |                |     |            |            |
| Parameter  | Units  |                    | bike<br>bnc.           | LCS<br>Result                           | L(<br>% R     | CS<br>ec    | % Rec<br>Limits C      | aulifiers      |     |            |            |
| METALS<br>Sodium                                     | mg/L   |                    | 50                     | 48                                      |               | 96          | 80-120                 |                |     |            |            |
| MATRIX SPIKE & MA                                    | TRIX SPIKE DUPLI                             | CATE: 2214         | 720                    | 22147                                   | 21            | Orig        | nal: S160              | 1754001        |     |            |            |
| Parameter  | Units  | Original<br>Result | Spike<br>Conc.         | MS<br>Result                            | MSD<br>Result | MS<br>% Rec | MSD<br>% Rec           | % Rec<br>Limit | RPD | Max<br>RPD | Qualifiers |
| METALS<br>Sodium                                     | mg/L   | 4.6                | 50                     | 54                                      | 53            | 98          | 96                     | 75-125         | 1   | 20         |            |
| QC Batch:<br>QC Batch Method:<br>Associated Lab Samp | WCAt/6102<br>SM 4500-CI-E<br>bles: T16189950 | 01, T1618995       | 5002, T16 <sup>,</sup> | Analysis M<br>Prepared:<br>18995003, T1 |               |             | 500-CI-E<br>95005, T16 | 18995000       | 6   |            |            |
| METHOD BLANK: 22                                     |  |                    |                        |   |               |             |                        |                |     |            |            |
| Parameter  | Units  |                    | Blank<br>Result        | Reporting<br>Limit                      | Qualifiers    |             |                        |                |     |            |            |
| WET CHEMISTRY<br>Chloride                            | mg/L   |                    | 2.6                    | 2.6                                     | U             |             |                        |                |     |            |            |

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| Workorder <sup>.</sup> | T1618005 SELE | Supplemental Site Assm   |
|------------------------|---------------|--------------------------|
| workorder.             | 11010990 SELF | Supplemental Site Assiri |

| LABORATORY CONTRO         | OL SAMPLE: 2   | 217243             |                |               |               |             |                   |                |     |            |            |
|---------------------------|----------------|--------------------|----------------|---------------|---------------|-------------|-------------------|----------------|-----|------------|------------|
| Parameter                 | Units          |                    | oike<br>onc.   | LCS<br>Result | L<br>% F      | CS<br>Rec   | % Rec<br>Limits C | alifiers       |     |            |            |
| WET CHEMISTRY<br>Chloride | mg/L           |                    | 50             | 50            |               | 100         | 90-110            |                |     |            |            |
| MATRIX SPIKE & MATR       | RIX SPIKE DUPL | ICATE: 2217        | 7244           | 2217          | 245           | Origi       | nal: T161         | 9114002        |     |            |            |
| Parameter                 | Units          | Original<br>Result | Spike<br>Conc. | MS<br>Result  | MSD<br>Result | MS<br>% Rec | MSD<br>% Rec      | % Rec<br>Limit | RPD | Max<br>RPD | Qualifiers |
| WET CHEMISTRY<br>Chloride | mg/L           | 1.7                | 50             | 52            | 55            | 103         | 110               | 90-110         | 6   | 10         |            |

### **QUALITY CONTROL DATA QUALIFIERS**

Workorder: T1618995 SELF Supplemental Site Assm

#### QUALITY CONTROL PARAMETER QUALIFIERS

U 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.

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#### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: T1618995 SELF Supplemental Site Assm

| ab ID      | Sample ID   | Prep Method        | Prep Batch | Analysis Method    | Analysis<br>Batch |
|------------|-------------|--------------------|------------|--------------------|-------------------|
| 1618995001 | Field Blank | SW-846 3010A       | DGMt/2178  | SW-846 6010        | ICPt/1720         |
| 1618995002 | TH-66A      | SW-846 3010A       | DGMt/2178  | SW-846 6010        | ICPt/1720         |
| 1618995003 | TH-67       | SW-846 3010A       | DGMt/2178  | SW-846 6010        | ICPt/1720         |
| 1618995004 | TH-38B      | SW-846 3010A       | DGMt/2178  | SW-846 6010        | ICPt/1720         |
| 1618995001 | Field Blank |                    |            | SM 2540 C          | WCAt/5983         |
| 1618995002 | TH-66A      |                    |            | SM 2540 C          | WCAt/5983         |
| 1618995003 | TH-67       |                    |            | SM 2540 C          | WCAt/5983         |
| 1618995004 | TH-38B      |                    |            | SM 2540 C          | WCAt/5983         |
| 1618995001 | Field Blank |                    |            | EPA 350.1          | WCAt/5992         |
| 1618995002 | TH-66A      |                    |            | EPA 350.1          | WCAt/5992         |
| 1618995003 | TH-67       |                    |            | EPA 350.1          | WCAt/5992         |
| 1618995004 | TH-38B      |                    |            | EPA 350.1          | WCAt/5992         |
| 1618995005 | TH-79       |                    |            | EPA 350.1          | WCAt/5992         |
| 1618995006 | TH-20B      |                    |            | EPA 350.1          | WCAt/5992         |
| 1618995005 | TH-79       |                    |            | SM 2540 C          | WCAt/6009         |
| 1618995006 | TH-20B      |                    |            | SM 2540 C          | WCAt/6009         |
| 1618995005 | TH-79       | SW-846 3010A       | DGMt/2202  | SW-846 6010        | ICPt/1733         |
| 1618995006 | TH-20B      | SW-846 3010A       | DGMt/2202  | SW-846 6010        | ICPt/1733         |
| 1618995001 | Field Blank |                    |            | SM 4500-CI-E       | WCAt/6102         |
| 1618995002 | TH-66A      |                    |            | SM 4500-CI-E       | WCAt/6102         |
| 1618995003 | TH-67       |                    |            | SM 4500-CI-E       | WCAt/6102         |
| 1618995004 | TH-38B      |                    |            | SM 4500-CI-E       | WCAt/6102         |
| 1618995005 | TH-79       |                    |            | SM 4500-CI-E       | WCAt/6102         |
| 1618995006 | TH-20B      |                    |            | SM 4500-CI-E       | WCAt/6102         |
| 1618995002 | TH-66A      | Field Measurements | FLDt/      | Field Measurements | FLDt/             |
| 1618995003 | TH-67       | Field Measurements | FLDt/      | Field Measurements | FLDt/             |
|            |             |                    |            |                    |                   |

Report ID: 458345 - 7877234

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#### **CERTIFICATE OF ANALYSIS**





#### QUALITY CONTROL DATA CROSS REFERENCE TABLE

#### Workorder: T1618995 SELF Supplemental Site Assm

| Lab ID      | Sample ID | Prep Method        | Prep Batch | Analysis Method    | Analysis<br>Batch |
|-------------|-----------|--------------------|------------|--------------------|-------------------|
| T1618995005 | TH-79     | Field Measurements | FLDt/      | Field Measurements | FLDt/             |
| T1618995006 | TH-20B    | Field Measurements | FLDt/      | Field Measurements | FLDt/             |

Report ID: 458345 - 7877234

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#### **CERTIFICATE OF ANALYSIS**



| Advanced<br>Environmental Labor |  |
|---------------------------------|--|
|                                 |  |

**Altamonte Springs**: 528 S. Northlake Blvd., Ste. 1016 • Altamonte Springs, FL 32701 • 407.937.1594 • Fax 407.937.1597

|  | ) huvanceu<br>Environmental Laboratories, Inc. | 33, Inc.                              |                        | Gainesvi<br>Jackson<br>Miramar:<br>Tallahass | lle: 4965 S<br>ville: 6681<br>10200 USA<br>See: 1288 ( |   | nesville, FL 32<br>• Jacksonville,<br>mar, FL 33025<br>e, Tallahassee, | 608 • 352.37<br>FL 32216 • (<br>• 954.889.22<br>FL 32301 • | 7.2349 • Fax<br>04.363.9350<br>88 • Fax 95⁄<br>850.219.627 | : 352.395.6<br>) • Fax 904<br>1.889.2281<br>74 • Fax 85 | 6639<br>1.363.9354<br>0.219.6275   |                    | 7761 899.<br>741 - 2000 |
|--|--|---------------------------------------|------------------------|--|--|---|--|--|--|---|--|--------------------|-------------------------|
| Client Name: Hills. Co   | Co. Public Utilities                           | Project Name:                         | SELF Suppleme          | emental Site Assessment                      | 9610 Princes<br>⊔ssment                                | e s   | pa, FL 33619 •   | 813.630.96   | 16 • Fax 813   | .630.4327   |  | 12/1               | 2100                    |
| Address: 332 North F   | 332 North Falkenburg Rd.                       | P.O. Number/Project<br>Number:        | t N/A                  |  | ITO8   | dy⊤<br>SIZE   |  |  |  |   |  |                    | ЯЗ                      |
| Tampa, Florida 33619   |  | Project Location:                     | Southeast C            | ounty Landfill                               |  |   | _  |  |  |   |  |                    | IaN                     |
| Phone: (813) 663-3222  | 222  | R                                     | REMARKS/SPECIAL INS    | INSTRUCTIONS:                                |  |   | N  | J  |  |   |  |                    | IUV                     |
| FAX: (813) 274-6801  | 801  |                                       |                        |  |  |   | 1-si   | 2)   |  |   |  |                    | 1.0                     |
| Contact: Michael Townsel   | wnsel  |                                       |                        |  |  | ; με  |  |  |  |   |  |                    | ].I )                   |
| Sampled By: Z. OA 7  | . CATTERSON                                    |                                       |                        |  |  | <sup>2</sup> P  |  |  | Ð  |   |  |                    | 780                     |
| Turn Around Time: 🕅 STANDARD   | C RUSH   |                                       |                        |  |  | ) EE  |  | ate  |  |   |  | ********           | )T/                     |
| Page: 👌 of:  |  |                                       |                        |  |  | ANA<br>3∙04<br>qqA  | Fe,<br>Tota  | Элін   | ричЭ   | SQT   |  |                    | אס<br>אר                |
| SAMPLE ID SA   | SAMPLE DESCRIPTION                             | Grab                                  | SAMPLING               | MATRIX                                       | Ň  | NOI-<br>892   |  |  |  |   |  |                    | <u>а</u> А_             |
|  |  | Comp                                  | DATE TIME              |  |  |   |  |  |  |   |  |                    | 1                       |
|  | FIELD BLANK                                    | K 61                                  | 11/29/16               | 9:55 M                                       |  |   | ×  |  | X  |   |  |                    | (11)                    |
|  | TH-GOR   |                                       |                        | 5:<br>E                                      |  |   |  |  | X  | ×   |  |                    | (II)                    |
|  | TH-67  |                                       | 11.21                  |  |  |   | ×  |  | X  |   |  |                    | 80                      |
|  | TH - 3813                                      | $\rightarrow$                         | V 12:04                | 7  |  |   | ; X<br>  |  | ×  | ×<br>メ  |  |                    | 00                      |
|  |  |                                       |                        |  |  |   |  |  |  |   |  |                    | -                       |
|  |  |                                       |                        |  |  |   |  |  |  |   |  |                    |                         |
|  |  |                                       |                        |  |  |   |  |  |  |   |  |                    |                         |
|  |  |                                       |                        |  |  |   |  |  |  |   |  |                    |                         |
|  |  |                                       |                        |  |  |   |  |  |  |   |  |                    |                         |
|  |  |                                       |                        |  |  |   |  |  |  |   |  |                    |                         |
| WW = wastewater  | W = surface water                              | GW = ground water DW = drinking water | drinking water O = oil | A = air SO                                   | = soil SL  | = sludge Pr   | eservation Co  | ode: I = ice   | H=(HCI) S  | = (H2SO4)   | Preservation Code: 1 = ice H=(HCI) S = (H2SO4) N = (HNO3) T = (Sodium Thiosulfate) | = (Sodium T        | niosulfate)             |
| Form reviewed on Ice   | o Temp taken from sample                       | Temp from blank                       |                        |  |  |   | Where required, pH checked   | cked   | Temperatu  | Temperature when received                               | sceived 44   | <u>/</u> (in degre | (in degrees celcius)    |
|  |  |                                       | 12                     | ed for measuring                             | Temp by uni  | Device used for measuring Temp by unique identifier (circle IR temp gun used) | e IR temp gun  | used) J: 9A  | A G: LT-1 LT-2   | LT-2 T  | T: J0A A: 3A   | M: 1A S: 1V        | ~                       |
| Relipauished by  | Date Time                                      | Re                                    | Received by:           | Date   | Time   | FOF   | R DRINKIN  | IG WAT   | ER USE   | (When PWS   | FOR DRINKING WATER USE (When PWS Information not otherwise supplied)               | otherwise sup      | olied)                  |
| 2 Sound and a second and a second and a second and a second a se | ~  |                                       |                        | 11/2/10                                      | 1977   | PWS ID:   |  |  |  | -phone.   |  |                    |                         |
| 3  |  |                                       |                        |  |  | Supplier of Water:  | Water:   |  |  |   |  |                    |                         |
| 4  |  |                                       |                        |  |  | Site-Address:   | ress:  |  |  |   |  |                    |                         |

| - | Fnuir                                    |  |
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| A |  |  |
| M | Anno an Anno an Anno Anno Anno Anno Anno |  |
|   |  |  |
|   | <br>                                     |  |

\*\* ---nceu

□ Altamonte Springs: 528 S. Northlake Blvd., Ste. 1016 • Altamonte Springs, FL 32701 • 407.937.1594 • Fax 407.937.1597 □ Gainesville: 4965 SW 41st Blvd. • Gainesville, FL 32608 • 352.377.2349 • Fax 352.395.6539 □ Jacksonville: 6681 Southpoint Pkwv. • Jacksonville, FL 32216 • 904.363.9350 • Fax 904.363.9354

Phone:

Supplier of Water: Contact Person:

> ო 4

Site-Address:

| SITE<br>NAME:       |                                  | 51                                     | ELF SO                          | SP                                   |  | TE<br>DCATION:   |   |   |                                  | 1 1                       |                    |
|---------------------|----------------------------------|--|---------------------------------|--------------------------------------|--|--|---|---|----------------------------------|---------------------------|--------------------|
| WELL NO             | :<br>-                           | ~                                      | BLANK                           |                                      |  | FIEL   | > B4  | INK   | DATE:                            | 11/29/1                   | 6                  |
| L                   |                                  | 1                                      |                                 |                                      | PURG   | SING DA  |   |   | á                                |                           | •                  |
|                     | R (inches): M                    |  | IETER (inches):                 | DEP                                  | L SCREEN<br>TH: fe   | INTERVAL<br>et to 🔶 f  | eet TO WAT  | ER (feet):  | A OR B                           | Ge pump type<br>Ailer:    | T                  |
|                     | LUME PURGE:<br>ut if applicable) | 1 WELL V                               | OLUME = (TO                     | FAL WELL DEP                         |  | TIC DEPTH T  | O WATER) X  | WELL CAPÁC  | gallons/foot                     |                           | gallons            |
|                     | NT VOLUME P<br>ut if applicable) | URGE: 1 EC                             |                                 | = PUMP VOLI                          | JME + (FUB   | /  | TY X J  | UBING LENGTH  | I) + FLOW CELI                   | LVOLUME                   | 4                  |
|                     | UMP OR TUBIN                     |  |                                 | MP OR TUBING                         | llons + (  | PURGIN   |   | PURGING   |                                  | gallons =<br>TOTAL VOLUMI | gallons<br>= N     |
| 1                   | I WELL (feet):                   | · IA                                   | DEPTH IN                        | WELL (feet):                         | !YA  |  | DAT:  | ENDED AT:   |                                  | PURGED (gallor            | - 8 MA             |
| TIME                | VOLUME<br>PURGED<br>(gallons)    | CUMUL<br>VOLUME<br>PURGEI<br>(gallons) | E PURGE<br>D RATE               | DEPTH<br>TO<br>WATER<br>(feet)       | pH<br>(standard<br>units)  | TEMP.<br>(°C)  | COND.<br>(circle units)<br>μmhos/cm<br><u>or</u> μS/cm  | OXYGEN<br>(circle units)<br>mg/L <u>or</u><br>% saturation  | TURBIDITY<br>(NTUs)              | COLOR<br>(describe)       | ODOR<br>(describe) |
|                     |                                  |  |                                 |                                      |  |  |   |   | 7                                |                           |                    |
|                     |                                  | /                                      |                                 |                                      |  | /  |   |   | 4                                |                           |                    |
|                     |                                  |  |                                 | and many and the second              |  |  |   |   |                                  |                           | 1                  |
|                     |                                  | +                                      |                                 | ·                                    |  |  | $\left\{ \right\}$  |   |                                  |                           | A                  |
|                     |                                  | yster pirmaneed                        |                                 |                                      | -  | and the second s |   |   | 11                               |                           |                    |
|                     |                                  |  |                                 | EI                                   | D  | 5  | $  \rangle$   | 1 AN  |                                  |                           |                    |
|                     |                                  |  | 1                               | 1 4                                  |  |  | M   | -11   | Y/                               |                           |                    |
| (                   |                                  |  |                                 |                                      | 6  |  |   |   |                                  |                           | 1                  |
|                     |                                  |  | -C                              |                                      |  |  |   | and the second se |                                  |                           | A                  |
| WELL CA             | PACITY (Gallon                   | s Per Foot):                           | <b>0.75</b> " = 0.02;           | 1" = 0.04;                           | <b>1.25"</b> = 0.06  | 5; <b>2</b> " = 0,16   | <b>3</b> " = 0.37:  | 4" = 0.65;  | <b>5"</b> = 1.02; <b>6</b>       | " = 1,47; <b>12</b> "     | = 5.88             |
| TUBING II           | SIDE DIA. CAR                    | PACITY (Gal                            | ./Ft.): <b>1/8''</b> = 0.       | 0006; <b>3/16"</b> :                 | = 0.0014;  | 1/4" = 0.002   | 6; <b>5/16"</b> = 0   | .004; 3/8" = 0  | 0.006; 1/2" =                    | 0.010; <b>5/8"</b>        | = 0.016            |
| PURGING             | EQUIPMENT C                      | ODES:                                  | B = Bailer;                     | BP = Bladder Pu                      |  | SP = Electric  | Submersible Pu  | mp; <b>PP = P</b>   | eristaltic Pump;                 | O = Other (               | Specify)           |
| SAMPLED             | BY (PRINT) / A                   | FFILIATION                             |                                 | SAMPLER(S) S                         |  |  |   | SAMPLING  | are                              | SAMPLING (                | 2.2.0              |
|                     | Z. K                             | ATTE                                   | LEN                             |                                      | /  | <u>/ oftic pe</u>  | Alm   | INITIATED A   | < 1)-                            | SAMPLING C<br>ENDED AT:   | 1.24               |
| PUMP OR<br>DEPTH IN | TUBING<br>WELL (feet):           | Ŋ                                      | A                               | TUBING<br>MATERIAL CO                | DE:  | Т  |   | FILTERED: Y   | 5 J                              | FILTER SIZE:              | μm                 |
| FIELD DE            | CONTAMINATIO                     | DN: P,UM                               | 1P.Y.N.                         | Dedicated                            | - <del>TUBIN</del>   | ·<br>GY  | V-Dedicated   | DUPLICATE:  |                                  | N                         |                    |
| SAM                 | PLE CONTAINE                     | R SPECIFIC                             | ATION                           | S                                    | SAMPLE PR  | ESERVATIO  | N   | INTEND  |                                  |                           | MPLE PUMP          |
| SAMPLE<br>ID CODE   | #<br>CONTAINERS                  | MATERIAL<br>CODE                       | VOLUME                          | PRESERVATINU USED                    |  | OTAL VOL<br>D IN FIELD (n  | FINAL<br>nL) pH   | ANALYSIS A<br>METHO   |                                  |                           | OW RATE            |
|                     |                                  |  |                                 |                                      |  |  |   | and around a substantian contractive and a substantian  |                                  |                           |                    |
|                     |                                  |  |                                 |                                      | -  |  | NAMA NUMBER AND ADDRESS OF ADDRE |   |                                  |                           |                    |
|                     |                                  |  |                                 |                                      |  | THE REAL PROPERTY OF THE PARTY  |   |   |                                  |                           |                    |
|                     |                                  |  |                                 |                                      | Street of Street |  |   |   |                                  |                           |                    |
|                     |                                  |  | A                               |                                      |  |  |   |   |                                  |                           |                    |
| ]                   |                                  |  |                                 | and the second second                |  |  |   |   |                                  |                           |                    |
| SEE C               | OC FOR                           | ANAL                                   | ysis (                          |                                      |  |  |   |   |                                  |                           |                    |
| MATERIAL            |                                  | AG = Ambe                              | r Glass; CG =                   | Clear Glass;                         | PE = Polye   | ethylene; I  | PP = Polypropy  | lene; <b>S</b> = Silico   | one; <b>T</b> = Teflo            | n; O = Other              | (Specify)          |
| SAMPLING            | GEQUIPMENT                       | CODES:                                 | APP = After Pe<br>RFPP = Revers | ristaltic Pump;<br>e Flow Peristalti | B = Baile<br>c Pump;   |  | Bladder Pump;<br>Method (Tubing   |   | ic Submersible I<br>O = Other (S |                           |                    |
| IOTES: 1.           | The above o                      |  |                                 | he informatio                        |  |  |   |   |                                  |                           |                    |

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

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

| SITE<br>NAME:          |                                  | SELF  | SUP.                             |  | 1  | SITE<br>OCATION:  |  |  |   | 1  |                             |
|------------------------|----------------------------------|---|----------------------------------|--|--|---|--|--|---|--|-----------------------------|
| WELL NO                | :                                | TH-C  |                                  | SAMPL  |  | TH-Cole   | A  |  | DATE:   | 1/29/11  | ~                           |
|                        |                                  |   |                                  |  | PUR  | GING DA   |  |  |   | 12011  | 9                           |
| WELL                   | ¢                                |   | NG                               | V/2 WE   |  |   |  | DEPTH SC   | 2 PUR   |  | PE DO                       |
|                        | R (inches): C                    |   | ETER (inches):<br>DLUME = (TOT   | AL WELL DE   | PTHO.3 /1<br>PTH - ST  |   | eet   TO WAT   | DEPTH<br>ER (feet): 8.5  |   | BAILER:  | BP                          |
|                        | it if applicable)                |   |                                  | 5.37 <sub>fe</sub>   |  | 8.83  |  | 31   |   | <u> </u>   | >                           |
|                        | NT VOLUME F<br>It if applicable) | URGE: 1 EG  | UIPMENT VOL                      | = PUMP VO  | LUME + (TU   | BING CAPACI   | TY X T   | UBING LENGTH   | + FLOW CEL  | L VOLUME   | gallons                     |
|                        |                                  |   |                                  | -  | allons + (   | gallo   | ns/foot X  | feet)  | +   | gallons =  | gallons                     |
| INITIAL PI<br>DEPTH IN | JMP OR TUBIN<br>WELL (feet):     | <sup>IG</sup> 14.37   | FINAL PUN<br>DEPTH IN            | MP OR TUBIN<br>WELL (feet):  | <sup>G</sup> 14.3  |   | G 9:58   |  | 10:15   | TOTAL VOLU<br>PURGED (gai  |                             |
| TIME                   | VOLUME<br>PURGED<br>(gallons)    | CUMUL.<br>VOLUME<br>PURGED<br>(gallons)   |                                  | DEPTH<br>TO<br>WATER<br>(feet)   | pH<br>(standard<br>units)  | TEMP.<br>( <sup>o</sup> C)  | COND.<br>(circle units)<br>µmhos/cm<br>or µS/cm  | DISSOLVED<br>OXYGEN<br>(circle units)<br>mg/L or<br>% saturation   | TURBIDITY<br>(NTUs)   | COLOR<br>(describe   |                             |
| 10:09                  | 1.10                             | 1,10  |                                  | 1095   | 5.83   | 25.34   | 512  | ,42  | 1.10  | NOK  | - NON                       |
| 10:12                  | .30                              | 1.40  |                                  | 11:00  | 5.82   |   | 512  | 39.682   | 0.68  |  | 1                           |
| 10:15                  | .30                              | 1.70  | 01. (                            | 101  | 582  | 25.44   | 512  | 33   | .49   | V  |                             |
|                        |                                  |   |                                  |  | THE PARTY NEW YORK OF THE PARTY NEW  | 2   | ····   |  |   |  |                             |
|                        |                                  | <u> </u>  |                                  |  |  |   |  | and the second s |   |  |                             |
|                        |                                  |   |                                  |  |  |   |  |  | and the second  |  |                             |
|                        |                                  |   |                                  |  |  |   |  |  |   |  |                             |
|                        |                                  | and the second se |                                  |  |  | and manufacture and a state of the state of |  | /  |   |  | /                           |
|                        |                                  | [   |                                  |  | A REAL PROPERTY AND A REAL |   | /  |  |   |  | 11                          |
| WELLCAR                | ACITY (Gallon                    | s Per Foot):  | 0.75" - 0.02                     | 1" = 0.04;   | <b>1.25"</b> = 0.0   | 6; <b>2"</b> = 0.16   | ; <b>3"</b> = 0.37;  | <b>4"</b> = 0.65; 5  |   |  | 191                         |
| TUBING IN              | SIDE DIA. CA                     | PACITY (Gal.  | (Ft.): 1/8" = 0.0                | 0006; <b>3/16''</b>  | = 0.0014;  | 1/4" = 0.0026   | <b>5; 5/16"</b> = 0.   | 004; <b>3/8"</b> = 0.  |   |  | " = 5.88<br>" = 0.016       |
| PURGING                | EQUIPMENT C                      | ODES: E   | B = Bailer; E                    | <b>3P =</b> Bladder F  |  | SP = Electric S   | Submersible Pu   | mp; PP = Pe  | ristaltic Pump;   | O = Othe   | r (Specify)                 |
| SAMPLED                | BY (PRINT) / A                   |   | T                                | SAMPLER(S)   |  |   |  | SAMPLING   | 1.4 1   |  | -                           |
|                        |                                  | ATTERS  |                                  | TUBING   | ,ci  | /och/   | Attom  | SAMPLING<br>INITIATED AT   | 10:15   | SAMPLING<br>ENDED AT:  | 10:19                       |
| PUMP OR<br>DEPTH IN    | TUBING<br>WELL (feet):           | 14.3  |                                  | MATERIAL CO  | DDE:   | T   |  | FILTERED: Y<br>on Equipment Typ  | e.  | FILTER SIZE  | .:μm                        |
| FIELD DEC              | ONTAMINATIO                      | DN: PUMI  |                                  | Dedicated  | TUBI   | NG Y N  |  | DUPLICATE:   | Y (   | N  |                             |
|                        | LE CONTAINE                      |   |                                  |  |  | RESERVATION   |  | INTENDE  | D SA  |  | AMPLE PUMP                  |
| SAMPLE<br>ID CODE      | #<br>CONTAINERS                  | MATERIAL<br>CODE  | VOLUME                           | PRESERVATI<br>USED   | VE ADDE  | FOTAL VOL<br>D IN FIELD (m  | FINAL<br>L) pH   | ANALYSIS AN<br>METHOD  |   |  | FLOW RATE<br>mL per minute) |
|                        |                                  |   |                                  |  |  |   |  |  | NAMES & STREET, S | All and a second se |                             |
|                        |                                  |   |                                  |  |  |   | A PARTICULAR DE LA PARTIC | na nananananananan sa tara da kara kara kara kara kara kara kar  |   |  |                             |
|                        |                                  |   |                                  |  |  | NUMBER OF CONTRACTOR OF CONTRACT  | 138/31/Kettel 4245-00.000/2016-00-00-00-00-00-00-00-00-00-00-00-00-00  |  |   |  |                             |
|                        |                                  |   |                                  | 100000   | and the second   | 2684-   |  |  |   |  |                             |
|                        |                                  |   |                                  | and the second |  | ġ.  |  | 1  |   |  |                             |
|                        | OC FOR                           |   |                                  | 10:091   | 8.   | 4 1   | 0:12   | 1.6)   | 2010  | (-3  |                             |
| MATERIAL               |                                  | ANAL I<br>AG = Amber  |                                  | Clear Glass;   | PE = Poly  |   | P = Polypropyle  | ~  | 10:15<br>e; T = Teflo   | 1  | ~ /                         |
|                        | EQUIPMENT                        | CODES: A  | PP = After Peri<br>FPP = Reverse | staltic Pump;  | B = Bail   | er; BP = B  | ladder Pump;<br>lethod (Tubing (   | ESP = Electric   | Submersible   | Pump;  | r (Specify)                 |
| DTES: 1.               | The above d                      |   |                                  |  |  | d by Chanter  | <sup>-</sup> 62-160, F.A.  |  | O = Other (S  | респу)   |                             |

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

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

| SITE SELF SUP SITE   |  |   |  |   |  |  |   |   |  |                         |                        |
|--|--|---|--|---|--|--|---|---|--|-------------------------|------------------------|
| NAME:  |  |   | =LF  | SUP                                     |  | DCATION:   |   |   |  | 1 1                     |                        |
| WELL NO:   |  | TH-C                                    | 67   | SAMPLE                                  | E ID:  |  | 67  |   | DATE:  | 129/16                  |                        |
| PURGING DATA   |  |   |  |   |  |  |   |   |  |                         |                        |
| WELL DIAMETER (inches): 2 TUBING 1/2 WELL SCREEN INTERVAL DEPTH: 5.25 feet to 15.25 feet TO WATER (feet): 607 OR BAILER: BP  |  |   |  |   |  |  |   |   |  |                         |                        |
| (only fill out if applicable)  |  |   |  |   |  |  |   |   |  |                         |                        |
| EQUIPMEN   | NT VOLUME P  | URGE: 1 EQI                             | JIPMENT VO   |   | et<br>LUME + (TUE  |  |   | UBING LENGTH  |  |                         | gallons                |
| (only fill out   | t if applicable)   |   |  | = g                                     | allons + (   | gallo  | ns/foot X   | feet  |  | gallons =               | gallons                |
| INITIAL PUMP OR TUBING 14 25 FINAL PUMP OR TUBING 14 25 PURGING INITIATED AT: 10 38 PURGING ENDED AT: 11 21 TOTAL VOLUME 5.3   |  |   |  |   |  |  |   |   |  |                         | s)5.30                 |
| TIME   | VOLUME<br>PURGED<br>(gallons)  | CUMUL.<br>VOLUME<br>PURGED<br>(gallons) | PURGE<br>RATE<br>(gpm)   | WATER<br>(feet)                         | pH<br>(standard<br>units)  | TEMP.<br>(°C)  | COND.<br>(circle units)<br>μmhos/cm<br>or μS/cm   | DISSOLVED<br>OXYGEN<br>(circle units)<br>mg/L or<br>% saturation  | TURBIDITY<br>(NTUs)  |                         | ODOR<br>(describe)     |
| 10:43  | 1.50   | 1.50                                    | .10  | 10.89                                   | 6.19   | 24.72  | 2712  | 2.28  | 7.17   | Nove                    | NONE                   |
| 10:47  | .40  | 1.90                                    | .10  | 10.90                                   | 6.18   | 24.70  | 2679  | 2.31  | 6.80   | 2 1                     |                        |
| 10:51  | .40  | 2.30                                    | ,10  | 10.50                                   | 6.19   | 24.70  | 2550  | 2.38  | 6.04   |                         |                        |
| 10:58  | 70   | 300                                     | .10  | 10.93                                   | 6.21   | 2497   | 2233  | 2.80  | 6.04   |                         |                        |
| 11:13  | 1.50   | 4.50                                    | . 10   | 10.95                                   | 6.21   | 25,15  | 2126  | 3.03  | 5.21   |                         |                        |
| 11:17  | .40  | 4.90                                    | .10  | ····                                    | 6:21   | 25.20  | 2136  | 3.09  | 5.49   |                         |                        |
| 11:21  | .40  | 5.30                                    | .D   | 11:20                                   | 6.21   | 25.23  | 2166  | 3,04  | 5.29   | V                       |                        |
|  |  |   |  | NAME OF TAXABLE PARTY OF TAXABLE PARTY. | 7  |  |   |   |  |                         |                        |
|  | -/   |   | and the contraction of the contr |   |  | and the second se  |   |   | and the second sec |                         |                        |
|  | /  |   |  |   | and the second se  |  |   | and the second se   |  |                         | $\lfloor c \rangle$    |
| WELL CAP   | ACITY (Gallon  | s Per Foot): 0                          | <b>).75"</b> = 0.02:   | 1" = 0.04;                              | <b>1.25"</b> = 0.06  | 5; <b>2"</b> = 0.10  | 5; <b>3"</b> = 0.37;  | 4" = 0.65;  | 5" = 1.02; 6   | " = 1.47; <b>12</b> " = | 5.99                   |
| TUBING IN:   | SIDE DIA. CAR  | PACITY (Gal./I                          | t.): 1/8" = 0  | .0006; 3/16"                            | = 0.0014;  | 1/4" = 0.002   | 6; <b>5/16" =</b> 0.0   | 004; 3/8" = 0.  |  |                         | 0.016                  |
| PURGING  | EQUIPMENT C  | ODES: B                                 | = Bailer;  | BP = Bladder F                          |  | SP = Electric  | Submersible Pur   | mp; PP = Pe   | ristaltic Pump;  | O = Other (S            | Specify)               |
| SAMPLED E  | 3Y (PRINT) / A   | EFILIATION:                             |  | SAMPLER(S)                              |  |  |   | 044451.000  | 11.24  |                         |                        |
|  | Z.F.   | ATTER                                   | ISAN   |   |  | / och  | flation   | SAMPLING  | 11.21  | SAMPLING<br>ENDED AT:   |                        |
| PUMP OR T<br>DEPTH IN V  |  | 14.                                     | 25   | TUBING<br>MATERIAL CO                   | DDE:   | T  |   | FILTERED: Y   | N)   | FILTER SIZE:            | μm                     |
| FIELD DEC  | ONTAMINATIO  | N: PUMP                                 | Y N  | Dedicated                               | TUBIN  | IG Y I   | V Dedicated   | DUPLICATE:  | Y (  | N                       |                        |
|  | LE CONTAINE  | R SPECIFICA                             | TION   |   | SAMPLE PR  | ESERVATIO  | V   | INTENDE   |  |                         | PLE PUMP               |
| SAMPLE<br>ID CODE  | #<br>CONTAINERS  | MATERIAL<br>CODE                        | VOLUME   | PRESERVATI<br>USED                      |  | OTAL VOL<br>D IN FIELD (n  | FINAL<br>nL) pH   | ANALYSIS AN<br>METHOD   |  |                         | OW RATE<br>per minute) |
|  |  |   |  |   |  |  |   | A STATES OF A STATE AND A STATES OF A STATE | A second se |                         | <i>/</i> <b>A</b>      |
|  |  |   |  |   |  | الإيد.   | and and and an and a |   |  | 1                       | $\sim$                 |
|  |  |   |  |   | and the second s | Contraction of the Association o |   | 17(-9   | 8.4)1  | 1:21 (-9                | 9,5                    |
|  |  |   |  |   |  | 10:5   | 8 9   | 56.9  | 101  | 1:13 -9                 | 76.3                   |
|  |  |   |  |   |  |  |   |   |  |                         |                        |
| SEE COC FOR ANALYSIS 10:43 (-62.5) 10:47 (-65.7) 10:51 (-72.7)   |  |   |  |   |  |  |   |   |  |                         |                        |
|  | MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify) |   |  |   |  |  |   |   |  |                         |                        |
|  | EQUIPMENT  | RI                                      | PP = Revers  |   |  | SM = Straw M   |   | Gravity Drain);   | Submersible<br>O = Other (S  |                         |                        |
| RFPP = Reverse Flow Peristaltic Pump;   SM = Straw Method (Tubing Gravity Drain);   O = Other (Specify)     OTES: 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:  $\pm$  0.2 units Temperature:  $\pm$  0.2 °C Specific Conductance:  $\pm$  5% Dissolved Oxygen: all readings  $\leq$  20% saturation (see Table FS 2200-2); optionally,  $\pm$  0.2 mg/L or  $\pm$  10% (whichever is greater) Turbidity: all readings  $\leq$  20 NTU; optionally  $\pm$  5 NTU or  $\pm$  10% (whichever is greater)

| SITE<br>NAME:  |                               | SEL  | F SU                                | P   |  | TE<br>DCATION:   |  |  |   | 1  |                        |
|--|-------------------------------|--|-------------------------------------|---|--|--|--|--|---|--|------------------------|
| WELL NO:   |                               | TH-  |                                     | SAMPLE  | E ID:  |  | H - 381  | B  | DATE:   | 29/16  |                        |
|  |                               |  |                                     |   |  |  |  |  |   |  |                        |
| WELL   TUBING   JOHNETER (inches):   UNELL SCREEN INTERVAL   STATIC DEPTH   O'H5   PURGE PUMP TYPE     DIAMETER (inches):   DIAMETER (inches):   JOHNETER (inches):   DEPTH: 5'H2feet to 15'H2 feet   TO WATER (feet):   O'H5   O'R BAILER:  |                               |  |                                     |   |  |  |  |  |   |  |                        |
| WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY  |                               |  |                                     |   |  |  |  |  |   |  |                        |
| EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME  |                               |  |                                     |   |  |  |  |  |   |  |                        |
| (only fill out   | if applicable)                |  |                                     | = ga  | allons + (   | gallo  | ns/foot X  | feet)  | +   | galions =  | gallons                |
| INITIAL PUMP OR TUBING<br>DEPTH IN WELL (feet):   Image: Construction of the sector of |                               |  |                                     |   |  |  |  |  |   |  |                        |
| TIME   | VOLUME<br>PURGED<br>(gallons) | CUMUL.<br>VOLUME<br>PURGED<br>(gallons)  | PURGE<br>RATE<br>(gpm)              | DEPTH<br>TO<br>WATER<br>(feet)  | pH<br>(standard<br>units)  | TEMP.<br>(°C)  | COND.<br>(circle units)<br>μmhos/cm<br><u>or</u> μS/cm   | DISSOLVED<br>OXYGEN<br>(circle units)<br>mg/L <sup>-</sup> or<br>% saturation  | TURBIDITY<br>(NTUs)   | COLOR<br>(describe)  | ODOR<br>(describe)     |
| 12:00  | .80                           | .80  | ,10                                 | 11.70   | 4.50   | 25.43  | 62   | ,90  | 19,9  | NONe   | None                   |
| 12:02  | .20                           | 1.00   | .10                                 | 11.70   | 4.75   |  | 61   | 1.00   | 19.7  | 1  | 1                      |
| 12:04  | . 20                          | 1.20   | : 10                                | 11.70   | 4.73   | 25.37  | 61   | ai 76  | 16.0  | $\downarrow \lor$  | ¥                      |
|  |                               | and the second s |                                     | المراجع   | electrony without a submitted synthesis and a submitte | 2  |  |  |   | and the second se  | 7-                     |
|  |                               | e  | automatical and                     | and an over the design of the |  |  | married and the second and the second and the second s | and the second sec |   | a contraction of the second se | /                      |
|  |                               |  | of an internet of the second second |   |  |  |  | <u> </u>   | and the state of the |  |                        |
|  |                               | The second s   |                                     | /   | er.  |  |  | and the second  |   |  |                        |
|  | L                             |  |                                     |   | and the second se  |  |  | and the second se  |   |  | 7                      |
|  |                               |  |                                     |   |  |  | (  |  |   |  | h                      |
|  |                               | s Per Foot): 0<br>PACITY (Gal./F   |                                     |   | <b>1.25"</b> = 0.06<br>= 0.0014;   |  |  |  |   | = 1.47; <b>12"</b> =   | = 5.88<br>= 0.016      |
|  | QUIPMENT C                    |  |                                     | <b>3P</b> = Bladder P   | ump; E   | SP = Electric  | Submersible Pur  |  | ristaltic Pump;   | O = Other (  |                        |
|  | BY (PRINT) / A                |  | r                                   | SAMPLER(S)  |  | LING DA  | TA   |  |   |  |                        |
| SAMPLED  |                               | PATTERS  | en l                                |   | SIGNATURE  | ode f  | Alton  | SAMPLING<br>INITIATED AT   | 12:04   | SAMPLING<br>ENDED AT:  | 2:08                   |
| PUMP OR T<br>DEPTH IN V  |                               | 14   | 6100                                | TUBING<br>MATERIAL CO   | DDE:   | Т  | FIELD-<br>Filtratio  | FILTERED: Y  | N)  | FILTER SIZE:   | μm                     |
| FIELD DEC  | ONTAMINATIC                   | N: PUMP  | Y N                                 | Dedicated   | TUBIN  | IG Y   | Dedicated  | DUPLICATE:   | Y (   | N  |                        |
| SAMP   | LE CONTAINE                   | R SPECIFICA  | TION                                |   | SAMPLE PR  | ESERVATIO  | V  | INTENDE  |   |  | IPLE PUMP              |
| SAMPLE<br>ID CODE  | #<br>CONTAINERS               | MATERIAL<br>CODE   | VOLUME                              | PRESERVATI<br>USED  |  | OTAL VOL<br>D IN FIELD (r  | FINAL<br>nL) pH  | ANALYSIS AN<br>METHOE  |   |  | OW RATE<br>per minute) |
|  |                               |  |                                     |   |  |  |  |  | SCATNERS CONTRACTOR   |  |                        |
|  |                               |  |                                     |   |  | - Carolina and Carolina and  | Non-terr Black Contraction   |  |   |  |                        |
|  |                               |  |                                     |   | and the second local designment of the   | and the second |  |  |   |  |                        |
|  |                               |  | 29                                  | and the second  | 41 <sup>118</sup>  |  |  |  |   |  |                        |
|  |                               |  |                                     |   | _  |  |  | ş  |   |  | j                      |
| SEE COC FOR ANALYSIS 12:00 (-22.4) 12:02 (-21.8) 12:04 (-22.9)   |                               |  |                                     |   |  |  |  |  |   |  |                        |
| MATERIAL   |                               | AG = Amber G   |                                     | Clear Glass;  | PE = Polye   | B  | PP = Polypropyle   |  | ne; T = Teflon  |  |                        |
| SAMPLING   | EQUIPMENT                     |  | P = After Peri                      |   | B = Baile  | er; BP = i<br>SM = Straw   | Bladder Pump;  | ESP = Electric   | c Submersible P   |  |                        |
| RFPP = Reverse Flow Peristaltic Pump;     SM = Straw Method (Tubing Gravity Drain);     O = Other (Specify)       OTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.     O = Other (Specify)   |                               |  |                                     |   |  |  |  |  |   |  |                        |

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

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

| SITE<br>NAME:   |                                 | 4                                       | SELF 5                         | up.                            |                                  | SITE<br>LOCATION:                         |  |   |                                  |                       |                      |  |
|---|---------------------------------|---|--------------------------------|--------------------------------|----------------------------------|---|--|---|----------------------------------|-----------------------|----------------------|--|
| WELL NO:  |                                 | TH-79                                   |                                | SAMPLE                         | ID:                              | TH-79                                     |  |   | DATE: 113                        | 0/16                  |                      |  |
| PURGING DATA  |                                 |   |                                |                                |                                  |   |  |   |                                  |                       |                      |  |
| WELL   TUBING   I/2   WELL SCREEN INTERVAL   STATIC DEPTH   7.84   PURGE PUMP TYPE     DIAMETER (inches):   DIAMETER (inches):   /2   DEPTH:7.80 feet to 17.50 feet   TO WATER (feet):   7.84   OR BAILER:   BP     WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER)   X   WELL CAPACITY |                                 |   |                                |                                |                                  |   |  |   |                                  |                       |                      |  |
|   | if applicable)                  |   |                                | 7.80 fee                       |                                  | 7.84                                      | feet) X  | .16   |                                  | = 1.60                | gallons              |  |
|   | IT VOLUME PU<br>if applicable)  | RGE: 1 EQUI                             | PMENT VOL.                     | = PUMP VOL                     | .UME + (TUE                      |   | TY X T   | UBING LENGTH  | ) + FLOW CELL                    | VOLUME                | ganono               |  |
|   |                                 | <u></u>                                 |                                |                                | allons + (                       |   | ns/foot X  | feet)   |                                  | gallons =             | gallons              |  |
| ber min wele (loci). • • • • • • • • • • • • • • • • • • •  |                                 |   |                                |                                |                                  |   |  | s): 800   |                                  |                       |                      |  |
| TIME  | VOLUME<br>PURGED<br>(gallons)   | CUMUL.<br>VOLUME<br>PURGED<br>(gallons) | PURGE<br>RATE<br>(gpm)         | DEPTH<br>TO<br>WATER<br>(feet) | pH<br>(standard<br>units)        | TEMP.<br>(°C)                             | COND.<br>(circle units)<br>µmhos/cm<br><u>or</u> | DISSOLVED<br>OXYGEN<br>(circle units)<br>mg/ <u>0</u><br>% saturation | TURBIDITY<br>(NTUs)              | COLOR<br>(describe)   | ODOR<br>(describe)   |  |
| 12:36   | 1.60                            | 1.60                                    | .20                            | 9.06                           | 6.12                             | 23.81                                     | 2780   | .61   | 73.3                             | clouchy               | NONE                 |  |
| 12:38   | .40                             | 2.00                                    | .26                            | 9.04                           | 6.12                             | 23.85                                     | 2789   | .54   | 83.5                             |                       |                      |  |
| 12:40   | .40                             | 2,40                                    | .20                            | 9.06                           | 6.12                             | 2387                                      | 2792   | .53   | 68.1                             |                       |                      |  |
| 12:44   | .80                             | 3.20                                    | .20                            | 9.07                           | 6.09                             | 23.88                                     | 2786   | ,36   | 62.6                             |                       | <u> </u>             |  |
| 13:00   | 1.60                            | 6.40                                    | .20                            | 9.09                           | 6.09                             | 23,97                                     | 2746   | .26<br>.18  | 50.6                             |                       | +                    |  |
| 13:08   | 1.60                            | 8.00                                    | .20                            | 9.09                           | 6.09                             | 24.03                                     | 2740   | . 25  | 27.6                             | +                     |                      |  |
| 10100   | 1.00 1.60 all 1.01 0.0          |   |                                |                                |                                  |   |  |   |                                  |                       | <u></u>              |  |
|   |                                 |   |                                | $ \rightarrow $                |                                  |   |  |   |                                  |                       | /                    |  |
| /   |                                 |   |                                |                                |                                  |   |  |   |                                  | E.                    |                      |  |
| C   |                                 |   |                                |                                |                                  |   | $\mathcal{C}$                                    |   |                                  |                       | C                    |  |
|   | ACITY (Gallons<br>SIDE DIA, CAP |   |                                | 1" = 0.04;<br>006; 3/16"       | <b>1.25"</b> = 0.06<br>= 0.0014; | 6; <b>2"</b> = 0.1<br><b>1/4"</b> = 0.002 |  |   |                                  |                       | = 5.88<br>= 0.016    |  |
| PURGING E   | EQUIPMENT CO                    | DDES: B =                               | Bailer; B                      | P = Bladder F                  |                                  |   | Submersible Pur                                  | mp; <b>PP =</b> Pe  | ristaltic Pump;                  | O = Other (           | Specify)             |  |
| SAMPLED   | BY (PRINT) / AF                 | FILIATION.                              |                                | SAMPLER(S)                     |                                  | LING DA                                   | ATA  |   | 12 00                            |                       |                      |  |
|   |                                 | ATTERSO                                 | $\mathcal{N}$                  |                                |                                  | /oui                                      | 11 Man   | SAMPLING  |                                  | SAMPLING<br>ENDED AT: | 3:12                 |  |
| PUMP OR T<br>DEPTH IN V   |                                 | 16.8                                    |                                | TUBING<br>MATERIAL CO          | DDE:                             | T   |  | FILTERED: Y   |                                  |                       | μm                   |  |
| FIELD DEC   | ONTAMINATIO                     | N: PUMP                                 | Y N                            | Dedicated                      | TUBIN                            | NG Y                                      | N Dedicated                                      | DUPLICATE:  | Y (                              | N)                    |                      |  |
|   | LE CONTAINE                     |   |                                |                                | -                                | RESERVATIO                                |  | INTENDE<br>ANALYSIS AN  |                                  |                       | IPLE PUMP<br>OW RATE |  |
| SAMPLE<br>ID CODE   | #<br>CONTAINERS                 | MATERIAL<br>CODE                        |                                | PRESERVATI<br>USED             |                                  |   |  |   | METHOD Conce (mL per minute)     |                       |                      |  |
|   |                                 |   |                                |                                |                                  |   |  |   |                                  |                       |                      |  |
|   |                                 |   |                                |                                |                                  |   |  | 12:0  |                                  | 40                    |                      |  |
|   |                                 |   |                                |                                |                                  |   |  | 13:0  | 100 1.                           |                       |                      |  |
|   |                                 |   |                                |                                | 12:                              | 44(-2                                     | 1) 12:   | 52 ( -0.  | 2)13:                            | 00 .0                 | 8                    |  |
|   |                                 |   |                                |                                |                                  |   |  |   |                                  |                       |                      |  |
| SEE COC FOR ANALYSIS 12:36 (-4.1) 12:38 (-3.7) 12:40 (-3.2)   |                                 |   |                                |                                |                                  |   |  |   |                                  |                       |                      |  |
| MATERIAL  | CODES: A                        | <b>\G</b> = Amber GI                    | ass; CG = (                    | Clear Glass;                   | PE = Poly                        | ethylene;                                 | PP = Polypropyl                                  |   |                                  |                       | Specify)             |  |
| SAMPLING  | EQUIPMENT C                     |   | P = After Peri<br>PP = Reverse |                                | B = Bai<br>tic Pump;             |   | Bladder Pump;<br>Method (Tubing                  |   | ic Submersible f<br>O = Other (S |                       |                      |  |
| RFPP = Reverse Flow Peristaltic Pump;     SM = Straw Method (Tubing Gravity Drain);     O = Other (Specify)       IOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.     Image: 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:  $\pm$  0.2 units Temperature:  $\pm$  0.2 °C Specific Conductance:  $\pm$  5% Dissolved Oxygen: all readings  $\leq$  20% saturation (see Table FS 2200-2); optionally,  $\pm$  0.2 mg/L or  $\pm$  10% (whichever is greater) Turbidity: all readings  $\leq$  20 NTU; optionally  $\pm$  5 NTU or  $\pm$  10% (whichever is greater)

| SITE<br>NAME:   |                                | SELF                                     | SUP   |  |                                 | TE<br>DCATION:                             |  |   |  | 1   |                    |
|---|--------------------------------|--|---|--|---------------------------------|--|--|---|--|---|--------------------|
| WELL NO:  |                                | TH-ZC                                    | )B  | SAMPLE                                   |                                 | TH-20                                      | DB   |   | DATE: 11   | 30/16                                     |                    |
| PURGING DATA  |                                |  |   |  |                                 |  |  |   |  |   |                    |
| WELL<br>DIAMETER  | (inches): 2                    |  | TER (inches):                                   | 12   DEF                                 |                                 | et to ZZ.8f                                | eet TO WATE  | ER (feet):  | 0 10 OR BA   | E PUMP TYPE<br>AILER: <b>BP</b>           |                    |
|   | UME PURGE:<br>if applicable)   | 1 WELL VOL                               |   |  |                                 |  |  | WELL CAPAC  |  | 7 041                                     |                    |
| EQUIPMEN  |                                | URGE: 1 EQU                              | = ( Z   |  | et<br>UME + (TUE                | 0.06                                       |  | . 16<br>JBING LENGTH  | gallons/foot<br>) + FLOW CELL                                      | <u>= 2.041</u><br>VOLUME                  | gallons            |
|   | if applicable)                 |  |   |  | allons + (                      |  | ns/foot X  | feet)   |  | gallons =                                 | gallons            |
|   | MP OR TUBIN<br>WELL (feet):    | G 21.8                                   | FINAL PUM<br>DEPTH IN V                         | P OR TUBINO<br>VELL (feet):              | 21.8                            | 8 PURGING<br>INITIATED AT: 11:17           |  |   | PURGING<br>ENDED AT: 12:14   |   | 5.70               |
| TIME VOLUME VOLUME PURGE<br>PURGED PURGED RATE<br>(gallons) (gallons) (gpm)                     |                                |  |   | DEPTH<br>TO<br>WATER<br>(feet)           | pH<br>(standard<br>units)       | TEMP.<br>(°C)                              | COND.<br>(circle units)<br>µmhos/cm<br><u>or</u> µS/cm | DISSOLVED<br>OXYGEN<br>(circle units)<br>mod or<br>% saturation | TURBIDITY<br>(NTUs)  | COLOR<br>(describe)                       | ODOR<br>(describe) |
| 11:38   | 2.10                           | 2.10                                     | .16   | 10.60                                    | 5.39                            | 26.65                                      | 266  | .68   | 10.20  | None                                      | NOK                |
| 11:44   | . 60                           | 2.70                                     | .10   | 10.60                                    | 5.42                            | 26.01                                      | 281  | - 56  | 9.58   |   |                    |
| 11:50   | .60                            | 3.30                                     | · 10  | 10.60                                    | 5.42                            | 25.85                                      | 300  | .46   | 8,93   |   |                    |
| 11:56   | .60                            | 3.90                                     | . 10  | 10.66                                    | 5.42                            | 25.73                                      | 313  | HG  | 6.59   |   |                    |
| 12:02   | .60                            | 4.50                                     | .10   | 10.60                                    | 5.43                            | 2562                                       | 324  | • 36  | 5.64   |   |                    |
| 12:08   | .60                            | 5.10                                     | .10   |  | 5.43                            | 25.47                                      | 330  | .30   | 4.62   |   |                    |
| 12:14   | .60                            | 5,70                                     | .10   | 10.60                                    | 075                             | 23.71                                      | 332  | . 27  | 7.1  | v.  |                    |
|   |                                |  |   | 7  |                                 |  | /  |   |  |   | 1                  |
|   | /                              |  |   |  |                                 |  |  |   | -/   |   | 1                  |
|   |                                |  |   |  |                                 |  |  |   |  |   |                    |
| WELL CAP  | ACITY (Gallon<br>SIDE DIA. CAI | l<br>s Per Foot):    0<br>PACITY (Gal./F | <b>0.75"</b> = 0.02;<br>(1.): <b>1/8"</b> = 0.0 | <b>1</b> " = 0.04;<br>006; <b>3/16</b> " | <b>1.25"</b> = 0.0<br>= 0.0014; | 6; <b>2"</b> = 0.10<br><b>1/4"</b> = 0.002 | 6; <b>3"</b> = 0.37;<br>6; <b>5/16"</b> = 0.           |   |  | = 1.47; <b>12"</b> = 0.010; <b>5/8"</b> = | 5.88<br>0.016      |
|   | EQUIPMENT C                    |  |   | P = Bladder F                            | Pump; E                         | SP = Electric                              | Submersible Pur  | mp; <b>PP =</b> Pe  | eristaltic Pump;   | • O = Other (S                            | Specify)           |
| 0.000   |                                |  |   |  |                                 | LING DA                                    | TA   | - <u></u>   | -24.   |   |                    |
| SAMPLED   | BY (PRINT) / A<br>Z.           | PATTERS                                  | ion l   | SAMPLER(S)                               | SIGNATURI                       | achi                                       | 1 then   | SAMPLING  |  | SAMPLING<br>ENDED AT:                     | 2:18               |
|   | TUBING<br>WELL (feet):         | 21.8                                     |   | TUBING<br>MATERIAL CO                    | 0DE'                            | T  |  | -FILTERED: Y<br>on Equipment Typ                                | N)   | FILTER SIZE: _                            | μm                 |
|   |                                |  |   | Dedicated                                | TUBI                            | NG Y                                       | N Dedicated  | DUPLICATE:  | Y (  | N   |                    |
|   | LE CONTAINE                    |  | 1   |  |                                 | RESERVATIO                                 |  | INTENDE   |  |   | IPLE PUMP          |
| SAMPLE<br>ID CODE   | #<br>CONTAINERS                | MATERIAL<br>CODE                         |   | PRESERVAT<br>USED                        | IVE 1                           | ANALYOL EINAL ANALY                        |  |   | ANALYSIS AND/OR EQUIPMENT FLOW RATE<br>METHOD CODE (mL per minute) |   |                    |
|   |                                |  |   |  |                                 |  |  |   | ,  |   |                    |
|   | /                              |  |   |  |                                 |  |  | 12.111  | / 21   |   |                    |
|   |                                |  |   |  |                                 |  |  | 12:14(  | - 31   | .2)                                       |                    |
|   |                                |  |   |  |                                 | 11:56                                      | 1201   | 12:02   | (-5.6  |   |                    |
|   |                                |  |   |  |                                 | 1.20                                       | 13.2)  | 14.02   | (-5.6  | ,)  | 1                  |
| SEE COC FOR ANALYSIS 11:38 77.1 11:44 60.9 11:50 33.6   |                                |  |   |  |                                 |  |  |   |  |   |                    |
|   |                                | AG = Amber (                             |   | 1:38<br>Clear Glass;                     | PE = Poly                       | <u> </u>                                   | PP = Polypropyl  | مي ا  |  |   | Specify)           |
| MATERIAL  |                                |  | .PP = After Per                                 |  | B = Bai                         |  | Bladder Pump;  |   | ic Submersible   |   |                    |
|   |                                | R  | FPP = Reverse                                   | Flow Peristal                            | ltic Pump;                      | SM = Straw                                 | Method (Tubing   | Gravity Drain);   | O = Other (S   |   |                    |
| 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:  $\pm$  0.2 units Temperature:  $\pm$  0.2 °C Specific Conductance:  $\pm$  5% Dissolved Oxygen: all readings  $\leq$  20% saturation (see Table FS 2200-2); optionally,  $\pm$  0.2 mg/L or  $\pm$  10% (whichever is greater) Turbidity: all readings  $\leq$  20 NTU; optionally  $\pm$  5 NTU or  $\pm$  10% (whichever is greater)