

John E. Manning
District One

Cecil L. Pendergrass
District Two

Larry Kiker
District Three

Brian Hamman
District Four

Frank Mann
District Five

Roger Desjarlais
County Manager

Richard Wm. Wesch
County Attorney

Donna Marie Collins
Hearing Examiner

May 18, 2015

Ms. Jennifer Carpenter
Assistant Director of District Management
Florida Department of Environmental Protection
P.O. Box 2549
Fort Myers, FL 33902-2549

**Re: Lee County Resource Recovery Facility, PA90-30H
Construction & Demolition Debris Recycling Facility
WACS ID No. 93715
First Semi-Annual 2015 Water Quality Monitoring Report**

Dear Ms. Carpenter:

Enclosed please find the First Semi-Annual 2015 Water Quality Monitoring (WQM) Report for the Lee County Resource Recovery Facility (RRF) and the Construction & Demolition Debris Recycling Facility (CDDRF). Flowers Chemical Laboratories, Inc. (FCL) sampled the RRF's six (6) shallow monitoring wells, or WTE-1S, WTE-2S, WTE-3SR, WTE-4S, WTE-5S and WTE-6S, which include the CDDRF's three (3) monitoring wells or WTE-2S, WTE-3SR and WTE-4S, on February 17, 2015. Sampling was performed in accordance with the Facility's Ground Water Monitoring Plan (GWMP) dated August 2010 and approved by the Department on October 19, 2010.

The laboratory analytical results from this WQM event were compared to the Department's water quality standards or maximum contaminant levels (MCL) established in Chapter 62-550, F.A.C., and are summarized below.

Ground Water Monitoring Data Discussion

Ground water from (4) of the six (6) shallow monitoring wells sampled, i.e., WTE-1S, WTE-2S, WTE-3S and WTE-6S, exceeded the secondary drinking water standard for Iron which is 0.3 milligrams per liter (mg/L) as established by Rule 62-550, F.A.C. Ground water from (2) of the six (6) shallow wells sampled, i.e., WTE-2S and WTE-5S, exceeded the secondary drinking water standard for Total Dissolved Solids (TDS) which is 500 mg/L as established by Rule 62-550, F.A.C. The concentrations of Iron and TDS in the wells that exceeded the MCL as noted above are provided in Table 1.

Table 1 – Summary of Results for Monitoring Wells which Exceeded the Water Quality Standards Established in Chapter 62-550, F.A.C.

Parameter (units)	WTE-1S	WTE-2S	WTE-3SR	WTE-4S	WTE-5S	WTE-6S
Iron (mg/L)	2.98	0.708	2.7	BS	BS	0.568
TDS (mg/L)	BS	654	BS	BS	570	BS

BS-Below Standard

Electronic Data Files

In accordance with the Department's electronic reporting requirements, this WQM Report includes the field and laboratory ADaPT files which are provided as separate electronic files prepared in the Department specified format.

Ground Water Elevations

The ground water elevations at the six (6) shallow (water table aquifer) and six (6) deep (sandstone aquifer) monitoring wells are provided in Table 2 below. The elevations were determined in accordance with the Department's Standard Operating Procedures for Field Activities, DEP-SOP-001/01, and specifically per FS2200, Ground Water Sampling. The data used to determine the ground water elevations, i.e., top of casing elevations and depth to ground water measurements, is provided in the Attachments to this WQM Report.

Table 2 – Ground Water Elevations (ft., NGVD) Measured February 17, 2015

WELL ID	Elevation (ft., NGVD)	WELL ID	Elevation (ft., NGVD)
WTE-1S	17.71	WTE-1D	8.26
WTE-2S	16.86	WTE-2D	15.41
WTE-3SR	15.84	WTE-3DR	14.65
WTE-4S	14.28	WTE-4D	13.19
WTE-5S	16.61	WTE-5D	15.06
WTE-6S	13.67	WTE-6D	12.52

Note: WTE-2S, WTE-3SR and WTE-4S comprise the monitoring well network for the CDDRF

Field Documentation and Report Certification

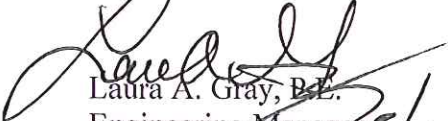
The attachments to this WQM Report include DEP Form #62-701.900(31), F.A.C., Water Quality Monitoring Certification, DEP Form FD 9000-24, Ground Water Sampling Log for each well sampled, field data sheets and sample chain of custody.

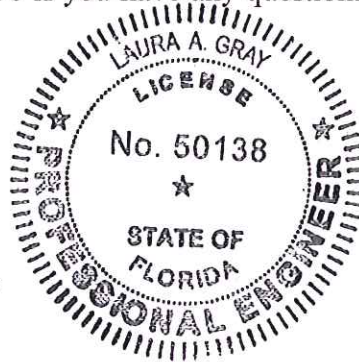
Recommendations/Conclusions

The monitoring results reported herein are consistent with prior monitoring results and background data for the RRF and the CDDRF and are typical for ground water in this geographical region. Based on these monitoring results, no additional ground water monitoring is recommended. The RRF and CDDRF will continue to implement the approved ground water monitoring plan and will report the results to the Department as required.

Please call me at (239) 533-8930 if you have any questions pertaining to this Water Quality Monitoring Report.

Sincerely,


Laura A. Gray, P.E.
Engineering Manager
Solid Waste Division 5/18/15



Attachments

Cc: Bureau of Solid and Hazardous Waste, FDEP
Siting Coordination Office, FDEP
Lindsey J. Sampson, SWD
Keith Howard, SWD
Mike Duff, Covanta
Tyler Huffman, Covanta
File II E107

LIST OF ATTACHMENTS

Attachment A - Ground Water Monitoring Report Certification,
DEP Form # 62-701.900(31)

Attachment B - Ground Water Contour Maps (Shallow and Sandstone Wells) and
Supporting Data

Attachment C - Ground Water Monitoring Well Inspection and Water Level
Measurement Form (Shallow and Sandstone Wells)

Attachment D – Sampling Documentation (Shallow Wells)

Ground Water Sampling Logs, FD 9000-24
Field Data and Calibration Sheets
Chain of Custody



Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form #: 62-701.900(31), F.A.C.

Form Title: Water Quality Monitoring Certification

Effective Date: January 6, 2010

Incorporated in Rule 62-701.510(9), F.A.C.

WATER QUALITY MONITORING CERTIFICATION

PART I GENERAL INFORMATION

- (1) Facility Name Lee County Solid Waste Energy Recovery Facility
Address 10500 Buckingham Road
City Fort Myers Zip 33905 County Lee
Telephone Number (239) 533-8000
- (2) WACS Facility ID 93715
- (3) DEP Permit Number PA90-30H
- (4) Authorized Representative's Name Lindsey J. Sampson Title Director
Address 10500 Buckingham Road
City Fort Myers Zip 33907 County Lee
Telephone Number (239) 533-8000
Email address (if available) lsampson@leegov.com

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submission of false information including the possibility of fine and imprisonment.

5/18/15
(Date)

Lindsey J. Sampson
(Owner or Authorized Representative's Signature)

PART II QUALITY ASSURANCE REQUIREMENTS

Sampling Organization Flowers Chemical Laboratories, Inc.
Analytical Lab NELAC / HRS Certification # E83018
Lab Name Flowers Chemical Laboratories, Inc.
Address P.O. Box 150597, Altamonte Springs, FL 32715-0597
Phone Number (407) 339-5984
Email address (if available) _____

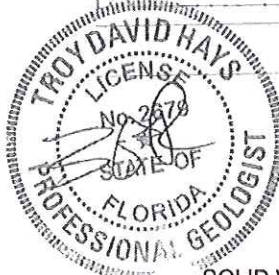
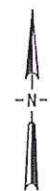
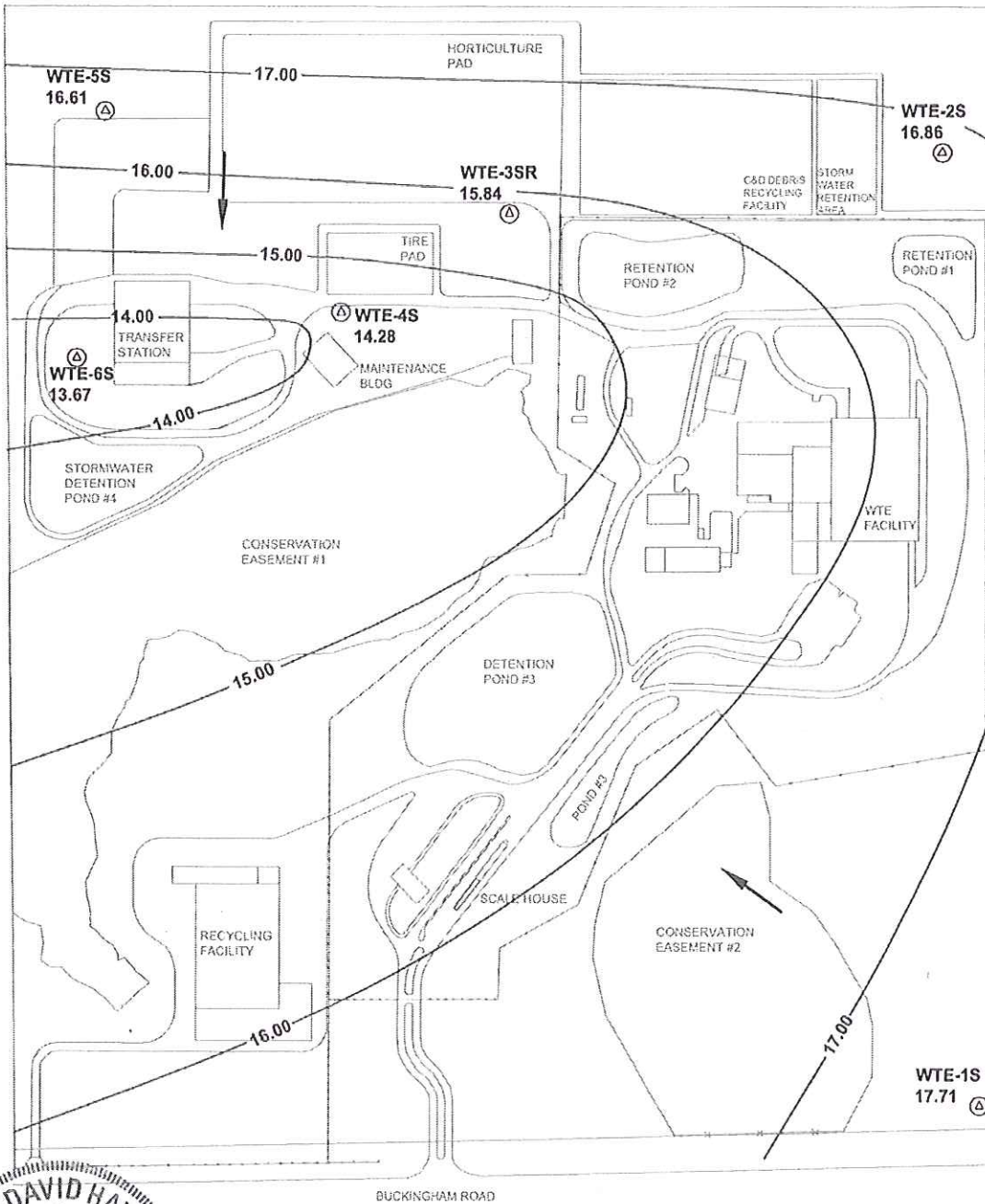
*Lee County Resource Recovery Facility, PA90-30H
Construction & Demolition Debris Recycling Facility
WACS ID No. 93715
First Semi-Annual 2015 Water Quality Monitoring Report*

Attachment A-Ground Water Monitoring Report Certification,
DEP Form # 62-701.900(31)

*Lee County Resource Recovery Facility, PA90-30H
Construction & Demolition Debris Recycling Facility
WACS ID No. 93715
First Semi-Annual 2015 Water Quality Monitoring Report*

**Attachment B –Ground Water Contour Maps (Shallow and
Sandstone Wells) and Supporting Data**

WELL	GW ELEVATION
WTE-1S	17.71 FT
WTE-2S	16.86 FT
WTE-3SR	15.84 FT
WTE-4S	14.28 FT
WTE-5S	16.61 FT
WTE-6S	13.67 FT



4/29/15

SHALLOW AQUIFER WELLS
 FEBRUARY 17, 2015
 SOLID WASTE ENERGY RECOVERY FACILITY
 LEE COUNTY SOLID WASTE DIVISION

LEGEND
WTE-1S
 17.71
 GROUNDWATER MONITORING WELL
 WITH GROUNDWATER ELEVATION (R)

GROUNDWATER ELEVATION
 CONTOUR

GROUNDWATER FLOW
 DIRECTION

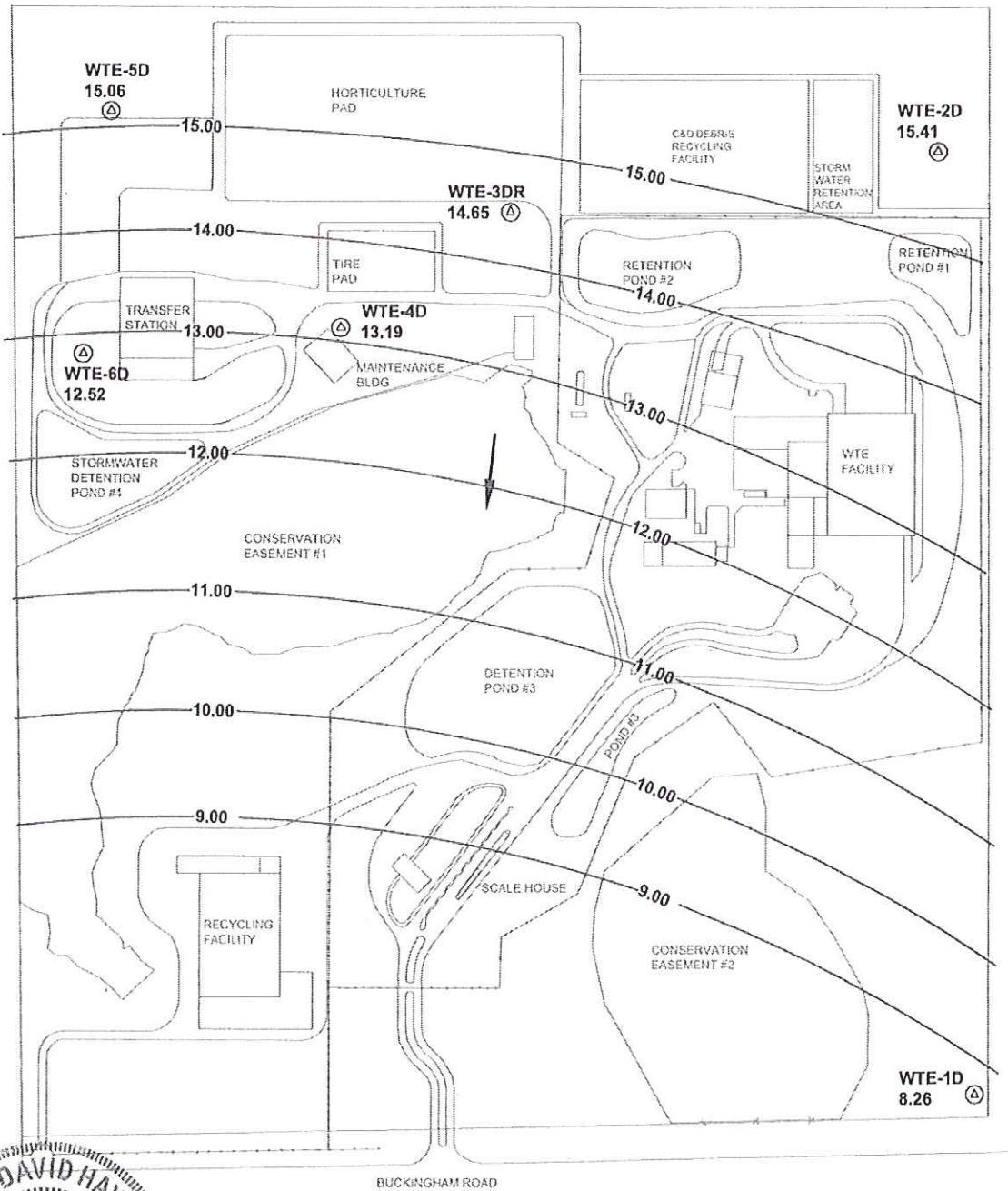
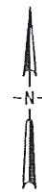
NOTE: NOT TO SCALE



PLOTTED: 4/27/2015 09:22 AM MICHELLE R. HAYS 12345-005-01

SAVED: 4/27/2015 8:48 AM THAYS K:\JONES EDMUNDS\LEE COUNTY\WTE PLANT\551\WTE DEEP 2-17-2015.DWG

WELL	GW ELEVATION
WTE-1D	8.26 FT
WTE-2D	15.41 FT
WTE-3DR	14.65 FT
WTE-4D	13.19 FT
WTE-5D	15.06 FT
WTE-6D	12.52 FT



DEEP AQUIFER WELLS
FEBRUARY 17, 2015
SOLID WASTE ENERGY RECOVERY FACILITY
LEE COUNTY SOLID WASTE DIVISION

WTE-1D
8.26

GROUNDWATER MONITORING WELL
WITH GROUNDWATER ELEVATION (R)

GROUNDWATER ELEVATION
CONTOUR

GROUNDWATER FLOW
DIRECTION

NOTE: NOT TO SCALE



*Lee County Resource Recovery Facility, PA90-30H
Construction & Demolition Debris Recycling Facility
WACS ID No. 93715
First Semi-Annual 2015 Water Quality Monitoring Report*

**Attachment C – Ground Water Monitoring Well Inspection and
Water Level Measurement Form (Shallow and Sandstone Wells)**

WASTE-TO-ENERGY (WTE) FACILITY WELL NETWORK

Well Inspections & Water Level Measurements

Date: 2/17/2015 Inspector Name: DUSTIN RAYBURN

Well ID	Well TOC, ft., NGVD	Time*	Distance to Water, ft.	Elevation, ft., NGVD	Well in Good Condition (Y/N)? **
WTE-1S	21.91	8:23	4.2	17.71	Y
WTE-1D	22.96	8:24	14.7	8.26	Y
WTE-2S	24.18	9:18	7.32	16.86	Y
WTE-2D	23.52	9:19	8.11	15.41	Y
WTE-3SR	23.98	9:53	8.14	15.84	Y
WTE-3DR	23.91	9:54	9.26	14.65	Y
WTE-4S	22.48	11:39	8.2	14.28	Y
WTE-4D	23.81	11:40	10.62	13.19	Y
WTE-5S	23.81	10:38	7.2	16.61	Y
WTE-5D	24.5	10:39	9.44	15.06	Y
WTE-6S	23.66	11:13	9.99	13.67	Y
WTE-6D	22.91	11:14	10.39	12.52	Y

*Enter date too if different than noted above.

**** If 'N' entered, explain below. Attach additional sheets if needed.**

Enter Comments Below As Needed. Ensure well ID is clearly noted for each comment.

[illegible]

Additional Pages Attached (Y/N)? NO

Inspector Signature: C. J. [Signature]

*Lee County Resource Recovery Facility, PA90-30H
Construction & Demolition Debris Recycling Facility
WACS ID No. 93715
First Semi-Annual 2015 Water Quality Monitoring Report*

Attachment D – Sampling Documentation (Shallow Wells)

- Ground Water (GW) Sampling Logs, FD 9000-24
- Field Data and Calibration Sheets
- Chain of Custody

*Lee County Resource Recovery Facility, PA90-30H
Construction & Demolition Debris Recycling Facility
WACS ID No. 93715
First Semi-Annual 2015 Water Quality Monitoring Report*

Ground Water (GW) Sampling Logs, FD 9000-24

NOTES 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization Criteria for range of variation of last three consecutive readings (see FS 2212, section 3)
pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: $\pm 5\%$ Dissolved Oxygen: all readings $\leq 20\%$ saturation (see Table FS 2200-2);
optionally, $+0.2$ mg/L or $+10\%$ (whichever is greater) Turbidity: all readings < 20 NTU; optionally $+5$ NTU or $+10\%$ (whichever is greater)
2, 2009

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization Criteria for range of variation of last three consecutive readings (see FS 2212, section 3).
pH: ± 0.2 units Temperature: $\pm 0.2^{\circ}\text{C}$ Specific Conductance: $\pm 5\%$ Dissolved Oxygen: all readings $\geq 20\%$ saturation (see Table FS 2200-2);
optionally, $+0.2\text{ mg/L}$ or $+10\%$ (whichever is greater) Turbidity: all readings $< 20\text{ NTU}$; optionally $+5\text{ NTU}$ or $+10\%$ (whichever is greater)

NOTES 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization Criteria for range of variation of last three consecutive readings (see FS 2212, section 3)
pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: $\pm 5\%$ Dissolved Oxygen: all readings $\leq 20\%$ saturation (see Table FS 2200-2);
optionally, + 0.2 mg/L or + 10% (whichever is greater) Turbidity: all readings < 20 NTU; optionally + 5 NTU or + 10% (whichever is greater)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization Criteria for range of variation of last three consecutive readings (see FS 2212, section 3).
pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: $\pm 5\%$ Dissolved Oxygen: all readings $\leq 20\%$ saturation (see Table FS 2200-2);
optionally, $+0.2$ mg/L or $+10\%$ (whichever is greater) Turbidity: all readings < 20 NTU; optionally $+5$ NTU or $+10\%$ (whichever is greater)

NOTES 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. Stabilization Criteria for range of variation of last three consecutive readings (see FS 2212, section 3)
pH: ± 0.2 units Temperature: $\pm 0.2^{\circ}\text{C}$ Specific Conductance: $\pm 5\%$ Dissolved Oxygen: all readings $\leq 20\%$ saturation (see Table FS 2200-2);
optionally, $+0.2\text{ mg/L}$ or $+10\%$ (whichever is greater) Turbidity: all readings $< 20\text{ NTU}$; optionally $+5\text{ NTU}$ or $+10\%$ (whichever is greater)

2. Stabilization Criteria for range of variation of last three consecutive readings (see FS 2212, section 3):
pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: $\pm 5\%$ Dissolved Oxygen: all readings $\leq 20\%$ saturation (see Table FS 2200-2);
optionally, $+0.2$ mg/L or $+10\%$ (whichever is greater) Turbidity: all readings < 20 NTU; optionally $+5$ NTU or $+10\%$ (whichever is greater)

*Lee County Resource Recovery Facility, PA90-30H
Construction & Demolition Debris Recycling Facility
WACS ID No. 93715
First Semi-Annual 2015 Water Quality Monitoring Report*

Chain of Custodies

Check Box That Applies To Your Location

☐ Flowers Chemical Laboratories, Inc.
481 Newburyport Ave.
Altamonte Springs, FL 32701
Bus: 407-339-5984
Fax: 407-260-6110

☐ Flowers Chemical Labs-South
West Park Industrial Plaza
571 N.W. Mercantile Pl., Ste. 111
Port St. Lucie, FL 34986
Bus: 772-343-8006
Fax: 772-343-8089

☐ Flowers Chemical Labs-North
812 S.W. Harvey Greene Dr.
Madison, FL 32340
Bus: 850-973-6878
Fax: 850-973-6878

☐ Flowers Chemical Labs-Keys
3980 Overseas Highway, Ste. 103
Marathon, FL 33050
Bus: 305-743-8598
Fax: 305-743-8598



DOWNLOAD REPORTS, INVOICES AND CHAINS OF CUSTODY WWW.FLOWERSLABS.COM

Client: Lee County Solid Waste Project Name: SWERF-WTE Wells S/A P.O. #
Address: Lee County Solid Waste Client Contact: Louisa Gray *Quicker: Lee Co. - WTE FAX
FCL Project Manager: Phil Loucks E-MAIL: new permit

Phone: Rush Charges May Apply
Requested Due Date: 10 Day Standard OR 10 Day Standard Vehicle Surcharge \$
Pick-Up Fee \$ Sampling Fee \$ 126

Sampled By (PRINT): Dustin Rayburn Date Sampled: 2-17-15
Sampler Signature: [Signature]

GW - ground water DW - drinking water WW - wastewater
SW - surface water SO - soil/solid SL - sludge HW - waste

ITEM NO.	SAMPLE ID	DATE	TIME	MATRIX	(LAB USE ONLY) LAB NO.	PRESERVATIVES	ANALYSES REQUEST	COMMENTS	Total # Containers
1	WTE-1S	2-17-15	8:48	GW	259147	NONE	NH ₃ , CL, DS, SO ₄ , NO ₃ , Fe, Ni, Al, Pb, Hg	<u>[Handwritten notes]</u>	5
2	WTE-2S	9:35							
3	WTE-3SR	10:13							
4	WTE-5S	11:03							
5	WTE-6S	11:32							
6	WTE-4S	11:56							
7	Trip Blank								2
8									
9									
10									

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
<u>[Signature]</u>	2-17-15	14:46	<u>[Signature]</u>	2-17-15	15:30	<u>[Signature]</u>	2-18-15	09:40

FINANCE CHARGES APPLIED TO PAST DUE INVOICES

• WHITE - Lab Copy - To Be Scanned

• YELLOW - Client Copy

*Lee County Resource Recovery Facility, PA90-30H
Construction & Demolition Debris Recycling Facility
WACS ID No. 93715
First Semi-Annual 2015 Water Quality Monitoring Report*

Field Data Sheets

FCL Field

Calibration Sheet

Sampler: DUSTIN C RAYBURN



Project: LEE COUNTY-SWERF

Date: 02/17/15

Sample Site I.D.'s WTE-1S, WTE-2S, WTE-3SR, WTE-4S, WTE-5S, WTE-6S

Equipment Used: RFPP

Weather conditions: SUNNY/COOL

Starting Calibration Values:

7:50

	Unit	Standard	Reading	Standard	Reading	Standard	Reading
pH	pH	4	4	7	7	10	10
Conductivity	us	1413	1413	25000			
Turbidity	NTU	1		10	10.05		
DO							100.00%

Ending Calibration Values:

12:30

	Unit	Standard	Reading
pH	pH	7	7.01
Conductivity	us	1413	1410
Turbidity	NTU	10	10.06%
DO			99.70%