



LEE COUNTY
SOUTHWEST FLORIDA

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March 2, 2010

Mr. Charles Emery
Solid Waste Administrator
Florida Department of Environmental Protection
P.O. Box 2549
Fort Myers, FL 33902-2549

**Re: Lee County Resource Recovery Facility, PA-90-30
First Quarter, 2010 Water Quality Monitoring Report, WACS ID No. 93715**

Dear Mr. Emery:

Enclosed please find the First Quarter, 2010, Water Quality Monitoring (WQM) Report for the Lee County Resource Recovery Facility (Facility). This WQM Report was prepared in accordance with the Department's requirements for submitting electronic water quality data to the Solid Waste Program. Flowers Chemical Laboratories, Inc. sampled all of the Facility's ground water monitoring wells on January 7, 2010 including shallow (surficial aquifer) monitoring wells WTE-1S through WTE-6S and deep (sandstone aquifer) monitoring wells WTE-1D through WTE-6D. The ground water samples were analyzed for the parameters listed in both the annual and the quarterly monitoring programs depending on the well sampled in accordance with the Facility's approved ground water monitoring plan dated August 1992 and revised on April 3, 1996.

Ground water samples from 'well group 2', which is comprised of monitoring wells WTE-1S, WTE-3S, WTE-5S and WTE-6S, were analyzed for the annual monitoring program parameters or the primary and secondary water quality parameters and general indicators. Ground water samples from 'well group 1', which is comprised of monitoring wells WTE-1S, WTE-2S, and WTE-4S, were analyzed for the quarterly program parameters or the secondary water quality parameters and general indicators.

Both the quarterly and annual monitoring program parameters were analyzed during this event because, in accordance with 1996 monitoring plan revisions, the well group to be sampled during each consecutive monitoring event alternates between the two identified well groups. Further, the alternating well group sampling pattern applies to both the quarterly and annual monitoring programs. Based on the above, the wells required to be sampled during the first quarter 2010 monitoring event were determined as follows. The 'well group 1' wells were sampled and analyzed for the annual monitoring event performed in January of 2009 or in the first quarter of 2009. Therefore, the 'well group 2' wells (WTE-1S, WTE-3S, WTE-5S and WTE-6S) should be sampled and analyzed for the annual monitoring event in 2010.

Likewise, the 'well group 2' wells were sampled and analyzed for the quarterly monitoring event performed in the fourth quarter of 2009. Therefore, the 'well group 1' wells (WTE-1S, WTE-2S, and WTE-4S) should be sampled and analyzed for the first quarter monitoring event in 2010. Due to the overlap occurring during the first quarter 2010 monitoring event (e.g., well group 1 wells monitored under the quarterly program and well group 2 wells monitored under the annual program), well WTE-1S was analyzed for the more extensive parameter list or the annual monitoring program parameters.

The results from the first quarter 2010 monitoring event were evaluated against 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 all shallow monitoring wells and from deep wells WTE-3D and WTE-6D 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. The Total Dissolved Solids (TDS) concentration of ground water from wells WTE-1D, WTE-2S, WTE-2D, WTE-3D, WTE-5S, WTE-5D and WTE-6D exceeded 500 mg/L, which is the secondary drinking water standard for Total Dissolved Solids (TDS) established by Rule 62-550, F.A.C. However, the referenced rule allows the TDS concentration to exceed 500 mg/L in a well if no other standard is exceeded in that well. Based on this allowance, ground water from monitoring wells WTE-2S, WTE-5S, WTE-3D, and WTE-6D only exceeded the water quality standard for TDS.

Ground water from monitoring well WTE-3D also exceeded the water quality standards for Chloride and Sodium, which are 250 mg/L and 160 mg/L, respectively, as established by Rule 62-550, F.A.C. Finally, ground water from well WTE-6D also exceeded the water quality standard for Manganese, which is 0.05 mg/L, as established by Rule 62-550, F.A.C. The parameter concentrations for wells that exceeded the water quality standards for TDS and Iron as summarized above are provided in Table 1.1 below and for wells that exceeded the water quality standard for parameters other than TDS and Iron as summarized above are provided in Table 1.2 below.

Table 1.1 – Summary of Results for Monitoring Wells which Exceed the Water Quality Standards Established in Chapter 62-550, F.A.C. for TDS and Iron

Parameter	WTE-1S	WTE-2S	WTE-3S	WTE-4S	WTE-5S	WTE-6S
Iron (mg/L)	2.23	1.49	0.713	1.07	1.64	1.64
TDS (mg/L)	BS	508	BS	BS	596	BS
Parameter	WTE-1D	WTE-2D	WTE-3D	WTE-4D	WTE-5D	WTE-6D
Iron (mg/L)	BS	BS	0.357	BS	BS	2.34
TDS (mg/L)	548	588	1290	BS	676	710

Table 1.2 – Summary of Results for Wells which Exceed the Water Quality Standards of Parameters Other than TDS and Iron

Parameter	WTE-3D
Chloride	503
Sodium	261
Parameter	WTE-6D
Manganese	0.142

Water Quality Standards: Iron-0.3 mg/L; TDS-500 mg/L (except as noted); Sodium-160 mg/L; Manganese-0.05 mg/L; Chloride-250 mg/L; 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 determined for each of the wells comprising the Facility's ground water monitoring well network are provided in Table 2 below. The elevations were determined in accordance with the Department's Standard Operating Procedures for Field Activities and specifically per FS2200, Ground Water Sampling, whereby the depth to water measurements were made at least 24 hours prior to purging and/or sampling the wells. The ground water elevations were computed using the known top of casing elevation and the depth to water measurement at each well. The data as noted above which was used to determine the ground water elevation for each of the Facility's monitoring wells are provided in the Attachments to this WQM Report.

Table 2. Ground Water Elevations (ft., NGVD) Measured January 5, 2010

WELL ID	Elevation (ft., NGVD)	WELL ID	Elevation (ft., NGVD)
WTE-1S	18.87	WTE-1D	12.15
WTE-2S	18.38	WTE-2D	17.42
WTE-3S	18.32	WTE-3D	17.49
WTE-4S	15.81	WTE-4D	15.15
WTE-5S	18.16	WTE-5D	16.98
WTE-6S	15.21	WTE-6D	14.57

Field Documentation and Report Certification

This WQM Report includes the Ground Water Monitoring Report, DEP Form # 62-520.900(2), which provides the WQM Report Certification required by the Department. This WQM Report also provides copies of the sampling documents generated in the field, including the Ground Water Sampling Logs, Chain of Custodies, and other logs and/or forms which document the sampling activities performed during this monitoring event. These sampling documents are provided in the Attachments to this WQM Report.

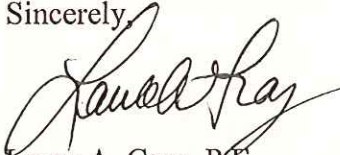
Recommendations/Conclusions

In conclusion, the first quarter 2010 water quality data is consistent with prior monitoring results and background data for the Facility with the exception of the Sodium, Chloride and Total Dissolved Solids concentrations at well WTE-3D and the Manganese concentration at well WTE-6D. The parameters reported to be above the Department's water quality standards at well WTE-3D are likely due to the old flowing well previously located near well WTE-3D. Because well WTE-3D is the most upgradient deep well at the Facility, the water quality reported at well WTE-3D can not be attributed to the Facility's operations. Additionally, Manganese is primarily a concern in drinking water supplies for both aesthetic and maintenance reasons and, as such, was established as a secondary water quality standard. For these reasons, no additional monitoring is recommended at this time.

The Solid Waste Division will closely monitor the ground water quality reported at the Facility's monitoring wells and, depending on subsequent monitoring results, may recommend additional monitoring in the future. The facility 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 First Quarter 2010 Water Quality Monitoring Report.

Sincerely,



Laura A. Gray, P.E.
Engineering Manager
Solid Waste Division

Attachments

Cc: F. Nemec, FDEP
L. Sampson, LCSWD
K. Howard, LCSWD
G. Ball-Llovera, Covanta
K. Chardo, Covanta
File II E107

LIST OF ATTACHMENTS

Attachment A - Ground Water Monitoring Report Certification,
DEP Form # 62-520.900(2)

Attachment B –Ground Water Monitoring Well Elevations with Supporting Data

Attachment C – Ground Water Monitoring Well Inspection Forms (All wells)

Attachment D – Sampling Documentation

D1. Annual Monitoring (Shallow) Sampling Documentation
(Wells WTE-1S, -3S, -5S and -6S)

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

D.2. Annual Monitoring (Deep) Sampling Documentation
(Wells WTE-1D, -3D, -5D and -6D)

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

D.3. Quarterly Monitoring Sampling Documentation
(Wells WTE-2S, -4S, -2D and -4D)

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

Attachment A-Ground Water Monitoring Report Certification

Florida Department of Environmental Protection

Bob Martinez Office Bldg. 2600 Blair Stone Road Tallahassee, Florida 323992400

DEP Form # 62-520.900(2)

Form Title Ground Water Monitoring Report

Effective Date _____

DEP Application No. _____

GROUND WATER MONITORING REPORT

Rule 62-520.600(11)

PART I GENERAL INFORMATION

(1) Facility Name : Lee County Resource Recovery Facility

Address 10500 Buckingham Road

City Ft. Myers

Zip 33905

Telephone Number (239) 533-8000

The GMS Identification Number : WACS ID No. 93715

(3) DEP Permit Number PA 90-30

(4) Authorized Representative Name Lindsey J. Sampson

Address 10500 Buckingham Road, 2nd floor

City Ft. Myers

Zip 33905

Telephone Number (239) 533-8000

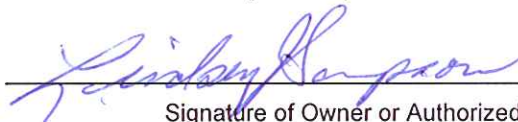
(5) Type of Discharge NA

(6) Method of Discharge NA-Waste-to-Energy Facility

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 submitting false information, including the possibility of fine and imprisonment.

Date: March 2, 2010



Signature of Owner or Authorized Representative

PART II QUALITY ASSURANCE REQUIREMENTS

Sample Organization Comp QAP # E83018

Analytical Lab Comp QAP # /HRS Certification # E83018

*Comp QAP # /HRS Certification # _____

Lab Name Flowers Chemical Laboratories, Inc.

Address P.O. Box 150597, Altamonte Springs, FL 32715-0597

Phone Number (407) 339 -5984

**Attachment B –Ground Water Monitoring Well Elevations with
Supporting Data**

WTE Ground Water Monitoring Well Elevations
Elevation Computation Table Given TOC Elev and Measured Depth to Water
Depth to Water Measurements Taken on January 5, 2010 (1st Quarter 2010)

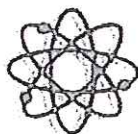
Well No.	Elev. TOC, NGVD	Depth to Water, Ft.	Water Elevation, Ft., NGVD
WTE-1S	21.91	3.04	18.87
WTE-1D	22.96	10.81	12.15
WTE-2S	24.18	5.8	18.38
WTE-2D	23.52	6.1	17.42
WTE-3S	25.75	7.43	18.32
WTE-3D	27.13	9.64	17.49
WTE-4S	22.48	6.67	15.81
WTE-4D	23.81	8.66	15.15
WTE-5S	23.81	5.65	18.16
WTE-5D	24.5	7.52	16.98
WTE-6S	23.66	8.45	15.21
WTE-6D	22.91	8.34	14.57

Depth to Water Measurements were taken at least 24 hours prior purging wells for sampling.

All deep wells are 4 inch diameter and all shallow well are 2 inches diameter.

S' denotes a shallow (surficial aquifer) well and 'D' denotes a deep (sandstone aquifer) well.

**Attachment C – Ground Water Monitoring Well Inspection Forms
(All wells)**



FLOWERS CHEMICAL LABORATORIES INC.

P.O. BOX 150597, ALTAMONTE SPRINGS FL 32715-0597 PHONE (407) 339-5984 FAX (407) 260-6110 www.flowerslabs.com

FCL/LCSWD

Monitoring Well Inspection Form

DATE: 1/5/10

SITE NAME: WTE

SITE LOCATION: Lee County

WELL NUMBER: WTE-15 ☒ Shallow ☐ Deep WELL DIAMETER: 2.00"

LOCATION: ☐ Landfill ☐ Percolation Pond ☐ O&M Building ☒ WTE Site

WELL TYPE: ☒ Background ☐ Detection ☐ Compliance

TOC Elevation: 21.91' TOTAL WELL DEPTH: 14.60' STATIC DEPTH TO WATER 3.04'

GROUNDWATER NGVD: (TOC Elevation - Static Depth to Water) 18.87'

Comments: (PER Monitoring Well Inspection on A12 of A19 of Contract):

Everything Inspected, Everything is O.K.

DATE: 1/5/10

SITE NAME: WTE

SITE LOCATION: Lee County

WELL NUMBER: WTE-10 ☐ Shallow ☒ Deep WELL DIAMETER: 4.00"

LOCATION: ☐ Landfill ☐ Percolation Pond ☐ O&M Building ☒ WTE Site

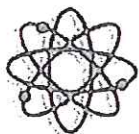
WELL TYPE: ☒ Background ☐ Detection ☐ Compliance

TOC Elevation: 22.96' TOTAL WELL DEPTH: 93.55' STATIC DEPTH TO WATER 10.81'

GROUNDWATER NGVD: (TOC Elevation - Static Depth to Water) 12.15'

Comments: (PER Monitoring Well Inspection on A12 of A19 of Contract):

Everything Inspected, Everything is O.K.



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FCL/LCSWD

Monitoring Well Inspection Form

DATE: 1/5/10

SITE NAME: WTE

SITE LOCATION: Lee County

WELL NUMBER: WTE-25 ☒ Shallow ☐ Deep WELL DIAMETER: 2.00"

LOCATION: ☐ Landfill ☐ Percolation Pond ☐ O&M Building ☒ WTE Site

WELL TYPE: ☐ Background ☒ Detection ☐ Compliance

TOC Elevation: 24.18' TOTAL WELL DEPTH: 12.00' STATIC DEPTH TO WATER 5.80'

GROUNDWATER NGVD: (TOC Elevation - Static Depth to Water) 18.38'

Comments: (PER Monitoring Well Inspection on A12 of A19 of Contract):

Everything Inspected, Everything is O.K.

DATE: 1/5/10

SITE NAME: WTE

SITE LOCATION: Lee County

WELL NUMBER: WTE-20 ☐ Shallow ☒ Deep WELL DIAMETER: 4.00"

LOCATION: ☐ Landfill ☐ Percolation Pond ☐ O&M Building ☒ WTE Site

WELL TYPE: ☐ Background ☒ Detection ☐ Compliance

TOC Elevation: 23.52' TOTAL WELL DEPTH: 93.00' STATIC DEPTH TO WATER 6.10'

GROUNDWATER NGVD: (TOC Elevation - Static Depth to Water) 17.42'

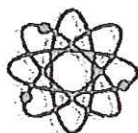
Comments: (PER Monitoring Well Inspection on A12 of A19 of Contract):

Everything Inspected, Everything is O.K.



FCL/LCSWD

Everything Inspected, Everything is O.K.



FLOWERS CHEMICAL LABORATORIES INC.

P.O. BOX 150597, ALTAMONTE SPRINGS FL 32715-0597 PHONE (407) 339-5984 FAX (407) 260-6110 www.flowerslabs.com

FCL/LCSWD

Monitoring Well Inspection Form

DATE: 1/5/10

SITE NAME: WTE

SITE LOCATION: Lee County

WELL NUMBER: WTE-45 ☒ Shallow ☐ Deep WELL DIAMETER: 2.00"

LOCATION: ☐ Landfill ☐ Percolation Pond ☐ O&M Building ☒ WTE Site

WELL TYPE: ☐ Background ☒ Detection ☐ Compliance

TOC Elevation: 22.48' TOTAL WELL DEPTH: 12.40' STATIC DEPTH TO WATER 6.67'

GROUNDWATER NGVD: (TOC Elevation - Static Depth to Water) 15.81'

Comments: (PER Monitoring Well Inspection on A12 of A19 of Contract):
Everything Inspected, Everything is O.K.

DATE: 1/5/10

SITE NAME: WTE

SITE LOCATION: Lee County

WELL NUMBER: WTE-412 ☐ Shallow ☒ Deep WELL DIAMETER: 4.00"

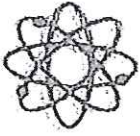
LOCATION: ☐ Landfill ☐ Percolation Pond ☐ O&M Building ☒ WTE Site

WELL TYPE: ☐ Background ☒ Detection ☐ Compliance

TOC Elevation: 23.81' TOTAL WELL DEPTH: 96.00' STATIC DEPTH TO WATER 8.66'

GROUNDWATER NGVD: (TOC Elevation - Static Depth to Water) 15.15'

Comments: (PER Monitoring Well Inspection on A12 of A19 of Contract):
Everything Inspected, Everything is O.K.



FLOWERS CHEMICAL LABORATORIES INC.

P.O. BOX 150597, ALTAMONTE SPRINGS FL 32715-0597 PHONE (407) 339-5834 FAX (407) 260-6110 www.flowerslabs.com

FCL/LCSWD

Monitoring Well Inspection Form

DATE: 1/5/10

SITE NAME: WTE

SITE LOCATION: Lee County

WELL NUMBER: WTE-55 ☒ Shallow ☐ Deep WELL DIAMETER: 2.00"

LOCATION: ☐ Landfill ☐ Percolation Pond ☐ O&M Building ☒ WTE Site

WELL TYPE: ☐ Background ☒ Detection ☐ Compliance

TOC Elevation: 23.81' TOTAL WELL DEPTH: 17.45' STATIC DEPTH TO WATER 5.65'

GROUNDWATER NGVD: (TOC Elevation - Static Depth to Water) 18.16'

Comments: (PER Monitoring Well Inspection on A12 of A19 of Contract):

Everything Inspected, Everything is O.K.

DATE: 1/5/10

SITE NAME: WTE

SITE LOCATION: Lee County

WELL NUMBER: WTE-51 ☐ Shallow ☒ Deep WELL DIAMETER: 4.00"

LOCATION: ☐ Landfill ☐ Percolation Pond ☐ O&M Building ☒ WTE Site

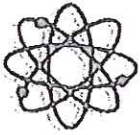
WELL TYPE: ☐ Background ☒ Detection ☐ Compliance

TOC Elevation: 24.50' TOTAL WELL DEPTH: 94.00' STATIC DEPTH TO WATER 7.52'

GROUNDWATER NGVD: (TOC Elevation - Static Depth to Water) 16.98'

Comments: (PER Monitoring Well Inspection on A12 of A19 of Contract):

Everything Inspected, Everything is O.K.



FLOWERS CHEMICAL LABORATORIES INC.

P.O. BOX 150597, ALTAMONTE SPRINGS FL 32715-0597 PHONE (407) 339-5984 FAX (407) 260-6110 www.flowerslabs.com

FCL/LCSWD

Monitoring Well Inspection Form

DATE: 1/5/10

SITE NAME: WTE

SITE LOCATION: Lee County

WELL NUMBER: WTE-65 ☒ Shallow ☐ Deep WELL DIAMETER: 2.00"

LOCATION: ☐ Landfill ☐ Percolation Pond ☐ O&M Building ☒ WTE Site

WELL TYPE: ☐ Background ☒ Detection ☐ Compliance

TOC Elevation: 23.66' TOTAL WELL DEPTH: 19.98' STATIC DEPTH TO WATER 8.45'

GROUNDWATER NGVD: (TOC Elevation - Static Depth to Water) 15.21'

Comments: (PER Monitoring Well Inspection on A12 of A19 of Contract):

Everything Inspected, Everything is O.K.

DATE: 1/5/10

SITE NAME: WTE

SITE LOCATION: Lee County

WELL NUMBER: WTE-60 ☐ Shallow ☒ Deep WELL DIAMETER: 4.00"

LOCATION: ☐ Landfill ☐ Percolation Pond ☐ O&M Building ☒ WTE Site

WELL TYPE: ☐ Background ☒ Detection ☐ Compliance

TOC Elevation: 22.91' TOTAL WELL DEPTH: 96.00' STATIC DEPTH TO WATER 8.34'

GROUNDWATER NGVD: (TOC Elevation - Static Depth to Water) 14.57'

Comments: (PER Monitoring Well Inspection on A12 of A19 of Contract):

Everything Inspected, Everything is O.K.

Attachment D – Sampling Documentation

D1. Annual Monitoring (Shallow) Sampling Documentation (Wells WTE-1S, -3S, -5S and -6S)

Chain of Custody

Field Data Sheet

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

D.2. Annual Monitoring (Deep) Sampling Documentation (Wells WTE-1D, -3D, -5D and -6D)

Chain of Custody

Field Data Sheet

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

D.3. Quarterly Monitoring Sampling Documentation (Wells WTE-2S, -4S, -2D and -4D)

Chain of Custody

Field Data Sheets

Ground Water Sampling Logs, FD 9000-24

Attachment D – Sampling Documentation

D1. Annual Monitoring (Shallow) Sampling Documentation (Wells WTE-1S, -3S, -5S and -6S)

Chain of Custody

Field Data Sheet

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

Check Box That Applies To Your Location

☐ Flowers Chemical Laboratories, Inc.

☐ Flowers Chemical Labs-South

☐ Flowers Chemical Labs-North

☐ Flowers Chemical Labs-Keys

481 Newburyport Ave.
Altamonte Springs, FL 32701
Bus: 407-339-5984
Fax: 407-260-6110

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

812 S.W. Harvey Greene Dr.
Madison, FL 32340
Bus: 850-973-6878
Fax: 850-973-6878

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	Project Name	P.O. #
Lee Co.	Amund WTE wells - Shallow	
Address	Client Contact	FAX
	Laura Gray	
	FCL Project Manager	E-MAIL
Phone	Requested Due Date	Rush Charges May Apply
	Phil Loucks	
	10 Day Standard	
Sampled By (PRINT):	Pick-Up Fee	Vehicle Surcharge
Tommy Cross	\$	\$
Sampler Signature	DATE SAMPLED	Sampling Fee
	11/7/10	\$ 74

Sampler Signature		Date Sampled		Total # Containers									
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Date Sampled		Date Sampled		Total # Containers</									

FINANCE CHARGES APPLIED TO PAST DUE INVOICES

• WHITE - Lab Copy - To Be Scanned

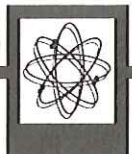
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Rev 04-08

Lab #
113965

FIELD DATA SHEET

FLOWERS
CHEMICAL
LABORATORIES
INCORPORATED



Sampler(s) Tommy Cross

Date 1/7/10

Page 1 of 5

Project Name Annual WTE wells-shallow

Sample Type	WW	SW	<u>GW</u>	DW	Reag.Wtr.	Sludge	Sediment	Soil	Other
-------------	----	----	-----------	----	-----------	--------	----------	------	-------

Sample Site Identification WTE-1S, WTE-3S, WTE-6S, WTE-5S

Sampling Method	Grab ☐	Composite ☐	Monitoring Well ☒	Bailer ☐	Pump ☒
-----------------	-------------------------------	------------------------------------	---	---------------------------------	--

Sampling Equipment Geotech II peristaltic pump, polyethylene + silicon tubing

Site & Weather Conditions clear + cold

Field Instrument Beginning Calibration

Slope

pH Meter	YES	☒	NO		Buffer	4.0	<u>4.01</u>	7.0	<u>7.01</u>	10.0	<u>10.0</u>
Conductivity Meter	YES	☒	NO		Buffer	147		1414	<u>1413</u>	12900	
Turbidity Meter	YES	☒	NO		Buffer	0.5		<u>10</u> 5.0	<u>10</u>	40	
DO Meter	YES	☒	NO		Buffer	<u>99.6 % saturation</u>		Adjust		From	

Field Filtered	☐ YES ☒ NO	Duplicate	☐ YES ☒ NO	Field Decontamination	☒ YES ☐ NO
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Parameter	Sample Containers	pH Check
☒ Nutrient	Plastic - H ₂ SO ₄	< 2
☒ Metals	Plastic - HNO ₃	< 2
☐ Sulfide	Plastic - NaOH / Zn Acetate	< 12
☐ Cyanide	Plastic - NaOH / Zn (No sulfide)/Ascorbic Acid	> 12
☐ Bacteriological	Glass - Thiosulfate (DW NO Chlorine Res)	
☐ Oil & Grease	Glass - HCl	< 2
☒ TOC	Plastic - HCl	< 2
☒ VOA	Glass - HCl	< 2
☐ SVOC	Glass - HCl (DW NO Chlorine Res)	
☐ Phenols	Glass - H ₂ SO ₄	< 2
☒ Other	Unpreserved	

Well Diameter	Multiplier
1.5 inches	0.092
2.0 inches	0.163
4.0 inches	0.653
6.0 inches	1.469

Field Instrument Ending Calibration

pH Meter	YES	☒	NO		Buffer	4.0		7.0	<u>7.06</u>	10.0	
Conductivity Meter	YES	☒	NO		Buffer	147		1414	<u>1427</u>	12900	
Turbidity Meter	YES	☒	NO		Buffer	0.5		<u>10</u> 5.0	<u>10</u>	20.0	
DO Meter	YES	☒	NO		Buffer	<u>99.7 % saturation</u>		Adjust		From	

General Site Information / Comments

DEP-SOP-001/01
FS 2200 Groundwater Sampling
Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: WTE	SITE LOCATION: Lee County
WELL NO: WTE-15	DATE: 1/7/10

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.25	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 3.06	PURGE PUMP TYPE OR BAILER: RFPP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable) = (14.60 feet - 3.06 feet) X 1.16 gallons/foot = 1.85 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = gallons + (gallons/foot X feet) + gallons = gallons				

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 8.00		FINAL PUMP OR TUBING DEPTH IN WELL (feet): 8.00		PURGING INITIATED AT: 0929		PURGING ENDED AT: 0947		TOTAL VOLUME PURGED (gallons): 3.50			
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/l or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
0936	2.00	2.00	0.19	3.07	6.79	21.5	597	0.99	0.45	none	none
0940	0.50	2.50	0.19	3.07	6.88	21.4	605	1.32	0.22	I	I
0944	0.50	3.00	0.19	3.07	6.93	21.4	607	1.35	0.11	I	I
0947	0.50	3.50	0.19	3.07	6.94	21.4	608	1.40	0.13	I	I

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tommy Cross / ECL				SAMPLER(S) SIGNATURES: 				SAMPLING INITIATED AT: 0950		SAMPLING ENDED AT: 0955	
PUMP OR TUBING DEPTH IN WELL (feet): 8.00				SAMPLE PUMP FLOW RATE (mL per minute): 7142				TUBING MATERIAL CODE: STPE			
FIELD DECONTAMINATION: ☒ N				FIELD-FILTERED: ☒ Y FILTER SIZE: µm				DUPLICATE: ☐ Y ☒ N			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
★ See C.O.C. ★											

REMARKS:

no sheen

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

SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump
EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

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

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

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

GROUNDWATER SAMPLING LOG

SITE NAME: WTE	SITE LOCATION: Lee County
WELL NO: WTE-35	SAMPLE ID: WTE-35
	DATE: 11/7/10

PURGING DATA

[illegible]

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tommy Cross / FLL				SAMPLER(S) SIGNATURES: <i>[Signature]</i>			SAMPLING INITIATED AT: 12:10		SAMPLING ENDED AT: 12:15		
PUMP OR TUBING DEPTH IN WELL (feet): 11.00				SAMPLE PUMP FLOW RATE (mL per minute): 7 ltr			TUBING MATERIAL CODE: S+PE				
FIELD DECONTAMINATION: 0 N				FIELD-FILTERED: Y (N) FILTER SIZE: _____ µm Filtration Equipment Type: _____			DUPLICATE: Y (N)				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
★ See L.O.C. ★											
REMARKS: no sheen											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPF = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)											

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

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

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

GROUNDWATER SAMPLING LOG

SITE NAME: WTE		SITE LOCATION: Lee County	
WELL NO: WTE-55	SAMPLE ID: WTE-55	DATE: 1/7/10	

PURGING DATA

[illegible]

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tommy Cross / FCL				SAMPLER(S) SIGNATURES: <i>[Signature]</i>		SAMPLING INITIATED AT: 1520		SAMPLING ENDED AT: 1525	
PUMP OR TUBING DEPTH IN WELL (feet): 9.00				SAMPLE PUMP FLOW RATE (mL per minute): 7.16		TUBING MATERIAL CODE: 54PE			
FIELD DECONTAMINATION: 0 N				FIELD-FILTERED: Y 0 FILTER SIZE: 0.1 μ m		DUPLICATE: Y 0			
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH			
REMARKS: no sheen									
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other.(Specify)									
SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)									

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

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

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

GROUNDWATER SAMPLING LOG

SITE NAME: WTE	SITE LOCATION: Lee County
WELL NO: WTE-65	SAMPLE ID: WTE-65
	DATE: 11/7/10

PURGING DATA

[illegible]

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tommy Cross / FCL	SAMPLER(S) SIGNATURES: 	SAMPLING INITIATED AT: 1415	SAMPLING ENDED AT: 1420					
PUMP OR TUBING DEPTH IN WELL (feet): 11.00	SAMPLE PUMP FLOW RATE (mL per minute): > 14v	TUBING MATERIAL CODE: ST PE						
FIELD DECONTAMINATION: ☒ N	FIELD-FILTERED: Y ☒ Filtration Equipment Type:	FILTER SIZE: _____ μm	Duplicate: Y ☒					
SAMPLE CONTAINER SPECIFICATION			INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE			VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH
* See L.O.C. *								
REMARKS: no sheen								
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other.(Specify)								
SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)								

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

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

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

Attachment D – Sampling Documentation

D.2. Annual Monitoring (Deep) Sampling Documentation (Wells WTE-1D, -3D, -5D and -6D)

Chain of Custody

Field Data Sheet

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

☐ Flowers Chemical Laboratories, Inc.

☐ Flowers Chemical Labs-South

☐ Flowers Chemical Labs-North

☐ Flowers Chemical Labs-Keys

481 Newburyport Ave.
Altamonte Springs, FL 32701
Bus: 407-339-5984
Fax: 407-260-6110

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

812 S.W. Harvey Greene Dr.
Madison, FL 32340
Bus: 850-973-6878
Fax: 850-973-6878

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	Project Name	P.O. #
Lee Co.	Annual WTE Wells - Deep	
Address	Client Contact	FAX
	Linda Gray	
	FCL Project Manager	E-MAIL
	Phil Lovelace	
Phone	Requested Due Date	Rush Charges May Apply
	10 Day Standard	
Sampled By (PRINT):	Pick-Up Fee	Vehicle Surcharge
Mike Payne	\$	\$
Sampler Signature	OR	Sampling Fee
M. Payne		\$

ITEM NO.	SAMPLE ID	DATE	TIME	MATRIX	(LAB USE ONLY) LAB NO.	PRESERVATIVES				ANALYSES REQUEST	COMMENTS	Total # Containers
						NONE	H ₂ SO ₄	HNO ₃	HCl	Na ₂ O ₃		
1	WTE-1D	1/7/10	1010	GW	1139646W1	X	X	X	X		60c pH=2	5
2	WTE-3D	1/7/10	1230	↓	2							
3	WTE-5D	1/7/10	1530	↓	3							
4	WTE-6D	1/7/10	1437	↓	4							
5												
6												
7												
8												
9												
10												
Relinquished By / Affiliation		Date	Time	Accepted By / Affiliation	Date	Time	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
[Signature]		1/8/10	1140							[Signature]	1/8/10	1147

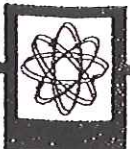
FINANCE CHARGES APPLIED TO PAST DUE INVOICES

Lee Co.

P.M. Phil
Loucks

FIELD DATA SHEET

LAB. # 113964

FLOWERS
CHEMICAL
LABORATORIES
INCORPORATED

Sampler(s)

Mike PAYNE

Date

1-7-10

Page

1

of 5

Project Name

WASTE TO ENERGY ANNUAL WELLS

Sample Type

WW

SW

GW ☒

DW

Reag.Wtr.

Sludge

Sediment

Soil

Other

Sample Site Identification

WTE 1D, 3D, 5D, 6D

Sampling Method

Grab ☒Composite ☐Monitoring Well ☒Bailer ☐Pump ☒

Sampling Equipment

RFPP, silicone + polyeth. tubing.

Site & Weather Conditions

COLD, WINDY

Field Instrument Beginning Calibration

Slope

pH Meter	YES	☒	NO		Buffer	4.0	4.01	7.0	7.0	10.0	
Conductivity Meter	YES	☒	NO		Buffer	100		1000	1413		
Turbidity Meter	YES	☒	NO		Buffer	1.0		10.0	10.0		
DO Meter	YES	☒	NO		99.9% SAT		1-AIT	0-SAL			

Field Filtered

☐ YES☒ NO

Duplicate

☐ YES☒ NO

Field Decontamination

☒ YES☐ NO

+ LAB. DECON.

Parameter	Sample Containers	pH Check
☒ Nutrient	Plastic - H ₂ SO ₄	< 2
☒ Metals	Plastic - HNO ₃	< 2
☐ Sulfide	Plastic - NaOH / Zn Acetate	< 12
☐ Cyanide	Plastic - NaOH / Zn (No sulfide)/Ascorbic Acid	> 12
☐ Bacteriological	Glass - Thiosulfate (DW NO Chlorine Res)	
☐ Oil & Grease	Glass - HCl	< 2
☒ TOC	Plastic - HCl GLASS	< 2
☐ VOA	Glass - HCl	< 2
☐ SVOC	Glass - HCl (DW NO Chlorine Res)	
☐ Phenols	Glass - H ₂ SO ₄	< 2
☒ Other	Unpreserved	

Well Diameter	Multiplier
1.5 inches	0.092
2.0 inches	0.163
4.0 inches	0.653
6.0 inches	1.469

Field Instrument Ending Calibration

Slope

pH Meter	YES		NO		Buffer	4.0		7.0		10.0	
Conductivity Meter	YES		NO		Buffer	100		1000			
Turbidity Meter	YES		NO		Buffer	1.0		10.0			
DO Meter	YES		NO								

General Site Information / Comments

NEXT EVENT FOR ANNU. IS 1-2011.

Purified per FDep SOP 2200.

GROUNDWATER SAMPLING LOG

SITE NAME: WASTE TO ENERGY		SITE LOCATION: Lee Co.	
WELL NO: WTE 1D	SAMPLE ID: WTE 1D	DATE: 1-7-10	

PURGING DATA

[illegible]

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <i>M. PAYNE F.C.L.</i>				SAMPLER(S) SIGNATURES: <i>Mike Payne</i>		SAMPLING INITIATED AT: <i>1010</i>		SAMPLING ENDED AT: <i>1013</i>		
PUMP OR TUBING DEPTH IN WELL (feet): <i>67'</i>				SAMPLE PUMP FLOW RATE (mL per minute): <i>< 1 LTR.</i>		TUBING MATERIAL CODE: <i>S+PE</i>				
FIELD DECONTAMINATION: <i>(Y)</i> N				FIELD-FILTERED: <i>Y</i> <i>(N)</i> FILTER SIZE: _____ μ m		DUPLICATE: Y <i>(N)</i>				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION			INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH				
REMARKS: <i>* NO SHEENS</i>										
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other.(Specify)										
SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)										

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

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

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

GROUNDWATER SAMPLING LOG

SITE NAME: WASTE TO ENERGY		SITE LOCATION: Lee CO.	
WELL NO: WTE 3D	SAMPLE ID: WTE 3D	DATE: 1-7-10	

PURGING DATA

[illegible]

SAMPLING DATA

[illegible]

REMARKS:

KS: ~~*~~ No 5Heen5

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

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

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

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

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

GROUNDWATER SAMPLING LOG

SITE NAME: WASTE TO ENERGY		SITE LOCATION: Lee CO.	
WELL NO: WTE 5D	SAMPLE ID: WTE 5D	DATE: 1-7-10	

PURGING DATA

WELL DIAMETER (inches): 4	TUBING DIAMETER (inches): .25	WELL SCREEN INTERVAL DEPTH: 63 feet to 73 feet	STATIC DEPTH TO WATER (feet): 7.65	PURGE PUMP TYPE OR BAILER: RFP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY only fill out if applicable)				
= (feet - feet) X gallons/foot = gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)				
= 0 gallons + (.0026 gallons/foot X 68' feet) + 1 LTR. gallons = .5 gallons				

[illegible]

SAMPLING DATA

[illegible]

REMARKS: * NO SHEENS

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

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

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

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

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

GROUNDWATER SAMPLING LOG

SITE NAME: WASTE TO ENERGY		SITE LOCATION: Lee Co.	
WELL NO: WTE 6D	SAMPLE ID: WTE 6D	DATE: 1-7-10	

PURGING DATA

WELL DIAMETER (inches): <u>4</u>	TUBING DIAMETER (inches): <u>.25</u>	WELL SCREEN INTERVAL DEPTH: <u>65</u> feet to <u>75</u> feet	STATIC DEPTH TO WATER (feet): <u>8.58</u>	PURGE PUMP TYPE OR BAILER: <u>RFPP</u>
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY only fill out if applicable)				
$= (\quad \text{feet} - \quad \text{feet}) \times \quad \text{gallons/foot} = \quad \text{gallons}$				

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

= 0 gallons + (.0026 gallons/foot X 70' feet) + 1 Ltr. gallons = 2.5 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 70'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 70'	PURGING INITIATED AT: 1356	PURGING ENDED AT: 1435	TOTAL VOLUME PURGED (gallons): 4.5
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[illegible]

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <i>M. PAYNE F.C.L.</i>		SAMPLER(S) SIGNATURES: <i>Mike Payne</i>		SAMPLING INITIATED AT: <i>1437</i>	SAMPLING ENDED AT: <i>1440</i>
PUMP OR TUBING DEPTH IN WELL (feet): <i>70'</i>		SAMPLE PUMP FLOW RATE (mL per minute): <i>< 1Ltr.</i>		TUBING MATERIAL CODE: <i>S + PE</i>	
FIELD DECONTAMINATION: <i>(Y)</i> N		FIELD-FILTERED: <i>Y</i> Filter Equipment Type: _____		FILTER SIZE: _____ μ m DUPLICATE: Y <i>(N)</i>	

[illegible]

REMARKS:

MARKS: X NO. 5 Heen 5

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

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

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

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

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

Attachment D – Sampling Documentation

D.3. Quarterly Monitoring Sampling Documentation (Wells WTE-2S, -4S, -2D and -4D)

Chain of Custody

Field Data Sheets

Ground Water Sampling Logs, FD 9000-24

☐ Flowers Chemical Laboratories, Inc.

☐ Flowers Chemical Labs-South

☐ Flowers Chemical Labs-North

☐ Flowers Chemical Labs-Keys

481 Newburyport Ave.
Altamonte Springs, FL 32701
Bus: 407-339-5984
Fax: 407-260-6110

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

812 S.W. Harvey Greene Dr.
Madison, FL 32340
Bus: 850-973-6878
Fax: 850-973-6878

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 Co. Project Name WTE Quarterly P.O. # _____
Address _____ Client Contact Laura Gray FAX _____
FCL Project Manager Phil Loucks E-MAIL _____

Phone _____ Rush Charges May Apply
Sampled By (PRINT): Johnny Cross / Mike Payne Quick Test: Lee Co. - WTE Quarterly Sec. 8000 Ind. 1
Sampler Signature _____ Date Sampled 1/7/10 Sampling Fee \$ 44
Pick-Up Fee \$ _____ Vehicle Surcharge \$ _____

ITEM NO.	SAMPLE ID	DATE	TIME	MATRIX	(LAB USE ONLY) LAB NO.	PRESERVATIVES				ANALYSES REQUESTED	COMMENTS	Total # Containers
						NONE	H ₂ SO ₄	HNO ₃	HCl	Na ₂ O ₃		
1	WTE-25	1/7/10	1100	GW	113963GW1	✓	✓	✓	✓	✓	CL, TDS, (and) S, Fe, Mn, Hg, Se, TOC	5
2	WTE-2D	1/7/10	1120	↓	2	✓	✓	✓	✓	✓	↓	1
3	WTE-4S	1/7/10	1311	↓	3	✓	✓	✓	✓	✓	↓	1
4	WTE-4D	1/7/10	1330	↓	4	✓	✓	✓	✓	✓	↓	1
5												
6												
7												
8												
9												
10												

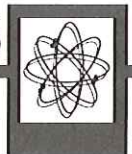
Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
<u>[Signature]</u>	1/8/10	1140	<u>[Signature]</u>	1/8/10	1147

FINANCE CHARGES APPLIED TO PAST DUE INVOICES

Lubett
113963

FIELD DATA SHEET

FLOWERS
CHEMICAL
LABORATORIES
INCORPORATED



Sampler(s) Tommy Cross

Date 1/7/10

Page 1 of 3

Project Name WTE Quarterly wells

Sample Type	WW	SW	<u>GW</u>	DW	Reag.Wtr.	Sludge	Sediment	Soil	Other
-------------	----	----	-----------	----	-----------	--------	----------	------	-------

Sample Site Identification WTE-25, WTE-45

Sampling Method	Grab ☐	Composite ☐	Monitoring Well ☒	Bailer ☐	Pump ☒
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Sampling Equipment Cocotek II peristaltic pump, Polyethylene & Silicon tubing

Site & Weather Conditions clear & cold

Field Instrument Beginning Calibration

Slope

pH Meter	YES	☒	NO		Buffer	4.0	<u>4.01</u>	7.0	<u>7.01</u>	10.0	<u>10.00</u>
Conductivity Meter	YES	☒	NO		Buffer	147		1414	<u>1413</u>	12900	
Turbidity Meter	YES	☒	NO		Buffer	0.5		<u>10</u>	<u>10</u>	40	
DO Meter	YES	☒	NO		Buffer	<u>99.6% saturation</u>		Adjust		From	

Field Filtered	☐ YES ☒ NO	Duplicate	☐ YES ☒ NO	Field Decontamination	☒ YES ☐ NO
----------------	---	-----------	---	-----------------------	---

Parameter	Sample Containers	pH Check
☒ Nutrient	Plastic - H ₂ SO ₄	< 2
☒ Metals	Plastic - HNO ₃	< 2
☐ Sulfide	Plastic - NaOH / Zn Acetate	< 12
☐ Cyanide	Plastic - NaOH / Zn (No sulfide)/Ascorbic Acid	> 12
☐ Bacteriological	Glass - Thiosulfate (DW NO Chlorine Res)	
☐ Oil & Grease	Glass - HCl	< 2
☒ TOC	Plastic - HCl	< 2
☐ VOA	Glass - HCl	< 2
☐ SVOC	Glass - HCl (DW NO Chlorine Res)	
☐ Phenols	Glass - H ₂ SO ₄	< 2
☒ Other	Unpreserved	

Well Diameter	Multiplier
1.5 inches	0.092
2.0 inches	0.163
4.0 inches	0.653
6.0 inches	1.469

Field Instrument Ending Calibration

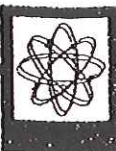
pH Meter	YES	☒	NO		Buffer	4.0		7.0	<u>7.06</u>	10.0	
Conductivity Meter	YES	☒	NO		Buffer	147		1414	<u>1427</u>	12900	
Turbidity Meter	YES	☒	NO		Buffer	0.5		<u>10</u>	<u>10</u>	20.0	
DO Meter	YES	☒	NO		Buffer	<u>99.7% saturation</u>		Adjust		From	

General Site Information / Comments

Lee
CO.P.M. Phil
Loucks

FIELD DATA SHEET

W.T.E. LAB. # 113963

FLOWERS
CHEMICAL
LABORATORIES
INCORPORATED

Sampler(s) Mike PAYNE Date 1-7-10 Page 1 of 3

Project Name WASTE TO ENERGY - Q - wells

Sample Type WW SW GW ☒ DW Reag.Wtr. Sludge Sediment Soil Other

Sample Site Identification W.T.E. 2D, 4D

Sampling Method Grab ☒ Composite ☐ Monitoring Well ☒ Bailer ☐ Pump ☒

Sampling Equipment R.F.R.P. SILICONE + POLYETH. TUBING

Site & Weather Conditions COLD - WINDY

Field Instrument Beginning Calibration

Slope

pH Meter	YES	☒	NO		Buffer	4.0	4.01	7.0	7.0	10.0	
Conductivity Meter	YES	☒	NO		Buffer	100		1000	1411		
Turbidity Meter	YES	☒	NO		Buffer	1.0		10.0	10.0		
DO Meter	YES	☒	NO				99.9% SAT. 1-AT.		0-SAL.		

Field Filtered ☐ YES ☒ NODuplicate ☐ YES ☒ NOField Decontamination ☒ YES ☐ NO

+ LAB. DECON.

Parameter	Sample Containers	pH Check
☒ Nutrient	Plastic - H ₂ SO ₄	< 2
☒ Metals	Plastic - HNO ₃	< 2
☐ Sulfide	Plastic - NaOH / Zn Acetate	< 12
☐ Cyanide	Plastic - NaOH / Zn (No sulfide)/Ascorbic Acid	> 12
☐ Bacteriological	Glass - Thiosulfate (DW NO Chlorine Res)	
☐ Oil & Grease	Glass - HCl	< 2
☒ TOC	Plastic - HCl GLASS	< 2
☐ VOA	Glass - HCl	< 2
☐ SVOC	Glass - HCl (DW NO Chlorine Res)	
☐ Phenols	Glass - H ₂ SO ₄	< 2
☒ Other	Unpreserved	

Well Diameter	Multiplier
1.5 inches	0.092
2.0 inches	0.163
4.0 inches	0.653
6.0 inches	1.469

Field Instrument Ending Calibration

Slope

pH Meter	YES		NO		Buffer	4.0		7.0		10.0	
Conductivity Meter	YES		NO		Buffer	100		1000			
Turbidity Meter	YES		NO		Buffer	1.0		10.0			
DO Meter	YES		NO								

General Site Information / Comments

NEXT EVENT IS 4-10. PARFED per
FDEP 2200.

DEP-SOP-001/01
FS 2200 Groundwater Sampling
Form FD 9000-24
GROUNDWATER SAMPLING LOG

SITE NAME: WTE -	SITE LOCATION: Lee County	
WELL NO: WTE-25	SAMPLE ID: WTE-25	DATE: 1/7/10

PURGING DATA

WELL DIAMETER (inches): 2.00	TUBING DIAMETER (inches): 0.125	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 5.87	PURGE PUMP TYPE OR BAILER: RFP
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY only fill out if applicable) = (12.00 feet - 5.87 feet) X .16 gallons/foot = 0.98 gallons				
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = gallons + (gallons/foot X feet) + gallons = gallons				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 9.00	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 9.00	PURGING INITIATED AT: 1037	PURGING ENDED AT: 1057	TOTAL VOLUME PURGED (gallons): 1.75

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
1046	1.00	1.00	0.09	5.87	7.35	20.9	706	2.45	0.23	none	none
1049	0.25	1.25	0.09	5.87	7.24	21.0	711	2.19	0.34	L	L
1053	0.25	1.50	0.09	5.87	7.20	21.0	716	2.17	0.12	L	L
1057	0.25	1.75	0.09	5.87	7.16	21.0	714	2.20	0.26	L	L

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tommy Cross / FCL		SAMPLER(S) SIGNATURES: 		SAMPLING INITIATED AT: 1100	SAMPLING ENDED AT: 1105
PUMP OR TUBING DEPTH IN WELL (feet): 9.00		SAMPLE PUMP FLOW RATE (mL per minute): 714		TUBING MATERIAL CODE: STPE	
FIELD DECONTAMINATION: ☒ N		FIELD-FILTERED: ☒ Y FILTER SIZE: µm		DUPLICATE: ☐ Y ☒ N	

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

* See C.O.C. *

REMARKS: **no sheen**

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

SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump
EQUIPMENT CODES: RFP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

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

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

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

GROUNDWATER SAMPLING LOG

SITE NAME: WASTE TO ENERGY		SITE LOCATION: Lee CO.	
WELL NO: WTE 2D	SAMPLE ID: WTE 2D	DATE: 1-7-10	

PURGING DATA

[illegible]

SAMPLING DATA

[illegible]

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)

GROUNDWATER SAMPLING LOG

SITE NAME: WTE.		SITE LOCATION: Lee County	
WELL NO: WTE-45	SAMPLE ID: WTE-45	DATE: 11/7/09	

PURGING DATA

WELL DIAMETER (inches): <u>2.00</u>		TUBING DIAMETER (inches): <u>0.25</u>		WELL SCREEN INTERVAL DEPTH: feet to feet		STATIC DEPTH TO WATER (feet): <u>6.76</u>		PURGE PUMP TYPE OR BAILER: <u>RFP1?</u>			
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY only fill out if applicable) = (<u>13.40</u> feet - <u>6.76</u> feet) X <u>.16</u> gallons/foot = <u>1.06</u> gallons											
EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable) = gallons + (gallons/foot X feet) + gallons = gallons											
INITIAL PUMP OR TUBING DEPTH IN WELL (feet): <u>9.00</u>			FINAL PUMP OR TUBING DEPTH IN WELL (feet): <u>9.00</u>			PURGING INITIATED AT: <u>1251</u>		PURGING ENDED AT: <u>1308</u>		TOTAL VOLUME PURGED (gallons): <u>2.75</u>	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (umhos/cm or mhos/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR, (describe)
<u>1258</u>	<u>1.25</u>	<u>1.25</u>	<u>0.16</u>	<u>6.76</u>	<u>7.35</u>	<u>24.3</u>	<u>583</u>	<u>1.02</u>	<u>0.17</u>	<u>none</u>	<u>none</u>
<u>1301</u>	<u>0.50</u>	<u>1.75</u>	<u>0.16</u>	<u>6.76</u>	<u>7.12</u>	<u>24.5</u>	<u>613</u>	<u>1.03</u>	<u>0.00</u>	<u>I</u>	<u>I</u>
<u>1305</u>	<u>0.50</u>	<u>2.25</u>	<u>0.16</u>	<u>6.76</u>	<u>7.10</u>	<u>24.5</u>	<u>626</u>	<u>0.91</u>	<u>0.00</u>	<u>I</u>	<u>I</u>
<u>1308</u>	<u>0.50</u>	<u>2.75</u>	<u>0.16</u>	<u>6.76</u>	<u>7.13</u>	<u>24.5</u>	<u>628</u>	<u>0.96</u>	<u>0.00</u>		
WELL CAPACITY (Gallons Per Foot): <u>0.75"</u> = 0.02; <u>1"</u> = 0.04; <u>1.25"</u> = 0.06; <u>2"</u> = 0.16; <u>3"</u> = 0.37; <u>4"</u> = 0.65; <u>5"</u> = 1.02; <u>6"</u> = 1.47; <u>12"</u> = 5.88 TUBING INSIDE DIA. CAPACITY (Gal./Ft.): <u>1/8"</u> = 0.0006; <u>3/16"</u> = 0.0014; <u>1/4"</u> = 0.0026; <u>5/16"</u> = 0.004; <u>3/8"</u> = 0.006; <u>1/2"</u> = 0.010; <u>5/8"</u> = 0.016											

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Tommy Cross / FCL				SAMPLER(S) SIGNATURES: 			SAMPLING INITIATED AT: 1311		SAMPLING ENDED AT: 1316		
PUMP OR TUBING DEPTH IN WELL (feet): 9.00				SAMPLE PUMP FLOW RATE (mL per minute): 7 ltr			TUBING MATERIAL CODE: 5+PE				
FIELD DECONTAMINATION: ☒ Y ☐ N				FIELD-FILTERED: Y ☒ ☐ FILTER SIZE: _____ µm Filtration Equipment Type: _____			DUPLICATE: Y ☒ ☐ NP				
SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS AND/OR METHOD		SAMPLING EQUIPMENT CODE	
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH					
* See C.O.C. *											
REMARKS: no sheen											
MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)											
SAMPLING/PURGING APP = After Peristaltic Pump; B = Bailor; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump EQUIPMENT CODES: RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)											

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

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

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

GROUNDWATER SAMPLING LOG

SITE NAME: WASTE TO ENERGY		SITE LOCATION: Lee Co.	
WELL NO: WTE 4D	SAMPLE ID: WTE 4D	DATE: 1-7-10	

PURGING DATA

WELL DIAMETER (inches): <u>4</u>	TUBING DIAMETER (inches): <u>.25</u>	WELL SCREEN INTERVAL DEPTH: <u>65</u> feet to <u>75</u> feet	STATIC DEPTH TO WATER (feet): <u>6.87</u>	PURGE PUMP TYPE OR BAILER: <u>REF BP</u>
WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH - STATIC DEPTH TO WATER) X WELL CAPACITY				
only fill out if applicable)				
= (feet - feet) X gallons/foot = gallons				

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

= 8 gallons + (.0026 gallons/foot X 70' feet) + 1 LTR. gallons = ~.5 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 70'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 70'	PURGING INITIATED AT: 1305	PURGING ENDED AT: 1328	TOTAL VOLUME PURGED (gallons): 3.5
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[illegible]

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

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <i>M. PAYNE F.C.L.</i>		SAMPLER(S) SIGNATURES: <i>Mike Payne</i>		SAMPLING INITIATED AT: <i>1330</i>	SAMPLING ENDED AT: <i>1333</i>
PUMP OR TUBING DEPTH IN WELL (feet): <i>70'</i>		SAMPLE PUMP FLOW RATE (mL per minute): <i>< 1 LTR.</i>		TUBING MATERIAL CODE: <i>STPE</i>	
FIELD DECONTAMINATION: <i>(Y)</i> N		FIELD-FILTERED: Y <i>(N)</i> Filtration Equipment Type: _____		FILTER SIZE: _____ μ m DUPLICATE: Y <i>(N)</i>	

[illegible]

REMARKS:

* NO SHEENS

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

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

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

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

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