

#### **BOARD OF COUNTY COMMISSIONERS**

Bob Janes District One

May 27, 2010

A. Brian Bigelow District Two

Ray Judah District Three

Mr. Charles Emery III
Solid Waste Administrator

Tammy Hall District Four Florida Department of Environmental Protection

P.O. Box 2549

Frank Mann District Five Fort Myers, FL 33902-2549

Karen B. Hawes County Manager

David M. Owen

County Attorney

RE: Le

Lee County Resource Recovery Facility

WACS ID No. 00093715

Transmittal of Electronic Media

Second Quarter 2010 Water Quality Monitoring Report

Diana M. Parker County Hearing Examiner

Dear Mr. Emery:

Enclosed please find a compact disc (CD) containing the three (3) electronic files which comprise the referenced Water Quality Monitoring Report for the Lee County Resource Recovery Facility. The electronic files were developed in accordance with the Department's guidance document entitled 'Guidance for Submitting Electronic Water Quality Data to the Solid Waste Program', dated June 25, 2009. The following files are provided on the enclosed CD:

93715\_201004\_swfdd.csv

93715\_201004\_swldd.csv

93715\_201004.pdf (provides the written narrative and attachments)

If you have any questions pertaining to this transmittal, please call me at (239) 533-8930.

Sincerely

Laura A. Gray, P.E.

Engineering Manager Solid Waste Division RECEIVED MAY 2 8 2010

D.E.P. South District

Attachments

:: FDEP, Tallahassee; FDEP Siting Coordination Office

L. Sampson, K. Howard, LCSW; G. Ball-Llovera, K. Chardo, Covanta

File II E107



#### **BOARD OF COUNTY COMMISSIONERS**

Bob Janes District One May 26, 2010

A. Brian Bigelow District Two

Mr. Charles Emery III, Solid Waste Administrator Florida Department of Environmental Protection

P.O. Box 2549

Tammy Hall District Four

Ray Judah

Fort Myers, FL 33902-2549

Frank Mann District Five

Re: Lee County Resource Recovery Facility, PA-90-30H

Second Quarter 2010 Water Quality Monitoring Report, WACS No. 93715

Karen B. Hawes County Manager

David M. Owen County Attorney

Dear Mr. Emery:

Diana M. Parker County Hearing Examiner Enclosed please find the Second 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 the 'Group 2' ground water monitoring wells on April 7, 2010. The Group 2 wells include shallow (surficial aquifer) monitoring wells WTE-1S, WTE-3S, WTE-5S and WTE-6S and deep (sandstone aquifer) monitoring wells WTE-1D, WTE-3D, WTE-5D, and WTE-6D. The ground water samples were analyzed for the parameters listed in the quarterly monitoring program in accordance with the Facility's approved ground water monitoring plan dated August 1992 and revised on April 3, 1996. The results from the second quarter 2010 monitoring event were evaluated against the Department's water quality standards established in Chapter 62-550, F.A.C. and are summarized below.

#### **Ground Water Monitoring Data Discussion**

Ground water from all Group 2 shallow monitoring wells 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-3D, WTE-5S, WTE-5D and WTE-6D exceeded 500 mg/L, which is the secondary drinking water standard for TDS as 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 water quality standard is exceeded in that well. Based on this allowance, only well WTE-5S exceeded the water quality standard for TDS.

Ground water from monitoring well WTE-3D also exceeded the water quality standard for Chloride which is 250 mg/L as established by Rule 62-550, F.A.C. The TDS and Iron concentrations for wells that exceeded the corresponding water quality standard for TDS and Iron are provided in Table 1.1 below. The parameter concentrations for wells that exceeded a water quality standard for parameters other than TDS and Iron are provided in Table 1.2 below.

Mr. Charles Emery III May 26, 2010 Page 2 of 3

Table 1.1- Summary of TDS and Iron Concentrations in Wells that Exceeded Department Standards for TDS and Iron as Established in Chapter 62-550, F.A.C.

Parameter	WTE-1S	WTE-3S	WTE-5S	WTE-6S
Iron (mg/L)	2.35	1.25	2.16	1.84
TDS (mg/L)	BS	BS	600	BS
Parameter	WTE-1D	WTE-3D	WTE-5D	WTE-6D
Iron (mg/L)	BS	BS	BS	BS
TDS (mg/L)	506	1440	668	704

Department (Water Quality) Standards: Iron-0.3 mg/L; TDS-500 mg/L (except as noted); BS-Below Standard. Where TDS > 500 mg/L but no other standard exceeded, TDS is below Department standard.

Table 1.2- Summary of Concentrations in Wells that Exceeded Department Standards for Parameters Other than TDS and Iron

Parameter	WTE-3D	
Chloride	516	

Department (Water Quality) Standards are established in Chapter 62-550, F.A.C.; WQS: Chloride-250 mg/L

#### **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 and Contour Maps**

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 Attachment B. Additionally, as required by Section A, Condition XXXI. D. of the Facility's modified Conditions of Certification PA90-30H dated March 22, 2010, the ground water elevations determined as described above and summarized in Table 2 below were used to develop ground water contour maps for the surficial and sandstone aquifers. The ground water contour maps are also provided in Attachment B of this WQM Report.

Mr. Charles Emery III

May 26, 2010 Page 3 of 3

Table 2. Ground Water Elevations (ft., NGVD) Measured April 6, 2010

WELL ID	Elevation (ft., NGVD)	WELL ID	Elevation (ft., NGVD)
WTE-1S	19.81	WTE-1D	12.38
WTE-2S	19.38	WTE-2D	18.28
WTE-3S	19.4	WTE-3D	18.41
WTE-4S	16.92	WTE-4D	16.02
WTE-5S	19,28	WTE-5D	17.9
WTE-6S	16.28	WTE-6D	15.45

#### 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 second quarter 2010 water quality data is consistent with prior monitoring results and background data for the Facility with the exception of the Chloride and Total Dissolved Solids concentrations at well WTE-3D. 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. Therefore, no additional monitoring is recommended at this time. 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 Water Quality Monitoring Report.

Laura A. Gray, P.E. Engineering Manager

No. 50 lid 8 Waste Division

Nemec, B. Krumbholz, DEP; L. Sampson, K. Howard, SWD;

Ball-Llovera, 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 Contour Maps and Supporting Data

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

Attachment D - Sampling Documentation

D.1. Quarterly Monitoring Sampling Documentation (Shallow Wells) (Wells WTE-1S, 3S, 5S, 6S)

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

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

Chain of Custody (Same as D.1.) Field Data Sheets Ground Water Sampling Logs, FD 9000-24

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

# DEP Form #\_ 62-520.900(2) Form Title Ground Water Monitoring Report

## Florida Department of Environmental Protection

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

Effective Date	
DEP Application No.	

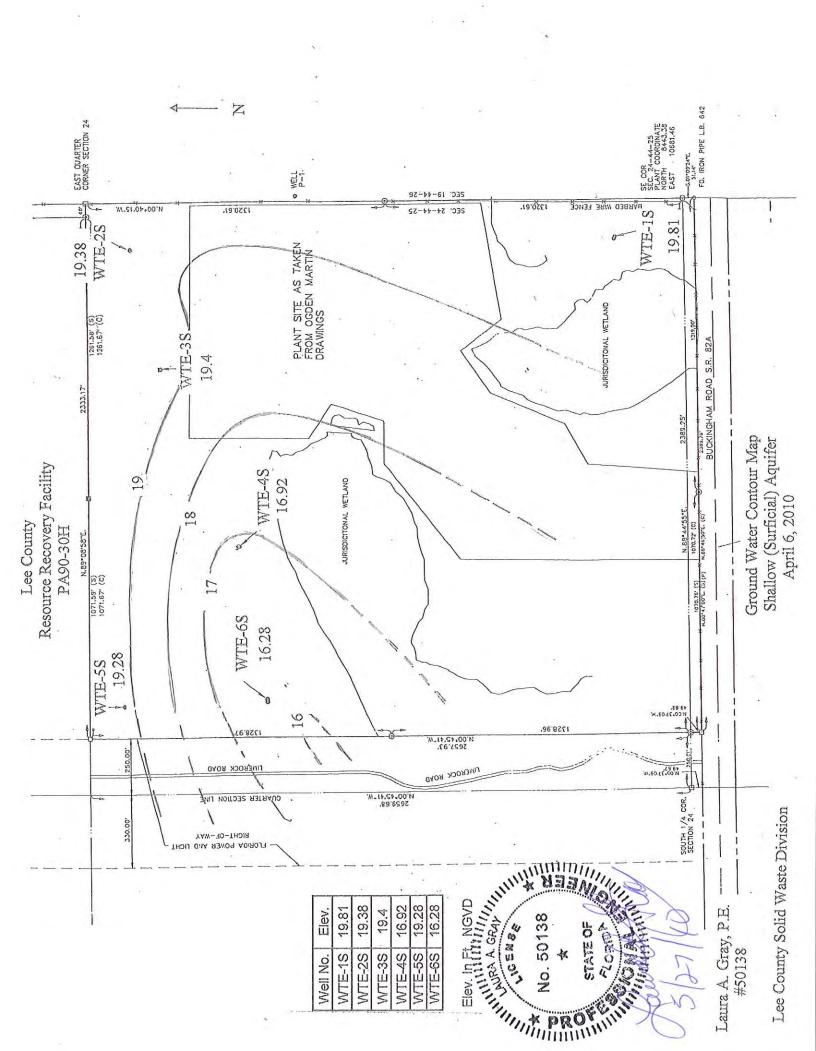
## **GROUND WATER MONITORING REPORT**

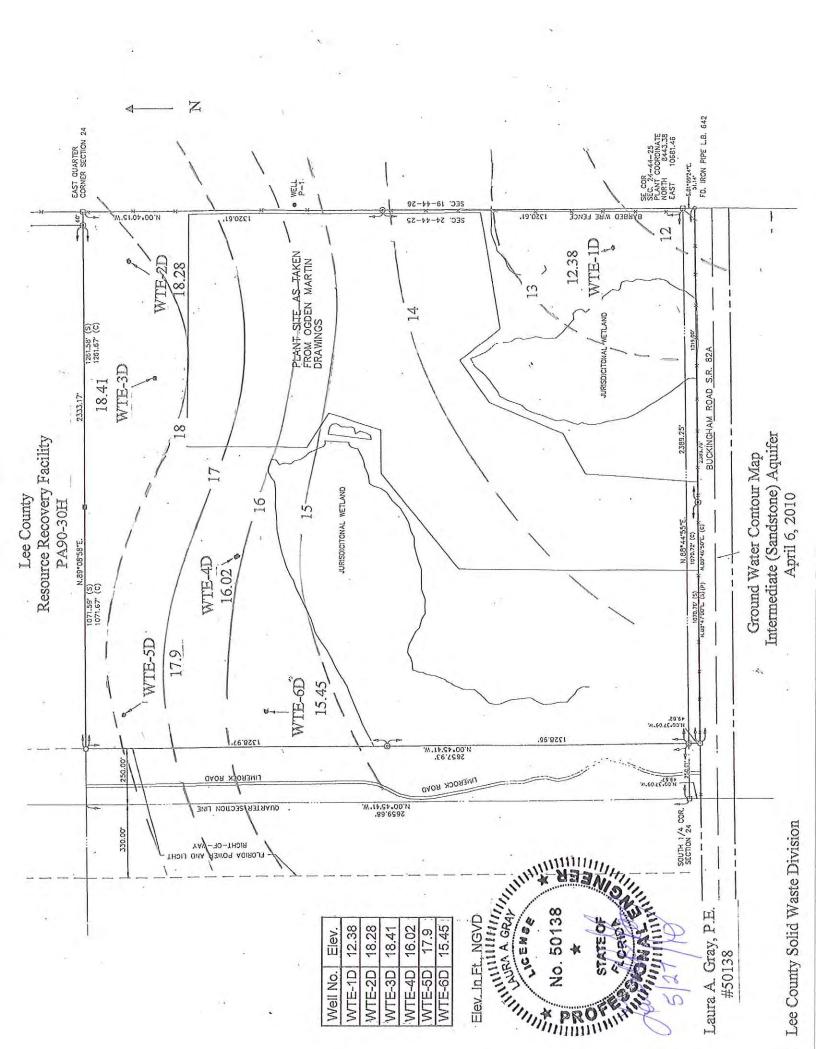
Rule 62-520.600(11)

PART I GENERAL INFORMATION

(1) Facility Name : Le	ee County Resource Recovery Facility
Address 10500 B	uckingham Road
City Ft. Myers	Zip 33905
Telephone Numbe	r ( 239) 533-8000
The GMS Identification	Number: WACS ID No. 93715
(3) DEP Permit Numb	er <u>PA 90-30</u>
(4) Authorized Repres	sentative Name Lindsey J. Sampson
Address 10500 B	uckingham Road, 2 <sup>nd</sup> floor
City Ft. Myers	Zip 33905
Telephone Number	r ( 239 ) 533-8000
(5) Type of Discharge	NA
all attachments and that that the information is tr including the possibility	Certification  f law that I have personally examined and am familiar with the information submitted in this document and to be be been been been been been been be
PART II QUALITY ASSU	JRANCE REQUIREMENTS
Sample Organization	Comp QAP # E83018
Analytical Lab	Comp QAP # /HRS Certification # E83018
	*Comp QAP # /HRS Certification #
Lab Name _Flowers Ch	nemical Laboratories, Inc.
Address P.O. Box 150	597, Altamonte Springs, FL 32715-0597
Phone Number (407 ) 3	39 -5984

Lee County Solid Waste Energy Recovery Facility WACS ID No. 0093715 Second Quarter, 2010 Water Quality Monitoring Report Attachment B - Ground Water Contour Maps and Supporting Data





Elevation Computation Table Given TOC Elev and Measured Depth to Water Depth to Water Measurements Taken on April 6, 2010 (2nd Quarter 2010) WTE Ground Water Monitoring Well Elevations

			Water Elevation, Ft.,
Well No.	Elev. TOC, NGVD	Depth to Water, Ft.	NGVD
WTF-1S	21.91	2.1	19.81
WTF-1D	22.96	10.58	12.35
WTE-2S	24.18	8,4	19.38
WTE-2D	23.52	5.24	18.28
WTE-3S	25.75	6.35	19.4
WTE-3D	27.13	8.72	18.41
WTE-4S	22.48	5.56	16.92
WTE-4D	23.81	7.79	16.02
WTE-5S	23.81	4.53	19.28
WTE-5D	24.5	9.9	17.9
WTE-6S	23.66	7.38	16.28
WTE-6D	22.91	7.46	15.45

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)



DATE:	Monitoring V	Well Inspection For	m s
SITE NAME:	WTE	ALL ALPROPERTY IN NOTICE CONTROL OF THE PARTY OF THE PART	·
SITE LOCATION:	Lee Com	- rka	
WELL NUMBER:	WIE-15Shall	lowDcep W	ELL DIAMETER: 200"
LOCATION:	LandfillPercolation	PondO&M Build	dingWTE Site
	Background		2
			IC DEPTH TO WATER 2.10
			19.81
Comments: (PER )	donitoring Well Inspection	on A12 of A19 of Com	ract):
SITE NAME:	WIE	<del> </del>	
SITE LOCATION:	Lee County		
			ELL DIAMETER: 4.00 1
LOCATION:	LandfillPercolation	PondO&M Buil	dingWTE Site
	Background		
			IC DEPTH TO WATER 10.58
	NGVD: (TOC Elevation -		
Comments: (PER M	Monitoring Well Inspection	on 12 of A 19 of Com	tract):
	— TO REACCES 181		



## Monitoring Well Inspection Form DATE: \_\_\_\_\_ SITE NAME: WTE SITE LOCATION: Lee County WELL NUMBER: WIE 25 \_\_Shallow \_\_ Deep WELL DIAMETER: 2.00" LOCATION: \_\_\_Landfill \_\_\_\_Percolation Pond \_\_\_\_O&M Building \_\_\_\_WTE Site WELL TYPE: \_\_\_\_\_ Background \_\_\_\_ Detection TOC Elevation: 2418' TOTAL WELL DEPTH: 12.00' STATIC DEPTH TO WATER 4.80 Comments: (PER Monitoring Well Inspection on A12 of A19 of Contract):\_\_\_\_\_\_ Everything was Inspected, Everything is OK. *Илининализарилинализарилинализарилинализаринализаринализаринализаринализаринализаринализарин* DATE: \_\_\_\_\_\_4/6/10 SITE NAME: WTE SITE LOCATION: Lee County WELL NUMBER: WIE. 2D \_\_\_ 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 5,24 GROUNDWATER NGVD: (TOC Elevation - Static Depth to Water) \_\_\_\_\_ 18:28 Comments: (PER Monitoring Well Inspection on A12 of A19 of Contract); Every thing was Inspected, Every thing is all.



DATE:	Monitor 4/6/10	ring Well Inspection	Form	Contract Con
SITE NAME:				
		unty		
WELL NUMBER: 6	NE-35 V	ShallowDeep	WELL DIAMETER:	2.00"
LOCATION:I	andfillPercole	ation PondO&M I	BuildingWTE	Site
		Detection		
TOC Elevation: 込ぐ	75 TOTAL WELL	L DEPTH: 16.95 ST	TATIC DEPTH TO WA	TER 6.35
		tion - Static Depth to Wa		
Comments: (PER M	onitoring Well Inspect his was Inspect	ction on A12 of A19 of C	Contract):	
		00000000000000000000000000000000000000		HHHHHHHHHHHH
		was the set of the set		
SITE LOCATION:	Lee Cou	nty		
WELL NUMBER:	WE-30	_ShallowDeep	WELL DIAMETER:	4,000
LOCATION:I	andfill Percol	ation PondO&M	BuildingWTE	Site
WELL TYPE:	Background	Detection	Com	pliance
		L DEPTH: 92.00° S		
GROUNDWATER	NGVD: (TOC Eleva	tion - Static Depth to W	ater)	
Comments: (PER M	onitoring Well Inspe Thing was Lasji	ction on A12 of A19, of oceted, Everything	Contract):	P-04



DATE:	Monitoring Well Inspection Form	
SITE NAME;	WIE	
SITE LOCATION:	Les County	
WELL NUMBER: (	TE.45 Shallow Deep WELL DIAMETER: 2.00	211
LOCATION:I	andfillPercolation PondO&M BuildingWTE Site	
WELL TYPE:	BackgroundCompliance	
TOC Elevation: 22	(8) TOTAL WELL DEPTH: 12.40' STATIC DEPTH TO WATER 5	156
GROUNDWATER	NGVD: (TOC Elevation – Static Depth to Water)	
Comments: (PER M	onitoring Well Inspection on A12 of A19 of Contract):	
		·/////////////////////////////////////
SITE LOCATION:	Lee County	
WELL NUMBER:	TE-412ShallowDeep WELL DIAMETER: 4.00	, , ,
LOCATION:	andfillPercolation PondO&M BuildingWTE Site	
WELL TYPE:	Background Compliance	
TOC Elevation: 2	SEL TOTAL WELL DEPTH: 96.00' STATIC DEPTH TO WATER	7.79
GROUNDWATER	NGVD: (TOC Elevation – Static Depth to Water)	
	onitoring Well Inspection on A12 of A19 of Contract):	



Monitoring Well Inspection Form  #/6/10
SITE NAME: WIE
SITE LOCATION: Lee County
WELL NUMBER: WIE 5 Shallow Deep WELL DIAMETER: 2.00"
LOCATION:LandfillPercolation PondO&M BuildingWTE Site
WELL TYPE: Background Detection Compliance
TOC Elevation: 23.81' TOTAL WELL DEPTH: 17.45' STATIC DEPTH TO WATER 4.5
GROUNDWATER NGVD: (TOC Elevation - Static Depth to Water) 19.28
Comments: (PER Monitoring Well Inspection on \$12 of A19 of Contract):  Every Thing was Inspected, Every Thing it O.K.
инининализанданданданданданданданданданданданданда
SITE NAME: WTE
SITE LOCATION: Lee County
WELL NUMBER: 4.00" Shallow Deep WELL DIAMETER: 4.00"
LOCATION:LandfillPercolation PondO&M BuildingWTE Site
WELL TYPE: Background Detection Compliance
TOC Elevation: 24.50 TOTAL WELL DEPTH: 94.00 STATIC DEPTH TO WATER 6.60
GROUNDWATER NGVD: (TOC Elevation - Static Depth to Water)
Comments: (PER Monitoring Well Inspection on A12 of A19 of Contract):



DATE:	4/6/10 Monito	oring Well Inspection	Form	
SITE NAME:	WIF			
SITE LOCATION:	Lee	County		
WELL NUMBER: 🎑	E-65	ShallowDeep	WELL DIAME	ETER: _2.00'
LOCATION:La	ndfillPerco	olation PondO&M	Building	_WTE Site
WELL TYPE:	Background	Detection	1	_ Compliance
TOC Elevation: 23.6	6. TOTAL WEI	L DEPTH: 19.98" S	TATIC DEPTH	TO WATER 7.38"
GROUNDWATER NO	GVD: (TOC Eleva	ation - Static Depth to W	/ater)	18'
		ection on A12 of A19 of extent, Every Thing	Contract):	
DATE:			And the second s	
SITE LOCATION:	Lee Go	muty		
WELL NUMBER: 仏	E-60	_ShallowDeep	WELL DIAMI	ETER: 4.00 "
LOCATION:Lai	ndfillPerco	lation PondO&M	Building	WTE Site
WELL TYPE:	Background	Detection	1	_ Compliance
TOC Elevation: 22.6	TOTAL WEL	L DEPTH: 96.00' S	TATIC DEPTH	TO WATER 7.46
GROUNDWATER NO	GVD: (TOC Eleva	ation - Static Depth to W	'ater)/5	1.45
Comments: (PER Mon	itering Well Inspe	ection on a 12/81 A 19 of	Contract):	Z

## Attachment D – Sampling Documentation

D1. Quarterly 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. Quarterly Monitoring (Deep) Sampling Documentation (Wells WTE-1D, -3D, -5D and -6D)

Chain of Custody (same as D.1.)
Field Data Sheet
Ground Water (GW) Sampling Logs, FD 9000-24

## Attachment D - Sampling Documentation

D1. Quarterly 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

Chain of Custody

-	
c	
+	
5	
C	
-	
5	
C	
5	
Ď,	١
5	
č	
A	
7	
ç	
-	
č	
00	۱
×	
C	

Flowers Chemical Labs-South | Flowers Chemical

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

Labs-North

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

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



DOWNLOAD REPORTS, INVOICES AND CHAINS OF	RTS,	0 2 2	ICES AN	AD CHA		CUST	<b>∆</b> 00	WWW	CUSTODY www.flowerslabs.com	rslab	s.com							
Lee Co. Solid Waste	50/16	210	12/2				Projec	Project Name	: Grow	Lowo?	6	144	a.	P.O. #				
Address							Client	Client Contact	ct	Sales	+		ĬĿ.	FAX				ĺ
							FCLF	FCL Project Manage	-	1			ù	E-MAIL				ĺ
Phone							Requi	Requested Due Date	ard	η <u></u>			8	Sush Charge	Charges May Apply	LIE CA	200	1 Apr
Sampled By (PRINT):	1250	W:lce	Day w	4			Pick-Up Fee	s d			Vehicle Surcharge	8	Z.		Sampling	S	100	
Sampler Signature	P	. 11	0 0	Date Sampled				PRESE	PRESERVATIVES	A B	ANALYSES	,	3			CON	COMMENTS	Siers
GW - ground water SW - surface water	1	W - drinking S - soil/solid	water SL -	1 (0	stewater HW - waste	te	31	-	32O3		THE	W. S.	Mar H	20			3-170 11	istnoO #
ITEM SAMPLE ID		DATE	TIME	MATRIX	(LAB USE ONLY) LAB NO.	E ONLY)	NON	ONH S <sup>z</sup> H	нсі		173	S	Est	7				Total
1 WIE-15	9	6/1/1	25/20 6/1/4	B	1206	216w (	4	7	+	0	7	7	7				'n	1
2 WTE-1D		-	6330	_	_	,,,	[ 2		_	) -		. –	-					
3 WE-35			1025			1, 1	2											
4 WE-3D			1025			Ü												
5 WTE-65			13			· N	10											
6 WE-6D			1120			9												
7 WIE-55			1205			1-	7											
" WE-5D		4	1215	7	>	∞	-1	7	7	7	-/-	7	1					7
o															-			
10																		
Relinquished By / Affiliation	Date	e Time		Accepted By / Affiliation	Iliation	Date	Time	Rei!	Relinguished By / Affiliation	// Affiliation	Date	te Time	e e	Accepted	Accepted By / Affiliation	Date	e Time	
								1					-	1	1	-		T

Field Data Sheet



## FIELD DATA SHEET



Sampler(s)	Tomm	y Cros	5		Date	4/7	110	Page	( of	5
Project Name	Lee C	io.: WT	E - G	) - wel	15					
	ww	sw	[8W]	DW	Reag.Wtr.	Sludge		ediment	Soil	Other
, , , , , , , , , , , , , , , , , , ,								Connent		Tollier
Sample Site Indentific	-	_		, WIE-C				er. 🗆	- Company	D/
Sampling Method		Srab []	Compo		. Monitoring	g Well	Bail	er. U	Pump	
Sampling Equipment	1/20	echill	Deristal.	ic pump	, tolye	Thefence	+51/120	2 Tubin		
Site & Weather Cond	illions e	lewt un	114							
ield Instrument Be	glnning	Calibration		,				,		Slope
pH Meter	YES	NO.		Buffer	4.0	4.07	7.9	7.07	10.0	10.11
Conductivity Meter	YES	NO		Buffer	100		1000	1414		
Turbidity Meter	YES	NO		Buffer	1.0		10.0	10.0		
DO Meter	YES	NO	99.7	To sature	11					
Field Filtered	YES	U-NO	Dupli		s ANO		Field Decor	ntamination	YES [	NO
Parameter		Sample Co	ntainom		- pH C	Check '				
	Plastic -		maniers		<2	- I	Well D	liameter		ultiplier .092
Nutrient Metals	Plastic -				<2		2.0 inc	Section 1		.163
		NaDH / Zn A	natata		< 12		4.0 ind			.653
Sulfide -		NaDH / Zn (N		saarbia Asid	> 12		0.0 111			.469
Cyanide					1212					
Bacteriological Oil & Grease	Glass - H	hiosulfate (D	W NO Chio	rine Hes)	<2		2.4			
TOC TOC	Plastic -				<2		N. I			
□ VOA	Glass - F				<2					
□ svoc		ICI (DW NO	Chlorine Re	s)	1				- 4	
Phenols	Glass - H				<2	-				
Other O	Unprese				+					
ield Instrument Er	1		-	•						5/00
pH Meter	YES	NO	_	Buffer	4.0		7.0	7.09	10.0	
Conductivity Meter	YES	NO	)	Buffer	100		1000	1427		
Turbidity Meter	YES	NO	)	Buffer	1.01		10.0	10.0		
DO Meter	YES	NO	1	170500	V/ V.			1	1	

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

### **GROUNDWATER SAMPLING LOG**

SITE NAME:	WIE	E				SITE LOCATION:	Lee	Co.		4 1 2	
WELL NO:	WIE-	15		SAMPLE	$-\omega$	TE-15			DATE: 4//	7/10	
					PURG	SING DA	ATA				
WELL VOL		TUBING DIAMETER (I 1 WELL VOLU	nches <b>0, 25</b> IME = (TOTA	DEPTH:	REEN INTER feet to TH - STA	feet	STATIC DI TO WATEI TO WATER)		PURGE PUMP T OR BAILER: A ACITY		
EQUIPMEN	if applicable)  NT VOLUME PU if applicable)	IRGE: 1 EQUIF	= ( PMENT VOL.	= PŮMP VOL	feet - 2. .UME + (TUB	ING CAPAC			gallons/foot TH) + FLOW CEL eet) +	L VOLUME gallons =	gallons
	MP OR TUBING	6.00	FINAL PUM DEPTH IN V	P OR TUBINO VELL (feet):	6.00	PURGII	NG ED AT: 090	PURGING ENDED A	T: 0922	TOTAL VOLUM PURGED (galle	ME ons): <b>3.</b> 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 co/cm)	DISSOLVED OXYGEN (circle policion) % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
0914	2.25	2.25	0.21	2.37	6.93	20.3	655	0.62	1.90	none	none
0917	0.75	3.00	0.21	2.37	6.78	20.3	670	0.68	2.10	1	1
WELL CAP	PACITY (Gallons	s Per Foot): 0.7			1.25" = 0.00 = 0.0014;	5; 2" = 0. 1/4" = 0.00 LING D	26; 5/16"				" = 5.88 " = 0.016
	BY (PRINT) / A  My Cro:	,	SA	AMPLER(S) S			AIA	SAMPLING INITIATED AT:	0925	SAMPLING ENDED AT:	0930
PUMP OR DEPTH IN	TUBING WELL (feet):	6.00	FI	MPLE PUMP OW RATE (n	nL per minute		TER SIZE:	TUBING MATERIAL CO	DE: SHPU	=	
FIELD DEC	CONTAMINATIO		0.23	tration Equip		1.12	TEN OILL.		DUPLICATE:	Y	
SAMPLE II	SPECIF	CONTAINER FICATION MATERIAL RS CODE	VOLUME	PRESER	VATIVE	PLE PRESE TOTAL V DED IN FIE	OL	FINAL pH	INTENDED ANALYSIS AND METHOD	2.2.3.3.4. Yes	AMPLING QUIPMENT CODE
							1				
		A	500	2	-0	C. 7					
							1				
REMARKS											
MATERIAL	CODES	AG = Amber	Glass: CG	= Clear Glass	. <b>PF</b> = Pr	olyethylene;	PP = Polv	propylene; S =	Silicone; T = T	eflon; O = Ot	her (Specify)
SAMPLING	PURGING	APP = After Per	istaltic Pump	B = Ba	iler; BP	= Bladder F	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SP = Electric Sub		PP = Perista O = Other	

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

### **GROUNDWATER SAMPLING LOG**

SITE NAME:	W	TE.				SITE LOCATION:	Le	· Co.			
WELL NO	WIF	-35		SAMPLE	ID: L	TE-	35		DATE: 4	17/10	
					PURC	SING DA	ATA				
WELL DIAMETE	R (inches) <b>2.00</b>	TUBING DIAMETER (	nches) 0. 2	DEPTH:	REEN INTER	feet	STATIC DI TO WATEI	R (feet)	PURGE PUMP OR BAILER:	YPE PPP	
only fill or	ut if applicable)		= ( /	6.95	feet - 6.	56	feet)	X WELL CAP		t = 1.66	gallons
(only fill or	NT VOLUME PU	JRGE: 1 EQUIF	MENT VOL	= PUMP VOL	.UME + (TUE allons + (	BING CAPAC	ITY X ons/foot X	TUBING LENG	TH) + FLOW CEI feet) +	L VOLUME gallons =	gallons
	UMP OR TUBIN	<sup>G</sup> 9.00		IP OR TUBINO	3	PURGII		PURGIN		TOTAL VOLU	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm	DISSOLVED OXYGEN (circle_moth or % saturation)	TURBIDITY	COLOR (describe)	ODOR (describe)
1010	1.75	1.75	0.19	6.65	736	21.8	389	0.76	9.30	none	none
1014	0.50	2.25	0.19	6.65	7.15	21.8	386	0.87	13.00	1	1
1018	0.50	2.75	0.19	6.65	7.12	21.8	391	0.94	11.00	+	
1021	0.50	3.25	0.19	6.65	7.03	21.0	400	0.96	2.90		1
WELL CA TUBING I	PACITY (Gallon NSIDE DIA. CAF	s Per Foot): 0.7	'5" = 0.02; ): 1/8" = 0.0	1" = 0.04; 0006; 3/16"	<b>1.25"</b> = 0.0 = 0.0014;				The state of the second		2" = 5.88 3" = 0.016
		EFU 1171011		AAADI ED/O/ O		LING D	ATA				
	MMYCre	5	11.7	AMPLER(S) S	IGNATURE		2	SAMPLING INITIATED AT:	1025	SAMPLING ENDED AT:	1030
PUMP OR	TUBING WELL (feet):	0		AMPLE PUMP LOW RATE (n	nL per minute	> 14	r	TUBING MATERIAL CO	DE: 5+PE		
	CONTAMINATIO	17.50	F	IELD-FILTERE	D: Y	FIL	TER SIZE: _	μm	DUPLICATE:		り
		CONTAINER				PLE PRESE	RVATION		INTENDED	1.00	AMPLING QUIPMENT
SAMPLE CODE		MATERIAL	VOLUME	PRESER' USE		TOTAL VO	DL LD (mL)	FINAL pH	ANALYSIS AND METHOD	7/OK EC	CODE
			1					1			
		0	4/		1	17	107				
		1	1.0	ce	C.	V. C	-· N				
						-11-					
REMARKS	S;										
MATERIA	L CODES:	AG = Amber	Glass; CG	= Clear Glass	; <b>PE</b> = Po	olyethylene;	PP = Poly	propylene; S =	Silicone; T = T	eflon; O = O	ther (Specify)
SAMPLIN	G/PURGING	APP = After Per	istaltic Pump	; B = Ba	iler; BF	= Bladder P	ump; Es	SP = Electric Sub	mersible Pump; = Vacuum Trap;	PP = Perist O = Other	
EQUIPME	NT CODES:	RFPP = Reverse		allic Pump;		A CONTRACTOR OF THE PARTY OF TH	The second second second	5.36	racaom map,	5 011101	V-1-4011

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

#### **GROUNDWATER SAMPLING LOG**

SITE NAME:	425	E				SITE LOCATION:	Lee	Lo.			
WELL NO:	GITE	-55		SAMPLE	tea	TE-5	5		DATE: 4	1/7/10	
	00.0					SING DA					
WELL DIAMETER	R (inches)2.00	TUBING DIAMETER (	inches $\mathcal{O}$ , $\lambda$	DEPTH:	REEN INTER	feet		R (feet).4.64	PURGE PUMP OR BAILER:	RIPPE	
WELL VO	LUME PURGE: t if applicable)	1 WELL VOLU	JME = (TOTA	L WELL DEF	PTH - STA			X WELL CAP	ACITY	t = 2-05	gallons
	NT VOLUME PU	JRGE: 1 EQUIP	PMENT VOL.	7.45 = PUMP VOI	.UME + (TUE	BING CAPAC	ITY X	TUBING LENG	TH) + FLOW CEI	LL VOLUME	
	Account of the second	0 1		= g P OR TUBING	allons + (	gall	ons/foot X	PURGING	eet) +	gallons =	gallons
DEPTH IN	JMP OR TUBING WELL (feet):	9.00 CUMUL.		VELL (feet):	9.00		ED AT: 114		T: 1200	PURGED (gallo	ns): 450
TIME	VOLUME PURGED (gallons)	VOLUME PURGED (gallons)	PURGE RATE (gpm)	TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm oras/co)	OXYGEN (circle pg/Dor % saturation)	-	COLOR (describe)	ODOR (describe)
1148	2.25	2.25	0.23		7.07	22.5	835	0.71	2.00	none	none
1152	0,75	3.00	0.23			22.3	830	0.83	2.50		
1200	0.75	3.75	0.23	4.66		22.3	841	0.70	2.00	1	1
						\ \ \					
	-										
WELL CAI	PACITY (Gallon NSIDE DIA. CAF	s Per Foot): 0.7 PACITY (Gal./Ft	75" = 0.02; .): 1/8" = 0.0	1" = 0.04; 006; 3/16'	1.25" = 0.0 ' = 0.0014;	1 6; 2" = 0.1 1/4" = 0.00	16; 3" = 0. 26; 5/16"	37; 4" = 0.65; = 0.004; 3/8"		The state of the s	' = 5.88 ' = 0.016
					SAMP	LING D					
	mmy L		1	AMPLER(S) S	SIGNATURES			SAMPLING INITIATED AT:	1205	SAMPLING ENDED AT:	1210
PLIMP OR	TUBING WELL (feet):	-		MPLE PUMP OW RATE (r	nl. por minute	> 124	,	TUBING MATERIAL CO	7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
	CONTAMINATION		FI	ELD-FILTERI tration Equip	ED: Y	FIL	TER SIZE: _		DUPLICATE:	Y (N	•
		CONTAINER FICATION			35000	PLE PRESE	ALSO LIVE IN		INTENDED ANALYSIS AND	To the late of the	MPLING UIPMENT
SAMPLE I CODE		MATERIAL ERS CODE		PRESER		TOTAL VO		FINAL pH	METHOD		CODE
		1					1	0			
		A	1		/	7/	1				
		11.	2	e		). C-	11				
REMARKS	3:										
MATERIAL	L CODES:	AG = Amber	Glass; CG	= Clear Glass	s; PE = P	olyethylene;	PP = Poly	propylene; S =	Silicone; T = T	eflon; O = Oti	ner (Specify)
EQUIPME	G/PURGING NT CODES:	APP = After Pe RFPP = Revers	e Flow Perista	altic Pump;	SM = Stra	A STATE OF THE PARTY OF THE PAR	ubing Gravity	,, (	mersible Pump; = Vacuum Trap;	PP = Perista O = Other	

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

#### **GROUNDWATER SAMPLING LOG**

SITE NAME:	WT	E				SITE LOCATION:	Lee	Co.			
WELL NO				SAMPLE		TE-6			DATE: 4	1/7/10	
	0011					SING DA					
WELL	R (inches):2.00	TUBING	inches)// 23	WELL SO	CREEN INTE	RVAL feet	STATIC D		PURGE PUMP OR BAILER:		
WELL VO	LUME PURGE:	1 WELL VOLU	JME = (TOTA	L WELL DE	PTH - STA	TIC DEPTH	TO WATER)	X WELL CAP	PACITY		gallons
EQUIPME	NT VOLUME PL	JRGE: 1 EQUIF	PMENT VOL.	= PUMP VO	LUME + (TUE	BING CAPAC	ITY X	TUBING LENG	gallons/foo GTH) + FLOW CE	LL VOLUME	ganonio
	it if applicable)				allons + (		ons/foot X		feet) +	gallons =	gallons
	UMP OR TUBING		FINAL PUMP DEPTH IN W		(0.00	PURGIN INITIAT	NG ED AT: /0	PURGIN ENDED	AT: // //	TOTAL VOLUM PURGED (galle	ME ons): 4.50
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µ8/con)	DISSOLVED OXYGEN (circle no Do % saturation)	TURBIDITY	COLOR (describe)	ODOR (describe)
1101	2.25	2125	0.24	7.46	7.16	23.4	627	0.77	3.70	none	none
1104	0.75	3.00	0,24	7.46	6.94	23.6		0.94	8.60		
1107	0.75	3.75	0.24	7.46	6.89	23.6	618	0.79	17.00		
1111	0.75	4.50	0.24		6.88	23.6	621	0.93	9.00	1	1
,,,,											
											16
WELL CA	PACITY (Gallons	s Per Foot): 0.7	75" = 0.02;	1" = 0.04;	1.25" = 0.0	6; 2" = 0.1	6; 3" = 0.	37; 4" = 0.65 = 0.004; 3/8'	5" = 1.02; ' = 0.006; 1/2"		" = 5.88 " = 0.016
TUBING II	NSIDE DÍA. CAF	ACTIV (Gal./Ft	.): 118 = 0.00	000, 3/16		LING DA		- 0.004, 0/0	- 0.000, 172	0.010, 0.0	
SAMPLED	BY (PRINT) / A	FFILIATION:	SA	MPLER(S)	SIGNATURE	S:		SAMPLING		SAMPLING	
T	TUBING	055/FLL	1	-	-6	-75		INITIATED AT	1115	ENDED AT:	1120
PUMP OR DEPTH IN	TUBING WELL (feet):	10.00	1_EL	MPLE PUM OW BATE (I	mL per minute			TUBING MATERIAL CO	DE: 5HP	=	
	CONTAMINATIO	-		LD-FILTER		FÍL'	TER SIZE: _	μm	DUPLICATE:	Y	
		CONTAINER				IPLE PRESE	RVATION		INTENDED	A CONTRACTOR OF THE PARTY OF TH	AMPLING
SAMPLE I	ID #	MATERIAL	VOLUME	PRESER	RVATIVE	TOTAL VO		FINAL	ANALYSIS ANI METHOD	Activities and the second	QUIPMENT CODE
CODE	CONTAINE	RS CODE	1 2000	US	ED AL	DDED IN FIEI	LD (ML)	рН			
		-									
0			1		1	. (	2/1				
		- A	150	0/		1.0	2/				
		/1	00		-, 0		V				
				-	-						
REMARKS	2.										
KEWAKKS	J.										
MATERIA	L CODES:	AG = Amber	Glass; CG	Clear Glass	s; PE = P	olyethylene;	PP = Poly	propylene; S =	Silicone; T = T	eflon; O = Ot	ther (Specify)
SAMPLIN	G/PURGING	APP = After Per				P = Bladder P	The state of the s	SP = Electric Sul	omersible Pump; = Vacuum Trap;	PP = Perista O = Other	
EQUIPME	NT CODES:	RFPP = Revers	e Flow Perista	itic Pump;		aw Method (T		Control of the contro	- vacuum map,	0 - Other	(Opcony)

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

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

## Attachment D – Sampling Documentation

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

Chain of Custody (same as D.1.)
Field Data Sheet
Ground Water (GW) Sampling Logs, FD 9000-24

Chain of Custody

Bev 04-08	0000
٠	

Check Box That Applies To Your Location	your Location
Flowers Chemical	Flowers Chemical
Laboratories, Inc.	Labs-South
481 Newburyport Ave.	West Park Industrial Plaza
Altamonte Springs, FL 32701	571 N.W. Mercantile Pl., S
Bus: 407-339-5984	Port St. Lucie, FL 34986
Fax: 407-260-6110	Bus: 772-343-8006
	Fax: 772-343-8089

ral Ticwers Chemical Labs-North 812 S.W. Harvey Gree

th 812 S.W. Harvey Greene Dr. Madison, FL 32340 Bus: 850-973-6878 Fax: 850-973-6878 DOWNLOAD REPORTS, INVOICES AND CHAINS OF CUSTODY www.flowerslabs.com

| I-Towers Chemical | Labs-freys | 3980 Overseas Highwi

3980 Overseas Highway, Ste. 103 Marathon, FL 33050 Bus: 305-743-8598 Fax: 305-743-8598

A CONTRACTOR	
	CHEMICAL LABORATORIES

GW - groupd water DW - drinking water WW - wastewater SW - sulface water S - soil/solid SL - sludge HW - waste BSW - LAB NO.  WIE - 15 4/7/0 6425 CAD 1206216W 7	Laure Gray	FAX
Fold Process		
Agy (PRINT):  Signature  Signature  Signature  ATTIO  GW - ground water DW - drinking water WW - wastewater  SW - surface water S - soil/solid SL - sludge HW - waste	Project Manager	E-MAIL
Sample in Date Sampled  Outpot water DW - drinking water WW - wastewater frace water S - soil/solid SL - sludge HW - waste Sample in Date Time Matrix (LAB USE ONLY)  Fee Prick U  (LAB USE ONLY)  SAMPLE ID 6925 (SL)   12062   Sh   Sh   Sh   Sh   Sh   Sh   Sh   S	uested Due Date ay Standard	Sush Charges May Apply
GW - ground water DW - drinking water WW - wastewater SW - sulface water S - soil/solid SL - sludge HW - waste SW - surface water DATI/N 6925 GW 1206216W FY - 15 4/7/N 6935 GW 1206216W FY - 1D 6935 GW 7		Sampling
GW-groupd water DW-drinking water WW-wastewater SW-surface water S-soil/solid SL-sludge HW-waste  SW-surface water S-soil/solid SL-sludge HW-waste  SAMPLE IS DATE TIME MATRIX (LAB USE ONLY) 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PRESERVATIVES ANALYSES REQUEST	COMMENTS
SAMPLE ID DATE TIME MATRIX (LAB USE ONLY) & G G G G G G G G G G G G G G G G G G	-	L # Contain
WTE-15 4/7/10 6925 CaW 1206216W 1 747	нс	EloT.
WTE-1D 1 0930	7 + + 7 7 7	*
3 WE-35 1025 3		
4 WIE-3D 1025		
6 WE-6D 1120 6		
7 WIE-55 1205 7 7 1 1		
7	イブイン	
o o		-
10	· a	
Relinquished By / Affiliation Date Time Accepted By / Affiliation Date Time Reling.	Relinquished-By / Affiliation Date Time	Accepted By / Affiliation Date Time
	1000 1630	4/0/10 0636

FINANCE CHARGES APPLIED TO PAST DUE INVOICES YELLOW - Client Copy

• WHITE - Lab Copy - To Be Scanned

Field Data Sheet

Lee Co. W.T.E.

P.M. PHIL LOUCKS

LAB.# 120621



Project Name	UA51	E 78	ENE	cruy-	Gira	up -	2 -	-Q-	W	2115
ample Type	vw	sw	GW ,	DW	Reag.Wtr.	Sludge	Se	diment 5	Soil	Other
ample Site Indentific	cation	W.T.E	.10	,30,3	50,0	6 D.				
ampling Method	G	rab 🛮	Comp	osite	. Monitorin	g Well	Baile	r. 🗆	Pump	0
ampling Equipment	RF	PP. S	ilico	NE + D	8/1/8	TH.	TuBin	16.		
ite & Weather Cond	itions				/	Mill	Brez	zzy.		
ield Instrument Be	alnning (	Calibration				,	,	(		Slope
pH Meter	YES	/ NO		Buffer	4.0	4.02	7.0	7.0	10.0	
Conductivity Meter	YES	NC		Buffer	100	/	10003	1411		
		N	-	Buffer	•			10 02		
Turbidity Meter	YES	-		O A	1.0		10.0	18.82		
DO Meter	YES	NO	)	18.6/		1				
Field Filtered	YES [	NO	Dup	licate YES	NO		Field Decon	tamination	YES [	ON
-		Cample Co			T. nu	Check	+LA.	5. Deca	N	
Parameter		Sample Co	mamers		<2	J.IECK	Well D 1.5 inc	iameter		Iltiplier .092
Nutrient	Plastic - I				<2		2.0-inc	hes		.163
Metals	Plastic - I	NaDH / Zn A			< 12		6.0 inc			.653
Sulfide -				Anartic Acid	> 12		0.0 1110	nes		.469
☐ Cyanide				Ascorbic Acid	712					
	Glass - H	hiosulfate (D	VV NO Chi	ionne Hes)	<2					
Bacteriological		.01			<2		α			
Oil & Grease		101								
Oil & Grease TOC	Plastic - I									
Oil & Grease  TOC  VOA	Plastic - I Glass - H	ICI	Chlorine B	les)	<2					
Oil & Grease TOC VOA SVOC	Plastic - I Glass - H Glass - H	ICI (DW NO	Chlorine R	les)	<2				4.	
Oil & Grease  TOC  VOA  SVOC  Phenols	Plastic - I Glass - H Glass - H Glass - H	ICI ICI (DW NO I <sub>2</sub> SO <sub>4</sub>	Chlorine F	les)	< 2					
Oil & Grease  TOC VOA SVOC Phenols Other	Plastic - I Glass - H Glass - H Glass - H Unpreser	ICI ICI (DW NO I <sub>2</sub> SO <sub>4</sub> Ived	Chlorine F	des)	<2				4.	
Oil & Grease  TOC VOA SVOC Phenols Other	Plastic - I Glass - H Glass - H Glass - H Unpresen	ICI ICI (DW NO I <sub>2</sub> SO <sub>4</sub> Ived			<2		<b>,</b>			5101
Oil & Grease  TOC  VOA  SVOC  Phenols  Other  Tield Instrument En	Plastic - I Glass - H Glass - H Unpreser	ICI ICI (DW NO I <sub>2</sub> SO <sub>4</sub> Ived Ibration	0	Buffer	<2		7.0		10.0	5100
Oil & Grease  TOC VOA SVOC Phenols Other  Tield Instrument En	Plastic   Glass - H Glass - H Glass - H Unpreser  unding Cal YES YES	ICI ICI (DW NO I <sub>2</sub> SO <sub>4</sub> Ived Ibration	0	Buffer Buffer	<2		7.0		10.0	5100
Oil & Grease  TOC  VOA  SVOC  Phenols	Plastic - I Glass - H Glass - H Unpreser	ICI ICI (DW NO I <sub>2</sub> SO <sub>4</sub> Ived Ibration	0 0	Buffer	<2 <2 <2 4.0				10.0	5/01

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

#### **GROUNDWATER SAMPLING LOG**

SITE NAME:	11)AST	E 7	O E	vera		SITE LOCATION:	4	ee c	2.		
WELL NO:	WI	= 11)		SAMPLE	In: S	SAME			DATE: 9	1-7-16	)
					100,000,000	GING DA					
WELL DIAMETER	(inches):	TUBING DIAMETER (	. 25 inches):	WELL SO DEPTH:	REEN INTE	RVAL 62 feet	TO WATER	R (feet) 0. 52	PURGE PUMP T OR BAILER:	REPP	
only fill out	if applicable)	1 WELL VOL	= (		feet -		feet)	X WELL CA	gallons/foot	=	gallons
	T VOLUME Pu if applicable)	RGE: 1 EQUI	PMENT VOL	11.	and a second	BING CAPAC		TUBING LEN	GTH) + FLOW CEL	_	<.5 .42 gallons
	MP OR TUBING	67'	FINAL PUMI DEPTH IN V	P OR TUBINO		1 22 (22)			NG D928	TOTAL VOLUM PURGED (galle	1E ons):2-25
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP.	COND. (µmhos/cm or µS/cm)	DISSOLVEI OXYGEN (circle/mg/L % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
0922	1.25	1-25	0.11	10.62	7.85	22.6	874	8.94	0.20	NONE	NONE
0925	.50	1.75		1	7.87	22.8	872	0.93	0.03		
0928		2.25	1	1	7.77	1	1	0.91	0.03	1-	1
			-						_	-	
WELL CAP	ACITY (Gallons SIDE DIA, CAP	Per Foot): 0. ACITY (Gal./Ft	75" = 0.02; .): 1/8" = 0.0	1" = 0.04; 006; 3/16"	1.25" = 0.0 ' = 0.0014;	1/4" = 0.002	6; 5/16"				" = 5.88 " = 0.016
OAMOLED !	A comment	SELLATION.	100	MPLER(S)		LING D	ATA				
M.	AVNE	F.C.	<u>_</u> .	MIN	PIGNATURES	Lays	il	SAMPLING INITIATED A	T: 0930	SAMPLING ENDED AT:	1935
PUMP OR 1 DEPTH IN V		67'		MPLE PUMI OW RATE (r		a): 2 /	LTG.	TUBING MATERIAL C	<.	+ PE	
	OITAMINATIO	N: Y N	FII	ELD-FILTERI tration Equip	ED: Y		ER SIZE: _	hw	DUPLICATE:	YOU	)
	SAMPLE		lecon.			IPLE PRESE	RVATION		INTENDED	And the last of th	AMPLING
SAMPLE ID CODE		MATERIA	VOLUME	PRESER	A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	TOTAL VO	m /	FINAL pH	ANALYSIS AND METHOD	1 - 0.00 / - 1	UIPMENT CODE
	-		-	1							
			-	1	E						
			-	C.0	٥, ८,						
			-						-	_	
	1	-									
DEUL DISC				,							
REMARKS:	X NE	5H	een:	5 -	-						
MATERIAL		AG = Amber		Clear Glass		olyethylene;			= Silicone; T = Te		ner.(Specify)
SAMPLING, EQUIPMEN		APP = After Per RFPP = Revers				P = Bladder P aw Method (T			ibmersible Pump; T = Vacuum Trap;	PP = Perista O = Other (	
VOTES: 1	he above do	not constitu	uto all of the	informati	on roquire	d by Chante	r 62-160. F	AC			

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

### **GROUNDWATER SAMPLING LOG**

SITE NAME:	WAST	E 70	ENERC	Y		SITE LOCATION:	1	ee e	CO.		
WELL NO:	W.T.C	E. 3D		SAMPLE	E ID:	SAM	IE.		DATE:	1-7-18	)
PURGING DATA											
WELL VOI		TUBING DIAMETER (I		DEPTH:		6   feet	TOWATE		OR BAILER:	REPP	
only fill out	if applicable)	_	= (		feet		feet)	×	gallons/foo		gallons
	NT VOLUME PL if applicable)	JRGE: 1 EQUIP	MENT VOL.			BING CAPAC 1026 gall		66	(GTH) + FLOW CE		< .50 42 gallons
INITIAL PUMP OR TUBING 6 ' FINAL PUMP OR TUBING 6 ' PURGING INITIATED AT 180 Z PURGING PURGED (gallons): 3.5											
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED	PURGE RATE (gpm)	DEPTH TO WATER	pH (standard units)	TEMP.	COND. (jumhos/qm) or (jus/cm)	DISSOLVE OXYGEN (circle ng/l	TURBIDITY or (NTUs)		ODOR. (describe)
1016	2.50	(gallons)	0.15	(feet) 10.16	8.09	24.7	2239	% saturation 8.95	4.67	NONE	NONE
1020	.50	3.0			8.06	24.5	2242	0.97	5.14	1)	
1024	1	3.5	+	1	8.05	1	2244	0.94	4.42	1-	1
		-									
								- 5	-		
							-126-12			-	
		Per Foot): 0.7 ACITY (Gal./Ft.)		1" = 0.04; 006; 3/16"	1.25" = 0.0 ' = 0.0014;	1/4" = 0.002	26; 5/16"		The state of the s		" = 5.88 " = 0.016
SAMPLED	BY (PRINT) / AF	FILIATION:	SA	MPLER(\$) S	SAMP	LING D	ATA			I	
MiKE	- PAYA	VE F.C.	L. 1	Mips	) K	whe		SAMPLING INITIATED A	1:1025	SAMPLING ENDED AT:	1830
DEPTH IN		66	FLO		nL per minute		CTA.	TUBING MATERIAL C	ODE: 5	+PE	
FIELD DEC	ONTAMINATIO	0 14	AD Fitt	LD-FILTERI ration Equipr		Y FILI	ER SIZE: _	hτυ	DUPLICATE:	Y CN	)
SAMPLE ID	SPECIF	MATERIAL	econ.	BRESCRIVATIVE TOTAL VOL				FINAL INTENDED ANALYSIS AND/O			
CODE CONTAINERS CODE			VOLUME PRESERVATIVE USED			DED IN FIEL		pН	METHOD		CODE
-			1	1							
			1	15E	E						
		_	-	60	· C.				,		
	-		-		-		-			_	
REMARKS:	A 11	a SH	leen	5-	-						
MATERIAL	MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other.(Specify)										
SAMPLING. EQUIPMEN	T CODES: R	APP = After Peris	Flow Peristal		SM = Stra		ubing Gravity	Drain); V	bmersible Pump; T = Vacuum Trap;	PP = Peristal O = Other (	

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

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

#### **GROUNDWATER SAMPLING LOG**

SITE NAME:	11)AS	TE TE	ENE	Chy		SITE OCATION:	10	e Co	,			
WELL NO	119.7.	F. 5	1)	SAMPLE		-11	E		DATE: 4	-7-10	2	
		<u> </u>			PURC	SING DA						
WELL DIAMETER	R (inches):	TUBING DIAMETER (I	· 25	WELL SO	WELL SCREEN INTERVAL STATIC DEPTH COMPANY TO WATER (feet):				PURGE PUMP TYPE FRO			
WELL VO		1 WELL VOLU	JME = (TOTA	L WELL DE	PTH - STA	TIC DEPTH	TO WATER)	X WELL CA	PACITY	AIV		
		IDOE: 4 FOUR	= (	- DUMP VO	feet -		feet)		gallons/foot	=	gallons	
	t if applicable)	JRGE: 1 EQUIP		10	allons + ( • &			. 1	TH) + FLOW CEL			
INITIAL PI	JMP OR TUBING	6 4 0 1	FINAL PUMP	~		PURGI		PURGIN	feet) + 25			
	WELL (feet);	60	DEPTH IN W	ELL (feet):	68		ED AT://4	ENDED		TOTAL VOLUM PURGED (gall	ons); 3. 5	
TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmbos/cm or (µS/cm)	DISSOLVED OXYGEN (circle mg/L) % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR. (describe)	
1200	2.0	2.0	0.14	7.46	8.10	25.3	1073	1.10	2.27	NONE	NONE	
1204	.50	2.5			8.05	24-9	1074	.94	2.58			
1208		3.0			7-91	25.0	1083	.81	2.07	1-1-		
12/3	1	3.5	+		7.93		1084	.89	2.63	1+		
									+	-		
							•				-	
									-		-	
									-			
		Per Foot): 0.7 ACITY (Gal./Ft.)		1" = 0.04; 06; 3/16"	1.25" = 0.06 = 0.0014;	3; 2" = 0.1 1/4" = 0.002					" = 5.88 " = 0.016	
SAMPLED	BY (PRINT) / AF	EEII IATION:	1 941	UDI EDIEVE	SAMP IGNATURES	LING D	ATA					
Mike	PAILA	IF IC	./.	Mila	O V	us &	)	SAMPLING INITIATED AT:	1215	SAMPLING ENDED AT:	1220	
PUMP OR	TUBING WELL (feet):	681		APLE PUMP  W RATE (mL per minute) / LT/ . MATERIAL CO					nc. 5	+17		
	ONTAMINATIO	N: Y N	FIE	LD-FILTERE ration Equipor	D: Y N	-	ER SIZE:	hw	DUPLICATE:	YN	)	
			econ.	auon Equipi		PLE PRESER	RVATION		INTENDED SAMPL		AMPLING	
SAMPLE ID # MATERIAL VO				IME PRESERVATIVE TOTAL VO				L PINAL		OR EQ	UIPMENT CODE -	
CODE CONTAINERS CODE				, 031	D AD	ADDED IN FIELD (mL)					*	
			=======================================	X								
				SEE		60.	C.					
	-											
	-											
REMARKS:												
	X	Alo <	Hee	NS								
MATERIAL		AG = Amber G	lass; CG =	Clear Glass		yethylene;	PP = Polyp	ropylene; S =	Silicone; T = Tet	flon; O = Oth	er.(Specify)	
SAMPLING EQUIPMEN		APP = After Peris RFPP = Reverse		B = Bai ic Pump;		= Bladder Pu v Method (Tu	imp; ES ubing Gravity	P = Electric Subr Drain); VT	nersible Pump; = Vacuum Trap;	PP = Peristal O = Other (		

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)

#### **GROUNDWATER SAMPLING LOG**

SITE NAME:	11)457	E 78	ENE	CaV		SITE LOCATION:	1.	e Co				
WELL NO:	113. 7	F. 6	1	SAMPLE		SAM	E			7-10		
PURGING DATA												
WELL	? (inches)	TUBING DIAMETER (	·25	WELL SC	RVAL	STATIC DEPTH PURGE PUMP TYPE _ / /						
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 < . 50												
(only fill out if applicable)  = College of the purple of												
DEPTH IN WELL (feet): DEPTH IN WELL (feet): INITIATED AT: ENDED AT:// PURGED (gallons): 7										ins):4-25		
TIME	VOLUME PURGED (gallons)	VOLUME PURGED (gallons)	PURGE RATE (gpm)	TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/em or(µS/om)	OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR. (describe)	
1185	2.75	2.75	0.15	8.94	8.27	25.5	899	1.48	3.51	OMNGE	NONE	
1110	.50	3.25	1		8.10	25.3	900	1.40	0.02	TiNT		
1//5		3.75			8.0		899	1.35	0.01	1		
1120		4.25			7.94	25.2	903	1.30	1.60	14		
WELL CAP TUBING IN	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:  SAMPLER(S) SIGNATURES:  SAMPLING  SAMPLING  SAMPLING  INITIATED AT: // Z O  FUMP OR TUBING  DEPTH IN WELL (feet):  TUBING  MATERIAL CODE:  SAMPLE PUMP  FLOW RATE (mL per minute):  SAMPLE PUMP  FLOW RATE (mL per minute):  SAMPLE PUMP  MATERIAL CODE:  SAMPLING  ENDED AT: // Z S  MATERIAL CODE:  SAMPLING  ENDED AT: // Z S										1/25		
	ONTAMINATIO	N: (Y) N	1 5	IELD-FILTERE	D: Y /	FILT	ER SIZE:	μm	DUPLICATE:	YN	)	
SAMPLE ID SAMPLE ID # MATERIAL VOLUME				PRESERVATIVE TOTAL VOL				FINAL	FINAL ANALYSIS AND/OR EQU		MPLING UIPMENT CODE -	
CODE	CONTAINE	RS CODE	USED ADDED IN FIELD (mL) pH								*	
				X 50	F	C.O.						
REMARKS: NO SHEENS -												
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: 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)