

21375

GW
LR

LEAFLET
EFFICIENT

CITRUS COUNTY CENTRAL LANDFILL

FIRST SEMIANNUAL 2006

DEP PERMIT NO. 21375-008-SO/01

DEP Due Date: July 15, 2006

**Dept. of Environmental
Protection**

JUL 14 2006

Southwest District

Prepared by:

JONES, EDMUNDS & ASSOCIATES, INC.

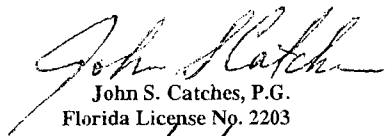
730 N.E. Waldo Road

Gainesville, Florida 32641-5699

Professional Engineering Certificate of Authorization # 1841

Professional Geology Certificate of Authorization #133

July 2006


John S. Catches, P.G.
Florida License No. 2203
7/13/06

JONES EDMUNDS

July 13, 2006

Mr. John Morris, P.G.
Florida Department of Environmental Protection – Southwest District
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION

JUL 14 2006

SOUTHWEST DISTRICT
TAMPA

RE: Semiannual Groundwater Monitoring Report – First Semiannual 2006
Citrus County Landfill
Permit No. 21375-008-SO/01
Jones Edmunds Project No. 03860-022-01

Dear Mr. Morris:

This report presents data from the First Semiannual 2006 sampling event at the Citrus County Landfill, performed on January 25, 26, 27, 30, and 31, 2006.

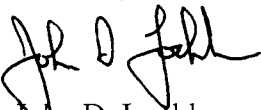
All groundwater monitoring wells (excluding the groundwater investigation wells) were sampled during this event and analyzed for the semiannual parameters. Leachate effluent was collected on January 26th. The leachate results were submitted separately on April 14, 2006.

Analysis results compared to groundwater standards are presented in Attachment 2. The data presented in Attachment 2 indicates that concentrations reported during this event are consistent with historical values with the following exceptions: Arsenic and Thallium in MW-D are first time exceedences.

As required in the Departments May 29th letter, groundwater samples will be collected from the current monitoring wells network and the groundwater investigation wells during the Second Semiannual 2006 monitoring event. A report of the second semiannual data will be submitted to the Department not later than September 15, 2006.

If you have any questions regarding this report, please contact us at (352) 377-5821.

Sincerely,



John D. Locklear
Project Manager

xc: Susan Metcalfe, P.G.

M:\EnvDocs\Citrus County\2006\06S1\06s1\CitrusLet.doc

Attachment 1: Groundwater Elevation Data and Groundwater Contour Map
Attachment 2: Analysis Results Compared to Groundwater Standards
Attachment 3: Groundwater and Leachate Parameters At or Above the Laboratory Detection Limit
Attachment 4: Parameter Monitoring Report Forms
Attachment 5: Original Laboratory Data
Attachment 6: Original Field Data

730 NE Waldo Rd
Gainesville, FL 32641

352.377.5821 Phone
352.377.3166 Fax
www.jonesedmunds.com

ATTACHMENT 5

ORIGINAL LABORATORY DATA

Environmental Conservation Laboratories, Inc.

10775 Central Port Drive

Orlando FL, 32824

Phone: 407.826.5314 FAX: 407.850.6945



www.encolabs.com

February 15, 2006

Jones Edmunds & Associates, Inc. (JO006)

Attn: Tim Cully

730 N.E. Waldo Road Bldg. A

Gainesville, FL 32641

**RE: Project Number: 04100-022-01, Project Name/Desc: Citrus Co. LF
ENCO Workorder: A600390**

Dear Tim Cully,

Enclosed is a copy of your laboratory report for test samples received by our laboratory on 1/27/06 10:35:00AM.

Unless otherwise noted in an attached project narrative, all samples were received in acceptable condition and processed in accordance with the referenced methods/procedures. Results for these procedures apply only to the samples as submitted.

This data has been produced in accordance with NELAC standards (June, 2003). This report shall not be reproduced except in full, without the written approval of the Laboratory.

If you have any questions or require further information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kelly Samples'.

Kelly Samples
Project Manager

Enclosure(s)

ENCO LABORATORIES

REPORT #	:	A600390
DATE REPORTED	:	2/15/2006
REFERENCE	:	04100-022-01
PROJECT NAME	:	Citrus Co. LF

RESULTS OF ANALYSIS

STATION NAME	PARAMETER	RESULT	UNITS	METHOD
LE	Total Dissolved Solids	1920	mg/L	EPA 160.1
LE	Chloride	649	mg/L	EPA 300.0
LE	Ammonia as N	13	mg/L	EPA 350.1
LE	Sodium	440	mg/L	EPA 6010B
LE	1,2-Dibromo-3-chloropropane	<0.01	ug/L	EPA 8011
LE	1,2-Dibromoethane	<0.02	ug/L	EPA 8011
LE	1,1,1,2-Tetrachloroethane	<0.2	ug/L	EPA 8260B
LE	1,1,1-Trichloroethane	<0.2	ug/L	EPA 8260B
LE	1,1,2,2-Tetrachloroethane	<0.2	ug/L	EPA 8260B
LE	1,1,2-Trichloroethane	<0.4	ug/L	EPA 8260B
LE	1,1-Dichloroethane	<0.3	ug/L	EPA 8260B
LE	1,1-Dichloroethene	<0.8	ug/L	EPA 8260B
LE	1,2,3-Trichloropropane	<0.3	ug/L	EPA 8260B
LE	1,2-Dichlorobenzene	<0.3	ug/L	EPA 8260B
LE	1,2-Dichloroethane	<0.3	ug/L	EPA 8260B
LE	1,2-Dichloropropane	<0.2	ug/L	EPA 8260B
LE	1,4-Dichlorobenzene	<0.2	ug/L	EPA 8260B
LE	2-Butanone	<1	ug/L	EPA 8260B
LE	2-Hexanone	<2	ug/L	EPA 8260B
LE	4-Methyl-2-pentanone	21	ug/L	EPA 8260B
LE	Acetone	9	ug/L	EPA 8260B
LE	Acrylonitrile	<2	ug/L	EPA 8260B
LE	Benzene	<0.1	ug/L	EPA 8260B
LE	Bromochloromethane	<0.9	ug/L	EPA 8260B
LE	Bromodichloromethane	14	ug/L	EPA 8260B
LE	Bromoform	2	ug/L	EPA 8260B
LE	Bromomethane	<1	ug/L	EPA 8260B

ENCO LABORATORIES

REPORT #	:	<u>A600390</u>
DATE REPORTED	:	<u>2/15/2006</u>
REFERENCE	:	<u>04100-022-01</u>
PROJECT NAME	:	<u>Citrus Co. LF</u>

RESULTS OF ANALYSIS

STATION NAME	PARAMETER	RESULT	UNITS	METHOD
LE	Carbon disulfide	0.8 l	ug/L	EPA 8260B
LE	Carbon tetrachloride	0.4 l	ug/L	EPA 8260B
LE	Chlorobenzene	<0.1	ug/L	EPA 8260B
LE	Chloroethane	<0.5	ug/L	EPA 8260B
LE	Chloroform	17	ug/L	EPA 8260B
LE	Chloromethane	<0.6	ug/L	EPA 8260B
LE	cis-1,2-Dichloroethene	<0.3	ug/L	EPA 8260B
LE	cis-1,3-Dichloropropene	<0.1	ug/L	EPA 8260B
LE	Dibromochloromethane	6	ug/L	EPA 8260B
LE	Dibromomethane	<0.4	ug/L	EPA 8260B
LE	Ethylbenzene	<0.3	ug/L	EPA 8260B
LE	Iodomethane	<1	ug/L	EPA 8260B
LE	m,p-Xylenes	0.4 l	ug/L	EPA 8260B
LE	Methylene chloride	<1	ug/L	EPA 8260B
LE	o-Xylene	<0.6	ug/L	EPA 8260B
LE	Styrene	<0.2	ug/L	EPA 8260B
LE	Tetrachloroethene	<0.6	ug/L	EPA 8260B
LE	Toluene	<0.2	ug/L	EPA 8260B
LE	trans-1,2-Dichloroethene	<0.8	ug/L	EPA 8260B
LE	trans-1,3-Dichloropropene	<0.2	ug/L	EPA 8260B
LE	trans-1,4-Dichloro-2-butene	<0.5	ug/L	EPA 8260B
LE	Trichloroethene	<0.3	ug/L	EPA 8260B
LE	Trichlorofluoromethane	<0.7	ug/L	EPA 8260B
LE	Vinyl acetate	<0.2	ug/L	EPA 8260B
LE	Vinyl chloride	<0.5	ug/L	EPA 8260B
LE	Xylenes, Total	1	ug/L	EPA 8260B
LE	Dissolved Oxygen	2.34	mg/L	Field
LE	pH	7.97	pH Units	Field
LE	Specific Conductance (EC)	3250	umhos/cm	Field
LE	Temperature	17.20	°C	Field
LE	Turbidity	2.10	NTU	Field



www.encolabs.com

Notes and Definitions

- U Analyte included in the analysis, but not detected
- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- I Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
- D Data reported from a dilution



ENVIRONMENTAL CONSERVATION LABORATORIES

4810 Executive Park Court, Suite 211
 Jacksonville, Florida 32216-6069
 Ph. (904) 296-3007 • Fax (904) 296-6210

10775 Central Port Drive
 Orlando, Florida 32824

1015 Passport Way
 Cary, North Carolina 27513
 Ph. (919) 677-1669 • Fax (919) 677-9846

ENCO CompQAP No.: 960038G/0

QSARF # A6-50

CHAIN OF CUSTODY RECORD

PROJECT REFERENCE Citrus Co. LF		PROJECT NO. 04100-022-01		P.O. NUMBER		MATRIX TYPE		REQUIRED ANALYSIS		PAGE 1 OF 1	
PROJECT LOC. (State) FL		SAMPLER(S) NAME Dan Lichtenwalter		PHONE (352) 377-5821		SURFACE WATER GROUND WATER WASTEWATER DRINKING WATER SOIL/SOLID/SEDIMENT NONAQUEOUS LIQUID (oil, solvent, etc.) AIR SLUDGE OTHER		See Attached sheets (3)! Leachate APP II App Total Trihalometh.		<input checked="" type="checkbox"/> STANDARD REPORT DELIVERY <input type="checkbox"/> EXPEDITED REPORT DELIVERY (surcharge)	
CLIENT NAME Jones, Edmunds + Assoc		CLIENT PROJECT MANAGER J. Locklear		FAX						Date Due: _____	
CLIENT ADDRESS (CITY, STATE, ZIP) 730 NE Waldo Rd Gville, FL 32641											
SAMPLE											
STATION	DATE	TIME	GRAB	COMP	SAMPLE IDENTIFICATION	PRESERVATIVE		NUMBER OF CONTAINERS SUBMITTED		REMARKS	
EQB#2	1/26/06	0905	✓		CF506-EQ2			8			
2 LE		0927	✓		- LE			8			Leachate Effluent
EQB#3		1015	✓		- EQ3			13			
MW-16		1127	✓		- 16	✓		13	MLM		
MW-6		1331	✓		- 6	✓		8			
TB#2								2			* Note: ALL VOCs in cooler w/ TB # 2 App II
7											
8											
9											
10											
11											
12											
13											
14											
SAMPLE KIT PREPARED BY: ORLANDO LP		DATE 1/11/06	TIME 20:00	RELINQUISHED BY: (SIGNATURE) Lisa Ponte		DATE 1/11/06	TIME 20:00	RECEIVED BY: (SIGNATURE)		DATE	TIME
RELINQUISHED BY: (SIGNATURE)		DATE	TIME	RECEIVED BY: (SIGNATURE) Dan Lichtenwalt		DATE 1/24/06	TIME 1630	RELINQUISHED BY: (SIGNATURE)		DATE	TIME
RECEIVED BY: (SIGNATURE)		DATE	TIME	RELINQUISHED BY: (SIGNATURE) Dan Lichtenwalt		DATE 1/26/06	TIME 1610	RECEIVED BY: (SIGNATURE)		DATE	TIME
RECEIVED FOR LABORATORY BY: (SIGNATURE) J. Jones		DATE 1/27/06	TIME 10:35	CUSTODY INTACT <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	ENCO LOG NO. A600390	REMARKS Shipped Greyhound from Gainesville to Orlando					

GROUNDWATER SAMPLING LOG

SITE NAME: Citrus County Landfill	SITE LOCATION: Lecanto, Florida	DATE: 1/26/06
WELL NO: <u>Leachate Effluent (LE)</u>	SAMPLE ID: <u>CFS06-LE</u>	

PURGING DATA

WELL DIAMETER (in):	TUBING DIAMETER (in):	WELL SCREEN LENGTH: feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE
$1 \text{ WELL VOLUME} = (\text{TOTAL WELL DEPTH} - \text{STATIC DEPTH TO WATER}) \times \text{WELL CAPACITY}$				PURGE METHOD:
$1 \text{ WELL VOLUME} = (\text{feet} - \text{feet}) \times \text{gallons/foot} = \text{gallons}$				Water Level Measured with: 2.1 2.2 2.3 3.4.1
$1 \text{ EQUIPMENT VOL.} = \text{PUMP VOLUME} + (\text{TUBING CAPACITY} \times \text{TUBING LENGTH}) + \text{FLOW CELL VOLUME}$				
(only fill out if applicable) = gallons + (gallons/foot X feet) + 0.123 gallons = gallons				
INITIAL PUMP OR TUBING DEPTH IN WELL (feet):		FINAL PUMP OR TUBING DEPTH IN WELL (feet):		PURGING INITIATED AT:
				PURGING ENDED AT:
TOTAL VOLUME PURGED (gallons):				

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (mS/cm or $\mu\text{S/cm}$)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)
0923					7.97	17.20	3252	2.34	2.10	None	None

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: <u>Dan Lichterwalter</u> /JEA	SAMPLER(S) SIGNATURES: <u>Dan Lichterwalter</u>	SAMPLING INITIATED AT: <u>0927</u>	SAMPLING ENDED AT: <u>0939</u>
PUMP OR TUBING DEPTH IN WELL (feet): <u>N/A</u>	SAMPLE PUMP VOC Sampling Rate <100 ml/min <input checked="" type="checkbox"/>	TUBING MATERIAL CODE: PE	SAMPLING EQUIPMENT CODE: <u>New 1L PE Bottle</u>
FIELD DECONTAMINATION: Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	FIELD-FILTERED: Y <input checked="" type="checkbox"/> N <input type="checkbox"/> FILTER SIZE: _____ μm	DUPLICATE: Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				INTENDED ANALYSIS
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOL	PRES. USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL PH		
	2	CG	40 ML	HCL	---	---	API-VOC'S	
	2	CG	40 ML	NONE	---	---	8011	
	1	PE	250 ML	HNO3	---	* < 2	Metals FE, HG	
	1	PE	250 ML	HNO3	---	* < 2	Metals SB Na	
	1	PE	250 500 ML	NONE	---	---	Chlorides, Nitrate, TDS	
	1	PE	250 ML	H2SO4	---	* < 2	Total Ammonia-N	
	1	PE	100 ML	Nathio	---	---	COLIF - D.L.	

REMARKS:
 * Verified Sample pH as <2 or >12 (as applicable) at LE
 Total Tubing Length: N/A feet
 Sky Conditions: Clear Ambient Air Temperature: 10.1 °C
 Approx. Wind Speed and Direction: 5 MPH - S
 Grundfos Settings: _____ HZ Peristaltic Setting: _____
 Bladder Pump: CPM _____ Refill/Discharge _____ sec Pressure _____ PSI

Comments:

Readings taken in tank
Samples filled by dipping New 1L PE bottle into tank + filling sample bottles