



January 26, 1996

D.E.P.
JAN 29 1996
TAMPA

Ms. Elizabeth B. Knauss
Environmental Manager
Southwest District
Florida Department of Environmental Protection
3804 Coconut Palm Drive
Tampa, Florida 33619

**Re: Tampa Electric Company
Central Operations Center - Garage
Sludge from Antifreeze Reclamation Process**

Dear Beth:

Enclosed are TCLP analytical results pertaining to two drums of oily sludge generated from our antifreeze reclamation process unit at Central Operations Center (COC) Garage. The analytical results are identified by their respective Tampa Electric Company Waste Disposal Request numbers (i.e., WD 95-183 and WD 95-212).

The unit at COC Garage reclaims used antifreeze via a two-stage filtration process. The first stage filter is a coarse fabric sock, which removes an oily sludge. The filtrate from the first stage is routed through a finer mesh bag filter (the second stage filter) for removal of finer particulate contaminants. The two drums of oily sludge that failed the TCLP metals determination were collected from the fabric sock. Both drums contained concentrations of lead and selenium in excess of regulatory threshold limits. The two drums of hazardous waste sludge were picked up by Laidlaw on December 29, 1995.

The second stage bag filter unit has not been changed out since the process was first installed at the COC Garage. The spent bag filter will be tested for hazardous waste determination parameters at the time that bag filter replacement becomes necessary. Please contact me at (813) 228-4842 if you have any questions about this information.

Sincerely,

Gwen L. Shofner, P.E.
Senior Engineer
Environmental Planning

EP\gm\GLS249

Enclosure

REPORT OF ANALYSIS

Tampa Electric
Central Testing Laboratory
5010 Causeway Blvd.
Tampa, FL 33619
Attn: Bob Dorey

Work Order # : 95-11-293
Date Received: 11/16/95
Report Due by: 11/29/95
OLI Contact: K_VAULT

Work ID: Tampa Electric
Samples collected by: Client
Total Samples: 6

<u>Sample Identification</u>	<u>Description of Analysis</u>	<u>Description of Analysis</u>
01A WD 95-191	TCLP Metals	
02A WD 95-189	TCLP Metals	
03A <u>WD 95-183</u> Drum GA 118	TCLP BNA Analysis TCLP Volatile Organics	TCLP Metals
04A WD 95-131	TCLP Metals	
05A Method Blank Water	TCLP BNA Analysis TCLP Volatile Organics	TCLP Metals
06A Method Blank Soil	TCLP Metals	

Respectfully Submitted,
ORLANDO LABORATORIES, INC.



Authorized Laboratory Signature

IFAXED
12/4/95
to Steve In hett

Results of Analysis

Work ID: Tampa Electric

Work Order: 95-11-293

Client Number: WD 95-183 Method Blank
 OLI Number: 03A Water
 Dilution: 1000 05A
 5

TCLP BNA Analysis: Water

<u>EPA1311 8270</u>	<u>Units</u>	<u>Result/Flag</u>	<u>Result/Flag</u>	<u>MDL</u>	<u>RTL (ppb)</u>
O-Cresol	ug/l	10000 U	50 U	10	
M-Cresol	ug/l	10000 U	50 U	10	
P-Cresol	ug/l	10000 U	50 U	10	
1,4-Dichlorobenzene	ug/l	10000 U	50 U	10	7500
2,4-Dinitrotoluene	ug/l	10000 U	50 U	10	130
Hexachlorobenzene	ug/l	10000 U	50 U	10	130
Hexachlorobutadiene	ug/l	10000 U	50 U	10	500
Hexachloroethane	ug/l	10000 U	50 U	10	3000
Nitrobenzene	ug/l	10000 U	50 U	10	2000
Pentachlorophenol	ug/l	50000 U	250 U	50	
2,4,5-Trichlorophenol	ug/l	50000 U	250 U	50	
2,4,6-Trichlorophenol	ug/l	10000 U	50 U	10	2000
Pyridine	ug/l	10000 U	50 U	10	5000

Client Number: WD 95-183 Method Blank
 OLI Number: 03A Water
 Dilution: 100 05A
 10

TCLP Volatile Organics: Water

<u>EPA1311 8260</u>	<u>Units</u>	<u>Result/Flag</u>	<u>Result/Flag</u>	<u>MDL</u>
Benzene	ug/l	500 U	50 U	5
Carbon Tetrachloride	ug/l	500 U	50 U	5
Chlorobenzene	ug/l	500 U	50 U	5
MEK (2-Butanone)	ug/l	1000 U	100 U	10
Vinyl Chloride	ug/l	1000 U	100 U	10
1,2-Dichloroethane	ug/l	500 U	50 U	5
1,1-Dichloroethene	ug/l	500 U	50 U	5
Tetrachloroethene	ug/l	500 U	50 U	5
Trichloroethene	ug/l	500 U	50 U	5
Chloroform	ug/l	500 U	50 U	5

Re: EPA 1311/8270 - Sample 03:

Elevated detection limits caused by dilution of sample due to matrix interference of an unknown composition.

Re: EPA 1311/8260 - Sample 03:

Elevated detection limits caused by dilution of sample due to quantifiable, non-target compounds in matrix.

Results of Analysis

Work ID: Tampa Electric

Work Order: 95-11-293

Client Number:	WD 95-183	Method Blank
OLI Number:	03A	Water 05A

Continued from preceding page

<u>EPA1311 8260</u>	<u>% Recovery</u>	<u>% Recovery</u>
<u>TCLP % Recoveries</u>		
Benzene	80 %	80 %
Carbon Tetrachloride	68 %	68 %
Chlorobenzene	88 %	88 %
MEK (2-Butanone)	90 %	90 %
Vinyl Chloride	78 %	78 %
1,2-Dichloroethane	64 %	64 %
1,1-Dichloroethene	88 %	88 %
Tetrachloroethene	76 %	76 %
Trichloroethene	84 %	84 %
Chloroform	84 %	84 %

Client Number:	WD 95-183	WD 95-191	WD 95-189	WD 95-131
OLI Number:	03A	01A	02A	04A

TCLP Metals: Water

<u>Analyte</u>	<u>Units</u>	<u>Result/Flag</u>	<u>Result/Flag</u>	<u>Result/Flag</u>	<u>Result/Flag</u>	<u>MDL</u>
Barium: EPA_1311_6010	mg/l	1.0 U	NR	NR	NR	1.0
Cadmium: EPA_1311_6010	mg/l	0.10 U	0.10 U	0.44	NR	0.10
Chromium: EPA_1311_6010	mg/l	0.50 U	0.50 U	0.50 U	NR	0.50
Silver: EPA_1311_6010	mg/l	0.10 U	NR	NR	NR	0.10
Arsenic: EPA_1311_6010	mg/l	1.0 U	0.50 U	0.50 U	NR	0.50
Lead: EPA_1311_6010	mg/l	5.9	0.50 U	0.56	0.50 U	0.50
Selenium: EPA_1311_6010	mg/l	1.8	NR	NR	NR	0.10
Mercury: EPA_1311_7470	mg/l	0.10 U	NR	NR	NR	0.10

Results of Analysis

Work ID: Tampa Electric

Work Order: 95-11-293

Client Number:	WD 95-183	WD 95-191	WD 95-189	WD 95-131
OLI Number:	03A	01A	02A	04A

Continued from preceding page

Analyte	% Recovery	% Recovery	% Recovery	% Recovery
TCLP % Recoveries				
Lead	45 %	108 %	108 %	108 %

Client Number:	Method Blank	Method Blank
	Water	Soil
OLI Number:	05A	06A

TCLP Metals: Method Blank

Analyte	Units	Result/Flag	Result/Flag	MDL
Barium: EPA_1311_6010	mg/l	1.0 U	NR	1.0
Cadmium: EPA_1311_6010	mg/l	0.10 U	0.10 U	0.10
Chromium: EPA_1311_6010	mg/l	0.50 U	0.50 U	0.50
Silver: EPA_1311_6010	mg/l	0.10 U	NR	0.10
Arsenic: EPA_1311_6010	mg/l	0.50 U	0.50 U	0.50
Lead: EPA_1311_6010	mg/l	0.50 U	0.50 U	0.50
Selenium: EPA_1311_6010	mg/l	0.10 U	NR	0.10
Mercury: EPA_1311_7470	mg/l	0.10 U	NR	0.10

TCLP % Recoveries

Cadmium	56 %	108 %
Chromium	65 %	95 %
Arsenic	80 %	91 %
Lead	45 %	108 %

QA for Analysis

Work ID: Tampa Electric

Work Order: 95-11-293

Client No: WD 95-191
OLI No: 01A
Matrix: Soil
Collected: 11/13/95 15:15:00

<u>Test Description</u>	<u>Method</u>	<u>Prep</u>	<u>Run</u>	<u>Analyst</u>
TCLP Metals	EPA_1311	11/21/95		
Cadmium	EPA_1311_6010	11/22/95	11/24/95	BB
Chromium	EPA_1311_6010	11/22/95	11/24/95	BB
Arsenic	EPA_1311_6010	11/22/95	11/24/95	BB
Lead	EPA_1311_6010	11/22/95	11/24/95	BB

Client No: WD 95-189
OLI No: 02A
Matrix: Soil
Collected: 11/13/95 16:00:00

<u>Test Description</u>	<u>Method</u>	<u>Prep</u>	<u>Run</u>	<u>Analyst</u>
TCLP Metals	EPA_1311	11/21/95		
Cadmium	EPA_1311_6010	11/22/95	11/24/95	BB
Chromium	EPA_1311_6010	11/22/95	11/24/95	BB
Arsenic	EPA_1311_6010	11/22/95	11/24/95	BB
Lead	EPA_1311_6010	11/22/95	11/24/95	BB

Client No: WD 95-183
OLI No: 03A
Matrix: Water
Collected: 11/14/95 10:15:00

<u>Test Description</u>	<u>Method</u>	<u>Prep</u>	<u>Run</u>	<u>Analyst</u>
TCLP BNA Analysis	EPA_1311	11/21/95		
TCLP Volatile Organics	EPA_1311	11/21/95	11/22/95	CJP
TCLP Metals	EPA_1311	11/22/95		
	EPA_1311	NA	11/22/95	EJP
	EPA_1311	11/27/95		
Barium	EPA_1311_6010	11/27/95	11/28/95	BB
Cadmium	EPA_1311_6010	11/27/95	11/28/95	BB
Chromium	EPA_1311_6010	11/27/95	11/28/95	BB
Silver	EPA_1311_6010	11/27/95	11/28/95	BB
Arsenic	EPA_1311_6010	11/27/95	11/28/95	BB
Lead	EPA_1311_6010	11/27/95	11/27/95	BB
Selenium	EPA_1311_6010	11/27/95	11/27/95	BB
Mercury	EPA_1311_7470	11/27/95	11/28/95	DH

Client No: WD 95-131
OLI No: 04A
Matrix: Soil
Collected: 11/15/95 11:15:00

<u>Test Description</u>	<u>Method</u>	<u>Prep</u>	<u>Run</u>	<u>Analyst</u>
TCLP Metals	EPA_1311	11/21/95		
Lead	EPA_1311_6010	11/22/95	11/24/95	BB

NOTE: No QA/QC data available for EPA 1311/8270 due to matrix interferences.

Miami • Orlando • Atlanta • Raleigh

REPORT OF ANALYSIS

Tampa Electric
Central Testing Laboratory
5010 Causeway Blvd.
Tampa, FL 33619
Attn: Bob Dorey

Work Order # : 95-11-435
Date Received: 11/29/95
Report Due by: 12/13/95
OLI Contact: K_VAULT

Work ID: Tampa Electric
Samples collected by: Client
Total Samples: 5

<u>Sample Identification</u>	<u>Description of Analysis</u>	<u>Description of Analysis</u>
→ 01A WD 95-212 Drm GA 120	TCLP BNA Analysis TCLP Volatile Organics	TCLP Metals
02A RC Pellet	TCLP BNA Analysis TCLP Volatile Organics	TCLP Metals
03A WD 95-217	TCLP Metals	TCLP Volatile Organics
04A Method Blank Pellet	TCLP BNA Analysis TCLP Volatile Organics	TCLP Metals
05A Method Blank Aqueous	TCLP BNA Analysis TCLP Volatile Organics	TCLP Metals

RECEIVED

DEC 13 1995

ENVIRONMENTAL
PLANNING

FAXED
12/13/95
to Steve Turkett

Respectfully Submitted,
ORLANDO LABORATORIES, INC.



Authorized Laboratory Signature

Results of Analysis

Work ID: Tampa Electric

Work Order: 95-11-435

Client Number:	WD 95-212	RC Pellet	Method Blank Pellet	Method Blank Aqueous
OLI Number:	01A	02A	04A	05A
Dilution:	50	5	5	5

TCLP BNA Analysis: Misc.

EPA1311 8270	Units	Result/Flag	Result/Flag	Result/Flag	Result/Flag	MDL
O-Cresol	ug/l	500 U	50 U	50 U	50 U	10
M-Cresol	ug/l	500 U	50 U	50 U	50 U	10
P-Cresol	ug/l	500 U	50 U	50 U	50 U	10
1,4-Dichlorobenzene	ug/l	500 U	50 U	50 U	50 U	10
2,4-Dinitrotoluene	ug/l	500 U	50 U	50 U	50 U	10
Hexachlorobenzene	ug/l	500 U	50 U	50 U	50 U	10
Hexachlorobutadiene	ug/l	500 U	50 U	50 U	50 U	10
Hexachloroethane	ug/l	500 U	50 U	50 U	50 U	10
Nitrobenzene	ug/l	500 U	50 U	50 U	50 U	10
Pentachlorophenol	ug/l	2500 U	250 U	250 U	250 U	50
2,4,5-Trichlorophenol	ug/l	2500 U	250 U	250 U	250 U	50
2,4,6-Trichlorophenol	ug/l	500 U	50 U	50 U	50 U	10
Pyridine	ug/l	500 U	50 U	50 U	50 U	10

Client Number:	WD 95-212	RC Pellet	WD 95-217	Method Blank Pellet
OLI Number:	01A	02A	03A	04A
Dilution:	100	10	10	10
% Moisture:	0	0	0	NA

TCLP Volatile Organics: Misc.

EPA1311 8260	Units	Result/Flag	Result/Flag	Result/Flag	Result/Flag	MDL
Benzene	ug/l	500 U	50 U	50 U	50 U	5
Carbon Tetrachloride	ug/l	500 U	50 U	NR	50 U	5
Chlorobenzene	ug/l	500 U	50 U	NR	50 U	5
MEK (2-Butanone)	ug/l	1000 U	100 U	NR	100 U	10
Vinyl Chloride	ug/l	1000 U	100 U	NR	100 U	10
1,2-Dichloroethane	ug/l	500 U	50 U	NR	50 U	5
1,1-Dichloroethene	ug/l	500 U	50 U	NR	50 U	5
Tetrachloroethene	ug/l	500 U	50 U	50 U	50 U	5
Trichloroethene	ug/l	500 U	50 U	50 U	50 U	5
Chloroform	ug/l	500 U	50 U	NR	50 U	5

Re: EPA 1311/8260 - Sample 01:

Elevated detection limits caused by dilution of sample due to quantifiable, non-target compounds in matrix.

Re: EPA 1311/8270 - Sample 01:

Elevated detection limits caused by dilution of sample due to quantifiable, non-target compounds in matrix.

Results of Analysis

Work ID: Tampa Electric

Work Order: 95-11-435

Client Number:	WD 95-212	RC Pellet	WD 95-217	Method Blank Pellet
OLI Number:	01A	02A	03A	04A

Continued from preceding page

<u>EPA1311 8260</u>	<u>% Recovery</u>	<u>% Recovery</u>	<u>% Recovery</u>	<u>% Recovery</u>
<u>TCLP % Recoveries</u>				
Benzene	106 %	106 %	106 %	106 %
Carbon Tetrachloride	140 %	140 %	NA	140 %
Chlorobenzene	104 %	104 %	NA	104 %
MEK (2-Butanone)	25 %	25 %	NA	25 %
Vinyl Chloride	69 %	69 %	NA	69 %
1,2-Dichloroethane	130 %	130 %	NA	130 %
1,1-Dichloroethene	86 %	86 %	NA	86 %
Tetrachloroethene	132 %	132 %	132 %	132 %
Trichloroethene	118 %	118 %	118 %	118 %
Chloroform	94 %	94 %	NA	94 %

Client Number:	Method Blank
	Aqueous
OLI Number:	05A
Dilution:	10

TCLP Volatile Organics: Method Blank

<u>EPA1311 8260</u>	<u>Units</u>	<u>Result/Flag</u>	<u>MDL</u>
Benzene	ug/l	50 U	5
Carbon Tetrachloride	ug/l	50 U	5
Chlorobenzene	ug/l	50 U	5
MEK (2-Butanone)	ug/l	100 U	10
Vinyl Chloride	ug/l	100 U	10
1,2-Dichloroethane	ug/l	50 U	5
1,1-Dichloroethene	ug/l	50 U	5
Tetrachloroethene	ug/l	50 U	5
Trichloroethene	ug/l	50 U	5
Chloroform	ug/l	50 U	5

Results of Analysis

Work ID: Tampa Electric

Work Order: 95-11-435

Client Number: Method Blank
 OLI Number: Aqueous
 05A

Continued from preceding page

EPA1311 8260 % Recovery

TCLP % Recoveries

Benzene	106 %
Carbon Tetrachloride	140 %
Chlorobenzene	104 %
MEK (2-Butanone)	25 %
Vinyl Chloride	69 %
1,2-Dichloroethane	130 %
1,1-Dichloroethene	86 %
Tetrachloroethene	132 %
Trichloroethene	118 %
Chloroform	94 %

Client Number:	WD 95-212	RC Pellet	WD 95-217	Method Blank Pellet
OLI Number:	01A	02A	03A	04A

TCLP Metals: Misc.

Analyte	Units	Result/Flag	Result/Flag	Result/Flag	Result/Flag	MDL
Barium: EPA_1311_6010	mg/l	1.0 U	1.0 U	NR	1.0 U	1.0
Cadmium: EPA_1311_6010	mg/l	0.10 U	0.10 U	NR	0.10 U	0.10
Chromium: EPA_1311_6010	mg/l	0.50 U	0.50 U	NR	0.50 U	0.50
Silver: EPA_1311_6010	mg/l	0.10 U	0.10 U	NR	0.10 U	0.10
Arsenic: EPA_1311_6010	mg/l	0.50 U	0.50 U	NR	0.50 U	0.50
Lead: EPA_1311_6010	mg/l	24 ←	0.50 U	12	0.50 U	0.50
Selenium: EPA_1311_6010	mg/l	2.4 ←	0.10 U	NR	0.10 U	0.10
Mercury: EPA_1311_7470	mg/l	0.10 U	0.10 U	NR	0.10 U	0.10

Results of Analysis

Work ID: Tampa Electric

Work Order: 95-11-435

Client Number:	WD 95-212	RC Pellet	WD 95-217	Method Blank Pellet
OLI Number:	01A	02A	03A	04A

Continued from preceding page

Analyte	% Recovery	% Recovery	% Recovery	% Recovery
<u>TCLP % Recoveries</u>				
Barium	91 %	95 %	NA	95 %
Cadmium	75 %	92 %	NA	92 %
Chromium	85 %	94 %	NA	94 %
Silver	83 %	97 %	NA	97 %
Arsenic	97 %	89 %	NA	89 %
Lead	65 %	90 %	65 %	90 %
Selenium	106 %	86 %	NA	86 %
Mercury	103 %	106 %	NA	106 %

Client Number:	Method Blank
OLI Number:	Aqueous 05A

TCLP Metals: Method Blank

Analyte	Units	Result/Flag	MDL
Barium: EPA_1311_6010	mg/l	1.0 U	1.0
Cadmium: EPA_1311_6010	mg/l	0.10 U	0.10
Chromium: EPA_1311_6010	mg/l	0.50 U	0.50
Silver: EPA_1311_6010	mg/l	0.10 U	0.10
Arsenic: EPA_1311_6010	mg/l	0.50 U	0.50
Lead: EPA_1311_6010	mg/l	0.50 U	0.50
Selenium: EPA_1311_6010	mg/l	0.10 U	0.10
Mercury: EPA_1311_7470	mg/l	0.10 U	0.10

Results of Analysis

Work ID: Tampa Electric

Work Order: 95-11-435

Client Number:	Method Blank
OLI Number:	Aqueous 05A

Continued from preceding page

<u>Analyte</u>	<u>% Recovery</u>
----------------	-------------------

TCLP % Recoveries

Barium	91 %
Cadmium	75 %
Chromium	85 %
Silver	83 %
Arsenic	97 %
Lead	65 %
Selenium	106 %
Mercury	103 %

QA for Analysis

Work ID: Tampa Electric

Work Order: 95-11-435

Client No: WD 95-212
OLI No: 01A
Matrix: AQUEOUS
Collected: 11/27/95 16:05:00

<u>Test Description</u>	<u>Method</u>	<u>Prep</u>	<u>Run</u>	<u>Analyst</u>
TCLP BNA Analysis	EPA_1311	11/27/95		
	EPA_1311	11/30/95	12/04/95	CJP
TCLP Volatile Organics	EPA_1311	12/01/95		
	EPA_1311	NA	12/01/95	EJP
TCLP Metals	EPA_1311	12/01/95		
Barium	EPA_1311_6010	12/01/95	12/04/95	DM
Cadmium	EPA_1311_6010	12/01/95	12/04/95	DM
Chromium	EPA_1311_6010	12/01/95	12/04/95	DM
Silver	EPA_1311_6010	12/01/95	12/04/95	DM
Arsenic	EPA_1311_6010	12/01/95	12/04/95	DM
Lead	EPA_1311_6010	12/01/95	12/04/95	DM
Selenium	EPA_1311_6010	12/01/95	12/04/95	DM
Mercury	EPA_1311_7470	12/03/95	12/05/95	DH

Client No: RC Pellet
OLI No: 02A
Matrix: PELLET
Collected: 11/27/95

<u>Test Description</u>	<u>Method</u>	<u>Prep</u>	<u>Run</u>	<u>Analyst</u>
TCLP BNA Analysis	EPA_1311	11/29/95		
	EPA_1311	11/30/95	12/04/95	CJP
TCLP Volatile Organics	EPA_1311	11/30/95		
	EPA_1311	NA	12/01/95	EJP
TCLP Metals	EPA_1311	11/30/95		
Barium	EPA_1311_6010	11/30/95	11/30/95	DM
Cadmium	EPA_1311_6010	11/30/95	11/30/95	DM
Chromium	EPA_1311_6010	11/30/95	11/30/95	DM
Silver	EPA_1311_6010	11/30/95	11/30/95	DM
Arsenic	EPA_1311_6010	11/30/95	11/30/95	DM
Lead	EPA_1311_6010	11/30/95	11/30/95	DM
Selenium	EPA_1311_6010	11/30/95	11/30/95	DM
Mercury	EPA_1311_7470	12/03/95	12/05/95	DH

Client No: WD 95-217
OLI No: 03A
Matrix: AQUEOUS
Collected: 11/28/95 13:20:00

<u>Test Description</u>	<u>Method</u>	<u>Prep</u>	<u>Run</u>	<u>Analyst</u>
TCLP Volatile Organics	EPA_1311	12/01/95		
	EPA_1311	NA	12/01/95	EJP
TCLP Metals	EPA_1311	12/01/95		
Lead	EPA_1311_6010	12/01/95	12/04/95	DM