



PASCO COUNTY, FLORIDA

DADE CITY (904) 521-4274
NEW PORT RICHEY (813) 847-8902

UTILITIES SERVICES BRANCH
PASCO COUNTY GOVT. COMPLEX
8864 GOVERNMENT DRIVE
NEW PORT RICHEY, FL 33654

RECEIVED
MAR 08 1994

February 21, 1994

Department of Environmental Protection
SOUTHWEST DISTRICT

BY _____

Ms. Allison Amram
Florida Department of
Environmental Protection
3804 Coconut Palm Drive
Tampa, Fl 33619

RE: Resource Recovery
Leachate Analysis

Dear Ms. Amram:

Enclosed please find analytical results for analysis conducted on the primary and secondary leachate from the ash cell at the Hays Road Resource Recovery site. Also included is the QA/AC data associated with this analysis. This completes the Quarter I 1994 monitoring requirement.

If you have any questions please feel free to contact me.

Sincerely,

A handwritten signature in cursive script, appearing to read "Candia E. Mulhern".

Candia E. Mulhern
Laboratory Supervisor

CEM/jv

Enclosure

cc: Douglas S. Bramlett, Assistant County Administrator (Utilities Services)
Robert J. Sigmond, Utilities Solid Waste/Fiscal Services Director
Robert J. Tietz, Utilities Construction and Maintenance Director



PASCO COUNTY, FLORIDA

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REPORT OF ANALYSES

Department of Environmental Protection
SOUTHWEST DISTRICT

BY _____

RESOURCE RECOVERY
14230 HAYS ROAD
SPRING HILL, FL 34610-
Attn: ROBERT TIETZ

DATE: 02/18/94
DHRS # 54237, E44123

RESOURCE RECOVERY ASH CELL - QI 1994 LEACHATE ANALYSIS (Page 1 of 2)

LAB No.	SAMPLE			DELIVERY TO LAB	
	DATE	TIME	SAMPLER	DATE	TIME MATRIX
20929	01/07/94	1130	CHRIS CHILDRESS	01/07/94	1600 LE
20930	01/07/94	1100	CHRIS CHILDRESS	01/07/94	1600 LE

CLIENT STATION ID: A-1 PRIMARY TAN A-1 SECONDARY T
 K ANK
 LAB #: 20929 20930

	STD. UNITS	6.01	7.68
FIELD PH	DEGREES C	21.72	19.17
FIELD TEMPERATURE	umhos/cm	32,800	3122
FIELD CONDUCTIVITY	mg/L	0.84	4.47
DISSOLVED OXYGEN, FIELD	mg/l	284	217
ALKALINITY, BICARB.	mg/L	37.11	85.23
TOT. ORGANIC CARBON	mg/L	15320	894
CHLORIDE	mg/L	20.2	0.18
AMMONIA NITROGEN	mg/L	5.34	<0.02
UN-IONIZED AMMONIA N	mg/L	2.30	0.90
TOTAL ORGANIC N	mg/l	<0.10	0.987
NITRATE/NITRITE	MG/L	22.50	2.07
TOTAL NITROGEN	mg/l	<3	<3
OIL AND GREASE	std units	7.29	8.35
PH, LAB	mg/L	<0.001	0.001
TOTAL PHENOLS	mg/L	46400	2730
TOTAL DISS. SOLIDS	umhos	27000	2140
SPEC. CONDUCTIVITY	mg/L	424	18.5
SULFATE	NTU	87	0.53
TURBIDITY			

LABORATORY DIRECTOR



PASCO COUNTY, FLORIDA

REPORT OF ANALYSES

RESOURCE RECOVERY
14230 HAYS ROAD
SPRING HILL, FL 34610-
Attn: ROBERT TIETZ

DATE: 02/18/94
DHRS # 54237, E44123

RESOURCE RECOVERY ASH CELL - QI 1994 LEACHATE ANALYSIS (Page 2 of 2)

LAB No.	SAMPLE		SAMPLER	DELIVERY TO LAB	
	DATE	TIME		DATE	TIME MATRIX
20929	01/07/94	1130	CHRIS CHILDRESS	01/07/94	1600 LE
20930	01/07/94	1100	CHRIS CHILDRESS	01/07/94	1600 LE

CLIENT STATION ID: A-1 PRIMARY TAN A-1 SECONDARY T
K ANK
LAB #: 20929 20930

TOTAL ORGANIC HALIDES	mg/l	0.580	0.280
ANTIMONY, TOTAL	mg/L	0.0062	<0.001
ARSENIC, TOTAL	mg/L	0.0033	<0.001
BERYLLIUM, TOTAL	mg/L	<0.0005	<0.0005
CADMIUM, TOTAL	mg/L	<0.0005	<0.0005
CALCIUM, TOTAL	mg/L	5830	414
CHROMIUM, TOTAL	mg/L	0.0011	<0.001
COPPER, TOTAL	mg/L	0.12	<0.02
IRON, TOTAL	mg/L	0.37	0.03
LEAD, TOTAL	mg/L	<0.001	0.0013
MAGNESIUM, TOTAL	mg/L	3.23	5.69
MANGANESE, TOTAL	mg/L	0.17	<0.01
MERCURY, TOTAL	mg/L	<0.0005	<0.0005
NICKEL, TOTAL	mg/L	0.27	<0.07
SELENIUM, TOTAL	mg/L	<0.001	<0.001
SILVER, TOTAL	mg/L	0.0005	<0.0005
SODIUM, TOTAL	mg/L	4010	191
THALLIUM, TOTAL	mg/L	0.001	<0.001
ZINC, TOTAL	mg/L	0.05	0.02

LABORATORY DIRECTOR



PASCO COUNTY, FLORIDA

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DATE, TIME, ANALYST REPORT

ANALYSIS	METHOD	ANALYSIS		ANALYST
		DATE	TIME	
AG/T/AA	272.2	01/11/94	1520	TER
AS/T/AA	206.2	01/11/94	0930	TER
BE/T/AA	210.2	01/12/94	1230	TER
BICARB. ALK	EPA310.1	01/07/94	1400	JK
CA/T/FLAA	215.1	01/14/94	1235	TER
CD/T/AA	213.2	01/11/94	1050	TER
CL-	EPA 325.3	01/11/94	1000	JK
COND	EPA120.1	01/07/94	1530	CC
COND, FIELD	EPA 120.1	01/07/94	1100	CHR
CR/T/AA	218.2	01/11/94	1410	TER
CU/T/AA	220.2	01/10/94	1500	TER
DO, FIELD	EPA 360.1	01/07/94	1100	CHR
FE/T/AA	236.2	01/14/94	1130	TER
FIELD TEMP	EPA 170.1	01/07/94	1100	CHR
HG/T/CVAA	245.1	01/19/94	0940	TER
MG/T/FLAA	242.1	01/14/94	1300	TER
MN/T/AA	243.2	01/12/94	1530	TER
NA/T/FLAA	273.1	01/14/94	1200	TER
NH3	EPA350.1	01/13/94	1500	TER
NH3-UNION	EPA 350.1	02/03/94	0800	CEM
NI/T/AA	249.2	01/12/94	1600	TER
NO2+NO3	EPA 353.2	01/09/94	1226	CEM
O+G	EPA413.1	02/01/94	1500	TER
PB/T/AA	239.2	01/12/94	0900	TER
PH	EPA150.1	01/21/94	1500	JK
PH, FIELD	EPA 150.0	01/07/94	1100	CHR
PHENOLS	420.1,2,3	01/17/94	0800	DH
SB/T/AA	204.2	01/11/94	1215	TER
SE/T/AA	270.2	01/12/94	1010	TER
SO4	EPA375.4	01/14/94	1000	JK
TDS	EPA160.1	01/12/94	1500	JK
TL/T/AA	279.2	01/12/94	1110	TER
TN	CALC.	02/03/94	0800	CEM
TOC	EPA 415.1	01/10/94	0900	IF
TON	CALC-351.3	01/13/94	1500	TER
TOX	SM 506	01/17/94	0744	JT
TURB	EPA180.1	01/21/94	1530	JK
ZN/T/FLAA	289.1	01/12/94	1500	TER

Department of Environmental Protection
SOUTHWEST DISTRICT

BY _____



PASCO COUNTY, FLORIDA

QA/QC for Sample Nos: 20929, 20930,

Page 1

Precision Data

Accuracy Data

Reference Sample Data

Analyte	LAB ID	Replicate		Range	RPD %	% Spike	Reference	Reference Sample Data		%
		A	B			Recovery	Sample ID	Target	Found	Recovery

FIELD PH
EPA 150.0
STD. UNITS

NO DUPLICATE, SPIKE, OR REFERENCE SAMPLES FOR THIS ANALYSIS

FIELD TEMPERATURE
EPA 170.1
DEGREES C

NO DUPLICATE, SPIKE, OR REFERENCE SAMPLES FOR THIS ANALYSIS

FIELD CONDUCTIVITY
EPA 120.1
umhos/cm

NO DUPLICATE, SPIKE, OR REFERENCE SAMPLES FOR THIS ANALYSIS

DISSOLVED OXYGEN,
FIELD
EPA 360.1
mg/L

NO DUPLICATE, SPIKE, OR REFERENCE SAMPLES FOR THIS ANALYSIS

ALKALINITY, BICARB.
EPA 310.1
mg/l

NO DUPLICATE, SPIKE, OR REFERENCE SAMPLES FOR THIS ANALYSIS

TOT. ORGANIC CARBON EPA 415.1 mg/L	20929	-----	-----	-----	101.74	PHOS. STD.	10.000	10.510	105.10
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CHLORIDE
EPA 325.3
mg/L

NO DUPLICATE, SPIKE, OR REFERENCE SAMPLES FOR THIS ANALYSIS



PASCO COUNTY, FLORIDA

QA/QC for Sample Nos: 20929, 20930,
Page 2

Analyte	LAB ID	Precision Data				Accuracy Data	Reference Sample Data			
		Replicate A	Replicate B	Range	RPD %	% Spike Recovery	Reference Sample ID	Target	Found	% Recovery
AMMONIA NITROGEN EPA350.1 mg/L	940113	10.02	10.19	0.17	1.68	-----	-----	-----	-----	-----
UN-IONIZED AMMONIA N EPA 350.1 mg/L		NO DUPLICATE, SPIKE, OR REFERENCE SAMPLES FOR THIS ANALYSIS								
TOTAL ORGANIC N CALC-351.3 mg/L		NO DUPLICATE, SPIKE, OR REFERENCE SAMPLES FOR THIS ANALYSIS								
NITRATE/NITRITE EPA 353.2 mg/l	20929	<0.10	<0.10	0.050	0.00	-----	STANDARD	4.00	4.032	100.80
TOTAL NITROGEN CALC. MG/L		NO DUPLICATE, SPIKE, OR REFERENCE SAMPLES FOR THIS ANALYSIS								
OIL AND GREASE EPA413.1 mg/l		NO DUPLICATE, SPIKE, OR REFERENCE SAMPLES FOR THIS ANALYSIS								
PH,LAB EPA150.1 std units		NO DUPLICATE, SPIKE, OR REFERENCE SAMPLES FOR THIS ANALYSIS								



PASCO COUNTY, FLORIDA

QA/QC for Sample Nos: 20929, 20930,
Page 3

Analyte	LAB ID	Precision Data			Accuracy Data		Reference Sample Data			
		Replicate A	Replicate B	Range	RPD %	% Spike Recovery	Reference Sample ID	Target	Found	% Recovery
TOTAL PHENOLS 420.1,2,3 mg/L		NO DUPLICATE, SPIKE, OR REFERENCE SAMPLES FOR THIS ANALYSIS								
TOTAL DISS.SOLIDS EPA160.1 mg/L		NO DUPLICATE, SPIKE, OR REFERENCE SAMPLES FOR THIS ANALYSIS								
SPEC.CONDUCTIVITY EPA120.1 umhos		NO DUPLICATE, SPIKE, OR REFERENCE SAMPLES FOR THIS ANALYSIS								
SULFATE EPA375.4 mg/L						STD	20.0	20.5	102.70	
TURBIDITY EPA180.1 NTU		NO DUPLICATE, SPIKE, OR REFERENCE SAMPLES FOR THIS ANALYSIS								
TOTAL ORGANIC HALIDES SM 506 mg/l		NO DUPLICATE, SPIKE, OR REFERENCE SAMPLES FOR THIS ANALYSIS								
ANTIMONY, TOTAL 204.2 mg/L	20929	6.21	6.21	0	0.00					



PASCO COUNTY, FLORIDA

QA/QC for Sample Nos: 20929, 20930,
Page 4

Analyte	LAB ID	Precision Data				Accuracy Data	Reference Sample Data			
		Replicate A	Replicate B	Range	RPD %	% Spike Recovery	Reference Sample ID	Target	Found	% Recovery
ARSENIC, TOTAL 206.2 mg/L	20929	3.85	3.30	0.55	15.38	-----	-----	-----	-----	-----
BERYLLIUM, TOTAL 210.2 mg/L	NO DUPLICATE, SPIKE, OR REFERENCE SAMPLES FOR THIS ANALYSIS									
CADMIUM, TOTAL 213.2 mg/L	20929	0.28	0.24	0.040	15.38	-----	-----	-----	-----	-----
CALCIUM, TOTAL 215.1 mg/L	20929	5.87	5.80	0.070	1.20	102.00	-----	-----	-----	-----
CHROMIUM, TOTAL 218.2 mg/L	20929	1.27	0.98	0.29	25.78	-----	-----	-----	-----	-----
COPPER, TOTAL 220.2 mg/L	20929	.125	.124	0.0010	0.80	-----	-----	-----	-----	-----
IRON, TOTAL 236.2 mg/L	NO DUPLICATE, SPIKE, OR REFERENCE SAMPLES FOR THIS ANALYSIS									



PASCO COUNTY, FLORIDA

QA/QC for Sample Nos: 20929, 20930,
Page 5

Analyte	LAB ID	Precision Data				Accuracy Data	Reference Sample Data		
		Replicate A	Replicate B	Range	RPD %	% Spike Recovery	Reference Sample ID	Target	Found
LEAD, TOTAL 239.2 mg/L	20930	1.26	1.31	0.050	3.89	-----	-----	-----	-----
MAGNESIUM, TOTAL 242.1 mg/L	20929	3.23	3.22	0.010	0.31	98.70	-----	-----	-----
MANGANESE, TOTAL 243.2 mg/L	20992	0.17	0.16	0.010	6.06	-----	-----	-----	-----
MERCURY, TOTAL 245.1 mg/L	20929	0.32	0.28	0.040	13.33	-----	-----	-----	-----
NICKEL, TOTAL 249.2 mg/L	20929	.266	.274	0.0080	2.96	94.40	-----	-----	-----
SELENIUM, TOTAL 270.2 mg/L	20930	<0.001	<0.001	0.00050	0.00	-----	-----	-----	-----
SILVER, TOTAL 272.2 mg/L	20929	0.42	0.59	0.17	33.66	-----	-----	-----	-----



PASCO COUNTY, FLORIDA

QA/QC for Sample Nos: 20929, 20930,
Page 6

Analyte	LAB ID	Precision Data				Accuracy Data	Reference Sample Data			
		Replicate A	Replicate B	Range	RPD %	% Spike Recovery	Reference Sample ID	Target	Found	% Recovery
SODIUM, TOTAL 273.1 mg/L	20930	19.04	19.09	0.050	0.26	108.90	-----	-----	-----	-----
THALLIUM, TOTAL 279.2 mg/L	20929	1.47	1.91	0.44	26.04	-----	-----	-----	-----	-----
ZINC, TOTAL 289.1 mg/L	20929	0.051	0.052	0.0010	1.94	98.40	-----	-----	-----	-----



BROWARD TESTING LABORATORY, INC.

4416 N.E. 11TH AVE., FORT LAUDERDALE, FLORIDA 33334



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Department of Environmental Protection
SOUTHWEST DISTRICT

Potable Water Laboratory Certification Number BTL#1-86137 BY _____

Environmental Laboratory Certification Number 86035

LABORATORY PARAMETER ANALYSIS REPORT

PROJECT: PASCO COUNTY UTILITIES

SOURCE: RESOURCE RECOVERY LEACHATE-ASH CELL, PRIMARY TANK SAMPLE DATE: 1-7-94
LAB NUMBER: 961-0107 SAMPLE TIME:
SAMPLED BY: CLIENT COMPLETION DATE: 2-9-94

PARAMETER MONITORED	ANALYSIS METHOD	ANALYSIS RESULT	UNITS	DATE	ANALYST
PHENOLS	420.1	<0.001	MG/L	1-17	D.H.

TOX WAS SUBCONTRACTED TO LAW ENVIRONMENTAL SEE ATTACHED REPORTS.
LAW ENVIRONMENTAL HRS #E81297,81393
#E81234,81351

REVIEWED BY:

Gary J. Meyer
Gary J. Meyer, Laboratory Director





BROWARD TESTING LABORATORY, INC.

4416 N.E. 11TH AVE., FORT LAUDERDALE, FLORIDA 33334



Potable Water Laboratory Certification Number BTL#1-86137

Environmental Laboratory Certification Number 86035

LABORATORY PARAMETER ANALYSIS REPORT

PROJECT: PASCO COUNTY UTILITIES

SOURCE: RESOURCE RECOVERY LEACHATE-ASH CELL, SECONDARY TANK SAMPLE DATE: 1-7-94
 LAB NUMBER: 961-0108 SAMPLE TIME:
 SAMPLED BY: CLIENT COMPLETION DATE: 2-9-94

PARAMETER MONITORED	ANALYSIS METHOD	ANALYSIS RESULT	UNITS	DATE	ANALYST
PHENOLS	420.1	0.001	MG/L	1-17	D.H.

TOX WAS SUBCONTRACTED TO LAW ENVIRONMENTAL SEE ATTACHED REPORTS.
 LAW ENVIRONMENTAL HRS #E81297,81393
 #E81234,81351

REVIEWED BY: Gary J. Meyer
 Gary J. Meyer, Laboratory Director



Law Environmental, Inc.
Pensacola Branch
7215 Pine Forest Road
Pensacola, Florida 32526



February 1, 1994

Ms. Jackie Kramer
Broward Testing Laboratory, Inc.
1034 N.E. 44th Court
Ft. Lauderdale, FL 33334
Client #32660 Project #9610107

Dear: Ms. Kramer:

Below are the results of analysis of 2 samples received for examination on January 17, 1994:

Sample I.D. AA49224 Location code: BROW1 *A-1 Primary Tank*
Purchase order number: 9610107 Project account code: 32660
Location Description: 9610107 Sample collection date: 01/07/94
Lab submittal date: 01/17/94 Time: 07:44

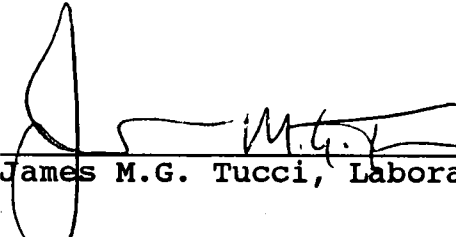
TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
2220-TOX Water EPA 450.1	ug/L	580	5.0

Sample I.D. AA49225 Location code: BROW1 *A-1 Secondary Tank*
Purchase order number: 9610107 Project account code: 32660
Location Description: 9610108 Sample collection date: 01/07/94
Lab submittal date: 01/17/94 Time: 07:44

TEST PARAMETER	UNITS	TEST RESULT	DETECTION LIMIT
2220-TOX Water EPA 450.1	ug/L	280	5.0

Please advise should you have questions concerning these data.

Respectfully submitted,


James M.G. Tucci, Laboratory Manager *1 FEB 1994*