



GW
SW
LEACH.

ST-001
MANATEE COUNTY
GOVERNMENT JRM
2/1/03
Utility Operations Department

January 14, 2003

Mr. John Morris, PG
Florida Department of Environmental Protection
Southwest District Office
3804 Coconut Palm Drive
Tampa, Florida 33619

Re: Semi-Annual Sample Results - Second Half 2002
Lena Road Landfill and Erie Road Landfill

Dear Mr. Morris:

Please find enclosed the laboratory analytical reports and Ground Water Monitoring Report Certification Form for the Lena Road Landfill. Also included are reviews of the analytical data and groundwater elevation contour maps for each landfill provided by PBS&J at the County's request.

The Manatee County Solid Waste Division is currently utilizing P.E. LaMoreaux & Associates, Inc. and the County's Central Laboratory for its sampling events.

If you have any questions regarding these submittals, please contact Greg Mudd, P.G., Senior Geologist, PBS&J, at 800/284-5182, extension 339. Thank you.

Sincerely,

Daniel T. Gray

Daniel T. Gray,
Director

DTG/gbp

cc: Gus DiFonzo, Solid Waste Division Manager *HA*
C. Michael Gore, Landfill Superintendent
Gwen Pagington, Solid Waste Program Specialist

MISSING TOTAL
HARDNESS & TOTAL
NITROGEN

DATA PROVIDED BY
MANATEE COUNTY
CENTRAL LW WAS NOT
PROVIDED ON REPORT
FORM

PE LAMOREAUX REPORT
FORM OBSOLETE
ELEVATED MCL FOR SELENIUM

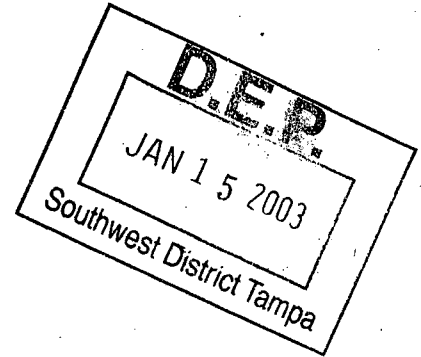


SEP 2002
SAMPLING
EVENT



An employee-owned company

January 13, 2003



Mr. Gus DiFonzo
Solid Waste Division
Manatee County Utility Operations Department
4410 66th Street West
Bradenton, FL 34210

**Re: Semi-Annual Water Quality Monitoring Report
Second Half 2002 Sampling Event
Lena Road Landfill
GMS ID No. 4041M02025
FDEP Permit No. 39884-001-SO**

Dear Mr. DiFonzo:

PBS&J is pleased to present this Semi-Annual Water Quality Monitoring Report for the Lena Road Landfill (LRL). This report presents the results of the Second Half of 2002 sampling event.

Background

The water quality monitoring network at the LRL is designed to monitor the leachate, surface water of Cypress Strand, and the groundwater within both the surficial aquifer and the deep (artesian), otherwise known as the Floridan aquifer. The leachate samples are collected from the leachate pump station. The surface water samples are collected from two points along Cypress Strand, one located upstream of the facility that is designated SW-2, and one located downstream that is designated SW-1. There are 27 wells that are used to monitor groundwater quality. The wells are designated CW-4, CW-5A, GC-1A through GC-6, LR11-1 through LR11-5, MW-1 through MW-6, SA-1 through SA-8, and SMR-1 and SMR-2. The wells designated CW-4, CW-5A, GC-1A through GC-6, LR11-1 through LR11-5, MW-1 through MW-6, and SMR-1 are used to monitor the groundwater of the surficial aquifer. The wells GC-6 and SMR-1 are the designated background wells for the surficial aquifer; the well SMR-2 is the designated background well for the artesian aquifer. A summary of the components that comprise the water quality network is presented in Table 1.

A Florida Department of Environmental Protection (FDEP) Ground Water Monitoring Report form for the Second Half 2002 sampling event is provided in Attachment A.

Groundwater Sample Collection Methodology

The leachate and surface water samples for the Second Half 2002 sampling event were collected on September 3, 2002. The groundwater samples were collected between September 4 and 20, 2002. The samples were collected by representatives of P.E. LaMoreaux and Associates, Inc. (PELA), and were analyzed at PELA's Lakeland, Florida laboratory. The samples were collected in general accordance with the FDEP's Standard Operating Procedure 001/01. Depth-to-groundwater measurements were made from the top-of-casing (TOC) at each monitoring well at the time of sample collection. Copies of the field data sheets from the sampling event are provided along with the laboratory analytical reports in Attachment B.

In accordance with Specific Condition 31 of the LRL's permit, the leachate sample collected during this sampling event was analyzed for the standard field parameters (pH, temperature, specific conductivity, dissolved oxygen, and turbidity). The samples were submitted to the laboratories for analysis for total ammonia-N, bicarbonate, chlorides, iron, mercury, nitrate, sodium, total dissolved solids (TDS), as well as all of the parameters listed in Appendices I and II of 40 Code of Federal Regulations (CFR) Part 258.

In accordance with Specific Condition 32 of the permit, in addition to the field parameters, the surface water samples were analyzed in the laboratories for unionized ammonia, total hardness, biochemical oxygen demand (BOD), copper, mercury, iron, nitrate, zinc, TDS, total organic carbon (TOC), fecal coliform, total phosphorus, chlorophyll A, total nitrogen, chemical oxygen demand (COD), total suspended solids (TSS), and the parameters listed in Appendix I of 40 CFR Part 258.

In accordance with Specific Condition 35 of the facility's permit, the groundwater samples collected at each monitoring well were analyzed in the field for the standard parameters. The samples were analyzed in the laboratories for total ammonia-N, chlorides, iron, mercury, nitrate, sodium, TDS and all of the parameters listed in Appendix 1 of 40 CFR Part 258. The depth to groundwater at each monitoring well was measured prior to purging the well in order to determine the direction of groundwater flow within both the surficial and deep aquifers.

Analytical Results

A summary of the leachate, groundwater, and surface water analytical results for the Second Half 2002 sampling event is presented in Tables 2, 3, and 4, respectively. The Maximum Contaminant Level (MCL) for each parameter is shown on the Tables 2 and 3. The MCLs are promulgated by Chapter 62-550, FAC, but have not been established for every parameter. The MCLs do not apply to and are provided in Table 2 only as a general reference. The analyte

concentrations in the groundwater that exceeded their respective MCLs is shown with shading on Table 3. In Table 4, the Surface Water Cleanup Target Levels (SWCTLs), as promulgated in Chapter 62-770, are provided as a general reference. The complete laboratory reports are provided in Attachment B. A summary of the analytical results is presented below.

Leachate Analytical Summary

There were several analytes detected in the leachate at concentrations in excess of their respective test method's detection limits. They included the inorganic analytes of bicarbonate, chloride, iron, nitrate, sodium, phenols, arsenic, barium, cadmium, and zinc; and the organic analytes benzene, chlorobenzene, 1,4-dichlorobenzene, ethylbenzene, total xylenes, and total sulfides. The concentrations of iron, sodium, cadmium and benzene exceeded their respective MCL for groundwater. The MCL for iron is a secondary drinking water standard.

Groundwater Analytical Summary

Detections in the groundwater samples collected at both the surficial and deep aquifer monitoring wells were limited to the inorganic analytes. At the surficial aquifer wells, every inorganic analyte except cadmium, copper, lead, selenium, silver, thallium, and mercury were detected at concentrations in excess of their respective test method's detection limits in at least one well location. The concentrations of antimony, arsenic, iron and TDS exceeded their respective MCLs in at least one well location. The pH was measured at a value below the prescribed MCL range at several of the surficial aquifer wells.

There were fewer analytes detected in the deep aquifer wells, but every inorganic analyte except arsenic, antimony, cadmium, copper, selenium, silver, thallium, zinc and mercury were detected at concentrations in excess of their respective test method's detection limits in at least one well location. The only analyte that exceeded its MCL in the samples collected at the deep aquifer wells was TDS. The pH value was outside the prescribed MCL range at several deep well locations.

A summary of the MCL exceedances is presented below.

Surficial Aquifer

- *pH* – The pH value measured lower than the prescribed MCL range (6.5-8.5 SU) in the groundwater samples collected at every surficial aquifer well except GC-1A, GC-3 and GC-4. The pH value at the background wells for the surficial aquifer was also lower than the MCL range.

- *Antimony* – The MCL for antimony is 0.06 mg/L. That concentration was exceeded in the sample collected at one of the surficial aquifer monitoring wells, GC-5.
- *Arsenic* – The concentration of arsenic exceeded the MCL (0.05 mg/L) in the samples collected at the shallow monitoring wells GC-2 and MW-2. The concentration of arsenic was below the test method's detection limits in the background wells.
- *Iron* – The concentration of iron exceeded the MCL (0.3 mg/L) in the samples collected at all of the surficial aquifer wells, including the background wells. The MCL for iron is a secondary drinking water standard.
- *TDS* – The MCL for TDS (500 mg/L) was exceeded in the sample collected at one of the surficial aquifer monitoring wells, CW-4. The MCL for TDS is also a secondary drinking water standard.

Deep Aquifer

- *pH* – The pH value was higher than the prescribed MCL range in the samples collected at two of the deep aquifer wells, SA-3 and SA-8.
- *TDS* – The MCL for TDS was exceeded in the sample collected at deep aquifer well SA-6. The TDS concentration deep aquifer background well, SMR-2, was also relatively high.

Surface Water Analytical Summary

Toluene was the only organic analyte detected in the surface water samples at concentrations in excess of its respective test method's detection limits. It was detected at the SW-2 location at a concentration of 21.5 micrograms per liter ($\mu\text{g/l}$). The MCL for toluene in groundwater is 1000 $\mu\text{g/l}$. There were a number of inorganic analytes detected in both surface water samples, including BOD, COD, fecal coliform, nitrate, TDS, TKN, total phosphorous, TSS, unionized ammonia, arsenic, barium, calcium, iron, magnesium, nickel and vanadium. Lead was also detected, but only in the SW-2 sample. The analytes that exceeded their respective SWCTLs were iron, in both surface water samples, and TDS, in the SW-2 sample.

Analytical Trends and Analysis

The pattern of detections during this sampling event is consistent with those of the previous three semiannual sampling events. Although both organic and inorganic analytes were detected in the monitoring network, the only analytes that were consistently detected at concentrations in excess

Mr. Gus DiFonzo
January 13, 2003
Page 5

of the regulatory standards were inorganics. The regulatory standard exceedances were limited primarily to pH, TDS and iron. Two of the trace metals, antimony and arsenic, were detected at concentrations in excess of the regulatory standards at several of the surficial aquifer well locations.

Groundwater Flow Pattern

The depth to water measurements at each monitoring well are provided in Table 5. The water level measurements were subtracted from the TOC elevations to determine the elevation of the water table at each well. The TOC elevations are referenced in feet above the National Geodetic Vertical Datum (NGVD). The water table elevation data from the shallow monitoring wells was plotted and contoured to generate the groundwater elevation contour map for the surficial aquifer presented as Figure 1. The data from the deep wells was used to generate the deep (artesian) aquifer contour map presented in Figure 2.

The configuration of the water table surface indicates that the groundwater within the surficial aquifer (outside the boundary of the landfill) was flowing in a north-northwesterly direction when the readings were taken. The average horizontal gradient was 0.001 feet per foot (ft/ft). The groundwater within the artesian aquifer flowing to the north-northwest at an average horizontal gradient was 0.006 ft/ft.

Please call me at (407) 647-7275, ext. 339 if you have any questions or need any additional information.

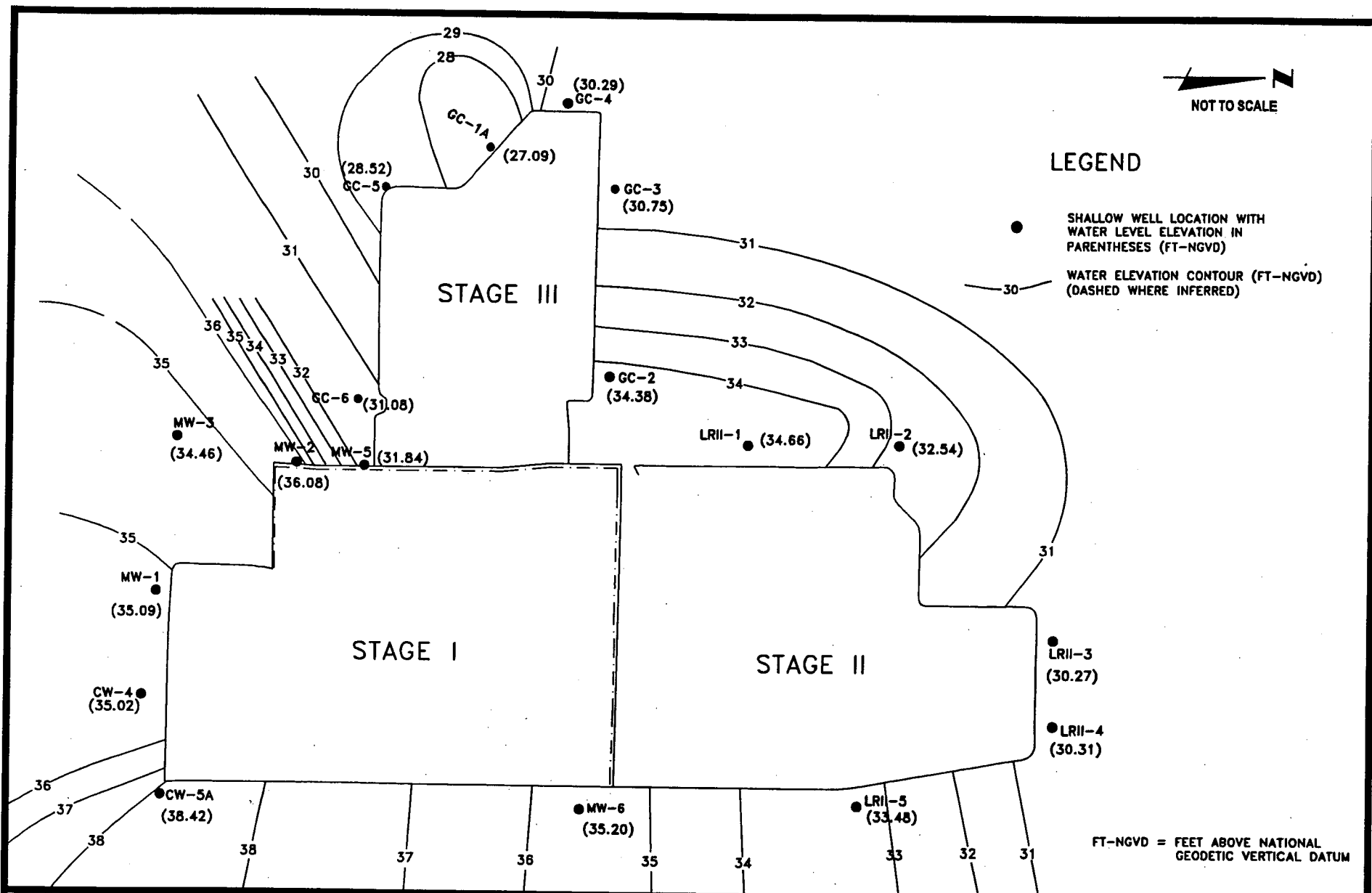
Very truly yours,



Greg Mudd, P.G.
Senior Geologist

C: File, 120498.05 9300

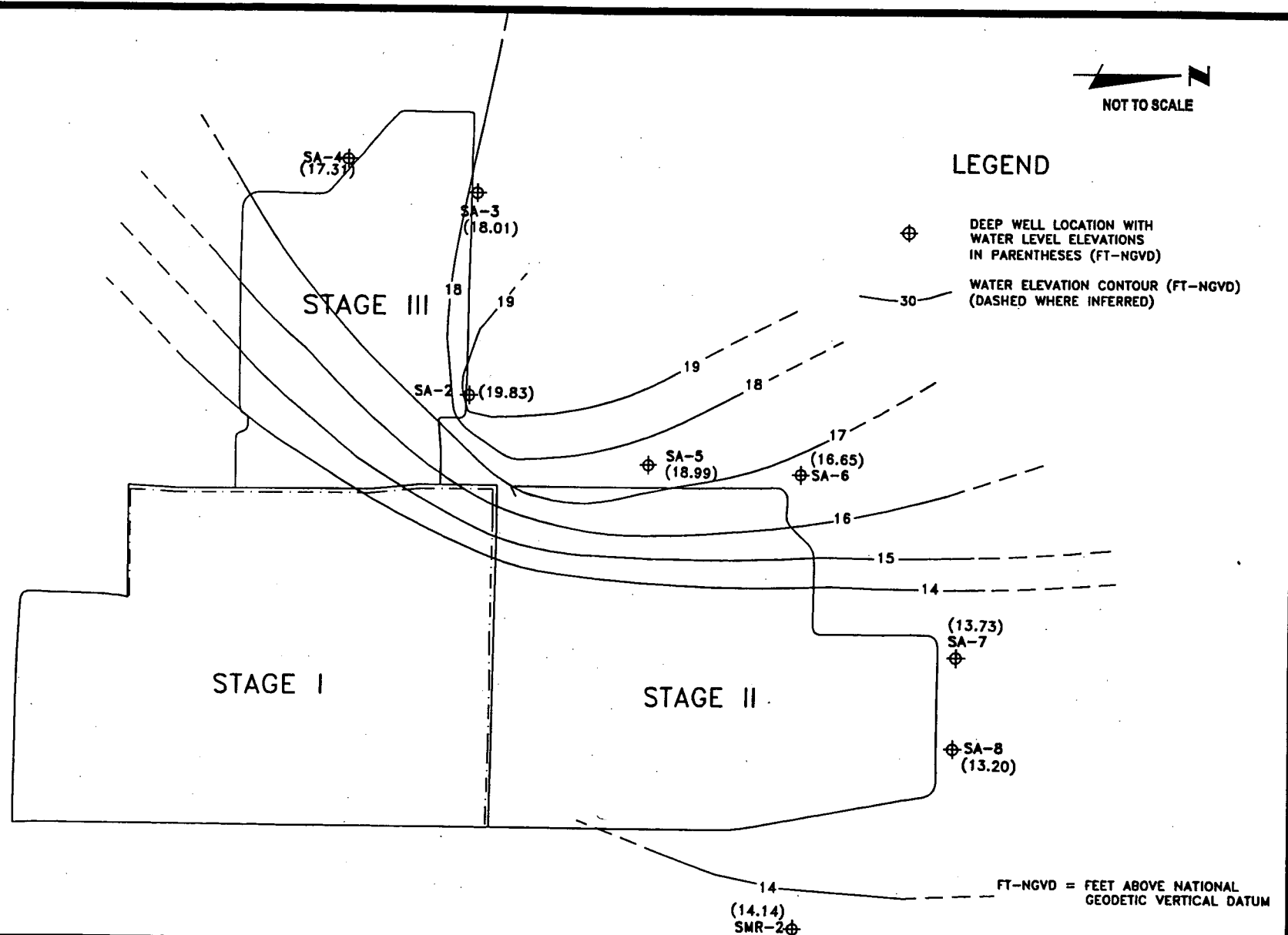
FIGURES



LENA ROAD LANDFILL
3333 LENA ROAD
BRADENTON, MANATEE
COUNTY, FLORIDA

GROUNDWATER ELEVATION CONTOUR MAP,
SURFICIAL AQUIFER - SECOND HALF, 2002

FIG.-1



PBS&J

LENA ROAD LANDFILL
3333 LENA ROAD
BRADENTON, MANATEE
COUNTY, FLORIDA

GROUNDWATER ELEVATION CONTOUR MAP,
DEEP AQUIFER - SECOND HALF, 2002

FIG. 2

TABLE 4

Surface Water Analytical Summary

Table 4 - Surface Water Analytical Summary

DATE OF TEST			SW-1 9/3/02	SW-2 9/3/02
	SWCTL ⁽¹⁾	UNITS		
Field				
Temp, Field		C	27.3	31.9
pH, Field		STD	6.71	7.18
Cond, Field		umhos/cm	310	700
Dissolved Oxygen, Field		mg/l	3.47	6.88
Turbidity, Field		NTU	23.4	29.2
CFR Part 258 Appendix I				
Inorganic:				
BOD		mg/l	2.13	8.1
COD		mg/l	28	216
Fecal Coliform		cfu/100ml	190	3900
Mercury	0.012	ug/l	<0.0001	<0.0001
Nitrate		mg/l	0.057	0.058
Nitrite		mg/l	<0.005	<0.005
TDS		mg/l	236	564
TKN		mg/l	1.9	3.1
Total Phosphorous		mg/l	0.993	0.118
TSS		mg/l	19.4	73.7
Unionized Ammonia		mg/l	0.02	0.01
Antimony	4.3	mg/l	<0.002	<0.002
Arsenic	0.05	mg/l	0.007	0.025
Barium	*	mg/l	0.016	0.027
Beryllium	0.00013	mg/l	<0.0002	<0.0002
Calcium		mg/l	29.3	98.6
Cadmium		mg/l	<0.0005	<0.0005
Chromium		mg/l	0.003	0.003
Cobalt		mg/l	<0.001	<0.001
Copper		mg/l	<0.005	<0.005
Iron	1	mg/l	3.02	28.2
Lead		mg/l	<0.005	0.01
Magnesium		mg/l	8.62	11.3
Nickel		mg/l	0.004	0.004
Selenium	0.005	mg/l	<0.01	<0.01
Silver	0.00007	mg/l	<0.002	<0.002
Thallium	0.0063	mg/l	<0.0004	<0.0004
Vanadium		mg/l	0.005	0.006
Zinc		mg/l	<0.01	<0.01
Organic:				
Acetone	1692	ug/l	<2.5	<2.5
Acrylonitrile	49.9	ug/l	<1.5	<1.5
Benzene	71.28	ug/l	<0.04	<0.04
Bromochloromethane		ug/l	<0.5	<0.5
Bromodichloromethane	22	ug/l	<0.08	<0.08

Table 4 - Surface Water Analytical Summary (Con't)

DATE OF TEST			SW-1 9/3/02	SW-2 9/3/02
	SWCTL ⁽¹⁾	UNITS		
Carbon Disulfide	105	ug/l	<4.1	<4.1
Carbon Tetrachloride	4.42	ug/l	<0.21	<0.21
Chlorobenzene	17	ug/l	<0.04	<0.04
Chloroethane		ug/l	<0.1	<0.1
Dibromochloromethane	34	ug/l	<0.05	<0.05
1,2-Dichlorobenzene	99	ug/l	<0.03	<0.03
1,4-Dichlorobenzene	100	ug/l	<0.03	<0.03
Dichloromethane		ug/l	<0.03	<0.03
1,2-Dibromo-3-chloropropane		ug/l	<0.01	<0.01
Ethylene dibromide	13	ug/l	<0.01	<0.01
o-dichlorobenzene		ug/l	<1.0	<1.0
1,1-Dichloroethane		ug/l	<0.03	<0.03
1,2-Dichloroethane		ug/l	<0.02	<0.02
1,1-Dichloroethene	3.2	ug/l	<0.12	<0.12
cis-1,2-Dichloroethene		ug/l	<0.1	<0.1
trans-1,2-Dichloroethene	11000	ug/l	<0.06	<0.06
1,2-Dichloropropane	2600	ug/l	<0.04	<0.04
cis-1,3-Dichloropropene		ug/l	<0.05	<0.05
trans-1,3-Dichloropropene		ug/l	<0.04	<0.04
Ethylbenzene	605	ug/l	<0.06	<0.06
2-Hexanone		ug/l	<2.5	<2.5
Methyl bromide		ug/l	<0.11	<0.11
Chloromethane	471	ug/l	<0.13	<0.13
2-butanone	120000	ug/l	<5	<5
Methyl iodide		ug/l	<0.5	<0.5
4-methyl-2-pentanone		ug/l	<5.0	<5.0
Styrene	455	ug/l	<1.0	<1.0
1,1,1,2-tetrachloroethane		ug/l	<0.1	<0.1
1,1,2,2-tetrachloroethane	10.8	ug/l	<0.04	<0.04
T-1,4-Dichloro-2-butene		ug/l	<10	<10
Tetrachloroethene	8.85	ug/l	<0.14	<0.14
Toluene	475	ug/l	<0.11	21.5
1,1,1-trichloroethane	270	ug/l	<0.04	<0.04
1,1,2-trichloroethane	28.5	ug/l	<0.1	<0.1
Tribromomethane		ug/l	<0.12	<0.12
Trichloroethene	80.7	ug/l	<0.19	<0.19
Trichloromethane		ug/l	<0.03	<0.03
Trichlorofluoromethane		ug/l	<0.08	<0.08
1,2,3-Trichloropropane		ug/l	<0.3	<0.3
Vinyl acetate	700	ug/l	<10	<10
Vinyl chloride		ug/l	<0.17	<0.17
Total Xylenes	370	ug/l	<0.11	<0.11

(1) Surface Water Cleanup Target Levels, as promulgated in Chapter 62-770, FAC.

* Can be no more than 10% higher than background.

TABLE 5

**Groundwater Elevation Survey Results
Lena Road Landfill
September 2002**

Location Identifier	Top-of-Casing Elevation (Ft-NGVD)	Bottom-of-Casing Elevation (Ft-NGVD)	Depth to Water (Ft-BTOC)	Water Level Elevation (Ft-NGVD)
Surficial Aquifer				
LRII-1	37.97	16.85	3.31	34.66
LRII-2	36.48	13.60	3.94	32.54
LRII-3	33.47	10.87	3.20	30.27
LRII-4	33.85	11.34	3.54	30.31
LRII-5	36.75	13.98	3.37	33.48
MW-1	42.63*	21.89	7.54	35.09
MW-2	41.13	24.95	5.05	36.08
MW-3	39.94	23.12	5.48	34.46
MW-5	39.88	18.67	8.04	31.84
MW-6	39.29	16.59	4.20	35.20
CW-4	37.48	22.55	2.46	35.02
CW-5A	41.18	23.33	2.76	38.42
GC-1A	31.75	16.52	4.66	27.09
GC-2	38.15	19.73	3.77	34.38
GC-3	35.02	11.92	4.27	30.75
GC-4	33.90	11.50	3.61	30.29
GC-5	36.46	14.91	6.74	28.52
GC-6	39.02	17.02	7.94	31.08
SMR-1	36.47	13.22	4.63	31.84
Artesian (Deep) Aquifer				
SMR-2	36.25	-119.75	22.11	14.14
SA-2	37.94	-118.16	18.11	19.83
SA-3	35.43	-120.67	17.42	18.01
SA-4	31.22	-124.78	13.91	17.31
SA-5	37.85	-118.15	18.86	18.99
SA-6	36.17	-119.83	19.52	16.65
SA-7	33.41	-122.59	19.68	13.73
SA-8	34.43	-121.57	21.23	13.20

Abbreviations: Ft-NGVD = Feet above the National Geodetic Vertical Datum.
Ft-BTOC = Feet below the Top-of-Casing.

Attachment B-3
Surface Water Data

LAB
REPORT
(COUNTY LAB)

REPORT OF ANALYSIS

MANATEE COUNTY UTILITY OPERATIONS CENTRAL WASTEWATER LABORATORY

5101 65TH STREET WEST

BRADENTON, FL 34210

Phone: (941) 792-8811 ext. 5285

Fax: (941) 795-3477

FDOH LAB ID: E54560

USEPA LAB CODE: FL00031

Laboratory Contact: Jeff Goodwin

PREPARED FOR: Mr. Gus Difonzo
MCUOD Solid Waste Division
4410 66th Street West
Bradenton, FL 34210

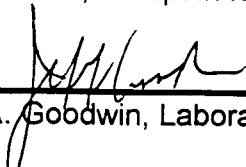
SAMPLE RECEIPT DATE: September 3, 2002

REPORT DATE: October 28, 2002

PROJECT NAME: Lena Road Landfill
Semiannual Surface Water Monitoring

Data Release Authorization:

The Methods of analysis in this report are in accordance with MCUOD Central Wastewater Laboratory's Quality Assurance Manual and meet all NELAC standards except where noted. Results pertain only to the items tested and to the samples specified. This report may not be reproduced, except in full, without the written approval of this laboratory.


Jeffrey A. Goodwin, Laboratory Supervisor



Lab ID	Client ID	Sample Location	Collection Date/Time	Parameter	Method	Results	Date /Time Analyzed	MDL	Analyst	Cost per sample
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Antimony	EPA 204.2	<0.002 mg/L	09/13/02 08:55	0.002 mg/L	JPN	\$6.15
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Arsenic	EPA 200.7	0.007 mg/L	09/11/02 12:11	0.007 mg/L	JPN	\$6.15
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Barium	EPA 200.7	0.016 mg/L	09/11/02 12:11	0.0002 mg/L	JPN	\$3.70
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Beryllium	EPA 200.7	<0.0002 mg/L	09/11/02 12:11	0.0002 mg/L	JPN	\$6.15
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Calcium	EPA 200.7	29.3 mg/L	09/11/02 12:11	0.010 mg/L	JPN	\$3.70
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Cadmium	EPA 200.7	<0.0005 mg/L	09/11/02 12:11	0.0005 mg/L	JPN	\$6.15
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Chromium	EPA 200.7	0.003 mg/L	09/11/02 12:11	0.0005 mg/L	JPN	\$3.70
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Cobalt	EPA 200.7	<0.001 mg/L	09/11/02 12:11	0.001 mg/L	JPN	\$3.70
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Copper	EPA 200.7	<0.005 mg/L	09/11/02 12:11	0.005 mg/L	JPN	\$3.70
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Iron	EPA 200.7	3.02 mg/L	09/11/02 12:11	0.010 mg/L	JPN	\$3.70
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Lead	EPA 200.7	<0.005 mg/L	09/11/02 12:11	0.005 mg/L	JPN	\$3.70
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Magnesium	EPA 200.7	8.62 mg/L	09/11/02 12:11	0.005 mg/L	JPN	\$3.70
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Nickel	EPA 200.7	0.004 mg/L	09/11/02 12:11	0.001 mg/L	JPN	\$3.70
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Selenium	EPA 200.7	<0.010 mg/L	09/11/02 12:11	0.010 mg/L	JPN	\$6.15
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Silver	EPA 200.7	<0.002 mg/L	09/11/02 12:11	0.002 mg/L	JPN	\$3.70
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Thallium	EPA 279.2	<0.0004 mg/L	09/17/02 18:13	0.0004 mg/L	JPN	\$6.15
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Vanadium	EPA 200.7	0.005 mg/L	09/11/02 12:11	0.0005 mg/L	JPN	\$3.70
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Zinc	EPA 200.7	<0.010 mg/L	09/11/02 12:11	0.010 mg/L	JPN	\$3.70
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Mercury	EPA 245.1	<0.100 ug/L	09/12/02 11:28	0.100 ug/L	WC	\$4.90
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Unionized Ammonia	DEP SOP 10/3/83	0.02 mg/L	09/11/02 14:32	Calculation	JAG	\$6.15
SW - 1	SW - 1	Lena Road	09/03/02 10:23	BOD	SM 5210B	2.13 mg/L	09/04/02 07:30	2.00 mg/L	LB/EMM	\$8.60
SW - 1	SW - 1	Lena Road	09/03/02 10:23	COD	EPA 410.4	68.9 mg/L	09/18/02 10:20	5.50 mg/L	LK	\$4.90
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Fecal Coliform	SM 9222D	190 CFU/100 ml	09/03/02 14:40	1 CFU/100 ml	LK	\$4.90
SW - 1	SW - 1	Lena Road	09/03/02 10:23	TDS	SM 2540C	236 mg/L	09/05/02 15:40	2.00 mg/L	EMM/LK	\$6.15
SW - 1	SW - 1	Lena Road	09/03/02 10:23	TKN	EPA 351.2	1.90 mg/L	09/05/02 14:43	0.050 mg/L	LB	\$4.90
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Nitrite	EPA 300.0	<0.005 mg/L	09/03/02 21:49	0.005 mg/L	LK	\$4.90
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Nitrate	EPA 300.0	0.057 mg/L	09/03/02 21:49	0.006 mg/L	LK	\$4.90
SW - 1	SW - 1	Lena Road	09/03/02 10:23	Total Phosphorus	EPA 365.1	0.993 mg/L	09/06/02 14:06	0.005 mg/L	EMM/JPN	\$6.15
SW - 1	SW - 1	Lena Road	09/05/02 09:15	TSS	SM 2540D	19.4 mg/L	09/06/02 08:50	0.600 mg/L	LK	\$4.90
TOC analyzed by an outside lab (PELA).										
Total Cost for Lena Road SW-										\$143.90

Lab ID	Client ID	Sample Location	Collection Date/Time	Parameter	Method	Results	Date /Time Analyzed	MDL	Analyst	Cost per sample
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Antimony	EPA 204.2	<0.002 mg/L	09/13/02 09:11	0.002 mg/L	JPN	\$6.15
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Arsenic	EPA 200.7	0.023 mg/L	09/11/02 12:23	0.007 mg/L	JPN	\$6.15
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Barium	EPA 200.7	0.026 mg/L	09/11/02 12:23	0.0002 mg/L	JPN	\$3.70
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Beryllium	EPA 200.7	<0.0002 mg/L	09/11/02 12:23	0.0002 mg/L	JPN	\$6.15
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Calcium	EPA 200.7	99.8 mg/L	09/11/02 12:23	0.010 mg/L	JPN	\$3.70
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Cadmium	EPA 200.7	<0.0005 mg/L	09/11/02 12:23	0.0005 mg/L	JPN	\$6.15
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Chromium	EPA 200.7	0.003 mg/L	09/11/02 12:23	0.0005 mg/L	JPN	\$3.70
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Cobalt	EPA 200.7	<0.001 mg/L	09/11/02 12:23	0.001 mg/L	JPN	\$3.70
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Copper	EPA 200.7	<0.005 mg/L	09/11/02 12:23	0.005 mg/L	JPN	\$3.70
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Iron	EPA 200.7	25.3 mg/L	09/11/02 12:23	0.010 mg/L	JPN	\$3.70
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Lead	EPA 200.7	<0.005 mg/L	09/11/02 12:23	0.005 mg/L	JPN	\$3.70
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Magnesium	EPA 200.7	11.5 mg/L	09/11/02 12:23	0.005 mg/L	JPN	\$3.70
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Nickel	EPA 200.7	0.004 mg/L	09/11/02 12:23	0.001 mg/L	JPN	\$3.70
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Selenium	EPA 200.7	<0.010 mg/L	09/11/02 12:23	0.010 mg/L	JPN	\$6.15
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Silver	EPA 200.7	<0.002 mg/L	09/11/02 12:23	0.002 mg/L	JPN	\$3.70
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Thallium	EPA 279.2	<0.0004 mg/L	09/17/02 18:38	0.0004 mg/L	JPN	\$6.15
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Vanadium	EPA 200.7	0.005 mg/L	09/11/02 12:23	0.0005 mg/L	JPN	\$3.70
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Zinc	EPA 200.7	<0.010 mg/L	09/11/02 12:23	0.010 mg/L	JPN	\$3.70
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Mercury	EPA 245.1	<0.100 ug/L	09/12/02 11:39	0.100 ug/L	WC	\$6.15
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Unionized Ammonia	DEP SOP 10/3/83	0.01 mg/L	09/11/02 14:36	Calculation	JAG	\$4.90
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	BOD	SM 5210B	8.07 mg/L	09/04/02 07:30	2.00 mg/L	LB/EMM	\$6.15
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	COD	EPA 410.4	223 mg/L	09/18/02 10:20	5.50 mg/L	LK	\$8.60
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	TDS	SM 2540C	530 mg/L	09/05/02 15:40	2.00 mg/L	EMM/LK	\$4.90
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	TKN	EPA 351.2	3.18 mg/L	09/05/02 14:46	0.050 mg/L	LB	\$6.15
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Nitrite	EPA 300.0	<0.005 mg/L	09/03/02 21:49	0.005 mg/L	LK	\$4.90
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Nitrate	EPA 300.0	0.043 mg/L	09/03/02 23:50	0.006 mg/L	LK	\$4.90
SW - 2 Dup	SW - 2 Dup	Lena Road	09/03/02 12:00	Total Phosphorus	EPA 365.1	0.111 mg/L	09/06/02 14:07	0.005 mg/L	EMM/JPN	\$6.15
SW - 2 Dup	SW - 2 Dup	Lena Road	09/05/02 10:00	TSS	SM 2540D	62.0 mg/L	09/06/02 08:50	0.600 mg/L	LK	\$4.90
TOC analyzed by an outside lab (PELA).										
Total Cost for Lena Road SW-2										\$139.00



REPORT OF ANALYSIS

P.E. LaMoreaux and Associates, Inc.

Geochemistry Laboratory

4320 Old Highway 37, Lakeland, Florida 33813

PHONE 863/646-8526

FAX 863/646-1042

CASE NARRATIVE

SENT TO: MANATEE COUNTY-SWRTP
JEFF GOODWIN
5101 65TH STREET WEST
BRADENTON FLORIDA 34210
941 792-8788

REPORT ID : 0209059021
PROJECT NO. :
PELA CONTACT :
RECEIVED DATE : 9/3/02
REPORTED DATE : 10/14/02

LAB ID

KC14473-02Y
KC14473-02X-5
KC14474-02Y
KC14474-02X-5
KC14474-03S
KC14475-02Y
KC14475-02X-5
KC14475-03S

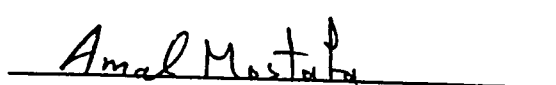
LAB
REPORT
(LA-MOREAUX)

REPORT SUMMARY

Sampling, handling, and holding time criteria were met for all samples.

Samples were collected by PELA according to DEP-SOP-001/01 revised January 1, 2002.


SENIOR CHEMIST


LABORATORY DIRECTOR

CERTIFICATE OF RESULTS

Sample integrity certified prior to analysis. Test results meet all requirements of the NELAC Standards, except as noted in the Case Narrative. This report may not be reproduced in part, results relate only to items tested. This report includes a case narrative, report of analysis, attachments, and chain of custody.

Narrative Page 1 of 1



REPORT OF ANALYSIS

P.E. LaMoreaux and Associates, Inc.

Geochemistry Laboratory

4320 Old Highway 37, Lakeland, Florida 33813

PHONE 863/646-8526

FAX 863/646-1042

CASE NARRATIVE

SENT TO: MANATEE COUNTY-SWRTP

JEFF GOODWIN

5101 65TH STREET WEST

BRADENTON FLORIDA 34210

941 792-8788

REPORT ID : 0209055578

PROJECT NO. :

PELA CONTACT :

RECEIVED DATE : 9/24/02

REPORTED DATE : 10/7/02

LAB ID

KC16225-01U

KC16226-01U

KC16227-01U

KC16228-01U

KC16229-01U

KC16230-01U

REPORT SUMMARY

Sampling, handling, and holding time criteria were met except as noted.

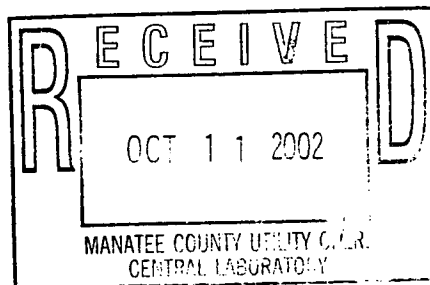
Sample data qualifier are reported as outlined in 62-160 F.A.C.

Samples were collected by the client.

QUALIFIER KEY

Q = Sample submitted to the laboratory after passing holding time – client notified

Jeff Goodwin
Laboratory Supervisor



SENIOR CHEMIST

CERTIFICATE OF RESULTS

Amal Mostafa
LABORATORY DIRECTOR

Sample integrity certified prior to analysis. Test results meet all requirements of the NELAC Standards, except as noted in the Case Narrative. This report may not be reproduced in part, results relate only to items tested. This report includes a case narrative, report of analysis, attachments, and chain of custody.

Narrative Page 1 of 1



REPORT OF ANALYSIS

E. LaMoreaux and Associates, Inc.

Geochemistry Laboratory

4320 Old Highway 37, Lakeland, Florida 33813

PHONE 863/646-8526

FAX 863/646-1042

Client Name : MANATEE COUNTY-SWRTP
Identification : SW 1
Site : SURFACE WATER LENA RD
Type : WATER

Report ID: 0209059021

COLLECTION DATE : 9/3/02

COLLECTION TIME : 10:23

COLLECTED BY : PELA

DATE RECEIVED IN LAB : 9/3/02

PARAMETER	RESULTS	DETECTION LIMITS	UNITS	ANALYST	DATE FINISHED
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ORGANICS

APPENDIX I VOLATILES (EPA 8260)

KC14473-02Y					
1,2,3-TRICHLOROPROPANE	ND	0.3	ug/l	JMS	9/4/02
CIS 1,2-DICHLOROETHENE	ND	0.10	ug/l	JMS	9/4/02
IODOMETHANE	ND	0.5	ug/l	JMS	9/4/02
T-1,4-DICHLORO-2-BUTENE	ND	10.0	ug/l	JMS	9/4/02
STYRENE	ND	1.0	ug/l	JMS	9/4/02
1,1,1,2-TETRACHLOROETHANE	ND	0.1	ug/l	JMS	9/4/02
4-METHYL-2-PENTANONE	ND	5.0	ug/l	JMS	9/4/02
DIBROMOMETHANE	ND	0.3	ug/l	JMS	9/4/02
2-BUTANONE	ND	5.0	ug/l	JMS	9/4/02
VINYL ACETATE	ND	10.0	ug/l	JMS	9/4/02
CARBON DISULFIDE	ND	4.1	ug/l	JMS	9/4/02
2-HEXANONE	ND	5.0	ug/l	JMS	9/4/02
ACETONE	ND	2.5	ug/l	JMS	9/4/02
BROMOCHLOROMETHANE	ND	0.5	ug/l	JMS	9/4/02
CHLOROMETHANE	ND	0.13	ug/l	JMS	9/4/02
TRANS-1,2-DICHLOROETHENE	ND	0.06	ug/l	JMS	9/4/02
DICHLOROMETHANE	ND	0.03	ug/l	JMS	9/4/02
1,1-DICHLOROETHENE	ND	0.12	ug/l	JMS	9/4/02
TRICHLOROFLUOROMETHANE	ND	0.08	ug/l	JMS	9/4/02
CHLOROETHANE	ND	0.10	ug/l	JMS	9/4/02
VINYL CHLORIDE	ND	0.17	ug/l	JMS	9/4/02
1,1,1-TRICHLOROETHANE	ND	0.04	ug/l	JMS	9/4/02
BROMOMETHANE	ND	0.11	ug/l	JMS	9/4/02
TRANS-1,3-DICHLOROPROPENE	ND	0.04	ug/l	JMS	9/4/02
1,2-DICHLOROBENZENE	ND	0.03	ug/l	JMS	9/4/02
1,4-DICHLOROBENZENE	ND	0.03	ug/l	JMS	9/4/02
1,1,2,2-TETRACHLOROETHANE	ND	0.04	ug/l	JMS	9/4/02
O-XYLENE	ND	0.11	ug/l	JMS	9/4/02
TRIBROMOMETHANE	ND	0.12	ug/l	JMS	9/4/02
M,P-XYLENES	ND	0.11	ug/l	JMS	9/4/02
ETHYLBENZENE	ND	0.06	ug/l	JMS	9/4/02
CHLOROBENZENE	ND	0.04	ug/l	JMS	9/4/02
TETRACHLOROETHENE	ND	0.14	ug/l	JMS	9/4/02
1,1-DICHLOROETHANE	ND	0.03	ug/l	JMS	9/4/02
1,1,2-TRICHLOROETHANE	ND	0.10	ug/l	JMS	9/4/02



REPORT OF ANALYSIS

E. LaMoreaux and Associates, Inc.

Geochemistry Laboratory

4320 Old Highway 37, Lakeland, Florida 33813

PHONE 863/646-8526

FAX 863/646-1042

Client Name : MANATEE COUNTY-SW RTP
Identification : SW 1
Site : SURFACE WATER LENA RD
Type : WATER

Report ID: 0209059021

COLLECTION DATE : 9/3/02

COLLECTION TIME : 10:23

COLLECTED BY : PELA

DATE RECEIVED IN LAB : 9/3/02

PARAMETER	RESULTS	DETECTION LIMITS	UNITS	ANALYST	DATE FINISHED
ACRYLONITRILE	ND	1.50	ug/l	JMS	9/4/02
TOLUENE	ND	0.11	ug/l	JMS	9/4/02
CIS-1,3-DICHLOROPROPENE	ND	0.05	ug/l	JMS	9/4/02
BROMODICHLOROMETHANE	ND	0.08	ug/l	JMS	9/4/02
TRICHLOROETHENE	ND	0.19	ug/l	JMS	9/4/02
1,2-DICHLOROPROPANE	ND	0.04	ug/l	JMS	9/4/02
CARBON TETRACHLORIDE	ND	0.21	ug/l	JMS	9/4/02
BENZENE	ND	0.04	ug/l	JMS	9/4/02
1,2-DICHLOROETHANE	ND	0.02	ug/l	JMS	9/4/02
TRICHLOROMETHANE	ND	0.03	ug/l	JMS	9/4/02
DIBROMOCHLOROMETHANE	ND	0.05	ug/l	JMS	9/4/02



REPORT OF ANALYSIS

P.E. LaMoreaux and Associates, Inc.

Geochemistry Laboratory

4320 Old Highway 37, Lakeland, Florida 33813

PHONE 863/646-8526

FAX 863/646-1042

Client Name : MANATEE COUNTY-SW RTP
Identification : SW 2
Site : SURFACE WATER LENA RD
Type : WATER

Report ID: 0209059021

COLLECTION DATE : 9/3/02

COLLECTION TIME : 12:00

COLLECTED BY : PELA

DATE RECEIVED IN LAB : 9/3/02

PARAMETER	RESULTS	DETECTION LIMITS	UNITS	ANALYST	DATE FINISHED
ORGANICS					
APPENDIX I VOLATILES (EPA 8260)					
KC14474-02Y					
1,2,3-TRICHLOROPROPANE	ND	0.3	ug/l	JMS	9/4/02
CIS 1,2-DICHLOROETHENE	ND	0.10	ug/l	JMS	9/4/02
IODOMETHANE	ND	0.5	ug/l	JMS	9/4/02
T-1,4-DICHLORO-2-BUTENE	ND	10.0	ug/l	JMS	9/4/02
STYRENE	ND	1.0	ug/l	JMS	9/4/02
1,1,1,2-TETRACHLOROETHANE	ND	0.1	ug/l	JMS	9/4/02
4-METHYL-2-PENTANONE	ND	5.0	ug/l	JMS	9/4/02
DIBROMOMETHANE	ND	0.3	ug/l	JMS	9/4/02
2-BUTANONE	ND	5.0	ug/l	JMS	9/4/02
VINYL ACETATE	ND	10.0	ug/l	JMS	9/4/02
CARBON DISULFIDE	ND	4.1	ug/l	JMS	9/4/02
2-HEXANONE	ND	5.0	ug/l	JMS	9/4/02
ACETONE	ND	2.5	ug/l	JMS	9/4/02
BROMOCHLOROMETHANE	ND	0.5	ug/l	JMS	9/4/02
CHLOROMETHANE	ND	0.13	ug/l	JMS	9/4/02
TRANS-1,2-DICHLOROETHENE	ND	0.06	ug/l	JMS	9/4/02
DICHLOROMETHANE	ND	0.03	ug/l	JMS	9/4/02
1,1-DICHLOROETHENE	ND	0.12	ug/l	JMS	9/4/02
TRICHLOROFLUOROMETHANE	ND	0.08	ug/l	JMS	9/4/02
CHLOROETHANE	ND	0.10	ug/l	JMS	9/4/02
VINYL CHLORIDE	ND	0.17	ug/l	JMS	9/4/02
1,1,1-TRICHLOROETHANE	ND	0.04	ug/l	JMS	9/4/02
BROMOMETHANE	ND	0.11	ug/l	JMS	9/4/02
TRANS-1,3-DICHLOROPROPENE	ND	0.04	ug/l	JMS	9/4/02
1,2-DICHLOROBENZENE	ND	0.03	ug/l	JMS	9/4/02
1,4-DICHLOROBENZENE	ND	0.03	ug/l	JMS	9/4/02
1,1,2,2-TETRACHLOROETHANE	ND	0.04	ug/l	JMS	9/4/02
O-XYLENE	ND	0.11	ug/l	JMS	9/4/02
TRIBROMOMETHANE	ND	0.12	ug/l	JMS	9/4/02
M,P-XYLENES	ND	0.11	ug/l	JMS	9/4/02
ETHYLBENZENE	ND	0.06	ug/l	JMS	9/4/02
CHLOROBENZENE	ND	0.04	ug/l	JMS	9/4/02
TETRACHLOROETHENE	ND	0.14	ug/l	JMS	9/4/02
1,1-DICHLOROETHANE	ND	0.03	ug/l	JMS	9/4/02
1,1,2-TRICHLOROETHANE	ND	0.10	ug/l	JMS	9/4/0



REPORT OF ANALYSIS

P.E. LaMoreaux and Associates, Inc.

Geochemistry Laboratory

4320 Old Highway 37, Lakeland, Florida 33813

PHONE 863/646-8526

FAX 863/646-1042

Client Name : MANATEE COUNTY-SWRTP
Identification : SW 2
Site : SURFACE WATER LENA RD
Type : WATER

Report ID: 0209059021

COLLECTION DATE : 9/3/02

COLLECTION TIME : 12:00

COLLECTED BY : PELA

DATE RECEIVED IN LAB : 9/3/02

PARAMETER	RESULTS	DETECTION LIMITS	UNITS	ANALYST	DATE FINISHED
ACRYLONITRILE	ND	1.50	ug/l	JMS	9/4/02
TOLUENE	21.5	0.11	ug/l	JMS	9/4/02
CIS-1,3-DICHLOROPROPENE	ND	0.05	ug/l	JMS	9/4/02
BROMODICHLOROMETHANE	ND	0.08	ug/l	JMS	9/4/02
TRICHLOROETHENE	ND	0.19	ug/l	JMS	9/4/02
1,2-DICHLOROPROPANE	ND	0.04	ug/l	JMS	9/4/02
CARBON TETRACHLORIDE	ND	0.21	ug/l	JMS	9/4/02
BENZENE	ND	0.04	ug/l	JMS	9/4/02
1,2-DICHLOROETHANE	ND	0.02	ug/l	JMS	9/4/02
TRICHLOROMETHANE	ND	0.03	ug/l	JMS	9/4/02
DIBROMOCHLOROMETHANE	ND	0.05	ug/l	JMS	9/4/02



REPORT OF ANALYSIS

P.E. LaMoreaux and Associates, Inc.

Geochemistry Laboratory

4320 Old Highway 37, Lakeland, Florida 33813

PHONE 863/646-8526

FAX 863/646-1042

ANALYTE ORIENTED ANALYSIS REPORT SAMPLE SUMMARY

SENT TO: MANATEE COUNTY-SWRTP
JEFF GOODWIN
5101 65TH STREET WEST
BRADENTON FLORIDA 34210
941 792-8788

ANALYZED BY: P.E. LaMoreaux & Associates, Inc.
4320 OLD HIGHWAY 37
LAKELAND, FLORIDA 33813

PHONE: (863) 646-8526

FAX: (863) 646-1042

PROJECT NO. :
PELA CONTACT :
REPORT ID : 0209059021

RECEIVED DATE : 9/3/02
REPORTED DATE : 10/14/02
PWS NUMBER :

STATE OF FLORIDA CERTIFICATIONS: E84098-ENVIRONMENTAL

SAMPLE NAME	COLLECTION DATE TIME	RESULT	UNITS	MDL	LAB NUMBER	START DATE TIME
ANALYTE: CHLOROPHYLL A						
SW 1	9/3/02 10:23	7.0	mg/m3	0.1	KC14473-03S	9/9/02 16:00
SW 2	9/3/02 12:00	41.3	mg/m3	0.1	KC14474-03S	9/9/02 16:00
DUPLICATE	9/3/02 0:00	43.0	mg/m3	0.1	KC14475-03S	9/9/02 16:00



REPORT OF ANALYSIS

P.E. LaMoreaux and Associates, Inc.

Geochemistry Laboratory

4320 Old Highway 37, Lakeland, Florida 33813

PHONE 863/646-8526

FAX 863/646-1042

ANALYTE ORIENTED ANALYSIS REPORT SAMPLE SUMMARY

SENT TO: MANATEE COUNTY-SWRTP
JEFF GOODWIN
5101 65TH STREET WEST
BRADENTON FLORIDA 34210
941 792-8788

ANALYZED BY: P.E. LaMoreaux & Associates, Inc.
4320 OLD HIGHWAY 37
LAKELAND, FLORIDA 33813

PHONE: (863) 646-8526
FAX: (863) 646-1042

PROJECT NO. :
PELA CONTACT :
REPORT ID : 0209059021

RECEIVED DATE : 9/3/02
REPORTED DATE : 10/14/02
PWS NUMBER :

STATE OF FLORIDA CERTIFICATIONS: E84098-ENVIRONMENTAL

SAMPLE NAME	COLLECTION DATE TIME	RESULT	UNITS	MDL	LAB NUMBER	START DATE TIME
ANALYTE: DIBROMCHLORPROPANE						
SW 1	9/3/02 10:23	ND	ug/L	0.01	KC14473-02X-5	9/13/02 18:36
SW 2	9/3/02 12:00	ND	ug/L	0.01	KC14474-02X-5	9/13/02 19:08
DUPLICATE	9/3/02 0:00	ND	ug/L	0.01	KC14475-02X-5	9/13/02 19:40

METHOD: EPA 504

ND- NONE DETECTED



REPORT OF ANALYSIS

P.E. LaMoreaux and Associates, Inc.

Geochemistry Laboratory

4320 Old Highway 37, Lakeland, Florida 33813

PHONE 863/646-8526

FAX 863/646-1042

ANALYTE ORIENTED ANALYSIS REPORT SAMPLE SUMMARY

SENT TO: MANATEE COUNTY-SW RTP
JEFF GOODWIN
5101 65TH STREET WEST
BRADENTON FLORIDA 34210
941 792-8788

ANALYZED BY: P.E. LaMoreaux & Associates, Inc.
4320 OLD HIGHWAY 37
LAKELAND, FLORIDA 33813

PHONE: (863) 646-8526

FAX: (863) 646-1042

PROJECT NO. :
PELA CONTACT :
REPORT ID : 0209059021

RECEIVED DATE : 9/3/02
REPORTED DATE : 10/14/02
PWS NUMBER :

STATE OF FLORIDA CERTIFICATIONS: E84098-ENVIRONMENTAL

SAMPLE NAME	COLLECTION DATE TIME	RESULT	UNITS	MDL	LAB NUMBER	START DATE TIME
ANALYTE: ETHYLENE DIBROMIDE						
SW 1	9/3/02 10:23	ND	ug/L	0.01	KC14473-02X-5	9/13/02 18:36
SW 2	9/3/02 12:00	ND	ug/L	0.01	KC14474-02X-5	9/13/02 19:08
DUPLICATE	9/3/02 0:00	ND	ug/L	0.01	KC14475-02X-5	9/13/02 19:40

REPORTING ADDRESS:

ATTN:

CLIENT:

ADDRESS:

P.E. LaMoreaux & Associates
4320 Old Highway 37
Lakeland, Florida 33813
(863) 646-8526

CHAIN OF CUSTODY

INVOICING ADDRESS:

ATTN:

CLIENT:

ADDRESS:

N2 59021

PROJECT NAME

PROJECT LOCATION

Surface water

Long Rd

PROJECT NO.

PURCHASE ORDER NO.

PROJECT CONTACT

PROJECT TEL. NO.

SAMPLER NAME(S)

S. Helms

SAMPLING

DATE

TIME

SAMPLE IDENTIFICATION

TYPE: (W)WATER (S)SOIL (O)OTHER

REQUIRED ANALYSIS

PAGE

OF

FIELD PARAMETERS

NUMBER OF CONTAINERS / CONTAINER SIZE & TYPE / PRESERVATIVE

CONTAINER TYPES: (P)PLASTIC (G)GLASS (O)OTHER

PRESERVATIVES: (S)SODIUM HYDROXIDE (Su)LFURIC (N)NITRIC (H)HYDROCHLORIC (I)ICED (O)OTHER

SC
(umhos/cm)

pH

TEMP
(°C)

D.O.

DATE	TIME	SAMPLE IDENTIFICATION
9/3/02	10:25	Sw 1
"	12:00	Sw 2
"	—	Dup

K014473

K014474

K014475

2	G	H	2	G	I	1	G	I

brown

clear

dark brown

none

like flow

cultures

310

6.71

27.3

3.47

234

700

7.18

31.9

0.88

29.2

RELINQUISHED BY:

DATE

TIME

RECEIVED BY:

RELINQUISHED BY:

DATE

TIME

RECEIVED BY:

FOR PELA LABORATORY USE ONLY

LABORATORY REMARKS

RECEIVED FOR LAB

DATE

TIME

WORK ORDER #

Q. 10/16/02

9/3/02

10:16

0209059021

T-2



REPORT OF ANALYSIS

P.E. LaMoreaux and Associates, Inc.

Geochemistry Laboratory

4320 Old Highway 37, Lakeland, Florida 33813

PHONE 863/646-8526

FAX 863/646-1042

ANALYTE ORIENTED ANALYSIS REPORT SAMPLE SUMMARY

SENT TO: MANATEE COUNTY-SWRTP
JEFF GOODWIN
5101 65TH STREET WEST
BRADENTON FLORIDA 34210
941 792-8788

ANALYZED BY: P.E. LaMoreaux Associates, Inc.
4320 OLD HIGHWAY 37
LAKELAND, FLORIDA 33813

PHONE: (863) 646-8526
FAX: (863) 646-1042

PROJECT NO. :
PELA CONTACT :
REPORT ID : 0209055578

RECEIVED DATE : 9/24/02
REPORTED DATE : 10/7/02
PWS NUMBER :

STATE OF FLORIDA CERTIFICATIONS: E84098-ENVIRONMENTAL

SAMPLE NAME	COLLECTION		RESULT	UNITS	MDL	LAB NUMBER	START	
	DATE	TIME					DATE	TIME
ANALYTE: TOTAL ORGANIC CARBON				METHOD: EPA 415.1				
EMD DI	9/13/02	10:55	2.25	mg/L	0.10	KC16225-01U	9/27/02	22:04
CENTRAL LAB DI	8/27/02	10:15	0.10 (Q)	mg/L	0.10	KC16226-01U	9/27/02	22:24
MW-1	9/17/02	8:45	1.18	mg/L	0.10	KC16227-01U	9/27/02	22:45
SW-1	9/3/02	10:23	32.0	mg/L	0.10	KC16228-01U	9/27/02	23:05
SW-2	9/3/02	12:00	92.0	mg/L	0.10	KC16229-01U	9/27/02	23:25
DUPLICATE	9/3/02	0:00	96.1	mg/L	0.10	KC16230-01U	9/27/02	23:45

ND- NONE DETECTED

REPORTING ADDRESS:

ATTN:

CLIENT:

ADDRESS:

P.E. LaMoreaux & Associates

4320 Old Highway 37

Lakeland, Florida 33813

(863) 646-8526

CHAIN OF CUSTODY

INVOICING ADDRESS:

ATTN:

CLIENT:

ADDRESS:

55578

PROJECT NAME

PROJECT LOCATION

PROJECT NO.

PURCHASE ORDER NO.

PROJECT CONTACT

PROJECT TEL. NO.

SAMPLER NAME(S)

SAMPLING

DATE

TIME

SAMPLE IDENTIFICATION

TYPE: (WATER (S)OIL (O)THER

REQUIRED ANALYSIS

PAGE

OF

FIELD PARAMETERS

SC
(umhos/cm)

pH

TEMP
(°C)

D.O.

NUMBER OF CONTAINERS / CONTAINER SIZE & TYPE / PRESERVATIVE

CONTAINER TYPES: (P)LASTIC (G)LASS (O)THER
PRESERVATIVES: (S)ODIUM HYDROXIDE (Su)LFURIC (N)ITRIC (H)YDROCHLORIC (I)CED (O)THER

DATE	TIME	SAMPLE IDENTIFICATION
9/13/02	10:00	EMD DI
8/27/02	10:15	Cent. Lab DE
9/17/02	08:45	MW-1
9/13/02	10:23	SW-1
9/13/02	12:00	SW-2
9/13/02		Dup

W

1

200

S

W

1

200

S

W

1

200

S

W

1

200

S

W

1

200

S

W

1

200

S

W

1

200

S

KC16225

KC16226

KC16227

KC16228

KC16229

KC16230

RELINQUISHED BY:

DATE

TIME

RECEIVED BY:

RELINQUISHED BY:

DATE

TIME

RECEIVED BY:

FOR PELA LABORATORY USE ONLY

RECEIVED FOR LAB

DATE

TIME

WORK ORDER #

LABORATORY REMARKS

CENTRAL LAB DI SAMPLE
PREPARED PAST
DUE DATE

ATTN: Jeff Goodman
CLIENT: Manatee Co
ADDRESS: _____

CHAIN OF CUSTODY

ATTN: _____
CLIENT: _____
ADDRESS: _____

Nº 59022

PROJECT NAME Surface water		PROJECT LOCATION Lena Rd		REQUIRED ANALYSIS										PAGE		OF									
PROJECT NO.		PURCHASE ORDER NO.		FIELD PARAMETERS																					
PROJECT CONTACT Toff		PROJECT TEL. NO.																							
SAMPLER NAME(S) S. Helms				NUMBER OF CONTAINERS / CONTAINER SIZE & TYPE / PRESERVATIVE CONTAINER TYPES: (P)LASTIC (G)LASS (O)THER PRESERVATIVES: (S)ODIUM HYDROXIDE (Su)LFURIC (N)ITRIC (H)YDROCLORIC (I)ICED (O)THER										SC (umhos/cm)		pH		TEMP (°C)		D.O.					
SAMPLING DATE 9/3/02		TIME 1023												SAMPLE IDENTIFICATION Sw 1		TYPE: (W)ATER (S)OIL (O)THER AlH ₄ , TN, cad, Toc, Pb, No ₃		THD, Cu, Hg, Fe, Zn		Mn		Bod, TDS, TSS		fecal	
DATE 9/3/02		TIME 1023		SAMPLE IDENTIFICATION Sw 1		TYPE: (W)ATER (S)OIL (O)THER AlH ₄ , TN, cad, Toc, Pb, No ₃		THD, Cu, Hg, Fe, Zn		Mn		Bod, TDS, TSS		fecal		color sheen		SC (umhos/cm)		pH		TEMP (°C)		D.O.	
DATE 9/3/02		TIME 1023		SAMPLE IDENTIFICATION Sw 1		TYPE: (W)ATER (S)OIL (O)THER AlH ₄ , TN, cad, Toc, Pb, No ₃		THD, Cu, Hg, Fe, Zn		Mn		Bod, TDS, TSS		fecal		color sheen		SC (umhos/cm)		pH		TEMP (°C)		D.O.	
DATE 9/3/02		TIME 1023		SAMPLE IDENTIFICATION Sw 1		TYPE: (W)ATER (S)OIL (O)THER AlH ₄ , TN, cad, Toc, Pb, No ₃		THD, Cu, Hg, Fe, Zn		Mn		Bod, TDS, TSS		fecal		color sheen		SC (umhos/cm)		pH		TEMP (°C)		D.O.	
DATE 9/3/02		TIME 1023		SAMPLE IDENTIFICATION Sw 1		TYPE: (W)ATER (S)OIL (O)THER AlH ₄ , TN, cad, Toc, Pb, No ₃		THD, Cu, Hg, Fe, Zn		Mn		Bod, TDS, TSS		fecal		color sheen		SC (umhos/cm)		pH		TEMP (°C)		D.O.	
DATE 9/3/02		TIME 1023		SAMPLE IDENTIFICATION Sw 1		TYPE: (W)ATER (S)OIL (O)THER AlH ₄ , TN, cad, Toc, Pb, No ₃		THD, Cu, Hg, Fe, Zn		Mn		Bod, TDS, TSS		fecal		color sheen		SC (umhos/cm)		pH		TEMP (°C)		D.O.	
DATE 9/3/02		TIME 1023		SAMPLE IDENTIFICATION Sw 1		TYPE: (W)ATER (S)OIL (O)THER AlH ₄ , TN, cad, Toc, Pb, No ₃		THD, Cu, Hg, Fe, Zn		Mn		Bod, TDS, TSS		fecal		color sheen		SC (umhos/cm)		pH		TEMP (°C)		D.O.	
DATE 9/3/02		TIME 1023		SAMPLE IDENTIFICATION Sw 1		TYPE: (W)ATER (S)OIL (O)THER AlH ₄ , TN, cad, Toc, Pb, No ₃		THD, Cu, Hg, Fe, Zn		Mn		Bod, TDS, TSS		fecal		color sheen		SC (umhos/cm)		pH		TEMP (°C)		D.O.	
DATE 9/3/02		TIME 1023		SAMPLE IDENTIFICATION Sw 1		TYPE: (W)ATER (S)OIL (O)THER AlH ₄ , TN, cad, Toc, Pb, No ₃		THD, Cu, Hg, Fe, Zn		Mn		Bod, TDS, TSS		fecal		color sheen		SC (umhos/cm)		pH		TEMP (°C)		D.O.	
DATE 9/3/02		TIME 1023		SAMPLE IDENTIFICATION Sw 1		TYPE: (W)ATER (S)OIL (O)THER AlH ₄ , TN, cad, Toc, Pb, No ₃		THD, Cu, Hg, Fe, Zn		Mn		Bod, TDS, TSS		fecal		color sheen		SC (umhos/cm)		pH		TEMP (°C)		D.O.	
DATE 9/3/02		TIME 1023		SAMPLE IDENTIFICATION Sw 1		TYPE: (W)ATER (S)OIL (O)THER AlH ₄ , TN, cad, Toc, Pb, No ₃		THD, Cu, Hg, Fe, Zn		Mn		Bod, TDS, TSS		fecal		color sheen		SC (umhos/cm)		pH		TEMP (°C)		D.O.	
DATE 9/3/02		TIME 1023		SAMPLE IDENTIFICATION Sw 1		TYPE: (W)ATER (S)OIL (O)THER AlH ₄ , TN, cad, Toc, Pb, No ₃		THD, Cu, Hg, Fe, Zn		Mn		Bod, TDS, TSS		fecal		color sheen		SC (umhos/cm)		pH		TEMP (°C)		D.O.	
DATE 9/3/02		TIME 1023		SAMPLE IDENTIFICATION Sw 1		TYPE: (W)ATER (S)OIL (O)THER AlH ₄ , TN, cad, Toc, Pb, No ₃		THD, Cu, Hg, Fe, Zn		Mn		Bod, TDS, TSS		fecal		color sheen		SC (umhos/cm)		pH		TEMP (°C)		D.O.	
DATE 9/3/02		TIME 1023		SAMPLE IDENTIFICATION Sw 1		TYPE: (W)ATER (S)OIL (O)THER AlH ₄ , TN, cad, Toc, Pb, No ₃		THD, Cu, Hg, Fe, Zn		Mn		Bod, TDS, TSS		fecal		color sheen		SC (umhos/cm)		pH		TEMP (°C)		D.O.	
DATE 9/3/02		TIME 1023		SAMPLE IDENTIFICATION Sw 1		TYPE: (W)ATER (S)OIL (O)THER AlH ₄ , TN, cad, Toc, Pb, No ₃		THD, Cu, Hg, Fe, Zn		Mn		Bod, TDS, TSS		fecal		color sheen		SC (umhos/cm)		pH		TEMP (°C)		D.O.	
DATE 9/3/02		TIME 1023		SAMPLE IDENTIFICATION Sw 1		TYPE: (W)ATER (S)OIL (O)THER AlH ₄ , TN, cad, Toc, Pb, No ₃		THD, Cu, Hg, Fe, Zn		Mn		Bod, TDS, TSS		fecal		color sheen		SC (umhos/cm)		pH		TEMP (°C)		D.O.	
DATE 9/3/02		TIME 1023		SAMPLE IDENTIFICATION Sw 1		TYPE: (W)ATER (S)OIL (O)THER AlH ₄ , TN, cad, Toc, Pb, No ₃		THD, Cu, Hg, Fe, Zn		Mn		Bod, TDS, TSS		fecal		color sheen		SC (umhos/cm)		pH		TEMP (°C)		D.O.	

ADDRESS:

CHAIN OF CUSTODY

ADDRESS:

Nº 59058

PROJECT NAME Surface water			PROJECT LOCATION Lena Rd									
PROJECT NO.			PURCHASE ORDER NO.									
PROJECT CONTACT			PROJECT TEL. NO.									
SAMPLER NAME(S) S.Helm												
✓ SAMPLING		SAMPLE IDENTIFICATION										
DATE	TIME											
9/5/02	0 ⁰⁰ 15	SW1	L	IPE	IPS	brown	none	280	6.34	26.5	4.40	28.1
:	1 ⁰⁰	SW2	L	:	:	dark brown	oil like film on surface	600	6.34	27.8	0.98	36.8
-	-	Dup	C	:	:	-	-	-	-	-	-	-
/	/											
/	/											
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/	/											
RELINQUISHED BY: <i>[Signature]</i>		DATE 9/5/02	TIME 1315	RECEIVED BY: <i>[Signature]</i>		RELINQUISHED BY:		DATE	TIME	RECEIVED BY:		
FOR PELA LABORATORY USE ONLY						LABORATORY REMARKS						
RECEIVED FOR LAB		DATE	TIME	WORK ORDER #								



REPORT OF ANALYSIS

P.E. LaMoreaux and Associates, Inc.

Geochemistry Laboratory

4320 Old Highway 37, Lakeland, Florida 33813

PHONE 863/646-8526

FAX 863/646-1042

PART III ANALYTICAL RESULTS

FACILITY GMS # :

TEST SITE ID # : SURFACE WATER LENA RD

WELL NAME : SW 1

CLASSIFICATION OF GROUNDWATER : G II

GROUND WATER ELEVATION (NGVD) :

OR (MSL) :

FEET BMP :

Report ID: 0209059021

SAMPLING DATE/TIME : 9/3/02 10:23:00

REPORT PERIOD (YR/QTR) :

WELL PURGED (Y/N) : Y

WELL TYPE :

COLLECTION DATE : 9/3/02

COLLECTION TIME : 10:23

COLLECTED BY : PELA

DATE RECEIVED IN LAB : 9/3/02

REPORT FROM
(LA-MONITOR)

SECRET CODE	PARAMETER MONITORED	SAMPLING METHOD	FIELD FILTERED Y/N	ANALYSIS METHOD	ANALYSIS DATE TIME	ANALYSIS RESULTS UNITS	DETECTION LIMITS UNITS
	INORGANICS KC14473-03S CHLOROPHYLL A	*	N	10200 H	9/9/02 16:00	7.0 mg/m3	0.1 mg/m3

SUBMERSIBLE OR PERISTALTIC PUMP

BAILER

	ORGANICS KC14473- APPENDIX I VOLATILES (E	*	N			Completed	
	KC14473- EDB & DBCP/EW	*	N			Completed	

SUBMERSIBLE OR PERISTALTIC PUMP

BAILER

	ORGANICS KC14473-02X-5	*	N	EPA 504	9/13/02 18:36	ND	ug/L	0.01	ug/L
827	DIBROMCHLORPROPANE	*	N	EPA 504	9/13/02 18:36	ND	ug/L	0.01	ug/L
6369	ETHYLENE DIBROMIDE	*	N	EPA 504	9/13/02 18:36	ND	ug/L	0.01	ug/L
	KC14473-02Y	*	N	EPA 8260	9/4/02 14:52	ND	ug/l	0.04	ug/l
4265	1,1,1-trichloroethane	*	N	EPA 8260	9/4/02 14:52	ND	ug/l	0.04	ug/l
4516	1,1,2,2-tetrachloroethane	*	N	EPA 8260	9/4/02 14:52	ND	ug/l	0.10	ug/l
1511	1,1,2-trichloroethane	*	N	EPA 8260	9/4/02 14:52	ND	ug/l	0.03	ug/l
4265	1,1-dichloroethane	*	N	EPA 8260	9/4/02 14:52	ND	ug/l	0.12	ug/l
1501	1,1-dichloroethene	*	N	EPA 8260	9/4/02 14:52	ND	ug/l	0.03	ug/l
1536	1,2-dichlorobenzene	*	N	EPA 8260	9/4/02 14:52	ND	ug/l	0.02	ug/l
1511	1,2-dichloroethane	*	N	EPA 8260	9/4/02 14:52	ND	ug/l	0.04	ug/l
1511	1,2-dichloropropane	*	N	EPA 8260	9/4/02 14:52	ND	ug/l	0.04	ug/l
1571	1,4-dichlorobenzene	*	N	EPA 8260	9/4/02 14:52	ND	ug/l	0.03	ug/l
2	Acrylonitrile	*	N	EPA 8260	9/4/02 14:52	ND	ug/l	1.50	ug/l
0	Benzene	*	N	EPA 8260	9/4/02 14:52	ND	ug/l	0.04	ug/l
101	Bromodichloromethane	*	N	EPA 8260	9/4/02 14:52	ND	ug/l	0.08	ug/l
4265	Bromomethane	*	N	EPA 8260	9/4/02 14:52	ND	ug/l	0.11	ug/l
1	Carbon tetrachloride	*	N	EPA 8260	9/4/02 14:52	ND	ug/l	0.21	ug/l
301	Chlorobenzene	*	N	EPA 8260	9/4/02 14:52	ND	ug/l	0.04	ug/l
311	Chloroethane	*	N	EPA 8260	9/4/02 14:52	ND	ug/l	0.10	ug/l

Page 1 of 6



REPORT OF ANALYSIS

P.E. LaMoreaux and Associates, Inc.

Geochemistry Laboratory

4320 Old Highway 37, Lakeland, Florida 33813

PHONE 863/646-8526

FAX 863/646-1042

PART III ANALYTICAL RESULTS

FACILITY GMS # :

TEST SITE ID # : SURFACE WATER LENA RD

WELL NAME : SW 1

CLASSIFICATION OF GROUNDWATER : G II

GROUND WATER ELEVATION (NGVD) :

OR (MSL) :

NET BMP :

Report ID: 0209059021

SAMPLING DATE/TIME : 9/3/02 10:23:00

REPORT PERIOD (YR/QTR) :

WELL PURGED (Y/N) : Y

WELL TYPE :

COLLECTION DATE : 9/3/02

COLLECTION TIME : 10:23

COLLECTED BY : PELA

DATE RECEIVED IN LAB : 9/3/02

STORET CODE	PARAMETER MONITORED	SAMPLING METHOD	FIELD FILTERED Y/N	ANALYSIS METHOD	ANALYSIS		ANALYSIS		DETECTION	
					DATE	TIME	RESULTS	UNITS	LIMITS	UNITS
34418	Chloromethane	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.13	ug/l
34404	cis-1,3-dichloropropene	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.05	ug/l
34405	Dibromochloromethane	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.05	ug/l
34423	Dichloromethane	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.03	ug/l
34371	Ethylbenzene	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.06	ug/l
8451	m,p-Xylenes	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.11	ug/l
77135	o-Xylene	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.11	ug/l
34475	Tetrachloroethene	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.14	ug/l
34400	Toluene	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.11	ug/l
34406	trans-1,2-dichloroethene	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.06	ug/l
34699	trans-1,3-dichloropropene	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.04	ug/l
24404	Tribromomethane	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.12	ug/l
94400	Trichloroethene	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.19	ug/l
4488	Trichlorofluoromethane	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.08	ug/l
2106	Trichloromethane	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.03	ug/l
94400	Vinyl Chloride	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.17	ug/l
7562	KC14473-02Y	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.1	ug/l
74400	1,1,1,2-tetrachloroethane	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.3	ug/l
1599	1,2,3-Trichloropropane	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	5.0	ug/l
7103	2-Butanone	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	5.0	ug/l
1103	2-Hexanone	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	5.0	ug/l
1103	4-Methyl-2-pentanone	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	5.0	ug/l
5085	Acetone	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	2.5	ug/l
3085	Bromochloromethane	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.5	ug/l
3085	Carbon Disulfide	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	4.1	ug/l
536	cis-1,2-Dichloroethene	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.10	ug/l
124	Dibromomethane	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.3	ug/l
124	Iodomethane	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	0.5	ug/l
124	Styrene	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	1.0	ug/l
163	t-1,4-Dichloro-2-butene	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	10.0	ug/l
157	Vinyl Acetate	*	N	EPA 8260	9/4/02	14:52	ND	ug/l	10.0	ug/l

REVERSIBLE OR PERISTALTIC PUMP

WELER



REPORT OF ANALYSIS

E. LaMoreaux and Associates, Inc.

Geochemistry Laboratory

4320 Old Highway 37, Lakeland, Florida 33813

PHONE 863/646-8526

FAX 863/646-1042

PART III ANALYTICAL RESULTS

FACILITY GMS # :

TEST SITE ID # : SURFACE WATER LENA RD

WELL NAME : SW 2

CLASSIFICATION OF GROUNDWATER : G II

GROUND WATER ELEVATION (NGVD) :

OR (MSL) :

FEET BMP :

Report ID: 0209059021

SAMPLING DATE/TIME : 9/3/02 12:00:00

REPORT PERIOD (YR/QTR) :

WELL PURGED (Y/N) : Y

WELL TYPE :

COLLECTION DATE : 9/3/02

COLLECTION TIME : 12:00

COLLECTED BY : PELA

DATE RECEIVED IN LAB : 9/3/02

PARAMETER MONITORED	SAMPLING METHOD	FIELD FILTERED Y/N	ANALYSIS METHOD	ANALYSIS DATE TIME	ANALYSIS RESULTS UNITS	DETECTION LIMITS UNITS
INORGANICS KC14474-03S CHLOROPHYLL A	*	N	10200 H	9/9/02 16:00	41.3 mg/m3	0.1 mg/m3

SUBMERSIBLE OR PERISTALTIC PUMP

BAILER

ORGANICS KC14474- APPENDIX I VOLATILES (E	*	N			Completed	
KC14474- EDB & DBCP/EW	*	N			Completed	

SUBMERSIBLE OR PERISTALTIC PUMP

BAILER

ORGANICS										
KC14474-02X-5										
84	DIBROMOCHLORPROPANE	*	N	EPA 504	9/13/02	19:08	ND	ug/L	0.01	ug/L
6369	ETHYLENE DIBROMIDE	*	N	EPA 504	9/13/02	19:08	ND	ug/L	0.01	ug/L
KC14474-02Y										
45	1,1,1-trichloroethane	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.04	ug/l
4516	1,1,2,2-tetrachloroethane	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.04	ug/l
4511	1,1,2-trichloroethane	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.10	ug/l
44	1,1-dichloroethane	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.03	ug/l
4501	1,1-dichloroethene	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.12	ug/l
4536	1,2-dichlorobenzene	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.03	ug/l
45	1,2-dichloroethane	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.02	ug/l
4511	1,2-dichloropropane	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.04	ug/l
4571	1,4-dichlorobenzene	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.03	ug/l
42	Acrylonitrile	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	1.50	ug/l
40	Benzene	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.04	ug/l
4101	Bromodichloromethane	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.08	ug/l
44	Bromomethane	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.11	ug/l
41	Carbon tetrachloride	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.21	ug/l
301	Chlorobenzene	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.04	ug/l
311	Chloroethane	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.10	ug/l

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REPORT OF ANALYSIS

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PART III ANALYTICAL RESULTS

FACILITY GMS # :

TEST SITE ID # : SURFACE WATER LENA RD

WELL NAME : SW 2

CLASSIFICATION OF GROUNDWATER : G II

GROUND WATER ELEVATION (NGVD) :

OR (MSL) :

FEET BMP :

Report ID: 0209059021

SAMPLING DATE/TIME : 9/3/02 12:00:00

REPORT PERIOD (YR/QTR) :

WELL PURGED (Y/N) : Y

WELL TYPE :

COLLECTION DATE : 9/3/02

COLLECTION TIME : 12:00

COLLECTED BY : PELA

DATE RECEIVED IN LAB : 9/3/02

SAMPLE ID	PARAMETER MONITORED	SAMPLING METHOD	FIELD FILTERED Y/N	ANALYSIS METHOD	ANALYSIS DATE TIME		ANALYSIS RESULTS UNITS		DETECTION LIMITS UNITS	
34418	Chloromethane	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.13	ug/l
34404	cis-1,3-dichloropropene	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.05	ug/l
34405	Dibromochloromethane	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.05	ug/l
34423	Dichloromethane	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.03	ug/l
34371	Ethylbenzene	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.06	ug/l
83561	m,p-Xylenes	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.11	ug/l
77135	o-Xylene	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.11	ug/l
14475	Tetrachloroethene	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.14	ug/l
14400	Toluene	*	N	EPA 8260	9/4/02	15:26	21.5	ug/l	0.11	ug/l
14446	trans-1,2-dichloroethene	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.06	ug/l
14699	trans-1,3-dichloropropene	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.04	ug/l
2144	Tribromomethane	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.12	ug/l
9100	Trichloroethene	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.19	ug/l
4488	Trichlorofluoromethane	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.08	ug/l
2146	Trichloromethane	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.03	ug/l
9146	Vinyl Chloride	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.17	ug/l
KC14474-02Y										
7562	1,1,1,2-tetrachloroethane	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.1	ug/l
7444	1,2,3-Trichloropropane	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.3	ug/l
1593	2-Butanone	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	5.0	ug/l
7103	2-Hexanone	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	5.0	ug/l
1144	4-Methyl-2-pentanone	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	5.0	ug/l
5000	Acetone	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	2.5	ug/l
085	Bromochloromethane	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.5	ug/l
3444	Carbon Disulfide	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	4.1	ug/l
0144	cis 1,2-Dichloroethene	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.10	ug/l
536	Dibromomethane	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.3	ug/l
4244	Iodomethane	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	0.5	ug/l
1244	Styrene	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	1.0	ug/l
263	t-1,4-Dichloro-2-butene	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	10.0	ug/l
157	Vinyl Acetate	*	N	EPA 8260	9/4/02	15:26	ND	ug/l	10.0	ug/l

REVERSIBLE OR PERISTALTIC PUMP

MILER