



Professional Service Industries, Inc.
Environmental & Analytical Division

July 6, 1995

Manatee County Public Works Department
Post Office Box 25010
Bradenton, Florida 38206

RECEIVED
JUL 19 1995
Department of Environmental Protection
BY SOUTHWEST DISTRICT

MANATEE CO. PUBLIC SVRS. DEPT.

RECEIVED
JUL 10 1995
PROJECT MANAGEMENT SECTION

Attention: Mr. Tom Yarger

Re: Groundwater Monitoring Plan
Braden River Park
Manatee County, Florida
PSI Project Number: 378-5I014

Dear Mr. Yarger:

The Following report includes the analytical results for three (3) separate sampling events at the above referenced site.

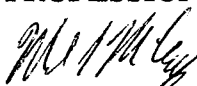
On June 14, 1995 water samples were collected from three locations: MW-6, surface water from the east pond and surface water from the west pond. In addition, a sediment sample was taken from the west pond.

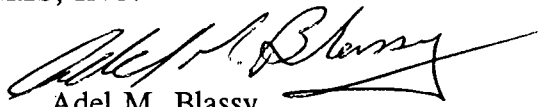
On June 23, 1995 samples were taken from MW-2 and from surface water in the East Pond. Additionally, on June 29, 1995 groundwater samples were collected from MW-3 and MW-5. Please refer to Figure 1 for all sample locations.

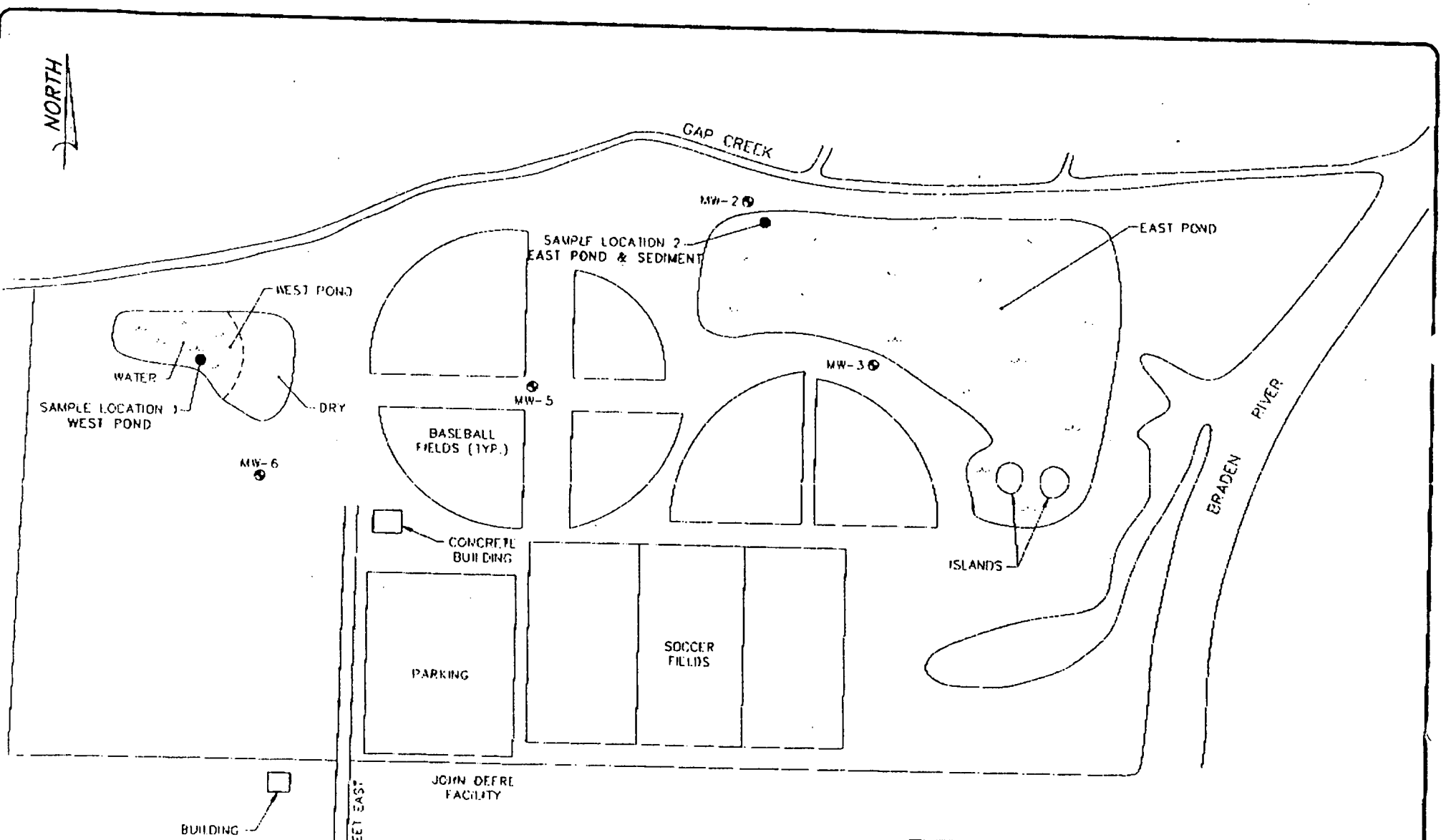
If you have any questions, please do not hesitate to contact us.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.


Mark R. McCagg
Staff Engineer
MRM/AMB:pfr


Adel M. Blassy
Senior Hydrogeologist



LEGEND

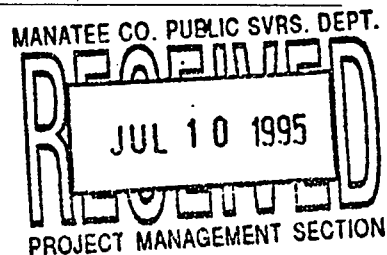
- GROUNDWATER WELLS
 - SAMPLE LOCATION
- (MW-3) WELL NUMBERING FROM 1994 REPORT

PERIODIC GROUNDWATER MONITORING
 BRADEN RIVER PARK PROJECT
 MANATEE COUNTY PARK AND RECREATION
 MANATEE COUNTY, FLORIDA



ENVIRONMENTAL SERVICES
 4400 - 140th AVENUE NORTH
 SUITE 100
 CLEARWATER, FLORIDA 34622

DRAWN BY: KT	SCALE: N.T.S.	PROJ. NO.: 378-51014
CHKD. BY: MM	DATE: 6/20/95	DWG.: FIGURE 1



ANALYTICAL REPORT

TESTED FOR: PSI, Inc.
Clearwater Environmental
4400-140th Avenue North
Suite 100
Clearwater, FL 34622

PROJECT: Braden River Park
378-5I014

ATTENTION: Adel Blassy

SAMPLE DATE: June 14, 1995

DATE: June 16, 1995

OUR REPORT NUMBER: 385-5P025-0052

Attached, please find our analytical report for samples described on the Chain-of-Custody (C-O-C). Please note that our laboratory has assigned unique sample numbers to each of your samples as shown on the attached C-O-C. Please reference our report number and direct any questions on this report to the individual designated below or to one of our Customer Service Representatives.

Reviewed By,

Anthony R. Febraro, Department Manager

Respectfully submitted,
Professional Service Industries, Inc.

HRS #84218
HRS #E84388
cc: Kathleen Theisen
/bb

Information To Be Retained

LAB #: 06117-01
Client ID: MW-6

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	µg/l	EPA 601	1/1
Bromoform	<1	µg/l	EPA 601	1/1
Bromomethane	<1	µg/l	EPA 601	1/1
Carbon Tetrachloride	<1	µg/l	EPA 601	1/1
Chlorobenzene	<1	µg/l	EPA 601	1/1
Chloroethane	<1	µg/l	EPA 601	1/1
Chloroform	<1	µg/l	EPA 601	1/1
Chloromethane	<1	µg/l	EPA 601	1/1
Dibromochloromethane	<1	µg/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	µg/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	µg/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	µg/l	EPA 601	1/1
Dichlorodifluoromethane	<1	µg/l	EPA 601	1/1
1,1-Dichloroethane	<1	µg/l	EPA 601	1/1
1,2-Dichloroethane	<1	µg/l	EPA 601	1/1
1,1-Dichloroethene	<1	µg/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	µg/l	EPA 601	1/1
1,2-Dichloropropane	<1	µg/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	µg/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	µg/l	EPA 601	1/1
Methylene Chloride	<1	µg/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	µg/l	EPA 601	1/1
Tetrachloroethene	<1	µg/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	µg/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	µg/l	EPA 601	1/1
Trichloroethene	<1	µg/l	EPA 601	1/1
Trichlorofluoromethane	<1	µg/l	EPA 601	1/1
Vinyl Chloride	<1	µg/l	EPA 601	1/1

Extraction Date:
NA
Analysis Date:
06/15/95
Analyst: KT



LAB #: 06117-01
Client ID: MW-6

ORGANOCHLORINE PESTICIDES AND PCB'S

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
A-BHC	<0.5	µg/l	EPA 608	0.5/1
B-BHC	<0.5	µg/l	EPA 608	0.5/1
G-BHC (Lindane)	<0.5	µg/l	EPA 608	0.5/1
D-BHC	<0.5	µg/l	EPA 608	0.5/1
Heptachlor	<0.5	µg/l	EPA 608	0.5/1
Aldrin	<0.5	µg/l	EPA 608	0.5/1
Heptachlor epoxide	<0.5	µg/l	EPA 608	0.5/1
Endosulfan I	<0.5	µg/l	EPA 608	0.5/1
Dieldrin	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDE	<0.5	µg/l	EPA 608	0.5/1
Endrin	<0.5	µg/l	EPA 608	0.5/1
Endosulfan II	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDD	<0.5	µg/l	EPA 608	0.5/1
Endrin Aldehyde	<0.5	µg/l	EPA 608	0.5/1
Endosulfan Sulfate	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDT	<0.5	µg/l	EPA 608	0.5/1
Methoxychlor	<0.5	µg/l	EPA 608	0.5/1
Chlordane	<0.5	µg/l	EPA 608	0.5/1
Toxaphene	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1016	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1221	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1232	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1242	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1248	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1254	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1260	<0.5	µg/l	EPA 608	0.5/1

Extraction Date:
06/15/95
Analysis Date:
06/15/95
Analyst: SA

NUTRIENT ANALYSES

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Phenol	<0.05	mg/l	EPA 420.1	06/15/95	NE	0.05

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Lead	0.005	mg/l	EPA 239.2	06/16/95	CP	0.005
Dissolved Lead	<0.005	mg/l	EPA 239.2	06/16/95	CP	0.005



LAB #: 06117-02
Client ID: West Pond

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	µg/l	EPA 601	1/1
Bromoform	<1	µg/l	EPA 601	1/1
Bromomethane	<1	µg/l	EPA 601	1/1
Carbon Tetrachloride	<1	µg/l	EPA 601	1/1
Chlorobenzene	<1	µg/l	EPA 601	1/1
Chloroethane	<1	µg/l	EPA 601	1/1
Chloroform	<1	µg/l	EPA 601	1/1
Chloromethane	<1	µg/l	EPA 601	1/1
Dibromochloromethane	<1	µg/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	µg/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	µg/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	µg/l	EPA 601	1/1
Dichlorodifluoromethane	<1	µg/l	EPA 601	1/1
1,1-Dichloroethane	<1	µg/l	EPA 601	1/1
1,2-Dichloroethane	<1	µg/l	EPA 601	1/1
1,1-Dichloroethene	<1	µg/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	µg/l	EPA 601	1/1
1,2-Dichloropropane	<1	µg/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	µg/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	µg/l	EPA 601	1/1
Methylene Chloride	<1	µg/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	µg/l	EPA 601	1/1
Tetrachloroethene	<1	µg/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	µg/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	µg/l	EPA 601	1/1
Trichloroethene	<1	µg/l	EPA 601	1/1
Trichlorofluoromethane	<1	µg/l	EPA 601	1/1
Vinyl Chloride	<1	µg/l	EPA 601	1/1

Extraction Date:
NA
Analysis Date:
06/15/95
Analyst: KT



LAB #: 06117-02
Client ID: West Pond

ORGANOCHLORINE PESTICIDES AND PCB'S

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
A-BHC	<0.5	µg/l	EPA 608	0.5/1
B-BHC	<0.5	µg/l	EPA 608	0.5/1
G-BHC (Lindane)	<0.5	µg/l	EPA 608	0.5/1
D-BHC	<0.5	µg/l	EPA 608	0.5/1
Heptachlor	<0.5	µg/l	EPA 608	0.5/1
Aldrin	<0.5	µg/l	EPA 608	0.5/1
Heptachlor epoxide	<0.5	µg/l	EPA 608	0.5/1
Endosulfan I	<0.5	µg/l	EPA 608	0.5/1
Dieldrin	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDE	<0.5	µg/l	EPA 608	0.5/1
Endrin	<0.5	µg/l	EPA 608	0.5/1
Endosulfan II	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDD	<0.5	µg/l	EPA 608	0.5/1
Endrin Aldehyde	<0.5	µg/l	EPA 608	0.5/1
Endosulfan Sulfate	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDT	<0.5	µg/l	EPA 608	0.5/1
Methoxychlor	<0.5	µg/l	EPA 608	0.5/1
Chlordane	<0.5	µg/l	EPA 608	0.5/1
Toxaphene	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1016	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1221	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1232	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1242	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1248	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1254	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1260	<0.5	µg/l	EPA 608	0.5/1

Extraction Date:
06/15/95
Analysis Date:
06/15/95
Analyst: SA

NUTRIENT ANALYSES

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Phenol	<0.05	mg/l	EPA 420.1	06/15/95	NE	0.05

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Lead	<0.005	mg/l	EPA 239.2	06/16/95	CP	0.005
Dissolved Lead	<0.005	mg/l	EPA 239.2	06/16/95	CP	0.005



LAB #: 06117-03
Client ID: Sediment

PURGEABLE HALOCARBONS

Matrix: Soil
LOW LEVEL

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<10	ug/kg	SW 8010	10/1
Bromoform	<10	ug/kg	SW 8010	10/1
Bromomethane	<10	ug/kg	SW 8010	10/1
Carbon Tetrachloride	<10	ug/kg	SW 8010	10/1
Chlorobenzene	<10	ug/kg	SW 8010	10/1
Chloroethane	<10	ug/kg	SW 8010	10/1
2-Chloroethylvinyl Ether	<10	ug/kg	SW 8010	10/1
Chloroform	<10	ug/kg	SW 8010	10/1
Chloromethane	<10	ug/kg	SW 8010	10/1
Dibromochloromethane	<10	ug/kg	SW 8010	10/1
1,2-Dichlorobenzene	<10	ug/kg	SW 8010	10/1
1,3-Dichlorobenzene	<10	ug/kg	SW 8010	10/1
1,4-Dichlorobenzene	<10	ug/kg	SW 8010	10/1
Dichlorodifluoromethane	<10	ug/kg	SW 8010	10/1
1,1-Dichloroethane	<10	ug/kg	SW 8010	10/1
1,2-Dichloroethane	<10	ug/kg	SW 8010	10/1
1,1-Dichloroethene	<10	ug/kg	SW 8010	10/1
trans-1,2-Dichloroethene	<10	ug/kg	SW 8010	10/1
1,2-Dichloropropane	<10	ug/kg	SW 8010	10/1
cis-1,3-Dichloropropene	<10	ug/kg	SW 8010	10/1
trans-1,3-Dichloropropene	<10	ug/kg	SW 8010	10/1
Methylene Chloride	<10	ug/kg	SW 8010	10/1
1,1,2,2-Tetrachloroethane	<10	ug/kg	SW 8010	10/1
Tetrachloroethene	<10	ug/kg	SW 8010	10/1
1,1,1-Trichloroethane	<10	ug/kg	SW 8010	10/1
1,1,2-Trichloroethane	<10	ug/kg	SW 8010	10/1
Trichloroethene	<10	ug/kg	SW 8010	10/1
Trichlorofluoromethane	<10	ug/kg	SW 8010	10/1
Vinyl Chloride	<10	ug/kg	SW 8010	10/1

Extraction Date:

NA

Analysis Date:

06/15/95

Analyst: KT



LAB #: 06117-03
Client ID: Sediment

ORGANOCHLORINE PESTICIDES AND PCB'S

Matrix: Soil

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
A-BHC	<0.02	mg/kg	SW 8080	0.02/1
B-BHC	<0.02	mg/kg	SW 8080	0.02/1
G-BHC (Lindane)	<0.02	mg/kg	SW 8080	0.02/1
D-BHC	<0.02	mg/kg	SW 8080	0.02/1
Heptachlor	<0.02	mg/kg	SW 8080	0.02/1
Aldrin	<0.02	mg/kg	SW 8080	0.02/1
Heptachlor epoxide	<0.02	mg/kg	SW 8080	0.02/1
Endosulfan I	<0.02	mg/kg	SW 8080	0.02/1
Dieldrin	<0.02	mg/kg	SW 8080	0.02/1
p,p'-DDE	<0.02	mg/kg	SW 8080	0.02/1
Endrin	<0.02	mg/kg	SW 8080	0.02/1
Endosulfan II	<0.02	mg/kg	SW 8080	0.02/1
p,p'-DDD	<0.02	mg/kg	SW 8080	0.02/1
Endrin Aldehyde	<0.02	mg/kg	SW 8080	0.02/1
Endosulfan Sulfate	<0.02	mg/kg	SW 8080	0.02/1
p,p'-DDT	<0.02	mg/kg	SW 8080	0.02/1
Methoxychlor	<0.02	mg/kg	SW 8080	0.02/1
Chlordane	<0.02	mg/kg	SW 8080	0.02/1
Toxaphene	<0.02	mg/kg	SW 8080	0.02/1
Arochlor 1016	<0.02	mg/kg	SW 8080	0.02/1
Arochlor 1221	<0.02	mg/kg	SW 8080	0.02/1
Arochlor 1232	<0.02	mg/kg	SW 8080	0.02/1
Arochlor 1242	<0.02	mg/kg	SW 8080	0.02/1
Arochlor 1248	<0.02	mg/kg	SW 8080	0.02/1
Arochlor 1254	<0.02	mg/kg	SW 8080	0.02/1
Arochlor 1260	<0.02	mg/kg	SW 8080	0.02/1

Extraction Date:
06/15/95
Analysis Date:
06/15/95
Analyst: SA

NUTRIENT ANALYSES

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Phenol	<0.9	mg/kg	SW 9066	06/15/95	NE	n/a

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>
Total Lead	0.2	mg/kg	SW 7420	06/15/95	CP



LAB #: 06117-04
Client ID: East Pond

PURGEABLE HALOCARBONS

Matrix: Water

Analyte	Results	Units	Method	MDL/DF
Bromodichloromethane	<1	µg/l	EPA 601	1/1
Bromoform	<1	µg/l	EPA 601	1/1
Bromomethane	<1	µg/l	EPA 601	1/1
Carbon Tetrachloride	<1	µg/l	EPA 601	1/1
Chlorobenzene	<1	µg/l	EPA 601	1/1
Chloroethane	<1	µg/l	EPA 601	1/1
Chloroform	<1	µg/l	EPA 601	1/1
Chloromethane	<1	µg/l	EPA 601	1/1
Dibromochloromethane	<1	µg/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	µg/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	µg/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	µg/l	EPA 601	1/1
Dichlorodifluoromethane	<1	µg/l	EPA 601	1/1
1,1-Dichloroethane	<1	µg/l	EPA 601	1/1
1,2-Dichloroethane	<1	µg/l	EPA 601	1/1
1,1-Dichloroethene	<1	µg/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	µg/l	EPA 601	1/1
1,2-Dichloropropane	<1	µg/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	µg/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	µg/l	EPA 601	1/1
Methylene Chloride	<1	µg/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	µg/l	EPA 601	1/1
Tetrachloroethene	<1	µg/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	µg/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	µg/l	EPA 601	1/1
Trichloroethene	<1	µg/l	EPA 601	1/1
Trichlorofluoromethane	<1	µg/l	EPA 601	1/1
Vinyl Chloride	<1	µg/l	EPA 601	1/1

Extraction Date:
NA
Analysis Date:
06/15/95
Analyst: KT



LAB #: 06117-04
Client ID: East Pond

ORGANOCHLORINE PESTICIDES AND PCB'S

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
A-BHC	<0.5	µg/l	EPA 608	0.5/1
B-BHC	<0.5	µg/l	EPA 608	0.5/1
G-BHC (Lindane)	<0.5	µg/l	EPA 608	0.5/1
D-BHC	<0.5	µg/l	EPA 608	0.5/1
Heptachlor	<0.5	µg/l	EPA 608	0.5/1
Aldrin	<0.5	µg/l	EPA 608	0.5/1
Heptachlor epoxide	<0.5	µg/l	EPA 608	0.5/1
Endosulfan I	<0.5	µg/l	EPA 608	0.5/1
Dieldrin	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDE	<0.5	µg/l	EPA 608	0.5/1
Endrin	<0.5	µg/l	EPA 608	0.5/1
Endosulfan II	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDD	<0.5	µg/l	EPA 608	0.5/1
Endrin Aldehyde	<0.5	µg/l	EPA 608	0.5/1
Endosulfan Sulfate	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDT	<0.5	µg/l	EPA 608	0.5/1
Methoxychlor	<0.5	µg/l	EPA 608	0.5/1
Chlordane	<0.5	µg/l	EPA 608	0.5/1
Toxaphene	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1016	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1221	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1232	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1242	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1248	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1254	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1260	<0.5	µg/l	EPA 608	0.5/1

Extraction Date:
06/15/95
Analysis Date:
06/15/95
Analyst: SA

NUTRIENT ANALYSES

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Phenol	<0.05	mg/l	EPA 420.1	06/15/95	NE	0.05

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Lead	<0.005	mg/l	EPA 239.2	06/16/95	CP	0.005
Dissolved Lead	<0.005	mg/l	EPA 239.2	06/16/95	CP	0.005



LAB #: 06117-05
Client ID: Trip

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	µg/l	EPA 601	1/1
Bromoform	<1	µg/l	EPA 601	1/1
Bromomethane	<1	µg/l	EPA 601	1/1
Carbon Tetrachloride	<1	µg/l	EPA 601	1/1
Chlorobenzene	<1	µg/l	EPA 601	1/1
Chloroethane	<1	µg/l	EPA 601	1/1
Chloroform	<1	µg/l	EPA 601	1/1
Chloromethane	<1	µg/l	EPA 601	1/1
Dibromochloromethane	<1	µg/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	µg/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	µg/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	µg/l	EPA 601	1/1
Dichlorodifluoromethane	<1	µg/l	EPA 601	1/1
1,1-Dichloroethane	<1	µg/l	EPA 601	1/1
1,2-Dichloroethane	<1	µg/l	EPA 601	1/1
1,1-Dichloroethene	<1	µg/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	µg/l	EPA 601	1/1
1,2-Dichloropropane	<1	µg/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	µg/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	µg/l	EPA 601	1/1
Methylene Chloride	<1	µg/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	µg/l	EPA 601	1/1
Tetrachloroethene	<1	µg/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	µg/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	µg/l	EPA 601	1/1
Trichloroethene	<1	µg/l	EPA 601	1/1
Trichlorofluoromethane	<1	µg/l	EPA 601	1/1
Vinyl Chloride	<1	µg/l	EPA 601	1/1

Extraction Date:

NA

Analysis Date:

06/15/95

Analyst: KT



QUALITY CONTROL DATA: ORGANIC ANALYTES

<u>Analyte</u>	<u>Lab</u> <u>Batch#</u>	<u>Analytical</u>			<u>QC</u> <u>%REC</u>	<u>Spike</u> <u>%REC</u>	<u>Dup</u> <u>%RPD</u>	Matrix: Water
		<u>Blank</u>	<u>MDL</u>	<u>Units</u>				<u>Method</u>
Bromodichloromethane	AB0615	<1	1	µg/l	101	95		601
Bromoform		<1	1	µg/l	106	113		601
Bromomethane		<1	1	µg/l	73	32		601
Carbon Tetrachloride		<1	1	µg/l	105	102		601
Chlorobenzene		<1	1	µg/l	108	106		601
Chloroethane		<1	1	µg/l	82	87		601
Chloroform		<1	1	µg/l	106	108		601
Chloromethane		<1	1	µg/l	59	53		601
Dibromochloromethane		<1	1	µg/l	91	100		601
1,2-Dichlorobenzene		<1	1	µg/l	105	100		601
1,3-Dichlorobenzene		<1	1	µg/l	104	102		601
1,4-Dichlorobenzene		<1	1	µg/l	108	103		601
Dichlorodifluoromethane		<1	1	µg/l	88	80		601
1,1-Dichloroethane		<1	1	µg/l	107	105		601
1,2-Dichloroethane		<1	1	µg/l	105	111		601
1,1-Dichloroethene		<1	1	µg/l	88	82		601
trans-1,2-Dichloroethene		<1	1	µg/l	104	99		601
1,2-Dichloropropane		<1	1	µg/l	104	108		601
cis-1,3-Dichloropropene		<1	1	µg/l	101	98		601
trans-1,3-Dichloropropene		<1	1	µg/l	101	102		601
Methylene Chloride		<1	1	µg/l	75	63		601
1,1,2,2-Tetrachloroethane		<1	1	µg/l	110	104		601
Tetrachloroethene		<1	1	µg/l	96	95		601
1,1,1-Trichloroethane		<1	1	µg/l	101	99		601
1,1,2-Trichloroethane		<1	1	µg/l	110	107		601
Trichloroethene		<1	1	µg/l	98	108		601
Trichlorofluoromethane		<1	1	µg/l	136	136		601
Vinyl Chloride		<1	1	µg/l	82	79		601

QUALITY CONTROL DATA: ORGANIC ANALYTES

Matrix: Water

<u>Analyte</u>	<u>Lab Batch#</u>	<u>Analytical Blank</u>	<u>MDL</u>	<u>Units</u>	<u>QC %REC</u>	<u>Spike %REC</u>	<u>Dup %RPD</u>	<u>Method</u>
A-BHC	AB0615	<0.5	0.5	µg/l		103		608
B-BHC		<0.5	0.5	µg/l		93		608
G-BHC		<0.5	0.5	µg/l		100		608
D-BHC		<0.5	0.5	µg/l		93		608
Heptachlor		<0.5	0.5	µg/l		98		608
Aldrin		<0.5	0.5	µg/l		96		608
Heptachlor epoxide		<0.5	0.5	µg/l		103		608
Endosulfan I		<0.5	0.5	µg/l		103		608
Dieldrin		<0.5	0.5	µg/l		103		608
p,p'-DDE		<0.5	0.5	µg/l		103		608
Endrin		<0.5	0.5	µg/l		130		608
Endosulfan II		<0.5	0.5	µg/l		108		608
p,p'-DDD		<0.5	0.5	µg/l		113		608
Endrin Aldehyde		<0.5	0.5	µg/l		104		608
Endosulfan Sulfate		<0.5	0.5	µg/l		109		608
p,p'-DDT		<0.5	0.5	µg/l		113		608
Methoxychlor		<0.5	0.5	µg/l		118		608
Chlordane		<0.5	0.5	µg/l				608
Toxaphene		<0.5	0.5	µg/l				608
Arochlor 1016		<0.5	0.5	µg/l				608
Arochlor 1221		<0.5	0.5	µg/l				608
Arochlor 1232		<0.5	0.5	µg/l				608
Arochlor 1242		<0.5	0.5	µg/l				608
Arochlor 1248		<0.5	0.5	µg/l				608
Arochlor 1254		<0.5	0.5	µg/l				608
Arochlor 1260		<0.5	0.5	µg/l				608

QUALITY CONTROL DATA: ORGANIC ANALYTES

<u>Analyte</u>	<u>Lab Batch#</u>	<u>Analytical Blank</u>	<u>MDL</u>	<u>Units</u>	<u>QC %REC</u>	<u>Spike %REC</u>	<u>Dup %RPD</u>	Matrix: Soil
								<u>Method</u>
Bromodichloromethane	AB0615	<1	1	µg/l	90	101		8010
Bromoform		<1	1	µg/l	97	73		8010
Bromomethane		<1	1	µg/l	103	101		8010
Carbon Tetrachloride		<1	1	µg/l	85	94		8010
Chlorobenzene		<1	1	µg/l	99	99		8010
Chloroethane		<1	1	µg/l	99	84		8010
Chloroform		<1	1	µg/l	98	97		8010
Chloromethane		<1	1	µg/l	86	75		8010
Dibromochloromethane		<1	1	µg/l	107	83		8010
1,2-Dichlorobenzene		<1	1	µg/l	104	105		8010
1,3-Dichlorobenzene		<1	1	µg/l	101	103		8010
1,4-Dichlorobenzene		<1	1	µg/l	104	106		8010
Dichlorodifluoromethane		<1	1	µg/l	104	100		8010
1,1-Dichloroethane		<1	1	µg/l	105	96		8010
1,2-Dichloroethane		<1	1	µg/l	95	94		8010
1,1-Dichloroethene		<1	1	µg/l	98	103		8010
trans-1,2-Dichloroethene		<1	1	µg/l	99	98		8010
1,2-Dichloropropane		<1	1	µg/l	104	99		8010
cis-1,3-Dichloropropene		<1	1	µg/l	88	79		8010
trans-1,3-Dichloropropene		<1	1	µg/l	89	81		8010
Methylene Chloride		<1	1	µg/l	86	90		8010
1,1,2,2-Tetrachloroethane		<1	1	µg/l	123	198		8010
Tetrachloroethene		<1	1	µg/l	98	99		8010
1,1,1-Trichloroethane		<1	1	µg/l	77	86		8010
1,1,2-Trichloroethane		<1	1	µg/l	101	87		8010
Trichloroethene		<1	1	µg/l	90	101		8010
Trichlorofluoromethane		<1	1	µg/l	99	84		8010
Vinyl Chloride		<1	1	µg/l	88	75		8010

<u>Analyte</u>	<u>Lab Batch#</u>	<u>Analytical Blank</u>	<u>MDL</u>	<u>Units</u>	<u>QC %REC</u>	<u>Spike %REC</u>	<u>Dup %RPD</u>	Matrix: Soil
								<u>Method</u>
Benzene	AB0615	<1	1	µg/l	92	90		8020
Toluene		<1	1	µg/l	97	95		8020
Ethylbenzene		<1	1	µg/l	97	98		8020
Total Xylenes		<1	1	µg/l	94	118		8020
MTBE		<1	1	µg/l	94	99		8020



QUALITY CONTROL DATA: ORGANIC ANALYTES

<u>Analyte</u>	<u>Lab Batch#</u>	<u>Analytical Blank</u>	<u>MDL</u>	<u>Units</u>	<u>QC %REC</u>	<u>Spike %REC</u>	<u>Dup %RPD</u>	Matrix: Soil
								<u>Method</u>
A-BHC	MB0615	<0.02	0.02	mg/kg		91		8080
B-BHC		<0.02	0.02	mg/kg		101		8080
G-BHC		<0.02	0.02	mg/kg		99		8080
D-BHC		<0.02	0.02	mg/kg		104		8080
Heptachlor		<0.02	0.02	mg/kg		93		8080
Aldrin		<0.02	0.02	mg/kg		102		8080
Heptachlor epoxide		<0.02	0.02	mg/kg		89		8080
Endosulfan I		<0.02	0.02	mg/kg		101		8080
Dieldrin		<0.02	0.02	mg/kg		102		8080
p,p'-DDE		<0.02	0.02	mg/kg		113		8080
Endrin		<0.02	0.02	mg/kg		150		8080
Endosulfan II		<0.02	0.02	mg/kg		122		8080
p,p'-DDD		<0.02	0.02	mg/kg		137		8080
Endrin Aldehyde		<0.02	0.02	mg/kg		123		8080
Endosulfan Sulfate		<0.02	0.02	mg/kg		132		8080
p,p'-DDT		<0.02	0.02	mg/kg		137		8080
Methoxychlor		<0.02	0.02	mg/kg		130		8080
Chlordane		<0.02	0.02	mg/kg				8080
Toxaphene		<0.02	0.02	mg/kg				8080
Arochlor 1016		<0.02	0.02	mg/kg				8080
Arochlor 1221		<0.02	0.02	mg/kg				8080
Arochlor 1232		<0.02	0.02	mg/kg				8080
Arochlor 1242		<0.02	0.02	mg/kg				8080
Arochlor 1248		<0.02	0.02	mg/kg				8080
Arochlor 1254		<0.02	0.02	mg/kg				8080
Arochlor 1260		<0.02	0.02	mg/kg				8080

QUALITY CONTROL DATA: INORGANIC ANALYTES

<u>Analyte</u>	<u>Lab Batch#</u>	<u>Analytical Blank</u>	<u>MDL</u>	<u>Units</u>	<u>QC %REC</u>	<u>Spike %REC</u>	<u>Dup %RPD</u>	Matrix: Water
								<u>Method</u>
Lead	AB0615	<0.005	0.005	mg/l	100	120	0	239.2

<u>Analyte</u>	<u>Lab Batch#</u>	<u>Analytical Blank</u>	<u>MDL</u>	<u>Units</u>	<u>QC %REC</u>	<u>Spike %REC</u>	<u>Dup %RPD</u>	Matrix: Soil
								<u>Method</u>
Lead	AB0615	<0.1	0.1	mg/l	94	90	4	7420



SURROGATE RECOVERY SUMMARY

Matrix: Water & Soil

PSI LAB #	1-Bromo-2 -Dichloropropane (601/8010)	a,a,a-TFT (602/8020)	2,4,5,6-Tetrachloro m-xylene (608/8080)	Dibutyl Chlorendate (608/8080)	2-Fluorobiphenyl (610/8100)	Nitrobenzene (610/8100)
06117-01	88			121		
06117-02	74			92		
06117-03	86	91		122		
06117-04	81			95		
06117-05	80					



CHAIN OF CUSTODY RECORD



Professional Service Industries, Inc.

[illegible]

ADDITIONAL REMARKS

SAMPLER'S SIGNATURE

PS7 ANALYTICAL SERVICES GROUP

APPENDIX A: NARRATIVE

LABORATORY PROJECT ID: 06117 INORGANIC / ORGANIC

<u>SAMPLE RECEIPT</u>	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT.</u>
1. C-O-C present & complete	☒	☐		BP
2. Samples match with C-O-C	☒	☐		
3. Temperature @ 4°C	☒	☐		
4. Shuttle Seal Present	☒	☐		
5. Container Condition Acceptable	☒	☐		
6. Other _____	☐	☐		

<u>GENERAL OBSERVATIONS</u>	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT.</u>
1. Sediment	☐	☐		
2. Headspace	☐	☐		
3. Appropriate Container	☐	☐		
4. Enough Sample	☐	☐		
5. Odor/Color (Describe)	☐	☐		
6. Homogeneous	☐	☐		
7. MultiPhasic	☐	☐		
8. Other _____	☐	☐		

<u>C. ANALYTICAL OBSERVATIONS</u>	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT.</u>
1. Analyzed within Holding times	☒	☐		JW ↓
2. Confirmation (Describe MS, 2nd Column, 2nd Detection)	☐	☒		
3. Matrix interferences	☐	☒		
4. Other _____	☐	☐		

D. GENERAL COMMENTS:

BY: _____ DATE: _____

PSI/ANALYTICAL SERVICES GROUP

APPENDIX A: NARRATIVE

LABORATORY PROJECT ID: 06117INORGANIC

ORGANIC

SAMPLE RECEIPTYESNOCOMMENTINIT.

1. C-O-C present & complete

☒☐

2. Samples match with C-O-C

☒☐

3. Temperature @ 4°C

☒☐

4. Shuttle Seal Present

☒☐5. Container Condition
Acceptable☒☐

6. Other _____

☐☐GENERAL OBSERVATIONSYESNOCOMMENTINIT.

1. Sediment

☐☐

2. Headspace

☐☐

3. Appropriate Container

☐☐

4. Enough Sample

☐☐

5. Odor/Color (Describe)

☐☐

6. Homogeneous

☐☐

7. MultiPhasic

☐☐

8. Other _____

☐☐C. ANALYTICAL OBSERVATIONSYESNOCOMMENTINIT.1. Analyzed within
Holding times☐☐2. Confirmation (Describe
MS, 2nd Column,
2nd Detection)☐☐

3. Matrix interferences

☐☐

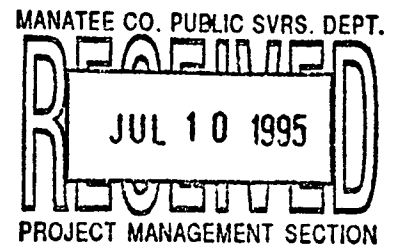
4. Other _____

☐☐

D. GENERAL COMMENTS:

BY: _____

DATE: _____



ANALYTICAL REPORT

TESTED FOR: PSI, Inc.
Clearwater Environmental
4400-140th Avenue North
Suite 100
Clearwater, FL 34622

PROJECT: Braden River Park
378-51014

ATTENTION: Adel Blassy

SAMPLE DATE: June 23, 1995

DATE: June 27, 1995

OUR REPORT NUMBER: 385-5P025-0054

Attached, please find our analytical report for samples described on the Chain-of-Custody (C-O-C). Please note that our laboratory has assigned unique sample numbers to each of your samples as shown on the attached C-O-C. Please reference our report number and direct any questions on this report to the individual designated below or to one of our Customer Service Representatives.

Reviewed By,

Anthony R. Febbraro, Department Manager

Respectfully submitted,
Professional Service Industries, Inc.

HRS #84218
HRS #E84388
cc: Kathleen Theisen
/bb

LAB #: 06227-01
Client ID: MW-2

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	µg/l	EPA 601	1/1
Bromoform	<1	µg/l	EPA 601	1/1
Bromomethane	<1	µg/l	EPA 601	1/1
Carbon Tetrachloride	<1	µg/l	EPA 601	1/1
Chlorobenzene	24	µg/l	EPA 601	1/1
Chloroethane	<1	µg/l	EPA 601	1/1
Chloroform	<1	µg/l	EPA 601	1/1
Chloromethane	<1	µg/l	EPA 601	1/1
Dibromochloromethane	<1	µg/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	µg/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	µg/l	EPA 601	1/1
1,4-Dichlorobenzene	2	µg/l	EPA 601	1/1
Dichlorodifluoromethane	<1	µg/l	EPA 601	1/1
1,1-Dichloroethane	<1	µg/l	EPA 601	1/1
1,2-Dichloroethane	<1	µg/l	EPA 601	1/1
1,1-Dichloroethene	<1	µg/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	µg/l	EPA 601	1/1
1,2-Dichloropropane	<1	µg/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	µg/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	µg/l	EPA 601	1/1
Methylene Chloride	<1	µg/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	µg/l	EPA 601	1/1
Tetrachloroethene	<1	µg/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	µg/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	µg/l	EPA 601	1/1
Trichloroethene	<1	µg/l	EPA 601	1/1
Trichlorofluoromethane	<1	µg/l	EPA 601	1/1
Vinyl Chloride	<1	µg/l	EPA 601	1/1

Extraction Date:

NA

Analysis Date:

06/26/95

Analyst: SA



LAB #: 06227-01
Client ID: MW-2

ORGANOCHLORINE PESTICIDES AND PCB'S

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
A-BHC	<0.5	µg/l	EPA 608	0.5/1
B-BHC	<0.5	µg/l	EPA 608	0.5/1
G-BHC (Lindane)	<0.5	µg/l	EPA 608	0.5/1
D-BHC	<0.5	µg/l	EPA 608	0.5/1
Heptachlor	<0.5	µg/l	EPA 608	0.5/1
Aldrin	<0.5	µg/l	EPA 608	0.5/1
Heptachlor epoxide	<0.5	µg/l	EPA 608	0.5/1
Endosulfan I	<0.5	µg/l	EPA 608	0.5/1
Dieldrin	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDE	<0.5	µg/l	EPA 608	0.5/1
Endrin	<0.5	µg/l	EPA 608	0.5/1
Endosulfan II	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDD	<0.5	µg/l	EPA 608	0.5/1
Endrin Aldehyde	<0.5	µg/l	EPA 608	0.5/1
Endosulfan Sulfate	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDT	<0.5	µg/l	EPA 608	0.5/1
Chlordane	<0.5	µg/l	EPA 608	0.5/1
Toxaphene	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1016	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1221	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1232	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1242	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1248	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1254	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1260	<0.5	µg/l	EPA 608	0.5/1

Extraction Date:
06/26/95
Analysis Date:
06/27/95
Analyst: SP

NUTRIENT ANALYSES

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Phenol	<0.05	mg/l	EPA 420.1	06/27/95	NE	0.05

INORGANIC ANALYSIS

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Lead	0.024	mg/l	EPA 239.2	06/27/95	MC	0.005
Dissolved Lead	0.016	mg/l	EPA 239.2	06/27/95	MC	0.005



LAB #: 06227-02
Client ID: East Pond (MW-3)

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	µg/l	EPA 601	1/1
Bromoform	<1	µg/l	EPA 601	1/1
Bromomethane	<1	µg/l	EPA 601	1/1
Carbon Tetrachloride	<1	µg/l	EPA 601	1/1
Chlorobenzene	<1	µg/l	EPA 601	1/1
Chloroethane	<1	µg/l	EPA 601	1/1
Chloroform	<1	µg/l	EPA 601	1/1
Chloromethane	<1	µg/l	EPA 601	1/1
Dibromochloromethane	<1	µg/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	µg/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	µg/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	µg/l	EPA 601	1/1
Dichlorodifluoromethane	<1	µg/l	EPA 601	1/1
1,1-Dichloroethane	<1	µg/l	EPA 601	1/1
1,2-Dichloroethane	<1	µg/l	EPA 601	1/1
1,1-Dichloroethene	<1	µg/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	µg/l	EPA 601	1/1
1,2-Dichloropropane	<1	µg/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	µg/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	µg/l	EPA 601	1/1
Methylene Chloride	<1	µg/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	µg/l	EPA 601	1/1
Tetrachloroethene	<1	µg/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	µg/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	µg/l	EPA 601	1/1
Trichloroethene	<1	µg/l	EPA 601	1/1
Trichlorofluoromethane	<1	µg/l	EPA 601	1/1
Vinyl Chloride	<1	µg/l	EPA 601	1/1

Extraction Date:
NA
Analysis Date:
06/26/95
Analyst: SA



LAB #: 06227-02
Client ID: East Pond (MW-3)

ORGANOCHLORINE PESTICIDES AND PCB'S

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
A-BHC	<0.5	µg/l	EPA 608	0.5/1
B-BHC	<0.5	µg/l	EPA 608	0.5/1
G-BHC (Lindane)	<0.5	µg/l	EPA 608	0.5/1
D-BHC	<0.5	µg/l	EPA 608	0.5/1
Heptachlor	<0.5	µg/l	EPA 608	0.5/1
Aldrin	<0.5	µg/l	EPA 608	0.5/1
Heptachlor epoxide	<0.5	µg/l	EPA 608	0.5/1
Endosulfan I	<0.5	µg/l	EPA 608	0.5/1
Dieldrin	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDE	<0.5	µg/l	EPA 608	0.5/1
Endrin	<0.5	µg/l	EPA 608	0.5/1
Endosulfan II	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDD	<0.5	µg/l	EPA 608	0.5/1
Endrin Aldehyde	<0.5	µg/l	EPA 608	0.5/1
Endosulfan Sulfate	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDT	<0.5	µg/l	EPA 608	0.5/1
Chlordane	<0.5	µg/l	EPA 608	0.5/1
Toxaphene	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1016	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1221	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1232	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1242	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1248	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1254	<0.5	µg/l	EPA 608	0.5/1
Arochlor 1260	<0.5	µg/l	EPA 608	0.5/1

Extraction Date:
06/26/95
Analysis Date:
06/27/95
Analyst: SP

NUTRIENT ANALYSES

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Phenol	<0.05	mg/l	EPA 420.1	06/27/95	NE	0.05

INORGANIC ANALYSIS

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Lead	<0.005	mg/l	EPA 239.2	06/27/95	MC	0.005
Dissolved Lead	<0.005	mg/l	EPA 239.2	06/27/95	MC	0.005



QUALITY CONTROL DATA: ORGANIC ANALYTES

Matrix: Water

<u>Analyte</u>	<u>Lab Batch#</u>	<u>Analytical Blank</u>	<u>MDL</u>	<u>Units</u>	<u>QC %REC</u>	<u>Spike %REC</u>	<u>Dup %RPD</u>	<u>Method</u>
Bromodichloromethane	AB0626	<1	1	µg/l	103	99		601
Bromoform		<1	1	µg/l	129	97		601
Bromomethane		<1	1	µg/l	107	45		601
Carbon Tetrachloride		<1	1	µg/l	101	76		601
Chlorobenzene		<1	1	µg/l	107	99		601
Chloroethane		<1	1	µg/l	118	78		601
Chloroform		<1	1	µg/l	103	96		601
Chloromethane		<1	1	µg/l	73	57		601
Dibromochloromethane		<1	1	µg/l		102		601
1,2-Dichlorobenzene		<1	1	µg/l	107	98		601
1,3-Dichlorobenzene		<1	1	µg/l	109	94		601
1,4-Dichlorobenzene		<1	1	µg/l	112	94		601
Dichlorodifluoromethane		<1	1	µg/l	96	54		601
1,1-Dichloroethane		<1	1	µg/l	117	106		601
1,2-Dichloroethane		<1	1	µg/l	106	98		601
1,1-Dichloroethene		<1	1	µg/l	123	90		601
trans-1,2-Dichloroethene		<1	1	µg/l	120	99		601
1,2-Dichloropropane		<1	1	µg/l	106	93		601
cis-1,3-Dichloropropene		<1	1	µg/l	106	76		601
trans-1,3-Dichloropropene		<1	1	µg/l	97	74		601
Methylene Chloride		<1	1	µg/l	147	111		601
1,1,2,2-Tetrachloroethane		<1	1	µg/l	106			601
Tetrachloroethene		<1	1	µg/l	116	88		601
1,1,1-Trichloroethane		<1	1	µg/l	106	88		601
1,1,2-Trichloroethane		<1	1	µg/l	109	97		601
Trichloroethene		<1	1	µg/l	103	100		601
Trichlorofluoromethane		<1	1	µg/l	111	84		601
Vinyl Chloride		<1	1	µg/l	104	80		601

QUALITY CONTROL DATA: ORGANIC ANALYTES

Analyte	Lab Batch#	Analytical Blank	MDL	Units	QC %REC	Spike %REC	Matrix: Water	
							Dup %RPD	Method
A-BHC	AB0626	<0.5	0.5	µg/l		78		608
B-BHC		<0.5	0.5	µg/l		89		608
G-BHC		<0.5	0.5	µg/l		82		608
D-BHC		<0.5	0.5	µg/l		92		608
Heptachlor		<0.5	0.5	µg/l		78		608
Aldrin		<0.5	0.5	µg/l		81		608
Heptachlor epoxide		<0.5	0.5	µg/l		89		608
Endosulfan I		<0.5	0.5	µg/l		101		608
Dieldrin		<0.5	0.5	µg/l		99		608
p,p'-DDE		<0.5	0.5	µg/l		114		608
Endrin		<0.5	0.5	µg/l		118		608
Endosulfan II		<0.5	0.5	µg/l		124		608
p,p'-DDD		<0.5	0.5	µg/l		151		608
Endrin Aldehyde		<0.5	0.5	µg/l		141		608
Endosulfan Sulfate		<0.5	0.5	µg/l				608
p,p'-DDT		<0.5	0.5	µg/l		122		608
Chlordane		<0.5	0.5	µg/l				608
Toxaphene		<0.5	0.5	µg/l				608
Arochlor 1016		<0.5	0.5	µg/l				608
Arochlor 1221		<0.5	0.5	µg/l				608
Arochlor 1232		<0.5	0.5	µg/l				608
Arochlor 1242		<0.5	0.5	µg/l				608
Arochlor 1248		<0.5	0.5	µg/l				608
Arochlor 1254		<0.5	0.5	µg/l				608
Arochlor 1260		<0.5	0.5	µg/l				608

QUALITY CONTROL DATA: INORGANIC ANALYTES

Analyte	Lab Batch#	Analytical Blank	MDL	Units	QC %REC	Spike %REC	Matrix: Water	
							Dup %RPD	Method
Lead	AB0627	<0.005	0.005	mg/l	110	130	0	239.2

SURROGATE RECOVERY SUMMARY

PSI LAB #	1-Bromo-2		2,4,5,6-Tetrachloro		Dibutyl	Matrix: Water	
	-Dichloropropane (601/8010)	a,a,a-TFT (602/8020)	m-xylene (608/8080)		Chlorendate (608/8080)	2-Fluorobiphenyl (610/8100)	Nitrobenzene (610/8100)
06227-01	129				102		
06227-02	119				99		



CHAIN OF CUSTODY RECORD



Professional Service Industries, Inc.

PROJECT NAME <i>Braden River Park</i>	REPORT TO <i>Adel Blissy</i>	INVOICE TO <i>Nana Fe Ikner</i>
PROJECT NUMBER <i>378-51014</i>	PROJECT MANAGER <i>Adel Blissy</i>	ADDRESS <i>PSI (552)</i>
P.O. NUMBER <i>552</i>	ADDRESS <i>PSI</i>	CITY / STATE / ZIP <i>Cleanton</i>
REQUIRED DUE DATE <i>RUSH - See Adel</i>	CITY / STATE / ZIP <i>Cleanton</i>	ATTENTION
SAMPLES TO LAB VIA <i>-</i>	TELEPHONE <i>(813) 538-2300</i>	TELEPHONE
NUMBER OF COOLERS <i>1</i>	REPORT VIA <i>U.S. MAIL/OVERNIGHT</i>	VERBAL FAX

LABORATORY SUBMITTED TO:

- ☐ 6913 Hwy. 225
Deer Park, TX 77536
(713) 479-8307
- ☐ 6056 Ulmerton Road
Clearwater, FL 34620
(813) 531-1446

- ☐ 4820 W. 15th Street
Lawrence, KS 66049
(800) 548-7901
- ☐ 850 Poplar Street
Pittsburgh, PA 15220
(412) 922-4000

TRANSFER NUMBER	RELINQUISHED BY DATE / TIME	ACCEPTED BY DATE / TIME	SEAL NUMBER
	<i>Blissy 6-22-95</i>	<i>Blissy 6-23-95</i>	
	<i>Blissy 6-23-95</i>	<i>Blissy 6-23-95</i>	

LABORATORY USE ONLY	
FIELD SERVICES	Y/N \$
SHIPPING	Y/N \$

LABORATORY USE ONLY	
ANALYTICAL DUE DATE	<i>6-27-95</i>
REPORT DUE DATE	
INORGANIC Sect	ORGANIC Sect
Row	Row
PSI PROJECT NAME	
PSI PROJECT #	<i>50025-0054</i>
PSI BATCH #	

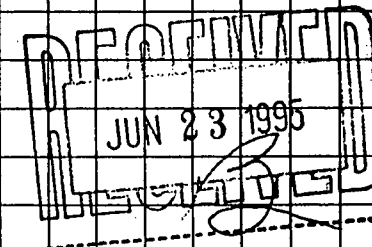
LABORATORY USE ONLY	
SAMPLE CUSTODIAN	DATE / TIME

SAMPLE IDENTIFICATION	DATE / TIME	COMP-C GRAB-B	SOIL-S WATER-W WASTE-X	LAB USE ONLY LAB NUMBER
-----------------------	-------------	------------------	------------------------------	----------------------------

<i>MW-2</i>	<i>11:30</i>	<i>B</i>	<i>W</i>	<i>01</i>
<i>East Pond (MW-3)</i>	<i>12:45</i>	<i>B</i>	<i>W</i>	<i>02</i>

NUMBER OF CONTAINERS	PARAMETER LIST									
	<i>601</i>	<i>608</i>	<i>420</i>	<i>Total Lead</i>	<i>Dissolved Lead</i>					

<i>6</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>					
<i>6</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>					



ADDITIONAL REMARKS

SAMPLER'S SIGNATURE

Blissy

PSI/ANALYTICAL SERVICES GROUP

APPENDIX A: NARRATIVE

 LABORATORY PROJECT ID: 06227 INORGANIC / ORGANIC
SAMPLE RECEIPT

	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT.</u>
1. C-O-C present & complete	☒	☐		BP
2. Samples match with C-O-C	☒	☐		
3. Temperature @ 4°C	☒	☐		
4. Shuttle Seal Present	☐	☒		
5. Container Condition Acceptable	☒	☐		
6. Other _____	☐	☐		

GENERAL OBSERVATIONS

	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT.</u>
1. Sediment	☐	☒		SAV
2. Headspace	☐	☒		
3. Appropriate Container	☒	☐		
4. Enough Sample	☒	☐		
5. Odor/Color (Describe)	☐	☒		
6. Homogeneous	☒	☐		
7. MultiPhasic	☐	☒		
8. Other _____	☐	☐		

ANALYTICAL OBSERVATIONS

	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT.</u>
1. Analyzed within Holding times	☒	☐		SAV
2. Confirmation (Describe MS, 2nd Column, 2nd Detection)	☐	☒		
3. Matrix interferences	☐	☒		
4. Other _____	☐	☐		

D. GENERAL COMMENTS:

BY: _____

DATE: _____

PSI/ANALYTICAL SERVICES GROUP

APPENDIX A: NARRATIVE

LABORATORY PROJECT ID: 06227 INORGANIC / ORGANIC

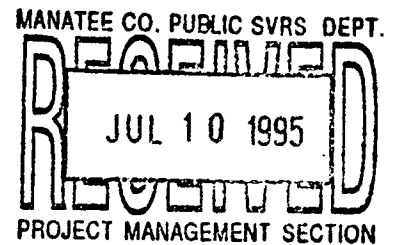
<u>SAMPLE RECEIPT</u>	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT.</u>
1. C-O-C present & complete	☒	☐		BP
2. Samples match with C-O-C	☒	☐		
3. Temperature @ 4°C	☒	☐		
4. Shuttle Seal Present	☐	☒		
5. Container Condition Acceptable	☒	☐		
6. Other _____	☐	☐		

<u>GENERAL OBSERVATIONS</u>	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT.</u>
1. Sediment	☐	☐		
2. Headspace	☐	☐		
3. Appropriate Container	☐	☐		
4. Enough Sample	☐	☐		
5. Odor/Color (Describe)	☐	☐		
6. Homogeneous	☐	☐		
7. MultiPhasic	☐	☐		
8. Other _____	☐	☐		

<u>ANALYTICAL OBSERVATIONS</u>	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT.</u>
1. Analyzed within Holding times	☐	☐		
2. Confirmation (Describe MS, 2nd Column, 2nd Detection)	☐	☐		
3. Matrix interferences	☐	☐		
4. Other _____	☐	☐		

GENERAL COMMENTS:

 BY: _____ DATE: _____



ANALYTICAL REPORT

TESTED FOR: PSI, Inc.
Clearwater Special Projects
4400-140th Avenue North
Suite 100
Clearwater, FL 34622

PROJECT: Brandon River Park
385-5P051-0104

SAMPLE DATE: June 29, 1995

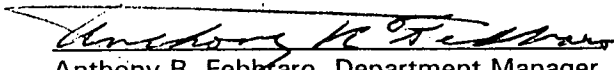
ATTENTION: Adel Blassy

DATE: July 3, 1995

OUR REPORT NUMBER: 385-5P051-0104

Attached, please find our analytical report for samples described on the Chain-of-Custody (C-O-C). Please note that our laboratory has assigned unique sample numbers to each of your samples as shown on the attached C-O-C. Please reference our report number and direct any questions on this report to the individual designated below or to one of our Customer Service Representatives.

Reviewed By,


Anthony R. Febbraro, Department Manager

Respectfully submitted,
Professional Service Industries, Inc.

HRS #84218
HRS #E84388
cc: Kathleen Theisen
/jm

Information To Build On

LAB #: 06280-01
Client ID: MW-5

PURGEABLE HALOCARBONS

Matrix: Water

Analyte	Results	Units	Method	MDL/DF
Bromodichloromethane	<1	µg/l	EPA 601	1/1
Bromoform	<1	µg/l	EPA 601	1/1
Bromomethane	<1	µg/l	EPA 601	1/1
Carbon Tetrachloride	<1	µg/l	EPA 601	1/1
Chlorobenzene	<1	µg/l	EPA 601	1/1
Chloroethane	<1	µg/l	EPA 601	1/1
Chloroform	<1	µg/l	EPA 601	1/1
Chloromethane	<1	µg/l	EPA 601	1/1
Dibromochloromethane	<1	µg/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	µg/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	µg/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	µg/l	EPA 601	1/1
Dichlorodifluoromethane	<1	µg/l	EPA 601	1/1
1,1-Dichloroethane	<1	µg/l	EPA 601	1/1
1,2-Dichloroethane	<1	µg/l	EPA 601	1/1
1,1-Dichloroethene	<1	µg/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	µg/l	EPA 601	1/1
1,2-Dichloropropane	<1	µg/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	µg/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	µg/l	EPA 601	1/1
Methylene Chloride	<1	µg/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	µg/l	EPA 601	1/1
Tetrachloroethene	<1	µg/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	µg/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	µg/l	EPA 601	1/1
Trichloroethene	<1	µg/l	EPA 601	1/1
Trichlorofluoromethane	<1	µg/l	EPA 601	1/1
Vinyl Chloride	<1	µg/l	EPA 601	1/1

Extraction Date:

NA

Analysis Date:

07/01/95

Analyst: LAB



mw5 (?)

ORGANOCHLORINE PESTICIDES AND PCB'S

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
A-BHC	<0.5	µg/l	EPA 608	0.5/1
B-BHC	<0.5	µg/l	EPA 608	0.5/1
G-BHC (Lindane)	<0.5	µg/l	EPA 608	0.5/1
D-BHC	<0.5	µg/l	EPA 608	0.5/1
Heptachlor	<0.5	µg/l	EPA 608	0.5/1
Aldrin	<0.5	µg/l	EPA 608	0.5/1
Heptachlor epoxide	<0.5	µg/l	EPA 608	0.5/1
Endosulfan I	<0.5	µg/l	EPA 608	0.5/1
Dieldrin	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDE	<0.5	µg/l	EPA 608	0.5/1
Endrin	<0.5	µg/l	EPA 608	0.5/1
Endosulfan II	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDD	<0.5	µg/l	EPA 608	0.5/1
Endrin Aldehyde	<0.5	µg/l	EPA 608	0.5/1
Endosulfan Sulfate	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDT	<0.5	µg/l	EPA 608	0.5/1
Chlordane	<0.5	µg/l	EPA 608	0.5/1
Toxaphene	<0.5	µg/l	EPA 608	0.5/1
PCB 1016	<0.5	µg/l	EPA 608	0.5/1
PCB 1221	<0.5	µg/l	EPA 608	0.5/1
PCB 1232	<0.5	µg/l	EPA 608	0.5/1
PCB 1242	<0.5	µg/l	EPA 608	0.5/1
PCB 1248	<0.5	µg/l	EPA 608	0.5/1
PCB 1254	<0.5	µg/l	EPA 608	0.5/1
PCB 1260	<0.5	µg/l	EPA 608	0.5/1

Extraction Date:
06/30/95
Analysis Date:
06/30/95
Analyst: SP

NUTRIENT ANALYSES

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Phenol	0.1	mg/l	EPA 420.1	07/03/95	NE	0.05

METALS ANALYSIS

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Lead	1.1	mg/l	EPA 239.2	06/30/95	MC	0.005
Dissolved Lead	0.006	mg/l	EPA 239.2	06/30/95	MC	0.005



LAB #: 06280-02

PURGEABLE HALOCARBONS

Client ID: MW-5

Matrix: Water

Analyte	Results	Units	Method	MDL/DF
Bromodichloromethane	<1	µg/l	EPA 601	1/1
Bromoform	<1	µg/l	EPA 601	1/1
Bromomethane	<1	µg/l	EPA 601	1/1
Carbon Tetrachloride	<1	µg/l	EPA 601	1/1
Chlorobenzene	6	µg/l	EPA 601	1/1
Chloroethane	<1	µg/l	EPA 601	1/1
Chloroform	<1	µg/l	EPA 601	1/1
Chloromethane	<1	µg/l	EPA 601	1/1
Dibromochloromethane	<1	µg/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	µg/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	µg/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	µg/l	EPA 601	1/1
Dichlorodifluoromethane	<1	µg/l	EPA 601	1/1
1,1-Dichloroethane	<1	µg/l	EPA 601	1/1
1,2-Dichloroethane	<1	µg/l	EPA 601	1/1
1,1-Dichloroethene	<1	µg/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	µg/l	EPA 601	1/1
1,2-Dichloropropane	<1	µg/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	µg/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	µg/l	EPA 601	1/1
Methylene Chloride	<1	µg/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	µg/l	EPA 601	1/1
Tetrachloroethene	<1	µg/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	µg/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	µg/l	EPA 601	1/1
Trichloroethene	<1	µg/l	EPA 601	1/1
Trichlorofluoromethane	<1	µg/l	EPA 601	1/1
Vinyl Chloride	<1	µg/l	EPA 601	1/1

Extraction Date:

NA

Analysis Date:

07/01/95

Analyst: LAB



mw5

ORGANOCHLORINE PESTICIDES AND PCB'S

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
A-BHC	<0.5	µg/l	EPA 608	0.5/1
B-BHC	<0.5	µg/l	EPA 608	0.5/1
G-BHC (Lindane)	<0.5	µg/l	EPA 608	0.5/1
D-BHC	<0.5	µg/l	EPA 608	0.5/1
Heptachlor	<0.5	µg/l	EPA 608	0.5/1
Aldrin	<0.5	µg/l	EPA 608	0.5/1
Heptachlor epoxide	<0.5	µg/l	EPA 608	0.5/1
Endosulfan I	<0.5	µg/l	EPA 608	0.5/1
Dieldrin	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDE	<0.5	µg/l	EPA 608	0.5/1
Endrin	<0.5	µg/l	EPA 608	0.5/1
Endosulfan II	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDD	<0.5	µg/l	EPA 608	0.5/1
Endrin Aldehyde	<0.5	µg/l	EPA 608	0.5/1
Endosulfan Sulfate	<0.5	µg/l	EPA 608	0.5/1
p,p'-DDT	<0.5	µg/l	EPA 608	0.5/1
Chlordane	<0.5	µg/l	EPA 608	0.5/1
Toxaphene	<0.5	µg/l	EPA 608	0.5/1
PCB 1016	<0.5	µg/l	EPA 608	0.5/1
PCB 1221	<0.5	µg/l	EPA 608	0.5/1
PCB 1232	<0.5	µg/l	EPA 608	0.5/1
PCB 1242	<0.5	µg/l	EPA 608	0.5/1
PCB 1248	<0.5	µg/l	EPA 608	0.5/1
PCB 1254	<0.5	µg/l	EPA 608	0.5/1
PCB 1260	<0.5	µg/l	EPA 608	0.5/1

Extraction Date:
06/30/95
Analysis Date:
06/30/95
Analyst: SP

NUTRIENT ANALYSES

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Phenol	0.09	mg/l	EPA 420.1	07/03/95	NE	0.05

METALS ANALYSIS

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Lead	0.033	mg/l	EPA 239.2	06/30/95	MC	0.005
Dissolved Lead	0.008	mg/l	EPA 239.2	06/30/95	MC	0.005



QUALITY CONTROL DATA: ORGANIC ANALYTES

Analyte	Lab	Analytical			QC	Spike	Dup	Matrix: Water
	Batch#	Blank	MDL	Units	%REC	%REC	%RPD	Method
Bromodichloromethane	AB0630	<1	1	µg/l	81	105		601
Bromoform		<1	1	µg/l	89	105		601
Bromomethane		<1	1	µg/l		54		601
Carbon Tetrachloride		<1	1	µg/l	97	85		601
Chlorobenzene		<1	1	µg/l	80	106		601
Chloroethane		<1	1	µg/l	85	117		601
Chloroform		<1	1	µg/l	83	109		601
Chloromethane		<1	1	µg/l	89	121		601
Dibromochloromethane		<1	1	µg/l	84	108		601
1,2-Dichlorobenzene		<1	1	µg/l	78	114		601
1,3-Dichlorobenzene		<1	1	µg/l	82	112		601
1,4-Dichlorobenzene		<1	1	µg/l	80	111		601
Dichlorodifluoromethane		<1	1	µg/l				601
1,1-Dichloroethane		<1	1	µg/l	90	120		601
1,2-Dichloroethane		<1	1	µg/l	80	107		601
1,1-Dichloroethene		<1	1	µg/l	99	133		601
trans-1,2-Dichloroethene		<1	1	µg/l	91	127		601
1,2-Dichloropropane		<1	1	µg/l	80	108		601
cis-1,3-Dichloropropene		<1	1	µg/l	78	105		601
trans-1,3-Dichloropropene		<1	1	µg/l	82	103		601
Methylene Chloride		<1	1	µg/l	81	111		601
1,1,2,2-Tetrachloroethane		<1	1	µg/l	85	108		601
Tetrachloroethene		<1	1	µg/l	86	118		601
1,1,1-Trichloroethane		<1	1	µg/l	92	121		601
1,1,2-Trichloroethane		<1	1	µg/l	84	103		601
Trichloroethene		<1	1	µg/l	85	115		601
Trichlorofluoromethane		<1	1	µg/l	146			601
Vinyl Chloride		<1	1	µg/l	101	138		601

QUALITY CONTROL DATA: ORGANIC ANALYTES

<u>Analyte</u>	<u>Lab Batch#</u>	<u>Analytical</u>		<u>Units</u>	<u>QC %REC</u>	<u>Spike %REC</u>	Matrix: Water	
		<u>Blank</u>	<u>MDL</u>				<u>Dup %RPD</u>	<u>Method</u>
A-BHC	AB0630	<0.5	0.5	µg/l	118			608
B-BHC		<0.5	0.5	µg/l	97			608
G-BHC		<0.5	0.5	µg/l	108			608
D-BHC		<0.5	0.5	µg/l	97			608
Heptachlor		<0.5	0.5	µg/l	102			608
Aldrin		<0.5	0.5	µg/l	105			608
Heptachlor epoxide		<0.5	0.5	µg/l	106			608
Endosulfan I		<0.5	0.5	µg/l	114			608
Dieldrin		<0.5	0.5	µg/l	103			608
p,p'-DDE		<0.5	0.5	µg/l	101			608
Endrin		<0.5	0.5	µg/l	111			608
Endosulfan II		<0.5	0.5	µg/l	113			608
p,p'-DDD		<0.5	0.5	µg/l	110			608
Endrin Aldehyde		<0.5	0.5	µg/l	110			608
Endosulfan Sulfate		<0.5	0.5	µg/l	113			608
p,p'-DDT		<0.5	0.5	µg/l	110			608
Chlordane		<0.5	0.5	µg/l				608
Toxaphene		<0.5	0.5	µg/l				608
PCB 1016		<0.5	0.5	µg/l				608
PCB 1221		<0.5	0.5	µg/l				608
PCB 1232		<0.5	0.5	µg/l				608
PCB 1242		<0.5	0.5	µg/l				608
PCB 1248		<0.5	0.5	µg/l				608
PCB 1254		<0.5	0.5	µg/l				608
PCB 1260		<0.5	0.5	µg/l				608

QUALITY CONTROL DATA: INORGANIC ANALYTES

<u>Analyte</u>	<u>Lab Batch#</u>	<u>Analytical</u>		<u>Units</u>	<u>QC %REC</u>	<u>Spike %REC</u>	Matrix: Soil/Water	
		<u>Blank</u>	<u>MDL</u>				<u>Dup %RPD</u>	<u>Method</u>
Phenol	AB0703	<0.005	0.005	mg/l	111		10	420.1

QUALITY CONTROL DATA: INORGANIC ANALYTES

<u>Analyte</u>	<u>Lab Batch#</u>	<u>Analytical</u>		<u>Units</u>	<u>QC %REC</u>	<u>Spike %REC</u>	Matrix: Water	
		<u>Blank</u>	<u>MDL</u>				<u>Dup %RPD</u>	<u>Method</u>
Total Lead	AB0630	<0.005	0.005	mg/l	110	90		239.2



Professional Service Industries, Inc.

☐ 850 Poplar Street
Pittsburgh, PA 15220
(412) 922-4000

SAMPLER'S SIGNATURE

APPENDIX A: NARRATIVE

LABORATORY PROJECT ID: 06280 INORGANIC ORGANIC

<u>SAMPLE RECEIPT</u>	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT.</u>
1. C-O-C present & complete	☒	☐		Bl ↓
2. Samples match with C-O-C	☒	☐		
3. Temperature @ 4°C	☒	☐		
4. Shuttle Seal Present	☒	☐		
5. Container Condition Acceptable	☒	☐		
6. Other _____	☐	☐		

<u>GENERAL OBSERVATIONS</u>	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT.</u>
1. Sediment	☐	☐		
2. Headspace	☐	☐		
3. Appropriate Container	☐	☐		
4. Enough Sample	☐	☐		
5. Odor/Color (Describe)	☐	☐		
6. Homogeneous	☐	☐		
7. MultiPhasic	☐	☐		
8. Other _____	☐	☐		

<u>ANALYTICAL OBSERVATIONS</u>	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT.</u>
1. Analyzed within Holding times	☐	☐		
2. Confirmation (Describe MS, 2nd Column, 2nd Detection)	☐	☐		
3. Matrix interferences	☐	☐		
4. Other _____	☐	☐		

D. GENERAL COMMENTS:

BY: _____ DATE: _____

APPENDIX A: NARRATIVE

LABORATORY PROJECT ID: 06280

INORGANIC

ORGANIC

SAMPLE RECEIPT

1. C-C-C present & complete
2. Samples match with C-C-C
3. Temperature @ 4°C
4. Shuttle Seal Present
5. Container Condition Acceptable
6. Other _____

YES

NO

COMMENT

INIT

GENERAL OBSERVATIONS

1. Sediment
2. Headspace
3. Appropriate Container
4. Enough Sample
5. Odor/Color (Describe)
6. Homogeneous
7. MultiPhasic
8. Other _____

YES

NO

COMMENT

INIT

C. ANALYTICAL OBSERVATIONS

1. Analyzed within Holding times
2. Confirmation (Describe MS, 2nd Column, 2nd Detection)
3. Matrix interferences
4. Other _____

YES

NO

COMMENT

INIT

D. GENERAL COMMENTS:

BY: _____

DATE: _____



Professional Service Industries, Inc.
Environmental & Analytical Division

February 27, 1995

Manatee County Public Works Department
Post Office Box 25010
Bradenton, Florida 38206

Attention: Mr. Tom Yeager

Re: Groundwater Monitoring Plan
Braden River Park
Manatee County, Florida
PSI Project Number: 378-5I014

Dear Mr. Yeager:

Please find enclosed the results from the first groundwater monitoring sampling event as requested. This sampling event occurred on February 21, 1995. This month's results are summarized below (Table 1). Please note we have designated a new well numbering system for the permanent monitoring wells now in place (Figure 1). The monitoring well construction detail is also attached to this report.

TABLE 1							
SUMMARY OF GROUNDWATER MONITORING							
Compound	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MCL
Chlorobenzene	2 ug/l	11 ug/l	15 ug/l	BDL	BDL	BDL	100 ug/l
Methylene Chloride	BDL	BDL	BDL	BDL	BDL	BDL	5 ug/l
Total Phenols	102 ug/l	171 ug/l	BDL	BDL	292 ug/l	BDL	20 ug/l
Lead (Filtered)	BDL	BDL	BDL	BDL	BDL	BDL	15 ug/l

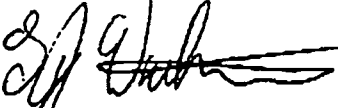
102 = Values in bold exceed Maximum Contaminate Level
ug/l = Micrograms per liter
MCL = Maximum contaminate level according to Drinking
Water Standards prescribed in 40 CFR 141.62

Manatee County Public Works Department
PSI Project No. 378-5I014
Page 2 of 2

Should you have any questions, please do not hesitate to contact the undersigned.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.



T/James M. Watkins, P.G.
Senior Project Manager



Adel M. Blassy
Manager, Environmental Services

Keith L. Butts, E.I.
Staff Engineer

TJMW/AMB/KLB:tms



LAB #: 02158-07
Client ID: Trip Blank

PURGEABLE HALOCARBONS

Matrix: Water

Analyte	Results	Units	Method	MDL/DF
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	<1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
2-Chloroethylvinyl Ether	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:

NA

Analysis Date:

02/23/95

Analyst: KT



LAB #: 02158-06
Client ID: MW-6

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 801	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	<1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
2-Chloroethylvinyl Ether	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:

NA

Analysis Date:

02/23/95

Analyst: KT

NUTRIENT ANALYSES

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Phenols	<0.010	mg/l	EPA 420.1	02/24/95	MC	0.010

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Lead	<5.00	ug/l	EPA 239.2	02/23/95	CP	5.00



LAB #: 02158-05
Client ID: MW-5

PURGEABLE HALOCARBONS

Matrix: Wat.

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 801	1/1
Bromoform	<1	ug/l	EPA 801	1/1
Bromomethane	<1	ug/l	EPA 801	1/1
Carbon Tetrachloride	<1	ug/l	EPA 801	1/1
Chlorobenzene	<1	ug/l	EPA 801	1/1
Chloroethane	<1	ug/l	EPA 801	1/1
2-Chloroethylvinyl Ether	<1	ug/l	EPA 801	1/1
Chloroform	<1	ug/l	EPA 801	1/1
Chloromethane	<1	ug/l	EPA 801	1/1
Dibromochloromethane	<1	ug/l	EPA 801	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 801	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 801	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 801	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 801	1/1
1,1-Dichloroethane	<1	ug/l	EPA 801	1/1
1,2-Dichloroethane	<1	ug/l	EPA 801	1/1
1,1-Dichloroethene	<1	ug/l	EPA 801	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 801	1/1
1,2-Dichloropropane	<1	ug/l	EPA 801	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 801	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 801	1/1
Methylene Chloride	<1	ug/l	EPA 801	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 801	1/1
Tetrachloroethene	<1	ug/l	EPA 801	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 801	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 801	1/1
Trichloroethene	<1	ug/l	EPA 801	1/1
Trichlorofluoromethane	<1	ug/l	EPA 801	1/1
Vinyl Chloride	<1	ug/l	EPA 801	1/1

Extraction Date:
NA
Analysis Date:
02/23/95
Analyst: K

NUTRIENT ANALYSES

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Phenols	0.242	mg/l	EPA 420.1	02/24/95	MC	0.010

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Lead	<5.00	ug/l	EPA 239.2	02/23/95	CP	5.00



LAB #: 02158-04

Client ID: MW-4

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	<1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
2-Chloroethylvinyl Ether	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 801	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:

NA

Analysis Date:

02/23/95

Analyst: KT

NUTRIENT ANALYSES

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Phenols	<0.010	mg/l	EPA 420.1	02/24/95	MC	0.010

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Lead	<5.00	ug/l	EPA 239.2	02/23/95	CP	5.00



LAB #: 02158-03

PURGEABLE HALOCARBONS

Client ID: MW-3

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 801	1/1
Bromoform	<1	ug/l	EPA 801	1/1
Bromomethane	<1	ug/l	EPA 801	1/1
Carbon Tetrachloride	<1	ug/l	EPA 801	1/1
Chlorobenzene	15	ug/l	EPA 801	1/1
Chloroethane	<1	ug/l	EPA 801	1/1
2-Chloroethylvinyl Ether	<1	ug/l	EPA 801	1/1
Chloroform	<1	ug/l	EPA 801	1/1
Chloromethane	<1	ug/l	EPA 801	1/1
Dibromochloromethane	<1	ug/l	EPA 801	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 801	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 801	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 801	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 801	1/1
1,1-Dichloroethane	<1	ug/l	EPA 801	1/1
1,2-Dichloroethane	<1	ug/l	EPA 801	1/1
1,1-Dichloroethene	<1	ug/l	EPA 801	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 801	1/1
1,2-Dichloropropane	<1	ug/l	EPA 801	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 801	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 801	1/1
Methylene Chloride	<1	ug/l	EPA 801	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 801	1/1
Tetrachloroethene	<1	ug/l	EPA 801	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 801	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 801	1/1
Trichloroethene	<1	ug/l	EPA 801	1/1
Trichlorofluoromethane	<1	ug/l	EPA 801	1/1
Vinyl Chloride	<1	ug/l	EPA 801	1/1

Extraction Date:

NA

Analysis Date:

02/23/95

Analyst: KT

NUTRIENT ANALYSES

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Phenols	<0.010	mg/l	EPA 420.1	02/24/95	MC	0.010

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Lead	<5.00	ug/l	EPA 239.2	02/23/95	CP	5.00



LAB #: 02158-02
Client ID: MW-2

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	11	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
2-Chloroethylvinyl Ether	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:

NA

Analysis Date:

02/23/95

Analyst: KT

NUTRIENT ANALYSES

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Phenols	0.171	mg/l	EPA 420.1	02/24/95	MC	0.010

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Lead	<5.00	ug/l	EPA 239.2	02/23/95	CP	5.00



LAB #: 02158-01
Client ID: MW-1

PURGEABLE HALOCARBONS

Matrix: Water

Analyte	Results	Units	Method	MDL/DF
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	2	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
2-Chloroethylvinyl Ether	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:

NA

Analysis Date:

02/23/95

Analyst: KT

NUTRIENT ANALYSES

Analyte	Results	Units	Method	Analysis Date	Analyst	MDL
Total Phenols	0.102	mg/l	EPA 420.1	02/24/95	MC	0.010

Analyte	Results	Units	Method	Analysis Date	Analyst	MDL
Total Lead	<5.00	ug/l	EPA 239.2	02/23/95	CP	5.00





Professional Service Industries, Inc.

ANALYTICAL REPORT

TESTED FOR: PSI, Inc.
Environmental Department
4400 - 140th Avenue North
Suite 100
Clearwater, Florida 34622

PROJECT: Braden River Park
378-5101A

SAMPLE DATE: February 21, 1995

ATTENTION: Jim Watkins

DATE: February 24, 1995

OUR REPORT NUMBER: 385-5P025-0018

Attached, please find our analytical report for samples described on the Chain-of-Custody (C-O-C). Please note that our laboratory has assigned unique sample numbers to each of your samples as shown on the attached C-O-C. Please reference our report number and direct any questions on this report to the individual designated below or to one of our Customer Service Representatives.

Reviewed By,


Anthony R. Febbrao, Department Manager

Respectfully submitted,
Professional Service Industries, Inc.

HRS #84218
HRS #E84388

cc: Kathleen Theisen

/dlr

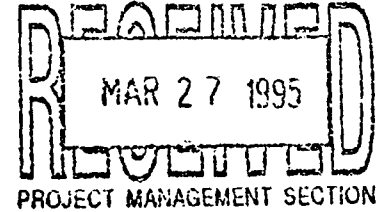


Professional Service Industries, Inc.

March 21, 1995

Manatee County Government
Public Services Department
Project Management
P.O. Box 25010
Bradenton, Florida 34206
Attention: Mr. Tom Yarger

MANATEE CO. PUBLIC SVRS. DEPT.



RE: Groundwater Monitoring Plan
Braden River Park
PSI Project No. 378-5I014

Dear Mr. Yarger:

Since our initial sampling event of the permanent wells on February 21, 1995, there has been much discussion concerning the wells and the analytical results. This letter summarizes the conversations which have occurred over the last few weeks.

The permanent groundwater monitoring wells are in place and have been conditionally approved by the Manatee County Environmental Action Committee (EAC, Mr. Rob Brown). The discussion concerning the replacement of MW-2 has been momentarily shelved, based mostly on the fact that groundwater has not been impacted near MW-2 or MW-5. Mr. Brown as asked for a contingency plan for an additional well between the ball field and the proposed pond in the event that monitor well MW-5 indicates contaminates.

There was a concern raised by EAC about the maximum contaminate level change by the State of Florida in the middle of last year. The State of Florida, in September of 1994, issued a new set of maximum allowable contaminate level (MCL) concentrations. The document entitled "Drinking Water Standards, Monitoring and Reporting" increased the allowable concentrations of Chlorobenzene from the previously reported 10 microgram/liter (ug/l) to 100 ug/l.

A letter was written by PSI to Manatee County Public Works, dated February 29, 1995, concerning the elevated phenolic compounds and the potential for the levels to be naturally occurring. Mr. Brown requested that PSI is to add testing by EPA Method 608 which will define the concentration levels of a group of Chlorinated Phenols. This sampling was negotiated to ad only one event rather than adding this method to the entire groundwater monitoring plan. This one time sampling event will add an additional \$900.00 to the project cost.

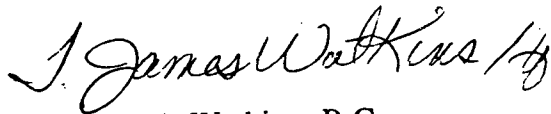
Manatee County Government
March 23, 1995
Page 2 of 2

Additionally, the concern over the quality of the surface water on the proposed pond was discussed. Again, Mr. Brown of EAC recommended that the "run in" to the pond from the sump located in the northeast portion of the site be tested for the same parameters as the groundwater monitoring wells. This will add additional sampling to the Groundwater Monitoring Plan which will increase the project costs by approximately \$1,600.00.

PSI appreciates Manatee County's response regarding the acceptance of the proposed increase in project scope and cost as discussed. These issues involve the addition of one surface water sampling point to the Groundwater Monitoring Plan and the addition of one sampling event (7 samples) for chlorinated phenolic compounds. A revised Work Assignment and budget has been prepared and is enclosed.

Very truly yours,

PSI



T. James M. Watkins, P.G.
Senior Project Manager

JMW/tkf

Enclosure: Revised Work Assignment #174



1168

Tom Yarger

MEMORANDUM

DATE: December 5, 1994

TO: Danny Hopkins, Director
Parks and Recreation Department

THROUGH: Karen M. Collins, Director *KM*

FROM: Douglas D. Means, Natural Resources Administrator *DDM*
Robert C. Brown, Water Quality Administrator *RCB*

SUBJECT: **EAC Staff Review:**
"Ground Water Testing Report Braden River Park Project"
prepared by Professional Service Industries, Inc. (PSI) for Manatee County

The referenced report was received by EAC staff at a meeting in the offices of the Planning, Permitting & Inspections Department (PP&I) on November 29, 1994. Those in attendance included:

Joaquin Servia, PP&I
Bob Schmitt, PP&I
Dan Ramsey, Parks & Recreation
Tom Yarger, Public Services
Doug Means, EAC
Greg Blanchard, EAC

Expressing the urgency of project time frames, your staff asked for our approval to proceed with construction in accordance with approved plans. EAC staff indicated they were still concerned about potential on-site contamination and agreed to review the report and respond as soon as possible.

Background

In correspondence sent to the Board of County Commissioners from this office on August 4, 1994, staff concerns for potential environmental hazards were delineated (attached). Additionally, the County approved plans on August 5, 1994 for limited work with specific stipulations requiring an assessment concurrent with Phase I construction (attached).

Discussion

Pursuant to conditions for site plan approval, PSI performed a limited assessment using Ground Penetrating Radar (GPR) and by constructing monitoring wells to identify any potential ground water concerns.

GPR:

Twenty-four transects were scanned across the site on August 11 and 23, 1994. The GPR survey identified nine (9) major metallic anomalies. The objects were photographed, classified, and returned to the landfill.

According to PSI's report:

The landfill material is estimated to vary between one (1) to 15 feet in thickness ... This landfill appears to have industrial, commercial and household refuse undifferentiated across the site. The only segregation of trash by area appears to be the construction related debris concentrated in the north center of the site.

Monitoring Well Construction/Monitoring:

A total of nine (9) areas were chosen to adequately identify any potential concerns. The sites chosen were representative of the landfill area and placed to investigate the groundwater from each area as defined by the GPR report. The groundwater monitoring wells, installed on October 10-12, 1994, were sampled by PSI environmental technicians on October 13-14, 1994. The groundwater samples were submitted to the PSI Analytical Laboratory for analysis by EPA Methods 624 and 625, phenol, EPA Priority Metals, PCBs and cyanide.

Groundwater levels were measured across the site on October 12, 1994. Borings generally located the water table between three (3) and nine (9) feet below land surface.

The analytical results of the groundwater samples taken from temporary monitoring wells on the subject site indicate elevated levels of methylene chloride, chlorobenzene, and phenol. Unfiltered groundwater samples were analyzed for the 13 metals identified by the EPA as priority pollutant metals. Five (5) of the priority metals were found in elevated concentrations; these include beryllium, arsenic, chromium, lead and nickel. These constituents appear to be consistent with the nature of old landfills.

Chlorobenzene is used as a solvent in pesticides and other industrial uses.

Methylene chloride is an aromatic hydrocarbon typically used as a solvent, degreaser, and paint remover. **Elevated levels detected on-site are as much as 10 times the FDEP reporting limits for drinking water standards.**

During a meeting between PSI and staff from Public Services, EAC, Parks & Recreation and PP&I, it was agreed that **confirmation testing was needed. On November 9th tests using EPA 601 methods were conducted. No methylene chloride was detected. A third sequence of sampling was authorized and conducted on November 14, 1994 with similar results.**

The confirmation tests failed to detect contamination revealed in the initial testing. PSI's report recommends:

As the source of contaminates for the original analysis remains undiscovered, the results cannot be discounted, however, the contaminate concentration has not been duplicated. PSI recommends the placement of three (3) additional permanent monitoring wells of similar construction as the present on-site groundwater wells. The placement of these wells should be in an upgradient position of the proposed pond and the temporary wells. MW-3, MW-7, and MW-9, should be converted to permanent wells. This upgrade should include protective locking well covers and a 2' x 2' concrete pad. **A periodic monitoring program is recommended to include a monthly sampling event of the six (6) wells and analysis for methylene chloride, phenols and lead concentrations by EPA Methods 601, 239.1 and 402.1 to address the concerns raised by the October 13 and 14, 1994 sampling events.** It is suggested that based on the metals detected, the samples be filtered prior to analysis to confirm that presently detected elevated levels are due to turbid groundwater conditions (within the suspended soil matrix rather than dissolved ionic concentrations). After three (3) consecutive months, quarterly sampling for one (1) year should follow. If any sampling event indicates elevated levels of the target compounds, immediate confirmation samples are recommended. The results of the monitoring program should be reviewed with Manatee County EAC upon any elevated compound detections, and at the end of one (1) year to decide the validity of continued monitoring.

During any excavation activities on-site, PSI suggests that the breathing zone air be monitored with an organic vapor analyzer (OVA) and explosimeter for the safety of the work crews. Should the non-methanous organic vapors exceed 50 ppm or the explosimeter indicate a danger range is imminent, the site work should stop until the natural air currents (breeze) dilute the excessive vapor concentrations.

Staff Recommendations

EAC staff concurs with the recommendations for continued monitoring and workers safety during construction; however, we reiterate our concerns about the utilization of potentially contaminated soil:

Monitoring is needed to determine if the initially observed contamination resurfaces during land disturbing activities (i.e. pipe laying and construction of stormwater treatment systems) which could result in human health risks through exposure during and after completion of the project. Workers should be educated regarding detection, avoidance and responses to hazardous conditions.

EAC staff's final recommendation would be to limit the use of excavated material from the property as fill for construction of recreational areas. As evident from the elevated metals concentration detected in the shallow wells and through the GPR findings, it could be assumed that the soils excavated also contain elevated metals and possible organics contamination. The use of this material as fill could possibly increase the risk of human exposure during and after completion of the project.

If you have any questions or need additional information, please give us a call.

attachments

cc: Environmental Action Commission
County Administrator
Director, Public Services Department
Director, Planning, Permitting & Inspections Department



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Professional Service Industries, Inc.
Environmental & Analytical Division

October 21, 1994

Public Works Department, Manatee County
Project Management, Solid Waste
4422-A West 66th Street
Bradenton, Florida 34240-0000

DRAFT

Re: Preliminary Test Results
Groundwater Testing
Braden River Park Project
51st Street East
Bradenton, Manatee County, Florida
PSI Project No. 378-41097

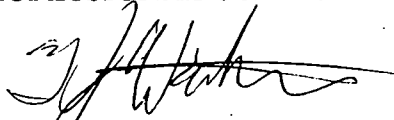
Dear Mr. Yarger:

Please accept the attached report for the above-referenced project. This report is a preliminary compilation of data collected under the authorization of Manatee County by the Purchase Order No. 102107. Recommendations for future actions are included in this report. PSI would welcome the opportunity to answer any questions concerning this project.

PSI is pleased to have been selected to perform this service for Manatee County Park and Recreation Department and hopes to continue to fill your environmental needs. Please feel free to contact the undersigned at your convenience.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.


T. James M. Watkins, P.G.
Senior Project Manager


Adel M. Blassy
Manager, Environmental Services

TJMW/AMB:tms

**GROUNDWATER TESTING
BRADEN RIVER PARK PROJECT
51ST STREET EAST
BRADENTON, MANATEE COUNTY, FLORIDA**

**PREPARED FOR
PUBLIC WORKS DEPARTMENT, MANATEE COUNTY
PROJECT MANAGEMENT/SOLID WASTE
4422-A WEST 66TH STREET
BRADENTON, FLORIDA 34240-0000**

**PREPARED BY
PROFESSIONAL SERVICE INDUSTRIES, INC.**

OCTOBER 21, 1994

PSI NUMBER: 378-41097

INTRODUCTION

DRAFT

General

This report summarizes the field activities of Professional Service Industries, Inc. (PSI) for the Braden River Park project concerning groundwater concentration investigations. A concurrent report of the methane concentration testing is also being prepared. Results of the groundwater testing and conclusions are included with our recommendations. The project site is located south of Gap Creek, west of the Braden River and north of State Road 70 (Figure 1). Access to the site is from 51st Street East, which extends into the site approximately 1/4 of the length from the western edge. The site includes portions of a closed landfill. Its proposed future use includes a sports playing field including soccer and baseball fields. Previously, PSI delineated portions of the landfill extents with a Ground Penetrating Radar (GPR) study. The results of this investigation were forwarded in a letter report to Manatee County representatives on September 6, 1994.

Purpose

The purpose of this exploration was to test for leachate contamination from the landfill. The primary objective is to test the groundwater in the surficial aquifer to identify the areas of potential concern. The second objective is to characterize the landfill for content type. PSI recommended temporary groundwater monitoring well installation for these purposes. PSI proposed the installation and monitoring of nine (9) monitoring wells into the unconfined aquifer.

Scope of Services

The recommended scope of work was authorized by Manatee County Parks and Recreation Department with Purchase Order No. 102107. This purchase order was received by PSI on October 6, 1994. A Dietrich 120 drill rig, crew and environmental professionals were mobilized to the site on October 10, 1994.

Regional Setting

The surficial deposits of Manatee County are predominately Tertiary age and range from unconsolidated sands to clays. Four (4) lithologic units are recognized in the region and include clayey sand, sandy clay, fine sand and silt, and shell/clay.

The study area lies within the physiographic province known as the Gulf Coast Lowlands. This province occupies the area between Bradenton and a scarp that rises sharply above the 40 foot elevation approximately six (6) miles to the east of the project site. The scarp marks the boundary of the Gulf Coast Lowlands and the Desoto Plain. The Gulf Coast Lowlands generally are gently sloping plains with variations of surface lithologies. The medium to fine

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sands and silts became increasingly thicker above the 25 foot elevation contour, while fine sands, shell and clay lithologies predominate below the 25 foot elevation contour.

The topography of the site generally slopes from the southwest to the northeast into the Braden River. This area has been classified by the DEP as the drainage area between the Myakka and Alafia basins (USGS, MS-28). The reported mean annual rainfall for this area ranges between 52 and 56 inches per year (USGS, MS-40). Regional annual rainfall runoff is estimated to be 10 inches per year (USGS, MS-22). These regional figures indicate between 42 and 46 inches of rainfall per year can be expected to enter the unconfined aquifer by percolation through the surficial soils. This precipitation has the potential to leach contaminants, if present, from uncapped landfills such as the one on the project site.

A review of published geologic studies indicate two aquifers exist in the region, the confining layer can be expected between 30 and 60 feet below land surface. The unconfined or surficial aquifer is contained in the Pleistocene Terrace deposits while the Floridan Aquifer is contained in the Miocene and Eocene limestones. The Hawthorn formation is reported to be approximately 200 feet thick in this area, and acts as the confining layer between the two aquifers (USGS, MS-56). This site is located in an area of known very low recharge for the Floridan aquifer (USGS, MS-98).

FIELD ACTIVITIES

Monitor Well Construction

The monitor wells were installed with a Dietrich 120 drill rig using four and one-quarter (4.25) inch inside diameter hollow-stem augers. A total of nine (9) areas were chosen to delineate any potential concerns (Figure 2). These sites chosen were representative of the landfill area and placed to investigate the groundwater from each area as defined by the GPR report.

Monitor Well Sampling

The temporary groundwater monitor wells installed on October 10-12, 1994 were sampled by PSI environmental technicians on October 13-14, 1994. The groundwater samples were submitted to the PSI Analytical Laboratory for analysis by EPA Methods 624 and 625, phenol, priority metals, PCBs and cyanide.

Sampling Procedure

Prior to the collection of any groundwater samples, a minimum of three (3) well volumes of water were removed from each monitor well.

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Groundwater samples were then withdrawn utilizing a dedicated disposable Teflon bailer. All sampling tasks were conducted in accordance with the procedures and methodology detailed in the PSI Generic Quality Assurance Plan approved by the State of Florida Department of Environmental Protection. All of the samples collected were stored at approximately 4°C in airtight vials, and transported to PSI Laboratories in St. Petersburg, Florida for analysis by EPA Methods 624, 625, for organic compounds. The samples were also analyzed for priority metals, PCBs, cyanides and phenols.

Groundwater

The groundwater level was measured across the site on October 12, 1994. A rough estimate of the relative elevation was made and used to determine groundwater flow direction (Figure 3). This data describes unconfined water table conditions typical to relatively flat clastic soils varying in response to seasonal and topographical condition. Borings generally located the water table between three (3) and nine (9) feet BLS. It should be recognized that groundwater levels will fluctuate with variations in precipitation, tidal and seasonal conditions.

SITE CONDITIONS

Soils

The purpose of this investigation is to determine the possibility of leachate contaminants generated from the landfill materials entering the unconfined aquifer. Nine (9) monitor wells were installed into the landfill material in representative areas. Each well was constructed to test the water table surface and was therefore slightly different in construction based on trash thickness and water table elevation. The site generally slopes to the northeast and is covered with one (1) to two (2) feet of gray silty sand. The land surface has surface features typical of landfill type subsidence where the landfill cells have created an undulating topography. The area west of 51st Street generally is covered with a loose yellow fine sand. The northeastern portion of the site contains significant quantities of native organic detritus normally associated with near delteric or riverine deposits. The landfill material is generally underlain by a dark gray to black silty sand with locally abundant organic detritus. Where encountered, this organic rich strata contained a typical natural methanous odor.

Landfill

The landfill material was estimated to vary between one (1) and 15 feet in thickness (Figure 5). One (1) piece of household garbage discovered was dated 1954; the garbage on the whole could vary in dates from the 1940's through recent. A buried pile of steel packing straps was uncovered in the GPR report area designated #2. A hot water heater, most likely from an industrial plant, was uncovered in the GPR report area #3. While drilling the methane vent well, R-2, a significant number of Tropicana orange juice containers were

uncovered. This landfill appears to have industrial, commercial and household refuse undifferentiated across the site. The only segregation of trash by area appears to be the construction related debris concentrated in the north center of the site.

Groundwater

The unconfined aquifer was measured on October 12, 1994 using a transit and rod. The slab of the concrete building on-site was used as a bench mark of 13 feet. The unconfined aquifer was found to flow to the northeast toward the Braden River (Figure 3), with a gradient of approximately one (1) foot per 100 feet.

LABORATORY RESULTS

Groundwater Laboratory Results

A groundwater sample was obtained from each of the nine (9) temporary monitor wells on-site. Samples were collected according to the previously described sampling procedures. The results of the limited groundwater sampling have detected elevated concentrations of six (6) metals and four (4) organic compounds in the nine (9) wells.

Monitor well #1 contained detectable levels of arsenic and cadmium, no organic compounds were found. Monitor well #2 contained elevated levels of beryllium, arsenic, chromium, nickel and methylene chloride. Detectable levels of mercury and zinc were noted. Monitor well #3 contained elevated levels of methylene chloride and detectable levels of arsenic and zinc. Monitor well #4 contained elevated levels of methylene chloride and arsenic, detectable quantities of cadmium and zinc were also noted. Monitor well #5 contained elevated quantities of methylene chloride and detectable quantities of arsenic and zinc. Monitor well #6 contained elevated levels of phenol and lead, and detectable quantities of di-n-butylphthalate, cadmium and zinc. MW-7 contained elevated levels of chlorobenzene and lead while detectable quantities of cadmium and zinc were noted. MW-8 contained elevated quantities of lead and detectable quantities of arsenic, cadmium, nickel and zinc were noted. No organic compounds were detected in monitor well #8. Monitor well #9 contained no elevated levels of the compounds tested, detectable quantities of arsenic and cadmium were detected. The detailed numbers are tabulated (Table No. 1 and Table No. 2) and the preliminary analytical report is appended to this letter.

TABLE NO. 1
METAL ANALYSIS SUMMARY
REPORTED IN MG/L

Description	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MCL
Antimony	*	*	*	*	*	*	*	*	*	0.006
Beryllium	*	0.11	*	*	*	*	*	*	*	0.004
Thallium	*	*	*	*	*	*	*	*	*	0.002
Arsenic	0.006	0.078	0.011	0.054	0.01	*	*	0.044	0.01	0.05
Barium	*	*	*	*	*	*	*	*	*	2
Cadmium	0.00101	*	*	0.00151	*	0.0008	0.0008	0.0015	0.0008	0.004
Chromium	*	0.218	*	*	*	*	*	*	*	0.1
Lead	*	*	*	*	*	0.102	0.072	0.368	*	0.015
Mercury	*	0.001	*	*	*	*	*	*	*	0.002
Nickel	*	0.111	*	*	*	*	*	0.082	*	0.1
Selenium	*	*	*	*	*	*	*	*	*	0.02
Silver	*	*	*	*	*	*	*	*	*	0.1
Zinc	*	1.96	0.164	0.614	0.042	0.02	0.154	1.06	*	5.0

* Below Reported Level

0.111 Results in "Bold" are in excess of Drinking Water Standards (FAC 62-550.310)

MCL Minimum Contaminate Level

DRAFT

TABLE NO. 2
ORGANIC ANALYSIS SUMMARY
REPORTED IN UG/L

Compound Name	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MCL
Methylene Chloride		62	24	96	96	*	*			5
Phenol	*	*	*	*	*	68	*	*	*	20
Di-n-butylphthalate	*	*	*	*	*	130	*	*	*	700
Chlorobenzene	*	*	*	*	*	*	13	*	*	10

68 Results in "Bold" are in excess of Drinking Water Standards

* Below Reporting Level

MCL Minimum Reporting Limit (Florida Department of Environmental Regulation
Groundwater Guidance Concentrations 1989)

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CONCLUSIONS AND RECOMMENDATIONS

Conclusions

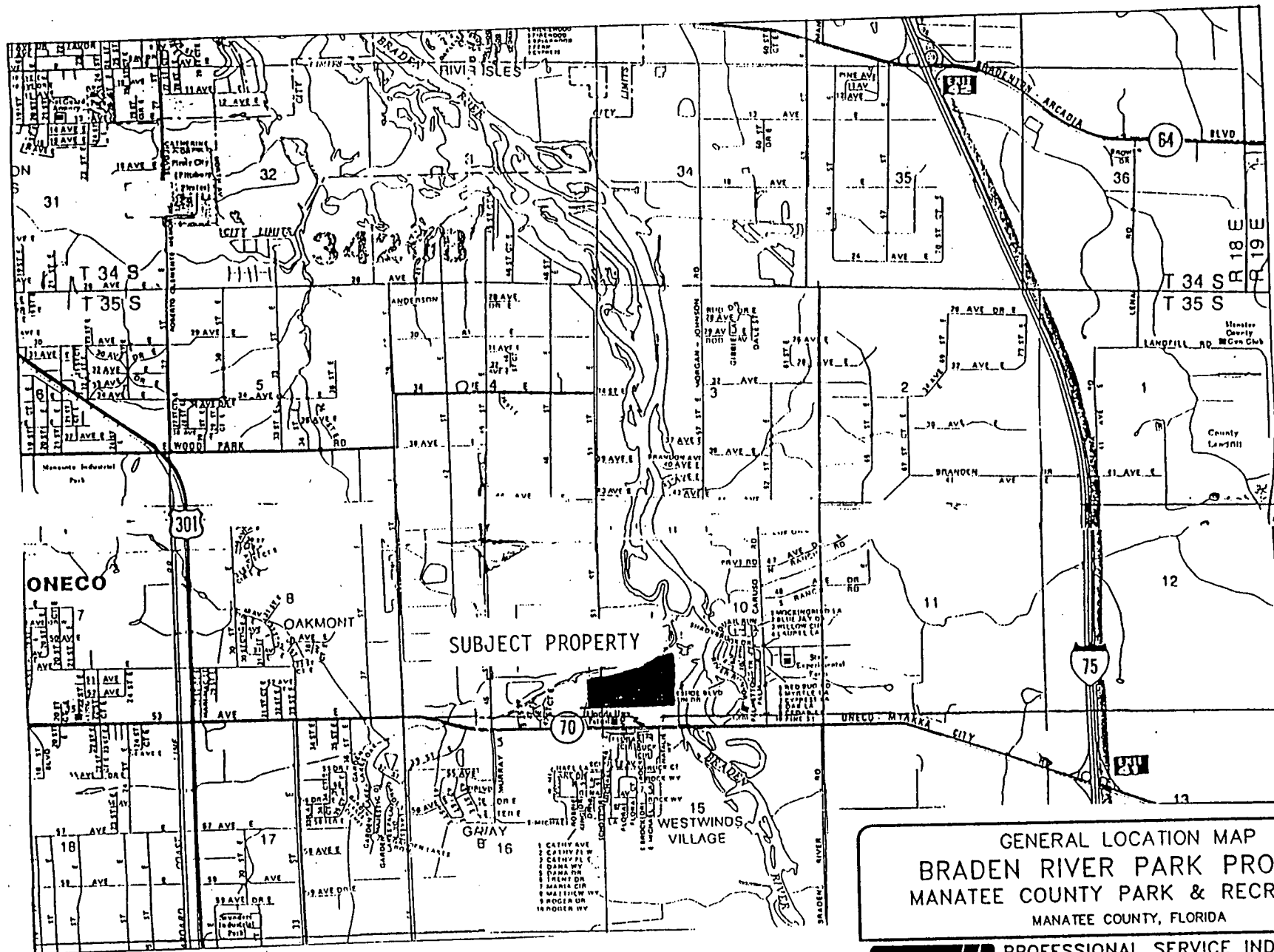
The analytical results of the groundwater samples taken from temporary monitor wells on the subject site indicate elevated levels of methylene chloride, chlorobenzene and phenol. These results are contained in wells on the north and west portions of the landfill.

Recommendations

DRAFT

PSI recommends that these results be released to the FDEP for a ruling as to actions required. Methylene chloride is an aromatic hydrocarbon that can be removed from groundwater through conventional technological use of air sparging. As no indication of the elevated contaminate levels extending off-site has been defined, the DEP may not require immediate action.

PSI further recommends a systematic monitoring of the groundwater be performed to evaluate any future potential concerns. This can be accomplished by the installation of a permanent monitor well array and periodic groundwater sampling.

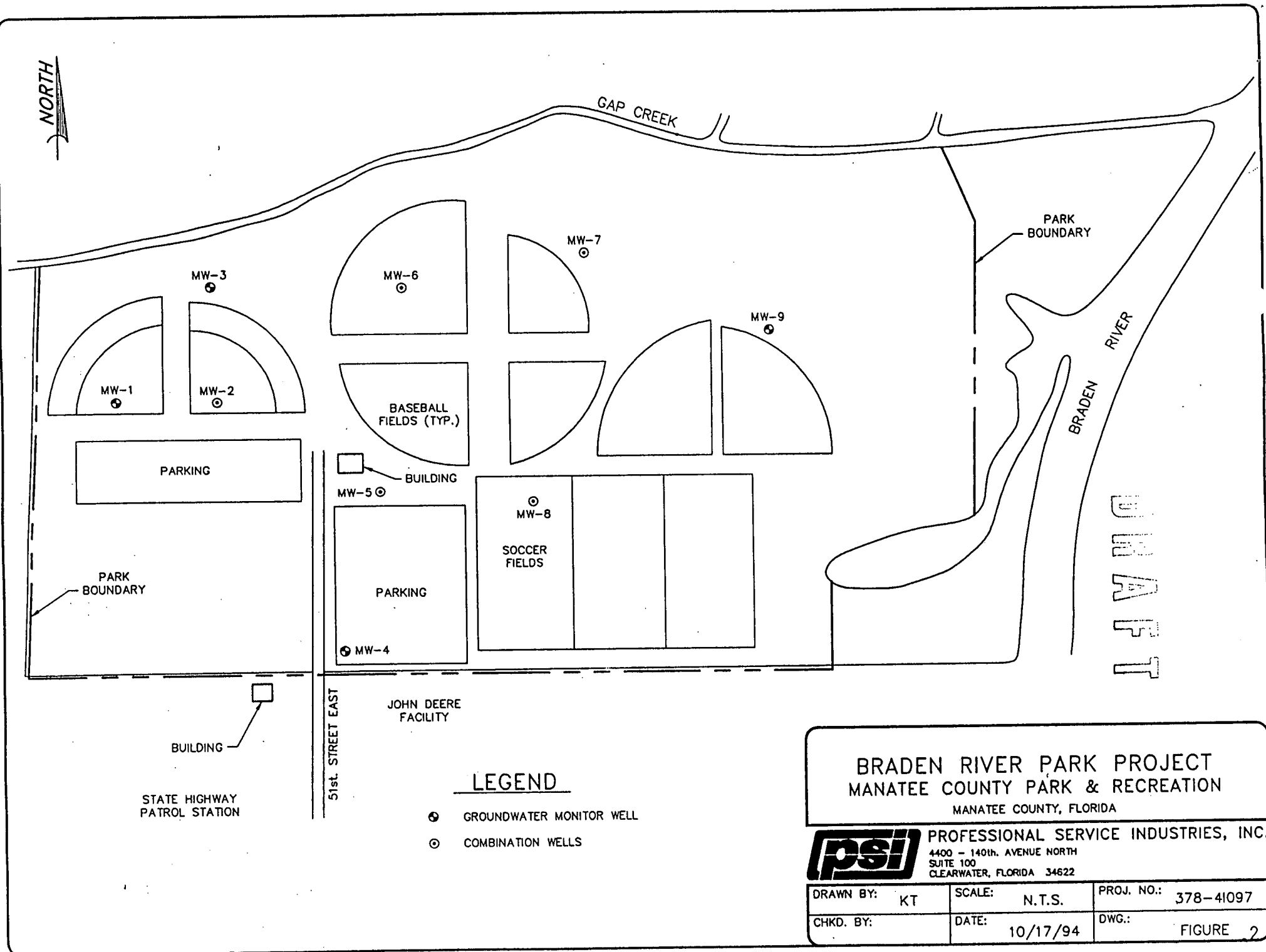


GENERAL LOCATION MAP
 BRADEN RIVER PARK PROJECT
 MANATEE COUNTY PARK & RECREATION
 MANATEE COUNTY, FLORIDA



PROFESSIONAL SERVICE INDUSTRIES, INC.
 4400 - 140th. AVENUE NORTH
 SUITE 100
 CLEARWATER, FLORIDA 34622

DRAWN BY:	KT	SCALE:	PROJ. NO.: 378-41058
CHKD. BY:		DATE: 10/17/94	DWG.: FIGURE 1



LEGEND

- ⊙ GROUNDWATER MONITOR WELL
- ⊗ COMBINATION WELLS

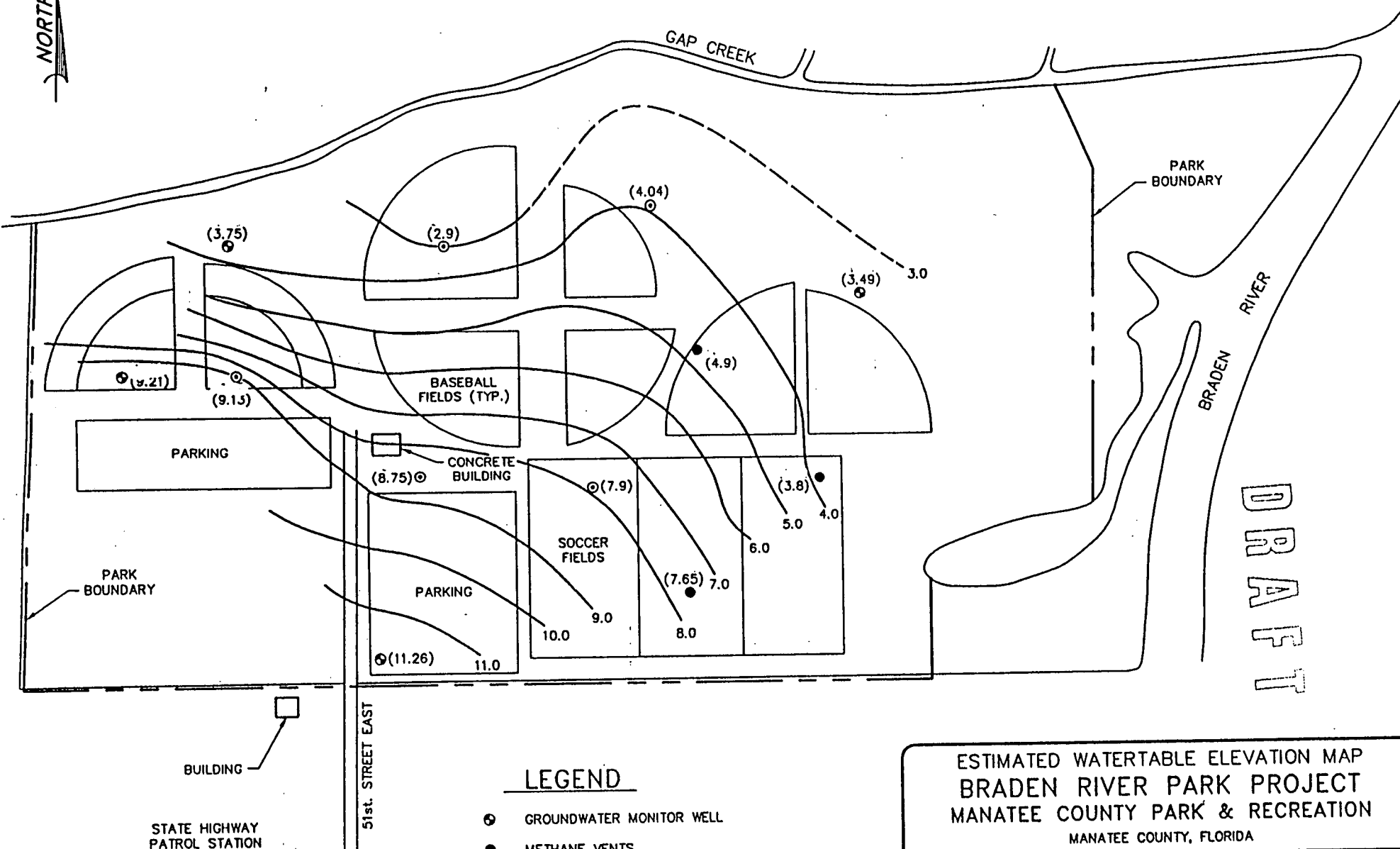
**BRADEN RIVER PARK PROJECT
MANATEE COUNTY PARK & RECREATION
MANATEE COUNTY, FLORIDA**



PROFESSIONAL SERVICE INDUSTRIES, INC.

4400 - 140th. AVENUE NORTH
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CLEARWATER, FLORIDA 34622

DRAWN BY: KT	SCALE: N.T.S.	PROJ. NO.: 378-41097
CHKD. BY:	DATE: 10/17/94	DWG.: FIGURE 2



STATE HIGHWAY
PATROL STATION

LEGEND

- ⊙ GROUNDWATER MONITOR WELL
- METHANE VENTS
- ⊕ COMBINATION WELLS
- (11.26) MEASURED GROUNDWATER ELEVATION
- GROUNDWATER CONTOUR IN FEET
CONTOUR INTERVAL: 0.10 FT.

ESTIMATED WATERTABLE ELEVATION MAP
BRADEN RIVER PARK PROJECT
MANATEE COUNTY PARK & RECREATION
MANATEE COUNTY, FLORIDA



PROFESSIONAL SERVICE INDUSTRIES, INC.

4400 - 140th. AVENUE NORTH
SUITE 100
CLEARWATER, FLORIDA 34622

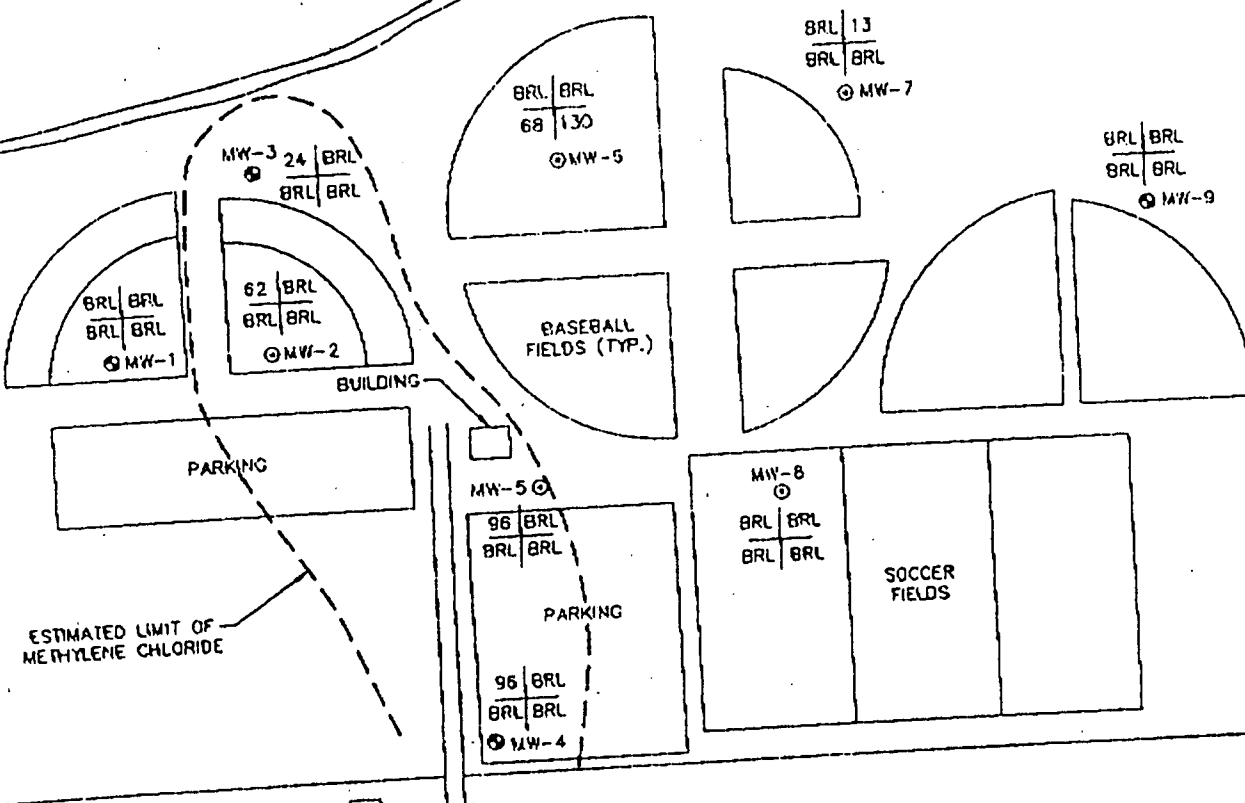
DRAWN BY:	KT	SCALE:	N.T.S.	PROJ. NO.:	378-
CHKD. BY:		DATE:	10/12/94	DWG.:	FIGURE 3

NORTH

GAP CREEK

BRADEN RIVER

DRAFT



LEGEND

- ⊙ GROUNDWATER MONITOR WELL
- ⊙ COMBINATION WELLS
- BRL BELOW READING LEVEL

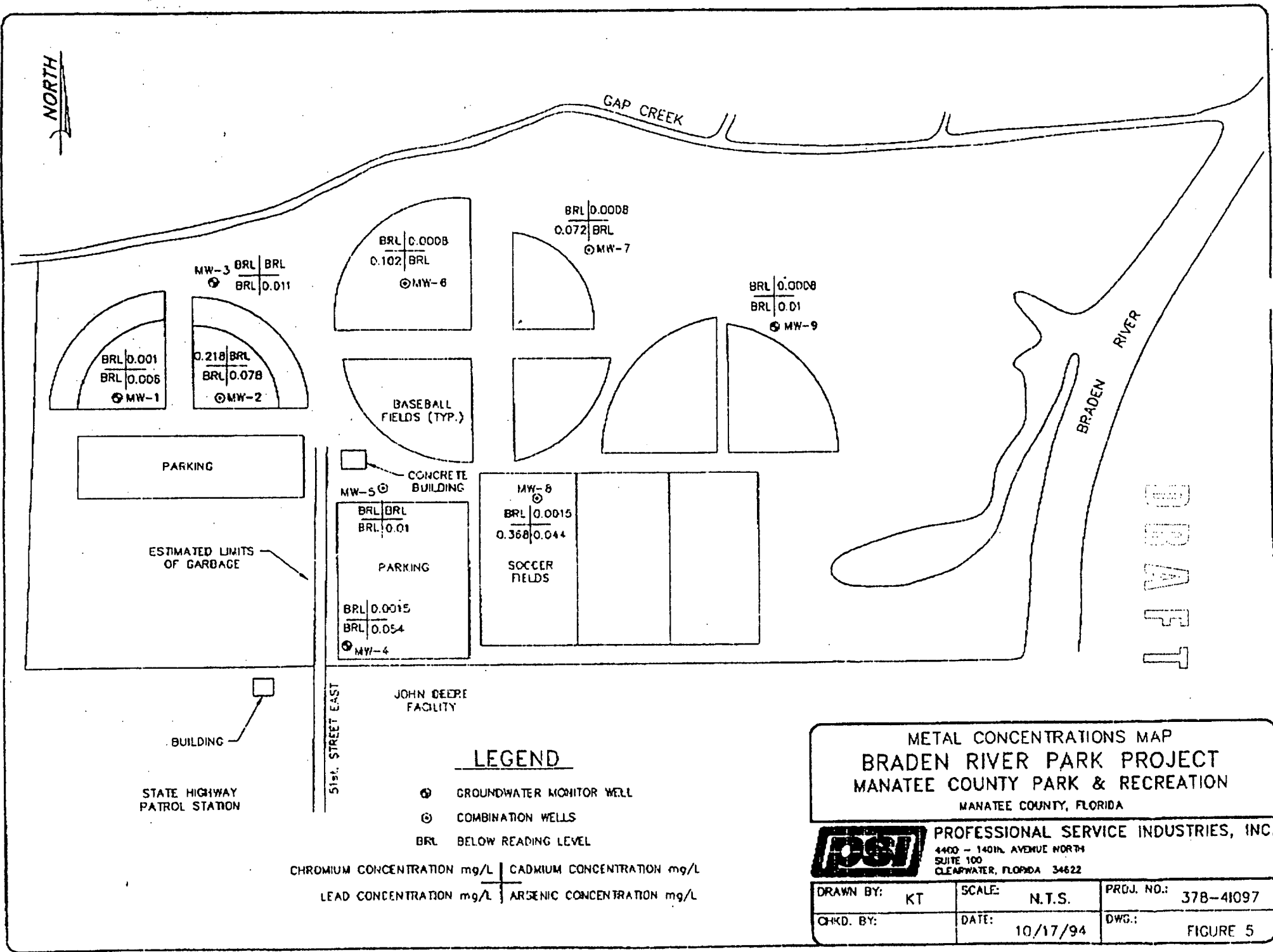
METHYLENE CHLORIDE | CHLOROBENZENE
PHENOLS | α-N-BUTYLPHthalATE

ORGANIC CONCENTRATION SUMMARY BRADEN RIVER PARK PROJECT MANATEE COUNTY PARK & RECREATION MANATEE COUNTY, FLORIDA



PROFESSIONAL SERVICE INDUSTRIES, INC.
4400 - 140TH AVENUE NORTH
SUITE 100
CLEARWATER, FLORIDA 34622

DRAWN BY: KT	SCALE: N.T.S.	PROJ. NO.: 378-41097
CHKD. BY:	DATE: 10/17/94	DWG.: FIGURE 4



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CONCLUSIONS AND RECOMMENDATIONS

Conclusions

DRAFT

The analytical results of the groundwater samples taken from temporary monitor wells on the subject site indicate elevated levels of methylene chloride, chlorobenzene and phenol. These results are contained in wells on the north and west portions of the landfill.

Recommendations

PSI recommends that these results be released to the FDEP for a ruling as to actions required. Methylene chloride is an aromatic hydrocarbon that can be removed from groundwater through conventional technological use of air sparging. As no indication of the elevated contaminate levels extending off-site has been defined, the DEP may not require immediate action.

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REPORTED IN MG/L

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Beryllium	*	0.11	*	*	*	*	*	*	*	0.004
Thallium	*	*	*	*	*	*	*	*	*	0.002
Arsenic	0.006	0.078	0.011	0.054	0.01	*	*	0.044	0.01	0.05
Barium	*	*	*	*	*	*	*	*	*	2
Cadmium	0.00101	*	*	0.00151	*	0.0008	0.0008	0.0015	0.0008	0.004
Chromium	*	0.218	*	*	*	*	*	*	*	0.1
Lead	*	*	*	*	*	0.102	0.072	0.368	*	0.015
Mercury	*	0.001	*	*	*	*	*	*	*	0.002
Nickel	*	0.111	*	*	*	*	*	0.082	*	0.1
Selenium	*	*	*	*	*	*	*	*	*	0.02
Silver	*	*	*	*	*	*	*	*	*	0.1
Zinc	*	1.96	0.164	0.614	0.042	0.02	0.154	1.06	*	5.0

* Below Reported Level

0.111 Results in "Bold" are in excess of Drinking Water Standards (FAC 62-550.310)

MCL Minimum Contaminate Level

DRAFT

TABLE NO. 2
ORGANIC ANALYSIS SUMMARY
REPORTED IN UG/L

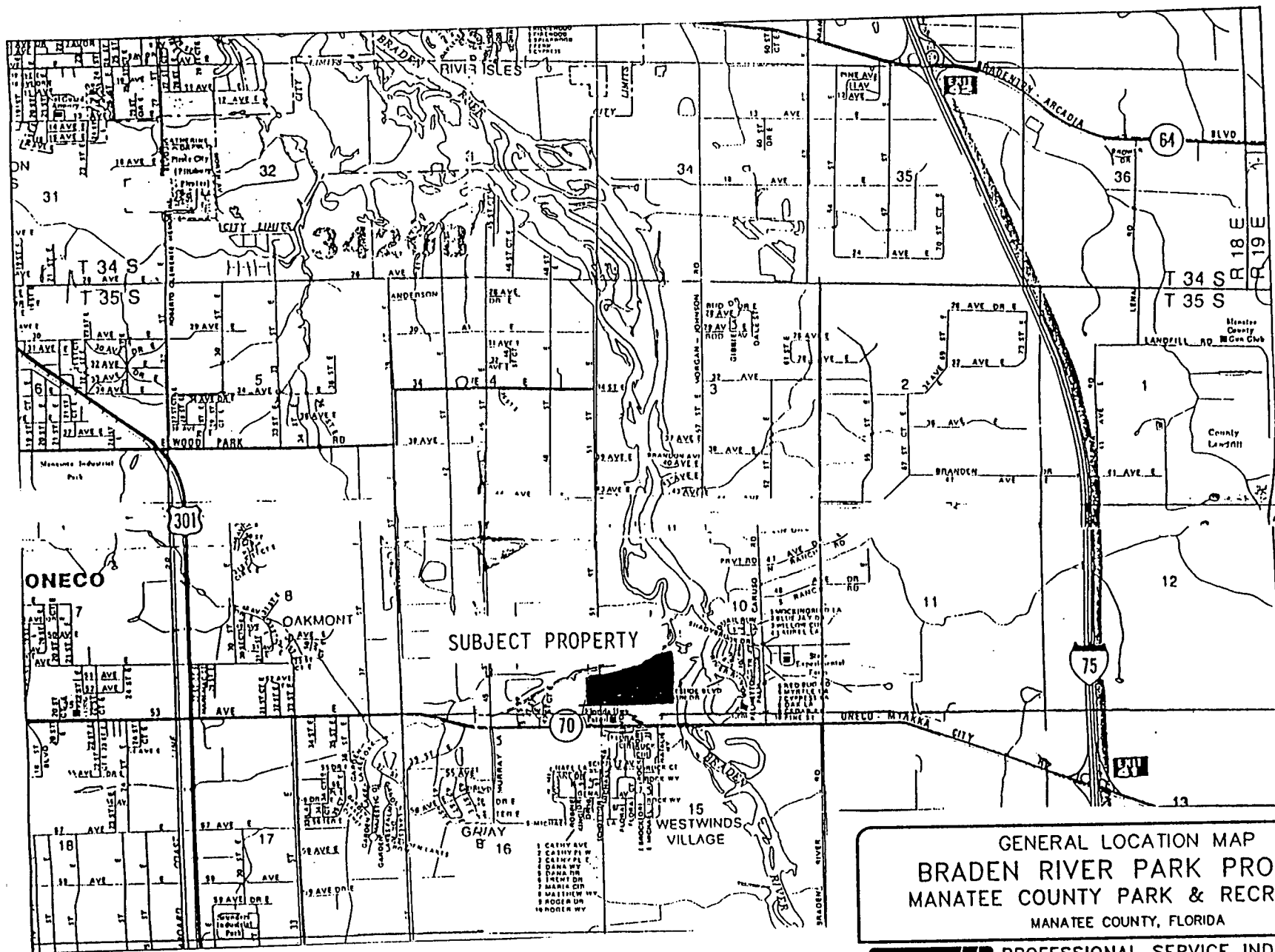
Compound Name	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MCL
Methylene Chloride		62	24	96	96	*	*			5
Phenol	*	*	*	*	*	68	*	*	*	20
Di-n-butylphthalate	*	*	*	*	*	130	*	*	*	700
Chlorobenzene	*	*	*	*	*	*	13	*	*	10

68 Results in "Bold" are in excess of Drinking Water Standards

* Below Reporting Level

MCL Minimum Reporting Limit (Florida Department of Environmental Regulation
Groundwater Guidance Concentrations 1989)

DRAFT

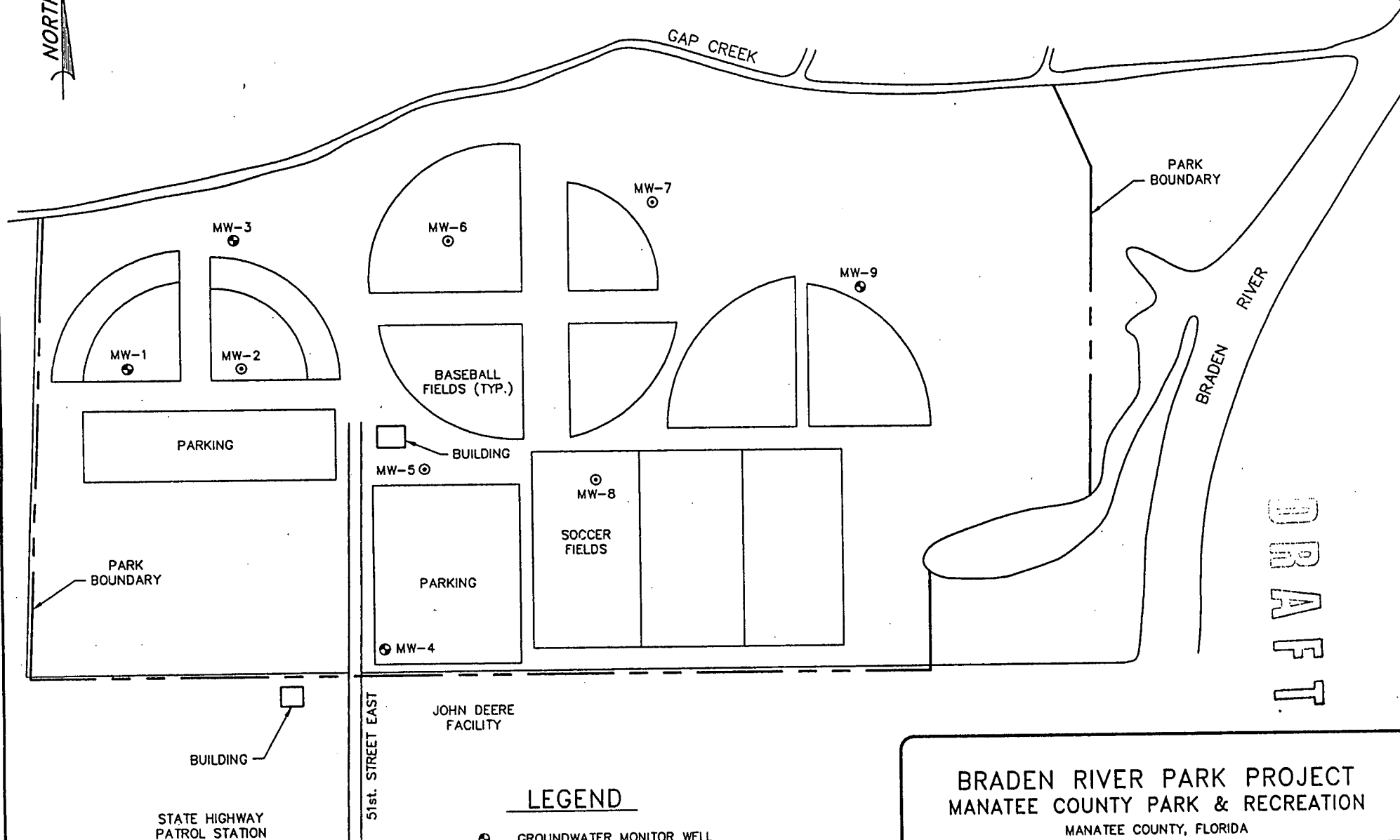


GENERAL LOCATION MAP
 BRADEN RIVER PARK PROJECT
 MANATEE COUNTY PARK & RECREATION
 MANATEE COUNTY, FLORIDA



PROFESSIONAL SERVICE INDUSTRIES, INC.
 4400 - 140th. AVENUE NORTH
 SUITE 100
 CLEARWATER, FLORIDA 34622

DRAWN BY:	KT	SCALE:	PROJ. NO.:
CHKD. BY:		DATE:	378-41058
		10/17/94	FIGURE 1



LEGEND

- ⊙ GROUNDWATER MONITOR WELL
- ⊙ COMBINATION WELLS

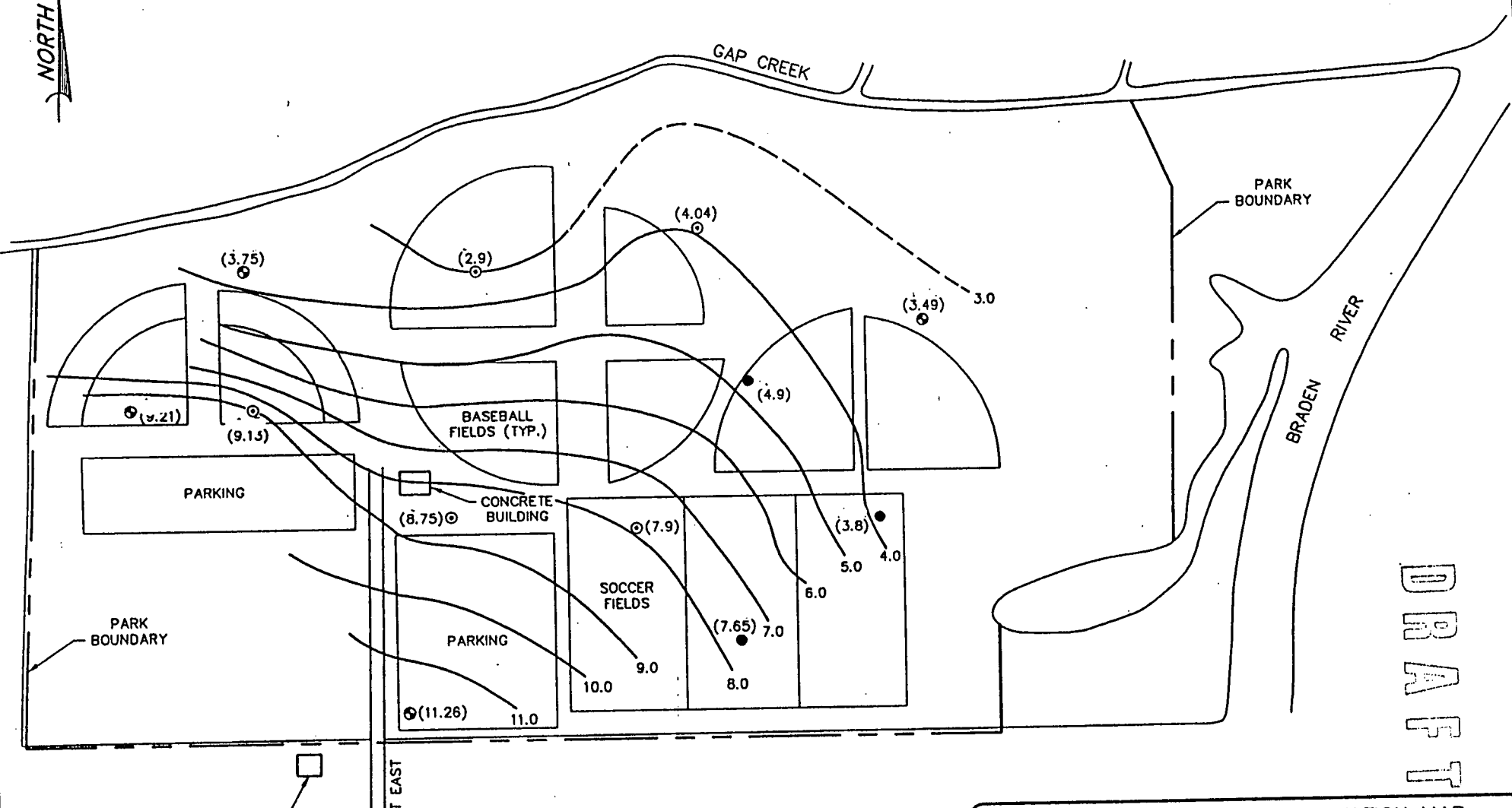
BRADEN RIVER PARK PROJECT MANATEE COUNTY PARK & RECREATION MANATEE COUNTY, FLORIDA



PROFESSIONAL SERVICE INDUSTRIES, INC.
4400 - 140th. AVENUE NORTH
SUITE 100
CLEARWATER, FLORIDA 34622

DRAWN BY: KT	SCALE: N.T.S.	PROJ. NO.: 378-41097
CHKD. BY:	DATE: 10/17/94	DWG.: FIGURE 2

NORTH



DRAFT

LEGEND

- ⊙ GROUNDWATER MONITOR WELL
- METHANE VENTS
- ⊙ COMBINATION WELLS
- ⊙(11.26) MEASURED GROUNDWATER ELEVATION
- GROUNDWATER CONTOUR IN FEET
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ESTIMATED WATERTABLE ELEVATION MAP
BRADEN RIVER PARK PROJECT
MANATEE COUNTY PARK & RECREATION
MANATEE COUNTY, FLORIDA



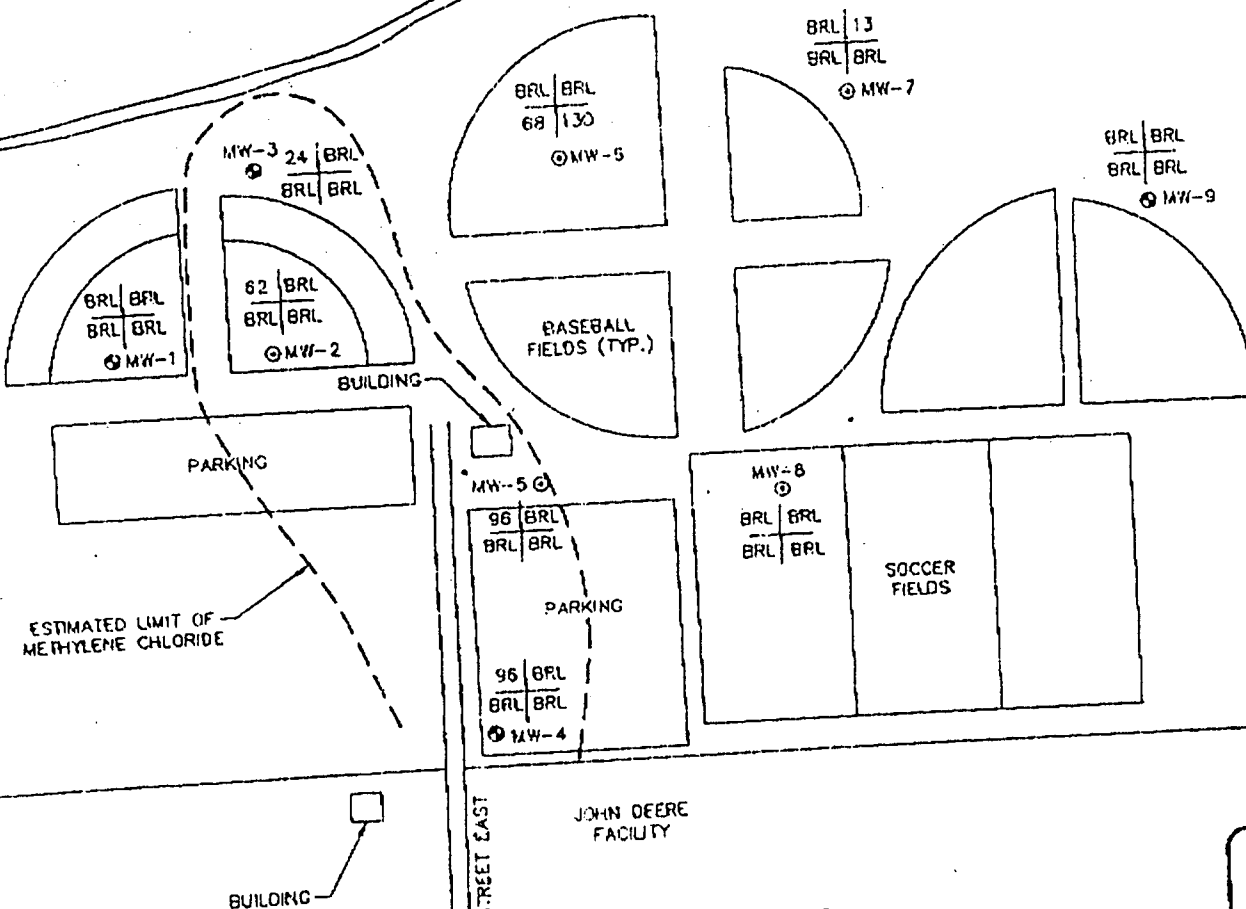
PROFESSIONAL SERVICE INDUSTRIES, INC.
4400 - 140th. AVENUE NORTH
SUITE 100
CLEARWATER, FLORIDA 34622

DRAWN BY: KT	SCALE: N.T.S.	PROJ. NO.: 378-
CHKD. BY:	DATE: 10/12/94	DWG.: FIGURE 3

NORTH

GAP CREEK

BRADEN RIVER



LEGEND

- GROUNDWATER MONITOR WELL
- ⊙ COMBINATION WELLS
- BRL BELOW READING LEVEL

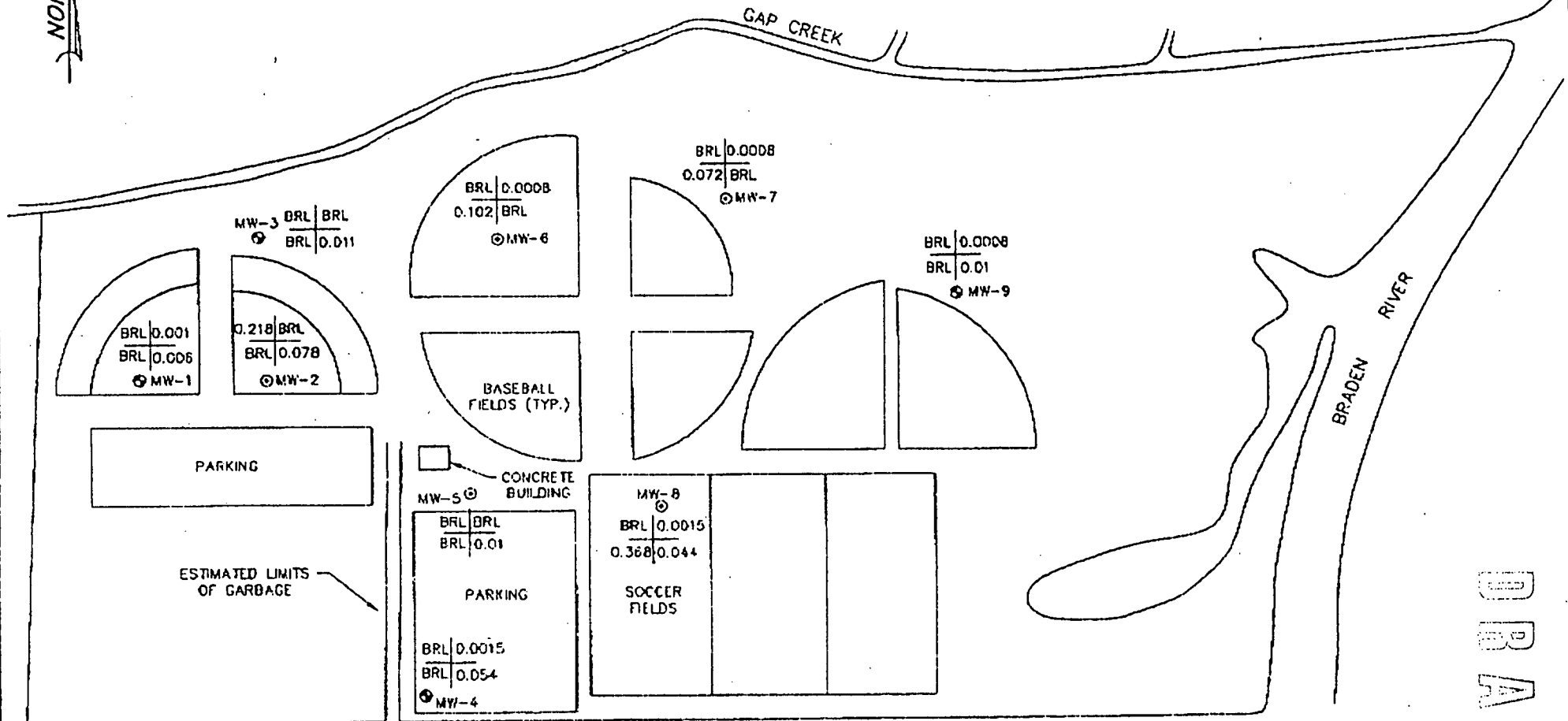
METHYLENE CHLORIDE | CHLOROBENZENE
PHENOLS | OI-N-BUTYLPHTHALATE

ORGANIC CONCENTRATION SUMMARY BRADEN RIVER PARK PROJECT MANATEE COUNTY PARK & RECREATION MANATEE COUNTY, FLORIDA



PROFESSIONAL SERVICE INDUSTRIES, INC.
4400 - 140TH AVENUE NORTH
SUITE 100
CLEARWATER, FLORIDA 34622

DRAWN BY: KT	SCALE: N.T.S.	PROJ. NO.: 378-41097
CHKD. BY:	DATE: 10/17/94	DWG.: FIGURE 4



DRAFT

LEGEND

- ⊕ GROUNDWATER MONITOR WELL
- ⊙ COMBINATION WELLS
- BRL BELOW READING LEVEL

CHROMIUM CONCENTRATION mg/L | CADMIUM CONCENTRATION mg/L
 LEAD CONCENTRATION mg/L | ARSENIC CONCENTRATION mg/L

METAL CONCENTRATIONS MAP BRADEN RIVER PARK PROJECT MANATEE COUNTY PARK & RECREATION MANATEE COUNTY, FLORIDA

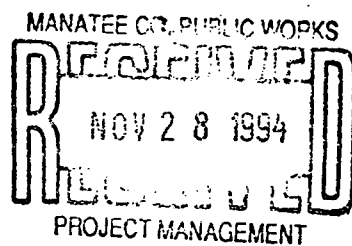


PROFESSIONAL SERVICE INDUSTRIES, INC.

4400 - 140th AVENUE NORTH
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 CLEARWATER, FLORIDA 34622

DRAWN BY:	KT	SCALE:	N.T.S.	PROJ. NO.:	378-41097
CHKD. BY:		DATE:	10/17/94	DWG.:	FIGURE 5

**GROUND WATER TESTING REPORT
BRADEN RIVER PARK PROJECT
51ST STREET EAST
BRADENTON, MANATEE COUNTY, FLORIDA
PSI PROJECT NO. 378-41097**





Professional Service Industries, Inc.
Environmental & Analytical Division

October 21, 1994

Public Works Department, Manatee County
Project Management, Solid Waste
4422-A West 66th Street
Bradenton, Florida 34240-0000

Attention: Mr. Tom Yarger

Re: Ground Water Testing Report
Braden River Park Project
51st Street East
Bradenton, Manatee County, Florida
PSI Project No. 378-4I097

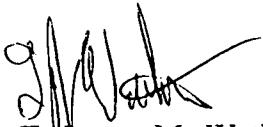
Dear Mr. Yarger:

Please accept the attached report for the above-referenced project. This report is a compilation of data collected under the authorization of Manatee County by the Purchase Order No. 102107. Recommendations for future actions are included in this report. PSI would welcome the opportunity to answer any questions concerning this project.

PSI is pleased to have been selected to perform this service for Manatee County Park and Recreation Department and hopes to continue to fill your environmental needs. Please feel free to contact the undersigned at your convenience.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.


T. James M. Watkins, P.G.
Senior Project Manager

TJMW/AMB:tms


Adel M. Blass
Manager, Environmental Services

**GROUND WATER TESTING
BRADEN RIVER PARK PROJECT
51ST STREET EAST
BRADENTON, MANATEE COUNTY, FLORIDA**

**PREPARED FOR
PUBLIC WORKS DEPARTMENT, MANATEE COUNTY
PROJECT MANAGEMENT/SOLID WASTE
4422-A WEST 66TH STREET
BRADENTON, FLORIDA 34240-0000**

**PREPARED BY
PROFESSIONAL SERVICE INDUSTRIES, INC.**

OCTOBER 21, 1994

PSI NUMBER: 378-41097



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INTRODUCTION

General

This report summarizes the field activities of Professional Service Industries, Inc. (PSI) for the Braden River Park project concerning potential groundwater contamination investigations. An athletic field is currently being constructed on the site of a historic landfill. One (1) of the planned structures is a stormwater retention pond which is presently planned to extend below the groundwater table. The Manatee County Environmental Action Committee expressed concern relative to potential contamination from the landfill leaching into the groundwater and then entering the pond. The concerns are addressed in this report of groundwater testing. Results of the groundwater testing and conclusions are included with our recommendations. The project site is located south of Gap Creek, west of the Braden River and north of State Road 70 (Figure 1). Access to the site is from 51st Street East, which extends into the site approximately 1/4 of the length from the western edge.

Purpose

The purpose of this exploration was to test for leachate contamination from the landfill. The primary objective is to test the groundwater in the surficial aquifer to identify the areas of potential concern. The second objective is to characterize the landfill for content type and areal extent.

Scope of Services

PSI proposed a ground penetrating radar (GPR) survey and the installation and monitoring of nine (9) temporary monitoring wells into the surficial water table aquifer. The monitoring included sampling the nine (9) wells and testing the groundwater by EPA Methods 624, 625, and for 13 priority metals. The recommended scope of work was authorized by Manatee County Parks and Recreation Department with Purchase Order No. 102107. This purchase order was received by PSI on October 6, 1994. A Dietrich 120 drill rig, crew and environmental professionals were mobilized to the site on October 10, 1994.

Regional Geologic Setting

The regional geologic setting was reviewed to identify conditions which might affect the tests performed or interpretation of the data obtained.

The surficial deposits of Manatee County are predominately Tertiary age and range from unconsolidated sands to clays. Four (4) lithologic units are recognized in the region and include clayey sand, sandy clay, fine sand and silt, and shell/clay.

The study area lies within the physiographic province known as the Gulf Coast Lowlands. This province occupies the area between Bradenton and a scarp that rises sharply above the

40 foot elevation approximately six (6) miles to the east of the project site. The scarp marks the boundary of the Gulf Coast Lowlands and the Desoto Plain. The Gulf Coast Lowlands generally are gently sloping plains with variations of surface lithologies. The medium to fine sands and silts become increasingly thicker above the 25 foot elevation contour, while fine sands, shell and clay lithologies predominate below the 25 foot elevation contour.

The topography of the site generally slopes from the southwest to the northeast into the Braden River. The eastern and northern portions of the landfill site are bordered by wetland areas associated with the Gap Creek and Braden River confluence. This area has been classified by the DEP and USGS as the drainage area between the Myakka and Alafia basins (USGS, MS-28). The reported mean annual rainfall for this area ranges between 52 and 56 inches per year (USGS, MS-40). Regional annual rainfall runoff is estimated to be 10 inches per year (USGS, MS-22). These regional figures indicate between 42 and 46 inches of rainfall per year can be expected to enter the unconfined aquifer by percolation through the surficial soils. This precipitation has the potential to leach contaminants, if present, from uncapped landfills such as the one on the project site.

A review of published geologic studies indicate two aquifers exist in the region, with the confining layer expected between 30 and 60 feet below land surface. The unconfined or surficial aquifer is contained in the Pleistocene Terrace deposits while the Floridan Aquifer is contained in the Miocene and Eocene limestones. The surficial aquifer generally follows the local topography and discharges into local streams and rivers. The Hawthorn formation is reported to be approximately 200 feet thick in this area, and acts as the confining layer between the two aquifers (USGS, MS-56). The Floridan Aquifer in this region generally flows to the west and southwest, except where influenced locally by withdrawal for fresh water supplies. This site is located in an area of known very low recharge for the Floridan aquifer (USGS, MS-98).

FIELD ACTIVITIES

Ground Penetrating Radar

The site was scanned with a 120 megahertz (MHZ) antenna and a subsurface interface radar system 3 (SIR-3). The antenna was pulled in a fiberglass sled on the ground behind a four-wheel drive vehicle at a slow speed. Twenty-four transects or lines were scanned across the suspect site by Subsurface Evaluations, Inc. on August 11 and 23, 1994. Nineteen of the transects were oriented in an east to west manner and five (5) transects were oriented north to south. The average transect length was 627 feet. The transects T-1 through T-11 were spaced approximately 100 feet apart, and covered the accessible areas east of 51st Street. Transects T-12 and T-13 extend north to south and are on the east and middle portions, respectively, of the subject site. Transects T-14 through T-21 are also at approximately 100 foot intervals oriented in an east to west manner west of 51 Street. Transects T-22, T-23

and T-24 are oriented north and south at the beginning, middle and end of the T-14 through T-21 transect paths (GPR Report Graphics, Appendix D).

Monitoring Well Construction

The monitoring wells were installed with a Dietrich 120 drill rig using four and one-quarter (4.25) inch inside diameter hollow-stem augers. A total of nine (9) areas were chosen to adequately identify any potential concerns (Figure 2). Monitoring wells MW-1 and MW-4 are located in upgradient positions from the landfill. Monitoring wells MW-7 and MW-9 are located downgradient of most of the landfill areas. The sites chosen were representative of the landfill area and placed to investigate the groundwater from each area as defined by a GPR report. The temporary wells were constructed of Schedule 40 PVC casing with flush thread connection to a 0.01 inch slotted Schedule 40 PVC screen. No PVC cement was used to construct the wells. The wells were sand packed with 60/40 silica sand and a bentonite seal was placed over the sand. Individual well construction details are provided in Appendix A.

Monitoring Well Sampling

The temporary groundwater monitoring wells, installed on October 10-12, 1994, were sampled by PSI environmental technicians on October 13-14, 1994. The groundwater samples were submitted to the PSI Analytical Laboratory for analysis by EPA Methods 624 and 625, phenol, EPA Priority Metals, PCBs and cyanide.

Sampling Procedure

Prior to the collection of any groundwater samples, a minimum of three (3) well volumes of water were removed from each monitoring well to purge the well of stagnate water. The purge water was discharged to the soils adjacent to the wells.

Groundwater samples were then withdrawn utilizing a dedicated disposable Teflon bailer. All sampling tasks were conducted in accordance with the procedures and methodology detailed in the PSI Generic Quality Assurance Plan approved by the State of Florida Department of Environmental Protection. The water quality parameters are appended with the analytical report in Appendix B. All of the samples collected were stored at approximately 4°C in airtight vials, and transported to PSI Laboratories in St. Petersburg, Florida for analysis by EPA Methods 624, 625, for organic compounds. The samples were also analyzed for EPA Priority Metals, PCBs, cyanides and phenols. MW-7 was sampled twice for quality control purposes, and a trip blank was also analyzed.

Groundwater

The groundwater level was measured across the site on October 12, 1994. A rough estimate of the relative elevation was made and used to determine groundwater flow direction (Figure 3). This data describes unconfined water table conditions typical to relatively flat clastic soils varying in response to seasonal and topographical condition. Borings generally located the water table between three (3) and nine (9) feet below land surface (BLS). It should be recognized that groundwater levels represent one (1) point in a dynamic surface and may fluctuate with variations in precipitation, tidal, and seasonal conditions.

SITE CONDITIONS

Soils

The purpose of this investigation is to determine the possibility of leachate contaminants generated from the landfill materials entering the unconfined aquifer. Nine (9) monitoring wells were installed into the landfill material in representative areas. Each well was constructed to test the water table surface and was therefore slightly different in construction based on trash thickness and water table elevation. The site generally slopes to the northeast and is covered with one (1) to two (2) feet of gray silty sand. The land surface has surface features typical of landfill type subsidence where the landfill cells have created an undulating topography. The area west of 51st Street generally is covered with a loose yellow fine sand. The northeastern portion of the site contains significant quantities of native organic detritus normally associated with near deltaic or riverine deposits. The landfill material is generally underlain by a dark gray to black silty sand with locally abundant organic detritus. Where encountered, this organic rich strata contained a typical natural methanous odor.

Landfill

The GPR survey was reviewed by SEI Specialists, and their report was transmitted to Manatee County on September 6, 1994. Areas having dense, chaotic and dipping reflections were interpreted as landfill areas, while areas with low reflectivity were interpreted as naturally-occurring sandy soils. Vertical stacks of strong, hyperbolic reflections were interpreted as buried metallic objects.

The areal extent of the landfill was partially determined with this survey. Reflections typical of a trench and fill type landfill were noted in a review of the survey. While this exploration "ground truthed" the GPR report relative to the areal extents of the landfill, the landfill extended further below land surface than was indicated by the survey. The landfill was found to be in excess of 15 feet in thickness in some areas and in most areas, extended below the water table. The GPR report does indicate a maximum depth of exploration of roughly 10 feet (Page 3, GPR report). The eastern cell limits indicate the landfill material was not placed more than 800 feet east of 51st Street East. The landfill extended from the

southern property boundary to Gap Creek. Transects extending over 600 feet west from 51st Street East did not discover the western limits of the landfill. Graphic representations of the GPR interpretations are appended to this report (Figures 1, 2 and 3, GPR Report Appendix C).

The GPR survey identified nine (9) major metallic anomalies in the survey. These anomalies were uncovered with a backhoe and a shovel by environmental professionals on October 21, 1994. The objects were photographed, classified, and returned to the landfill. The classifications are shown in Table No. 1.

TABLE NO. 1

Anomaly Number	Quadrant	Description
1	Southeast	Not found
2	Southwest	Steel packing straps
3	Southwest	Water heater and drum
4	Northwest	Water purifier and drink dispenser
5	Northwest	Water main
6	Southwest	Refrigerator
7	Northwest	Chain-link conveyor belt
8	Northwest	Building rubble
9	Northwest	Drum

The landfill material is estimated to vary between one (1) to 15 feet in thickness (Figure 5). One (1) piece of household garbage discovered is dated 1954; the garbage on the whole could vary from the 1940's through recent. A buried pile of steel packing straps was uncovered in the GPR report area designated #2. A hot water heater, most likely from an industrial plant, was uncovered in the GPR report area #3. While drilling the methane vent well, in the area of anomaly #1, a significant number of Tropicana orange juice containers were uncovered. This landfill appears to have industrial, commercial and household refuse undifferentiated across the site. The only segregation of trash by area appears to be the construction related debris concentrated in the north center of the site. The excavations and temporary well installation drilling confirmed the GPR findings.

Groundwater

The unconfined aquifer was measured on October 12, 1994 using a transit and rod, with the southeast corner of the slab of the on-site building used as a bench mark of 13 feet. The unconfined aquifer was found to flow to the northeast toward the Braden River and Gap Creek (Figure 3), with a gradient of approximately one (1) foot per 100 feet.

LABORATORY RESULTS

Groundwater Laboratory Results

A groundwater sample was obtained from each of the nine (9) temporary monitoring wells on-site. Samples were collected according to the previously described sampling procedures. The results of the limited groundwater sampling have detected elevated concentrations of six (6) metals and four (4) organic compounds in the nine (9) wells.

Monitoring well #1 contained detectable levels of arsenic and cadmium, no organic compounds were found. Monitoring well #2 contained elevated levels of beryllium, arsenic, chromium, nickel and methylene chloride. Detectable levels of mercury and zinc were noted. Monitoring well #3 contained elevated levels of methylene chloride and detectable levels of arsenic and zinc. Monitoring well #4 contained elevated levels of methylene chloride and arsenic, detectable quantities of cadmium and zinc were also noted. Monitoring well #5 contained elevated quantities of methylene chloride and detectable quantities of arsenic and zinc. Monitoring well #6 contained elevated levels of phenol and lead, and detectable quantities of di-n-butylphthalate, cadmium and zinc. MW-7 contained elevated levels of chlorobenzene and lead while detectable quantities of cadmium and zinc were noted. MW-8 contained elevated quantities of lead and detectable quantities of arsenic, cadmium, nickel and zinc were noted. No organic compounds were detected in monitoring well #8. Monitoring well #9 contained no elevated levels of the compounds tested, detectable quantities of arsenic and cadmium were detected. The detailed results are tabulated (Table No. 2 and Table No. 3) and the analytical reports are found in Appendix B.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The analytical results of the groundwater samples taken from temporary monitoring wells on the subject site indicate elevated levels of methylene chloride, chlorobenzene, and phenol. Unfiltered groundwater samples were analyzed for the 13 metals identified by the EPA as priority pollutant metals. Five (5) of the nine (9) wells contained elevated levels of some of the metals. Only five (5) of the priority metals were found in elevated levels; these include beryllium, arsenic, chromium, lead and nickel.

Metals

The elevated concentrations of metals detected are from unfiltered groundwater samples. The fine particles of soil and organic material suspended in the unfiltered samples can create interference of the chemical analysis yielding excessive readings not indicative of the groundwater concentrations. Due to the relatively low levels of most of the metals and the levels indicated in the two (2) wells, most upgradient (MW-1 and MW-4). PSI suggests these findings are within a range that, if filtered samples were analyzed, the contaminate levels would be lowered beneath the minimum contaminate level (MCL) suggested in the FDEP "Groundwater Guidance Concentrations of 1989".

Organics

Phenol is a common and important chemical with a myriad of uses. It can be used in resins, plastics, adhesives, and disinfectants. In the presence of oxygen, it biodegrades rapidly. Under most anaerobic conditions, degradation is slowed as microbial adaptation periods are longer. Phenol will not be expected to significantly evaporate, hydrolyze, adsorb to sediment, or bioconcentrate in aquatic organisms. Phenol was detected in MW-6 at concentrations of 68 micrograms per liter. The standard for landfill leachate reporting concentration is 20 micrograms per liter (FDER DW Standards 1989).

Chlorobenzene is used as a solvent in pesticides and other industrial uses. It is relatively mobile in sandy soil and aquifer materials. As it biodegrades very slowly or not at all in these soils, it can be expected to leach into the ground water. Degradation in the ground water is expected to be slow. Chlorobenzene was detected in MW-7 at concentrations between 11 and 13 micrograms per liter. The Florida Department of Environmental Protection reporting requirements are for concentrations in excess of 10 micrograms per liter.

Methylene chloride is an aromatic hydrocarbon typically used as a solvent, degreaser, and paint remover. This volatile organic can be removed from ground water through conventional air sparging. The elevated levels detected on-site are as much as 10 times the FDEP reporting limits for drinking water standards. This hydrocarbon will rapidly evaporate and is also easily biodegraded. Methylene chloride was detected in MW-2, MW-3, MW-4 and MW-5 in elevated concentrations.



TABLE NO. 2
METAL ANALYSIS SUMMARY
REPORTED IN MG/L

Description	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MCL
Antimony	*	*	*	*	*	*	*	*	*	0.006
Beryllium	*	0.11	*	*	*	*	*	*	*	0.004
Thallium	*	*	*	*	*	*	*	*	*	0.002
Arsenic	0.006	0.078	0.011	0.054	0.01	*	*	0.044	0.01	0.05
Barium	*	*	*	*	*	*	*	*	*	2
Cadmium	0.00101	*	*	0.00151	*	0.0008	0.0008	0.0015	0.0008	0.004
Chromium	*	0.218	*	*	*	*	*	*	*	0.1
Lead	*	*	*	*	*	0.102	0.072	0.368	*	0.015
Mercury	*	0.001	*	*	*	*	*	*	*	0.002
Nickel	*	0.111	*	*	*	*	*	0.082	*	0.1
Selenium	*	*	*	*	*	*	*	*	*	0.02
Silver	*	*	*	*	*	*	*	*	*	0.1
Zinc	*	1.96	0.164	0.614	0.042	0.02	0.154	1.06	*	5.0

* = Below Reporting Level

0.111 = Results in "Bold" are in excess of Drinking Water Standards (FAC 62-550.310)

MCL = Minimum Contaminate Level



TABLE NO. 3
ORGANIC ANALYSIS SUMMARY
REPORTED IN UG/L

Compound Name	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MCL
Methylene Chloride	*	62	24	96	96	*	*			5
Phenol	*	*	*	*	*	68	*	*	*	20
Di-n-butylphthalate	*	*	*	*	*	130	*	*	*	700
Chlorobenzene	*	*	*	*	*	*	13	*	*	10

68 = Results in "Bold" are in excess of Drinking Water Standards

***** = Below Reporting Level

MCL = Minimum Contaminate Level (Florida Department of Environmental Regulation
Groundwater Guidance Concentrations 1989)

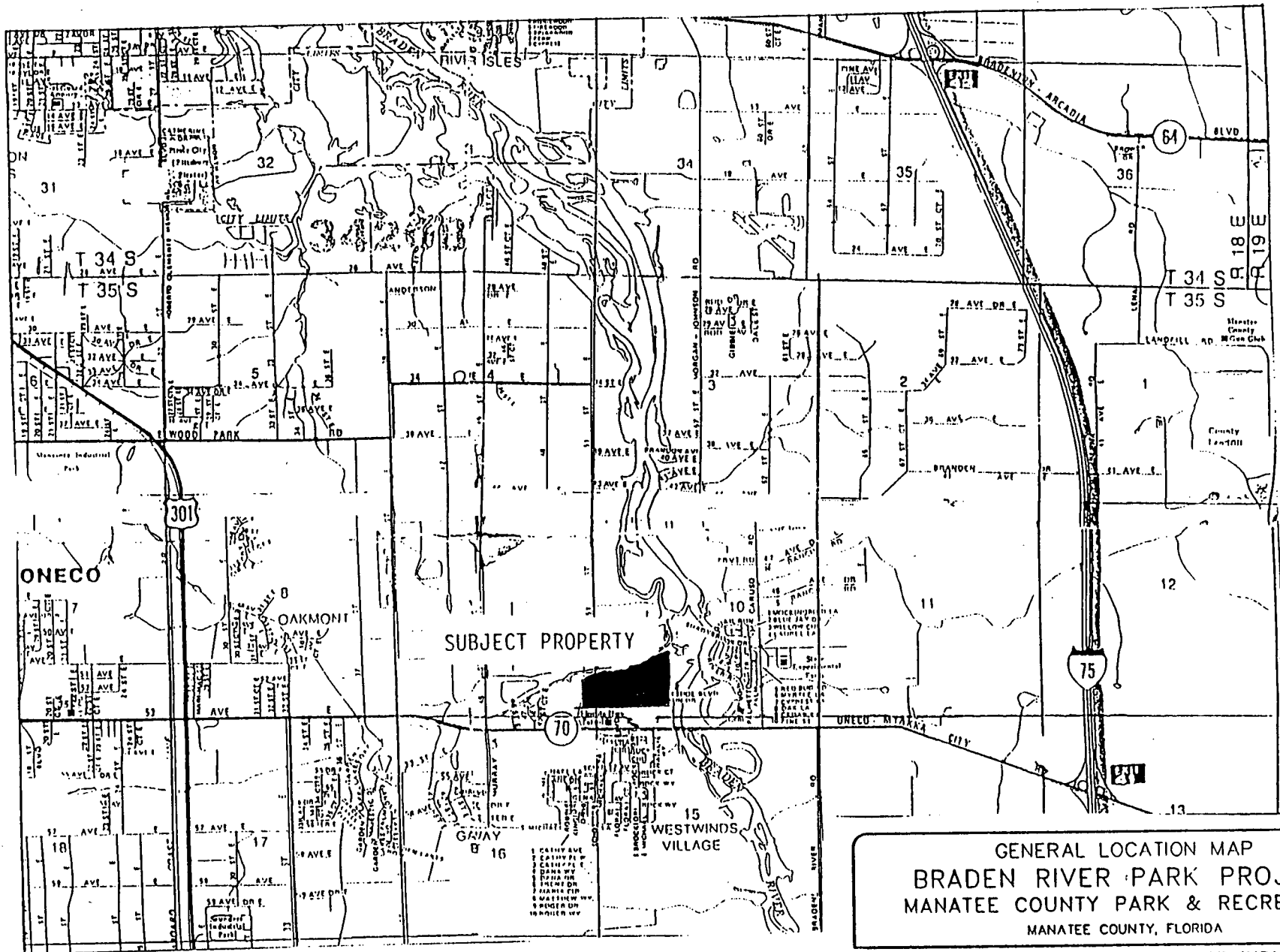
Recommendations

PSI recommends that these results be retested for methylene chloride using EPA Method 601 before being released to the FDEP for a ruling of actions required. As no indication of the elevated contaminate levels extending off-site has been defined, the DEP may not require immediate action, should these levels be confirmed. As there is no comprehensive landfill ruling in Florida Administrative Code, each landfill is currently being handled by the DEP as a separate case.

During any excavation activities on-site, PSI suggests that the breathing zone air be monitored with an organic vapor analyzer (OVA) and explosimeter for the safety of the work crews. Should the non-methanous organic vapors exceed 50 ppm or the explosimeter indicate a danger range is imminent, the site work should step until the natural air currents (breeze) dilute the excessive vapor concentrations.

b:reports5\braden.grd

FIGURES



GENERAL LOCATION MAP
BRADEN RIVER PARK PROJECT
MANATEE COUNTY PARK & RECREATION
MANATEE COUNTY, FLORIDA



PROFESSIONAL SERVICE INDUSTRIES, INC.

4400 - 140th. AVENUE NORTH
SUITE 100
CLEARWATER, FLORIDA 34622

DRAWN BY:	KT	SCALE:	PROJ. NO.:
CHKD. BY:		DATE:	378-41058
		10/17/94	DWG.: FIGURE 1

NORTH

GAP CREEK

BRADEN RIVER

MW-3

MW-6

MW-7

MW-9

MW-1

MW-2

BASEBALL
FIELDS (TYP.)

BUILDING

PARKING

MW-5

MW-8

SOCCER
FIELDS

MW-4

PARKING

JOHN DEERE
FACILITY

BUILDING

STATE HIGHWAY
PATROL STATION

51st. STREET EAST

LEGEND

- ⊕ GROUNDWATER MONITOR WELL
- COMBINATION WELLS

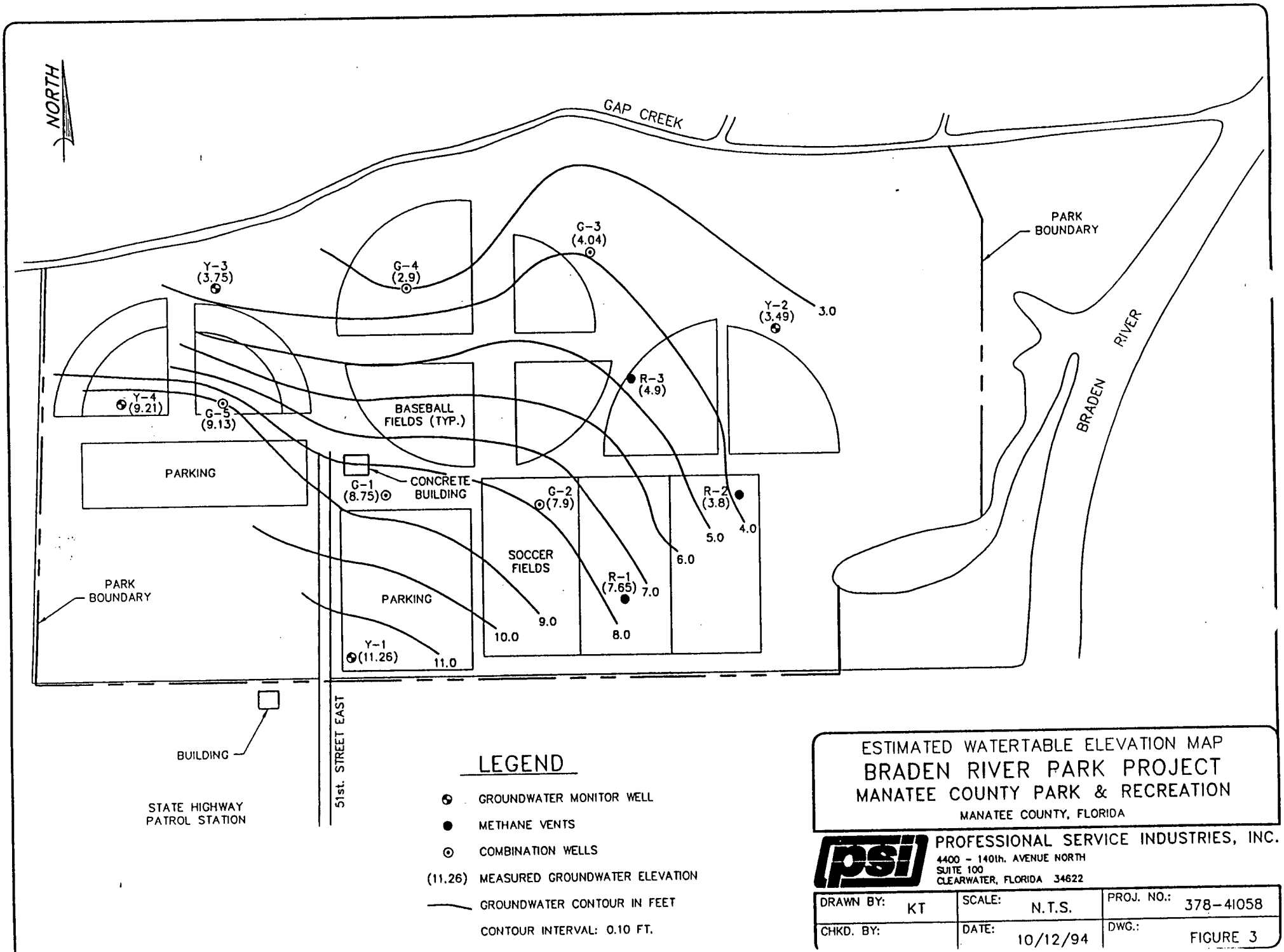
SITE MAP
BRADEN RIVER PARK PROJECT
MANATEE COUNTY PARK & RECREATION
MANATEE COUNTY, FLORIDA



PROFESSIONAL SERVICE INDUSTRIES, INC.

4400 - 140th. AVENUE NORTH
SUITE 100
CLEARWATER, FLORIDA 34622

DRAWN BY: KT	SCALE: N.T.S.	PROJ. NO.: 378-41097
CHKD. BY:	DATE: 10/17/94	DWG.: FIGURE 2



NORTH

GAP CREEK

BRADEN RIVER

BRL 13
BRL BRL
MW-7

BRL BRL
BRL BRL
MW-9

BRL BRL
68 130
MW-6

MW-3 24 BRL
BRL BRL

62 BRL
BRL BRL
MW-2

BRL BRL
BRL BRL
MW-1

BUILDING

PARKING

ESTIMATED LIMIT OF
METHYLENE CHLORIDE

MW-5

96 BRL
BRL BRL

PARKING

96 BRL
BRL BRL
MW-4

MW-8
BRL BRL
BRL BRL

SOCCER
FIELDS

BASEBALL
FIELDS (TYP.)

JOHN DEERE
FACILITY

51st STREET EAST

BUILDING

STATE HIGHWAY
PATROL STATION

LEGEND

- GROUNDWATER MONITOR WELL
- COMBINATION WELLS
- BRL BELOW READING LEVEL

METHYLENE CHLORIDE	CHLOROBENZENE
PHENOLS	DI-N-BUTYLPHTHALATE

ORGANIC CONCENTRATION SUMMARY BRADEN RIVER PARK PROJECT MANATEE COUNTY PARK & RECREATION MANATEE COUNTY, FLORIDA



PROFESSIONAL SERVICE INDUSTRIES, INC.
4400 - 140th AVENUE NORTH
SUITE 100
CLEARWATER, FLORIDA 34622

DRAWN BY: KT	SCALE: N.T.S.	PROJ. NO.: 378-41097
CHKD. BY:	DATE: 10/17/94	DWG.: FIGURE 4



GAP CREEK

BRL 0.0008
0.072 BRL
MW-7

MW-3 BRL BRL
BRL 0.011

BRL 0.0008
0.102 BRL
MW-6

BRL 0.0008
BRL 0.01
MW-9

BRL 0.001
BRL 0.006
MW-1

0.218 BRL
BRL 0.078
MW-2

BASEBALL
FIELDS (TYP.)

PARKING

ESTIMATED LIMITS
OF GARBAGE

MW-5

CONCRETE
BUILDING

BRL BRL
BRL 0.01

PARKING

BRL 0.0015
BRL 0.054
MW-4

MW-8
BRL 0.0015
0.368 0.044

SOCCER
FIELDS

BUILDING

STATE HIGHWAY
PATROL STATION

51st STREET EAST

JOHN DEERE
FACILITY

LEGEND

- ⊙ GROUNDWATER MONITOR WELL
- ⊙ COMBINATION WELLS
- BRL BELOW READING LEVEL

CHROMIUM CONCENTRATION mg/L | CADMIUM CONCENTRATION mg/L
LEAD CONCENTRATION mg/L | ARSENIC CONCENTRATION mg/L

METAL CONCENTRATIONS MAP
BRADEN RIVER PARK PROJECT
MANATEE COUNTY PARK & RECREATION
MANATEE COUNTY, FLORIDA



PROFESSIONAL SERVICE INDUSTRIES, INC.

4400 - 140th AVENUE NORTH
SUITE 100
CLEARWATER, FLORIDA 34622

DRAWN BY: KT	SCALE: N.T.S.	PROJ. NO.: 378-41097
CHKD. BY:	DATE: 10/17/94	DWG.: FIGURE 5

APPENDICES

APPENDIX A
WELL CONSTRUCTION DIAGRAMS

SITE LOCATION: BRADEN RIVER PARK

PROJECT NO: 378 - 41058

BORING NO: MW-01

PAGE 1 OF 1

DATE BEGAN: 10-12-94

DATE FINISHED: 10-12-94

GEOLOGIST: J. Watkins

DRILLER: Tom Firkinbinder

SECTION: 9

CHECKED BY: S.S.P.

GROUND SURFACE ELEV.: EST. 14'

TOWNSHIP: 35 S

GWL DEPTH: 7.25'

DRILLING METHOD: 4.25" I.D. Hollow Stem Auger

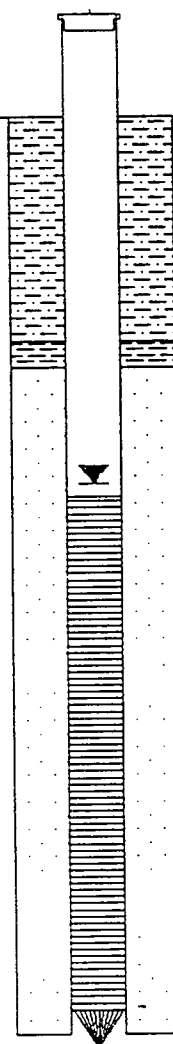
RANGE: 18 E

DRILL EQUIP: Detrick-120

CONTRACTOR: PSI

GWL-DATE/TIME: 10-12-94

WATER TABLE	DEPTH (FT)	SAMPLE TYPE AND NO.	ASTM (N)	P R O F I L E	DESCRIPTION	VOLATILE ORGANIC VAPORS (ppm)		WELL CONSTRUCTION	
						FID	PID	MONITOR WELL NO.: MW-01	
								BOREHOLE DIAMETER: 4-INCH	
								SURFACE CASING: 2-INCH PVC	
								SCREEN LENGTH: 10 FT (0.01' SLOT)	
								SEAL TYPE: BENTONITE	
								DEVELOPMENT TIME: 15 gal.	
								8-INCH MANHOLE COVER	
	5.00								
	0.00				SILTY SAND: yellow, fine grained, well sorted.				
	-5.00								
	-10.00								
	-15.00								
	-20.00				BOTTOM OF BORING AT 18.0 FT				



SITE LOCATION: BRADEN RIVER PARK

PROJECT NO: 378 - 41058

BORING NO: MW-02

PAGE 1 OF 1

DATE BEGAN: 10-12-94

DATE FINISHED: 10-12-94

GEOLOGIST: J. Watkins

DRILLER: Tom Finkinbinder

SECTION: 9

CHECKED BY: S.S.P

GROUND SURFACE ELEV.: EST. 14'

TOWNSHIP: 35 S

GWL DEPTH: 7.13'

DRILLING METHOD: 4.25" I.D. Hollow Stem Auger

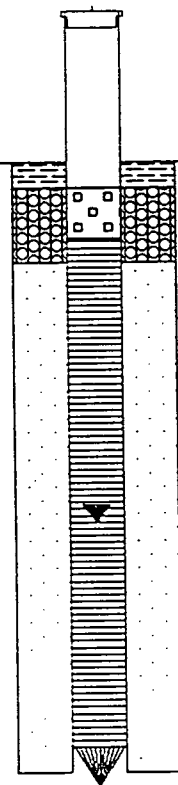
RANGE: 18 E

DRILL EQUIP: Detrick-120

CONTRACTOR: PSI

GWL-DATE/TIME: 10-12-94

WATER TABLE	DEPTH (FT)	SAMPLE TYPE AND NO.	ASTM (N)	P R O F I L E	DESCRIPTION	VOLATILE ORGANIC VAPORS (ppm)		WELL CONSTRUCTION MONITOR WELL NO.: MW-02 BOREHOLE DIAMETER: 4-INCH SURFACE CASING: 2-INCH PVC SCREEN LENGTH: 10 FT (0.01' SLOT) SEAL TYPE: BENTONITE DEVELOPMENT TIME: 15 gal. 8-INCH MANHOLE COVER
						FID	PID	
	5.00							
	0.00				SILTY SAND: yellow, fine grained, well sorted, loose.			
	-5.00				LANDFILL MATERIAL:			
	-10.00							
	-15.00							
	-20.00				BOTTOM OF BORING AT 12.0 FT			



SITE LOCATION: BRADEN RIVER PARK

PROJECT NO: 378 - 41058

BORING NO: MW-03

PAGE 1 OF 1

DATE BEGAN: 10-12-94

DATE FINISHED: 10-12-94

GEOLOGIST: J. Watkins

DRILLER: Tom Firkinbinder

SECTION: 9

CHECKED BY: S.S.P.

GROUND SURFACE ELEV.: EST 11'

TOWNSHIP: 35 S

GWL DEPTH: 9.6'

DRILLING METHOD: 4.25" I.D. Hollow Stem Auger

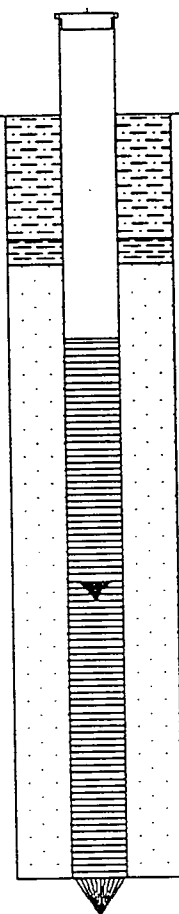
RANGE: 18 E

DRILL EQUIP: Detrick-120

CONTRACTOR: PSI

GWL-DATE/TIME: 10-12-94

WATER TABLE	DEPTH (FT)	SAMPLE TYPE AND NO.	ASTM (IN)	P R O F I L E	DESCRIPTION	VOLATILE ORGANIC VAPORS (ppm)		WELL CONSTRUCTION MONITOR WELL NO.: MW-3 BOREHOLE DIAMETER: 4-INCH SURFACE CASING: 2-INCH PVC SCREEN LENGTH: 10 FT (0.01' SLOT) SEAL TYPE: BENTONITE DEVELOPMENT TIME: 15 gal 8-INCH MANHOLE COVER
						FID	PID	
	5.00							
	0.00				SILTY SAND: yellow, fine grained, well sorted.			
					LANDFILL MATERIAL.			
	-5.00							
	-10.00							
	-15.00				SILTY SAND: grey, fine grained, well sorted, loose			
					BOTTOM OF BORING AT 15.0 FT			
	-20.00							



SITE LOCATION: BRADEN RIVER PARK

PROJECT NO: 378 - 4I058

BORING NO: MW-04

PAGE 1 OF 1

DATE BEGAN: 10-12-94

DATE FINISHED: 10-12-94

GEOLOGIST: J Watkins

DRILLER: Tom Finkinbinder

SECTION: 10

CHECKED BY: S.S.P

GROUND SURFACE ELEV. : EST 6.0'

TOWNSHIP: 35 S

GWL DEPTH: 5.17'

DRILLING METHOD: 4.25" I.D. Hollow Stem Auger

RANGE: 18 E

DRILL EQUIP: Detrick-120

CONTRACTOR: PSI

GWL-DATE/TIME: 10-12-94

WATER TABLE	DEPTH (FT)	SAMPLE TYPE AND NO.	ASTM (N)	PROFILE	DESCRIPTION	VOLATILE ORGANIC VAPORS (ppm)		WELL CONSTRUCTION MONITOR WELL NO.: MW-1 BOREHOLE DIAMETER: 4-INCH SURFACE CASING: 2-INCH PVC SCREEN LENGTH: 10 FT 10.01" SLOT: SEAL TYPE: BENTONITE DEVELOPMENT TIME: 15 gal. 8-INCH MANHOLE COVER
						FID	PID	
	5.00							
	0.00				SILTY SAND: black, fine grained, well sorted.			
					LANDFILL MATERIAL:			
	-5.00				SILTY SAND: dark grey, fine grained, with finely divided organic material.			
	-10.00							
	-15.00							
	-20.00				BOTTOM OF BORING AT 12.0 FT			

SITE LOCATION: BRADEN RIVER PARK

PROJECT NO: 378 - 41058

BORING NO: MW-05

PAGE 1 OF 1

DATE BEGAN: 10-12-94

DATE FINISHED: 10-12-94

GEOLOGIST: J. Watkins

DRILLER: Tom Finkinbinder

SECTION: 10

CHECKED BY: S.S.P.

GROUND SURFACE ELEV.: EST. 11.5'

TOWNSHIP: 35 S

GWL DEPTH: 5.25'

DRILLING METHOD: 4.25" I.D. Hollow Stem Auger

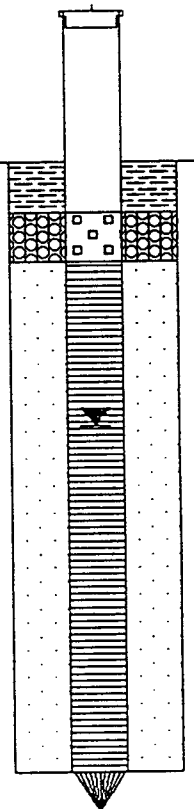
RANGE: 18 E

DRILL EQUIP: Detrick-120

CONTRACTOR: PSI

GWL-DATE/TIME: 10-12-94

WATER TABLE	DEPTH (FT)	SAMPLE TYPE AND NO.	ASTM (IN)	PROFILE	DESCRIPTION	VOLATILE ORGANIC VAPORS (ppm)		WELL CONSTRUCTION
						FID	PID	
	5.00							MONITOR WELL NO.: MW-05
								BOREHOLE DIAMETER: 4-INCH
								SURFACE CASING: 2-INCH PVC
								SCREEN LENGTH: 10 FT (0.01' SLOT)
								SEAL TYPE: BENTONITE
								DEVELOPMENT TIME: 15 gal.
								8-INCH MANHOLE COVER
	0.00				SILTY SAND: grey, fine grained, poorly sorted.			
					LANDFILL MATERIAL:			
					SILTY SAND: grey, fine grained, well sorted.			
	-5.00							
	-10.00							
	-15.00							
	-20.00				BOTTOM OF BORING AT 12.0 FT			



SITE LOCATION: BRADEN RIVER PARK

PROJECT NO: 378 - 41058

BORING NO: MW-06

PAGE 1 OF 1

DATE BEGAN: 10-11-94

DATE FINISHED: 10-11-94

GEOLOGIST: J. Watkins

DRILLER: Tom Finkinbinder

SECTION: 10

CHECKED BY: S.S.P.

GROUND SURFACE ELEV.: EST. 10'

TOWNSHIP: 35 S

GWL DEPTH: 9.75'

DRILLING METHOD: 4.25" I.D. Hollow Stem Auger

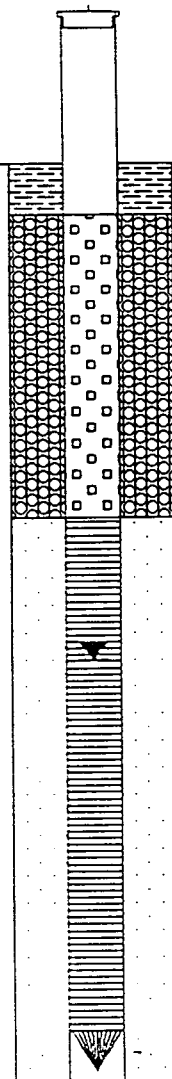
RANGE: 18 E

DRILL EQUIP: Detrick-120

CONTRACTOR: PSI

GWL-DATE/TIME: 10-11-94

WATER TABLE	DEPTH (FT)	SAMPLE TYPE AND NO.	ASTM (IN)	P R O F I L E	DESCRIPTION	VOLATILE ORGANIC VAPORS (ppm)		WELL CONSTRUCTION	
						FID	PID	MONITOR WELL NO.: MW-06	BOREHOLE DIAMETER: 4-INCH
								SURFACE CASING: 2-INCH PVC	SCREEN LENGTH: 10 FT (0.01" SLOTS)
								SEAL TYPE: BENTONITE	DEVELOPMENT TIME: 15 gal.
								8-INCH MANHOLE COVER	
	5.00								
	0.00				SILTY SAND: grey, fine grained, well sorted.				
					LANDFILL MATERIAL:				
	-5.00				SILTY SAND: grey, fine grained, well sorted.				
	-10.00								
	-15.00								
	-20.00				BOTTOM OF BORING AT 18.0 FT				



SITE LOCATION: BRADEN RIVER PARK

PROJECT NO: 378 - 41058

BORING NO: MW-07

PAGE 1 OF 1

DATE BEGAN: 10-11-94

DATE FINISHED: 10-11-94

GEOLOGIST: J. Watkins

DRILLER: Tom Finkinbinder

SECTION: 10

CHECKED BY: S.S.P.

GROUND SURFACE ELEV.: EST. 11'

TOWNSHIP: 35 S

GWL DEPTH: 5.42'

DRILLING METHOD: 4.25" I.D. Hollow Stem Auger

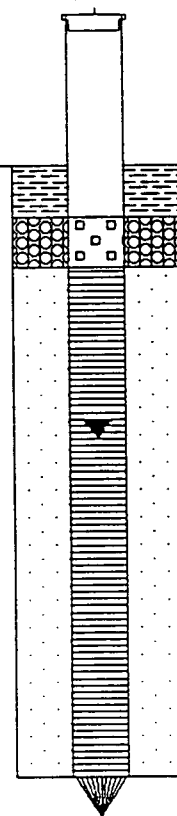
RANGE: 18 E

DRILL EQUIP: Detrick-120

CONTRACTOR: PSI

GWL-DATE/TIME: 10-11-94

WATER TABLE	DEPTH (FT)	SAMPLE TYPE AND NO.	ASTM (IN)	P R O F I L E	DESCRIPTION	VOLATILE ORGANIC VAPORS (ppm)		WELL CONSTRUCTION MONITOR WELL NO.: MW-07 BOREHOLE DIAMETER: 4-INCH SURFACE CASING: 2-INCH PVC SCREEN LENGTH: 10 FT (0.01' SLOT) SEAL TYPE: BENTONITE DEVELOPMENT TIME: 20 gal. 8-INCH MANHOLE COVER
						FID	PID	
	5.00							
	0.00				SILTY SAND: grey, fine grained, poorly sorted.			
					LANDFILL MATERIAL: strong fetid odor.			
	-5.00				SILTY SAND: black, fine grained, poorly sorted, finely divided organic material.			
	-10.00							
	-15.00							
	-20.00				BOTTOM OF BORING AT 12.0 FT			



SITE LOCATION: BRADEN RIVER PARK

PROJECT NO: 378 - 41058

BORING NO: MW-08

PAGE 1 OF 1

DATE BEGAN: 10-12-94

DATE FINISHED: 10-12-94

GEOLOGIST: J. Watkins

DRILLER: Tom Finkinbinder

SECTION: 10

CHECKED BY: S.S.P.

GROUND SURFACE ELEV.: EST. 12'

TOWNSHIP: 35 S

GWL DEPTH: 5.40'

DRILLING METHOD: 4.25" I.D. Hollow Stem Auger

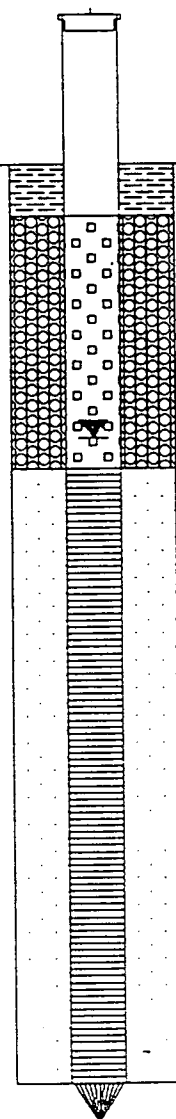
RANGE: 18 E

DRILL EQUIP: Detrick-120

CONTRACTOR: PSI

GWL-DATE/TIME: 10-12-94

WATER TABLE	DEPTH (FT)	SAMPLE TYPE AND NO.	ASTM (N)	PROFILE	DESCRIPTION	VOLATILE ORGANIC VAPORS (ppm)		WELL CONSTRUCTION
						FID	PID	
	5.00							MONITOR WELL NO.: MW-08
								BOREHOLE DIAMETER: 4-INCH
								SURFACE CASING: 2-INCH PVC
								SCREEN LENGTH: 10 FT 10.01' SLOT
								SEAL TYPE: BENTONITE
								DEVELOPMENT TIME: 15 gal
								8-INCH MANHOLE COVER
	0.00				SILTY SAND: grey, fine grained, well sorted.			
					LANDFILL MATERIAL:			
	-5.00				SILTY SAND: grey, fine grained, poorly sorted.			
	-10.00							
	-15.00							
	-20.00				BOTTOM OF BORING AT 18.0 FT			



SITE LOCATION: BRADEN RIVER PARK

PROJECT NO: 378 - 41058

BORING NO: MW-09

PAGE 1 OF 1

DATE BEGAN: 10-12-94

DATE FINISHED: 10-12-94

GEOLOGIST: J Watkins

DRILLER: Tom Finkinbinder

SECTION: 10

CHECKED BY: S.S.P.

GROUND SURFACE ELEV.: EST. 12.5'

TOWNSHIP: 35 S

GWL DEPTH: 3.55'

DRILLING METHOD: 4.25" I.D. Hollow Stem Auger

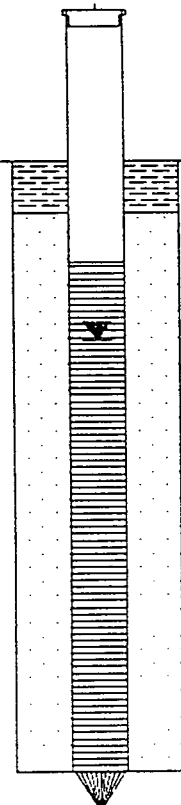
RANGE: 18 E

DRILL EQUIP: Detrick-120

CONTRACTOR: PSI

GWL-DATE/TIME: 10-12-94

WATER TABLE	DEPTH (FT)	SAMPLE TYPE AND NO.	ASTM (IN)	P R O F I L E	DESCRIPTION	VOLATILE ORGANIC VAPORS (ppm)		WELL CONSTRUCTION MONITOR WELL NO.: MW-09 BOREHOLE DIAMETER: 4-INCH SURFACE CASING: 2-INCH PVC SCREEN LENGTH: 10 FT (0.01' SLOT) SEAL TYPE: BENTONITE DEVELOPMENT TIME: 15 GAL. 8-INCH MANHOLE COVER
						FID	PID	
	5.00							
	0.00				SILTY SAND: grey, fine grained, well sorted.			
					SILTY SAND: grey to black, fine grained, poorly sorted.			
	-5.00				SILTY SAND: grey, fine grained, well sorted.			
	-10.00							
	-15.00							
	-20.00				BOTTOM OF BORING AT 12.0 FT			



APPENDIX B

LABORATORY ANALYTICAL REPORT



WATER QUALITY PARAMETERS

CONDUCTIVITY

OHM METER

MONITOR WELL	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9
10/14/94	390	550	510	500	725	1800	1400	800	1400
11/09/94	500	600	1000	500	800	1800	-	700	-
11/14/94	500	600	900	500	700	1800	-	700	-

pH

MONITOR WELL	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9
10/14/94	6.2	-	7.6	-	-	6.8	6.7	6.8	6.5
11/09/94	6.9	7.3	8.2	7.2	7.3	6.5	-	6.9	-
11/14/94	7.4	7.3	6.9	6.9	6.9	6.6	-	6.4	-

TEMPERATURE

DEGREES (C)

MONITOR WELL	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9
10/14/94	-	27	23	24	26	26	27	-	26
11/09/94	28	28	29	28	27	28	-	27	-
11/14/94	26	26	26	28.5	25	25	-	25	-

- PARAMETER NOT RECORDED



Professional Service Industries, Inc.

ANALYTICAL REPORT

TESTED FOR: PSI, Inc.
Environmental Department
4400-140th Avenue North
Suite 100
Clearwater, FL 34622

PROJECT: Manatee County Parks & Recreation
378-41058

ATTENTION: Jim Watkins

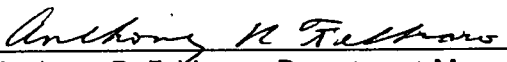
SAMPLE DATE: October 14, 1994

DATE: October 26, 1994

OUR REPORT NUMBER: 385-4P025-0055

Attached, please find our analytical report for samples described on the Chain-of-Custody (C-O-C). Please note that our laboratory has assigned unique sample numbers to each of your samples as shown on the attached C-O-C. Please reference our report number and direct any questions on this report to the individual designated below or to one of our Customer Service Representatives.

Reviewed By,


Anthony R. Febraro, Department Manager

Respectfully submitted,
Professional Service Industries, Inc.

HRS #84218
HRS #E84388
/bb

LAB #: 10106-02
Client ID: MW-06

NUTRIENT ANALYSES

Matrix: Water

Analyte	Results	Units	Method	Analysis Date	Analyst	MDL
Total Cyanide	<0.005	mg/l	EPA 335.2	10/24/94	MC	0.005
Total Phenols	<0.050	mg/l	EPA 420.1	10/25/94	MC	0.050

METALS ANALYSIS

Analyte	Results	Units	Method	Analysis Date	Analyst	MDL
Total Arsenic	<0.005	mg/l	EPA 206.2	10/18/94	CP	0.005
Total Barium	<0.200	mg/l	EPA 208.1	10/20/94	CP	0.200
Total Cadmium	0.800	ug/l	EPA 213.2	10/20/94	CP	0.800
Total Chromium	<0.050	mg/l	EPA 218.1	10/18/94	CP	0.050
Total Lead	102	ug/l	EPA 239.2	10/20/94	CP	5.00
Total Mercury	<0.001	mg/l	EPA 245.1	10/26/94	CP	0.001
Total Nickel	<0.050	mg/l	EPA 249.1	10/24/94	CP	0.050
Total Selenium	<0.005	mg/l	EPA 270.2	10/19/94	CP	0.005
Total Silver	<0.020	mg/l	EPA 272.1	10/17/94	CP	0.020
Total Zinc	0.020	mg/l	EPA 289.1	10/24/94	CP	0.010

PESTICIDES/PCB'S

Analyte	Results	Units	Method	MDL/DF
PCB 1016	<0.5	mg/l	EPA 608	0.5/1
PCB 1221	<0.5	mg/l	EPA 608	0.5/1
PCB 1232	<0.5	mg/l	EPA 608	0.5/1
PCB 1242	<0.5	mg/l	EPA 608	0.5/1
PCB 1248	<0.5	mg/l	EPA 608	0.5/1
PCB 1254	<0.5	mg/l	EPA 608	0.5/1
PCB 1260	<0.5	mg/l	EPA 608	0.5/1

Extraction Date:
10/18/94
Analysis Date:
10/24/94
Analyst: SP



LAB #: 10106-03
Client ID: MW-07

NUTRIENT ANALYSES

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Cyanide	<0.005	mg/l	EPA 335.2	10/24/94	MC	0.005
Total Phenols	0.080	mg/l	EPA 420.1	10/25/94	MC	0.050

METALS ANALYSIS

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Arsenic	<0.005	mg/l	EPA 206.2	10/18/94	CP	0.005
Total Barium	<0.200	mg/l	EPA 208.1	10/20/94	CP	0.200
Total Cadmium	0.800	ug/l	EPA 213.2	10/20/94	CP	0.800
Total Chromium	<0.050	mg/l	EPA 218.1	10/18/94	CP	0.050
Total Lead	72	ug/l	EPA 239.2	10/20/94	CP	5.00
Total Mercury	0.002	mg/l	EPA 245.1	10/26/94	CP	0.001
Total Nickel	<0.050	mg/l	EPA 249.1	10/24/94	CP	0.050
Total Selenium	<0.005	mg/l	EPA 270.2	10/19/94	CP	0.005
Total Silver	<0.020	mg/l	EPA 272.1	10/17/94	CP	0.020
Total Zinc	0.154	mg/l	EPA 289.1	10/24/94	CP	0.010

PESTICIDES/PCB'S

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
PCB 1016	<0.5	mg/l	EPA 608	0.5/1
PCB 1221	<0.5	mg/l	EPA 608	0.5/1
PCB 1232	<0.5	mg/l	EPA 608	0.5/1
PCB 1242	<0.5	mg/l	EPA 608	0.5/1
PCB 1248	<0.5	mg/l	EPA 608	0.5/1
PCB 1254	<0.5	mg/l	EPA 608	0.5/1
PCB 1260	<0.5	mg/l	EPA 608	0.5/1

Extraction Date:
10/18/94
Analysis Date:
10/24/94
Analyst: SP



LAB #: 10106-04
Client ID: MW-08

NUTRIENT ANALYSES

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Cyanide	<0.005	mg/l	EPA 335.2	10/24/94	MC	0.005
Total Phenols	<0.050	mg/l	EPA 420.1	10/25/94	MC	0.050

METALS ANALYSIS

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Arsenic	0.044	mg/l	EPA 206.2	10/18/94	CP	0.005
Total Barium	<0.200	mg/l	EPA 208.1	10/20/94	CP	0.200
Total Cadmium	1.50	ug/l	EPA 213.2	10/20/94	CP	0.800
Total Chromium	<0.050	mg/l	EPA 218.1	10/18/94	CP	0.050
Total Lead	368	ug/l	EPA 239.2	10/20/94	CP	5.00
Total Mercury	<0.001	mg/l	EPA 245.1	10/26/94	CP	0.001
Total Nickel	0.082	mg/l	EPA 249.1	10/24/94	CP	0.050
Total Selenium	<0.005	mg/l	EPA 270.2	10/19/94	CP	0.005
Total Silver	<0.020	mg/l	EPA 272.1	10/17/94	CP	0.020
Total Zinc	1.06	mg/l	EPA 289.1	10/24/94	CP	0.010

PESTICIDES/PCB'S

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
PCB 1016	<0.5	mg/l	EPA 608	0.5/1
PCB 1221	<0.5	mg/l	EPA 608	0.5/1
PCB 1232	<0.5	mg/l	EPA 608	0.5/1
PCB 1242	<0.5	mg/l	EPA 608	0.5/1
PCB 1248	<0.5	mg/l	EPA 608	0.5/1
PCB 1254	<0.5	mg/l	EPA 608	0.5/1
PCB 1260	<0.5	mg/l	EPA 608	0.5/1

Extraction Date:
10/18/94
Analysis Date:
10/24/94
Analyst: SP



LAB #: 10106-05
Client ID: MW-09

NUTRIENT ANALYSES

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Cyanide	<0.005	mg/l	EPA 335.2	10/24/94	MC	0.005
Total Phenols	<0.050	mg/l	EPA 420.1	10/25/94	MC	0.050

METALS ANALYSIS

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Arsenic	0.010	mg/l	EPA 206.2	10/18/94	CP	0.005
Total Barium	<0.200	mg/l	EPA 208.1	10/20/94	CP	0.200
Total Cadmium	0.800	ug/l	EPA 213.2	10/20/94	CP	0.800
Total Chromium	<0.050	mg/l	EPA 218.1	10/18/94	CP	0.050
Total Lead	<5.00	ug/l	EPA 239.2	10/20/94	CP	5.00
Total Mercury	<0.001	mg/l	EPA 245.1	10/26/94	CP	0.001
Total Nickel	<0.050	mg/l	EPA 249.1	10/24/94	CP	0.050
Total Selenium	<0.005	mg/l	EPA 270.2	10/19/94	CP	0.005
Total Silver	<0.020	mg/l	EPA 272.1	10/17/94	CP	0.020
Total Zinc	<0.010	mg/l	EPA 289.1	10/24/94	CP	0.010

PESTICIDES/PCB'S

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
PCB 1016	<0.5	mg/l	EPA 608	0.5/1
PCB 1221	<0.5	mg/l	EPA 608	0.5/1
PCB 1232	<0.5	mg/l	EPA 608	0.5/1
PCB 1242	<0.5	mg/l	EPA 608	0.5/1
PCB 1248	<0.5	mg/l	EPA 608	0.5/1
PCB 1254	<0.5	mg/l	EPA 608	0.5/1
PCB 1260	<0.5	mg/l	EPA 608	0.5/1

Extraction Date:
10/18/94
Analysis Date:
10/24/94
Analyst: SP



LAB #: 10106-06
Client ID: MW-17

PURGEABLE HALOCARBONS

Matrix: Water

Analyte	Results	Units	Method	MDL/DF
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	13	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:
NA
Analysis Date:
10/25/94
Analyst: LB

PURGEABLE AROMATICS

Analyte	Results	Units	Method	MDL/DF
Benzene	<1	ug/l	EPA 602	1/1
Toluene	<1	ug/l	EPA 602	1/1
Ethylbenzene	<1	ug/l	EPA 602	1/1
Total Xylenes	<1	ug/l	EPA 602	1/1
Total VOAs	<1	ug/l	EPA 602	-/-
MTBE	<1	ug/l	EPA 602	1/1

Extraction Date:
NA
Analysis Date:
10/25/94
Analyst: LB



LAB #: 10106-07
Client ID: Trip

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	<1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:
NA
Analysis Date:
10/25/94
Analyst: LB

PURGEABLE AROMATICS

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Benzene	<1	ug/l	EPA 602	1/1
Toluene	<1	ug/l	EPA 602	1/1
Ethylbenzene	<1	ug/l	EPA 602	1/1
Total Xylenes	<1	ug/l	EPA 602	1/1
Total VOAs	<1	ug/l	EPA 602	-/-
MTBE	<1	ug/l	EPA 602	1/1

Extraction Date:
NA
Analysis Date:
10/25/94
Analyst: LB



QUALITY CONTROL DATA: ORGANIC ANALYTES

								Matrix: Water
Analyte	Lab Batch#	Analytical Blank	MDL	Units	QC %REC	Spike %REC	Dup %RPD	Method
Bromodichloromethane	AB1025	<1	1	ug/l		117		601
Bromoform		<1	1	ug/l		114		601
Bromomethane		<1	1	ug/l				601
Carbon Tetrachloride		<1	1	ug/l		95		601
Chlorobenzene		<1	1	ug/l		120		601
Chloroethane		<1	1	ug/l		80		601
Chloroform		<1	1	ug/l		104		601
Chloromethane		<1	1	ug/l		143		601
Dibromochloromethane		<1	1	ug/l		105		601
1,2-Dichlorobenzene		<1	1	ug/l		129		601
1,3-Dichlorobenzene		<1	1	ug/l		119		601
1,4-Dichlorobenzene		<1	1	ug/l		119		601
Dichlorodifluoromethane		<1	1	ug/l				601
1,1-Dichloroethane		<1	1	ug/l		100		601
1,2-Dichloroethane		<1	1	ug/l		103		601
1,1-Dichloroethene		<1	1	ug/l		104		601
trans-1,2-Dichloroethene		<1	1	ug/l		104		601
1,2-Dichloropropane		<1	1	ug/l		132		601
cis-1,3-Dichloropropene		<1	1	ug/l		103		601
trans-1,3-Dichloropropene		<1	1	ug/l		111		601
Methylene Chloride		<1	1	ug/l		102		601
1,1,2,2-Tetrachloroethane		<1	1	ug/l		71		601
Tetrachloroethene		<1	1	ug/l		118		601
1,1,1-Trichloroethane		<1	1	ug/l		118		601
1,1,2-Trichloroethane		<1	1	ug/l		99		601
Trichloroethene		<1	1	ug/l		114		601
Trichlorofluoromethane		<1	1	ug/l		84		601
Vinyl Chloride		<1	1	ug/l		96		601

								Matrix: Water
Analyte	Lab Batch#	Analytical Blank	MDL	Units	QC %REC	Spike %REC	Dup %RPD	Method
Benzene	AB1025	<1	1	ug/l	86	105		602
Toluene		<1	1	ug/l	93	97		602
Ethylbenzene		<1	1	ug/l	93	97		602
Total Xylenes		<1	1	ug/l	99	103		602
MTBE		<1	1	ug/l	98	100		602

								Matrix: Water
Analyte	Lab Batch#	Analytical Blank	MDL	Units	QC %REC	Spike %REC	Dup %RPD	Method
PCB 1016	AB1018	<0.5	0.5	ug/l				608
PCB 1221		<0.5	0.5	ug/l				608
PCB 1232		<0.5	0.5	ug/l				608
PCB 1242		<0.5	0.5	ug/l				608
PCB 1248		<0.5	0.5	ug/l				608
PCB 1254		<0.5	0.5	ug/l				608
PCB 126		<0.5	0.5	ug/l		89		608



QUALITY CONTROL DATA: INORGANIC ANALYTES

Matrix: Water								
<u>Analyte</u>	<u>Lab Batch#</u>	<u>Analytical Blank</u>	<u>MDL</u>	<u>Units</u>	<u>QC %REC</u>	<u>Spike %REC</u>	<u>Dup %RPD</u>	<u>Method</u>
Total Cyanide	AB1024	<0.005	0.005	mg/l	98	59	0-	335.2
Total Phenols	AB1025	<0.050	0.050	mg/l	94	128		420.1

Matrix: Water								
<u>Analyte</u>	<u>Lab Batch#</u>	<u>Analytical Blank</u>	<u>MDL</u>	<u>Units</u>	<u>QC %REC</u>	<u>Spike %REC</u>	<u>Dup %RPD</u>	<u>Method</u>
Arsenic	AB1018	<0.005	0.005	mg/l	92	90	0	206.2
Barium	AB1020	<0.200	0.200	mg/l	94	83	0	208.1
Cadmium	AB1020	<0.800	0.800	ug/l	116	116	0	213.2
Chromium	AB1018	<0.050	0.050	mg/l	127	96	0	218.1
Lead	AB1020	<5.00	5.00	ug/l	90	107	0	239.2
Mercury	AB1026	<0.001	0.001	mg/l	94	91	0	245.1
Nickel	AB1024	<0.050	0.050	mg/l	104	116	0	249.1
Selenium	AB1019	<0.005	0.005	mg/l	100	104	0	270.2
Silver	AB1017	<0.020	0.020	mg/l	113	84	0	272.1
Zinc	AB1020	<0.010	0.010	mg/l	96	99	0	289.1

SURROGATE RECOVERY SUMMARY

Matrix: Water						
<u>PSI LAB #</u>	<u>1-Bromo-2-Dichloropropane (601/8010)</u>	<u>a,a,a-TFT (602/8020)</u>	<u>2,4,5,6-Tetrachloro m-xylene (608/8080)</u>	<u>Dibutyl Chloroendate (608/8080)</u>	<u>2-Fluorobiphenyl (610/8100)</u>	<u>Nitrobenzene (610/8100)</u>
10106-02				83		
10106-03				81		
10106-04				124		
10106-05				96		
10106-06	92	82				
10106-07	101	95				

CHAIN OF CUSTODY RECORD



Professional Service Industries, Inc.

PROJECT NAME <i>Mamie County Parks & Recreation</i>		REPORT TO		INVOICE TO	
PROJECT NUMBER <i>378-41058</i>		PROJECT MANAGER <i>Jim Watkins</i>		ADDRESS	
P.O. NUMBER		ADDRESS <i>PSI-4400 140 Allen St NW</i>		CITY / STATE / ZIP	
REQUIRED DUE DATE		CITY / STATE / ZIP <i>Clearwater FL</i>		ATTENTION	
SAMPLES TO LAB VIA		TELEPHONE <i>538-2300</i>		TELEPHONE	
NUMBER OF COOLERS		FAX		REPORT VIA	
		VERBAL FAX		U.S. MAIL/OVERNIGHT	

LABORATORY SUBMITTED TO:

☐ 6913 Hwy. 225
Deer Park, TX 77536
(713) 479-8307

☐ 4820 W. 15th Street
Lawrence, KS 66049
(800) 548-7901

☐ 6056 Ulmerton Road
Clearwater, FL 34620
(813) 531-1446

☐ 850 Poplar Street
Pittsburgh, PA 15220
(412) 922-4000

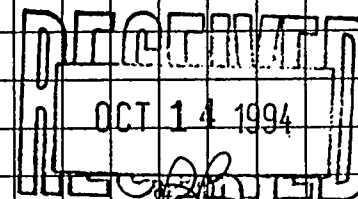
TRANSFER NUMBER	RELINQUISHED BY DATE / TIME	ACCEPTED BY DATE / TIME	SEAL NUMBER
	<i>14M 10/14/94 16:15 pm B. Polanski</i>	<i>10-14</i>	

LABORATORY USE ONLY	
FIELD SERVICES	Y/N \$
SHIPPING	Y/N \$

LABORATORY USE ONLY	
ANALYTICAL DUE DATE	
REPORT DUE DATE <i>10/26/94</i>	
INORGANIC	ORGANIC
Sect _____ Row _____	Sect _____ Row _____
PSI PROJECT NAME	
PSI PROJECT # <i>44 4P025-0055</i>	
PSI BATCH # <i>111</i>	

LABORATORY USE ONLY		SAMPLE CUSTODIAN		DATE / TIME	
		<i>10106</i>			
SAMPLE IDENTIFICATION	DATE / TIME	COMP-C GRAB-B	SOIL-S WATER-W WASTE-X	LAB USE ONLY	LAB NUMBER
<i>10-14-94</i>					
<i>11:30 am</i>	<i>B</i>	<i>W</i>			
<i>12:45 pm</i>	<i>B</i>	<i>W</i>			
<i>2:30 pm</i>	<i>B</i>	<i>W</i>			
<i>2:00</i>	<i>B</i>	<i>W</i>			
<i>---</i>	<i>B</i>	<i>W</i>			
<i>10/13/94</i>					
<i>TRIP</i>					

NUMBER OF CONTAINERS	PARAMETER LIST									
	<i>601/602</i>	<i>624</i>	<i>CN</i>	<i>PCB</i>	<i>Metals</i>	<i>Phenol</i>	<i>S-Vols</i>			
14										
14										
14										
14										
14										
2										



ADDITIONAL REMARKS

SAMPLER'S SIGNATURE

APPENDIX A: NARRATIVE

LABORATORY PROJECT ID: 10106

INORGANIC / ORGANIC

A. <u>SAMPLE RECEIPT</u>	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT.</u>
1. C-O-C present & complete	☒	☐		<u>WJ</u>
2. Samples match with C-O-C	☒	☐		<u>WJ</u>
3. Temperature @ 4°C	☒	☐		<u>WJ</u>
4. Shuttle Seal Present	☐	☒	<u>HAND DELIVERED</u>	<u>WJ</u>
5. Container Condition Acceptable	☒	☐		<u>WJ</u>
6. Other _____	☐	☐		

B. <u>GENERAL OBSERVATIONS</u>	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT.</u>
1. Sediment	☐	☐		
2. Headspace	☐	☐		
3. Appropriate Container	☐	☐		
4. Enough sample	☐	☐		
5. Odor/Color (Describe)	☐	☐		
6. Homogeneous	☐	☐		
7. MultiPhasic	☐	☐		
8. Other _____	☐	☐		

C. <u>ANALYTICAL OBSERVATIONS</u>	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT.</u>
1. Analyzed within Holding times	☐	☐		
2. Confirmation (Describe MS, 2nd Column, 2nd Detection)	☐	☐		
3. Matrix interferences	☐	☐		
4. Other _____	☐	☐		

D. GENERAL COMMENTS:

BY: _____ DATE: _____

APPENDIX A: NARRATIVE

LABORATORY PROJECT ID: 10106INORGANIC

ORGANIC

A. <u>SAMPLE RECEIPT</u>	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT.</u>
1. C-O-C present & complete	☒	☐		<u>WJ</u>
2. Samples match with C-O-C	☒	☐		<u>WJ</u>
3. Temperature @ 4°C	☒	☐		<u>WJ</u>
4. Shuttle Seal Present	☐	☒	<u>HAND DELIVERED</u>	<u>WJ</u>
5. Container Condition Acceptable	☒	☐		<u>WJ</u>
6. Other _____	☐	☐		

B. <u>GENERAL OBSERVATIONS</u>	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT.</u>
1. Sediment	☐	☐		
2. Headspace	☐	☐		
3. Appropriate Container	☐	☐		
4. Enough sample	☐	☐		
5. Odor/Color (Describe)	☐	☐		
6. Homogeneous	☐	☐		
7. MultiPhasic	☐	☐		
8. Other _____	☐	☐		

C. <u>ANALYTICAL OBSERVATIONS</u>	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT.</u>
1. Analyzed within Holding times	☐	☐		
2. Confirmation (Describe MS, 2nd Column, 2nd Detection)	☐	☐		
3. Matrix interferences	☐	☐		
4. Other _____	☐	☐		

D. GENERAL COMMENTS:

BY: _____ DATE: _____



Professional Service Industries, Inc.

ANALYTICAL REPORT

TESTED FOR: PROFESSIONAL SERVICE
INDUSTRIES, INC.
1770 Commerce Ave. N.
St. Petersburg, FL 33716

PSI REPORT # 214-2P090-437-O

CLW #10088

ATTN: ANTHONY FEBBRARO

DATE: OCTOBER 24, 1994

PROJECT: 10088
DATE RECEIVED: October 15, 1994
SAMPLE MATRIX: Water
METHODOLOGY EMPLOYED: EPA 624, EPA 625

<u>PSI LAB #</u>		<u>CLIENT SAMPLE ID</u>
410574	-	10088-01-mw3
410575	-	10088-02-mw-56
410576	-	10088-03-mw7
410577	-	10088-04-mw8
410578	-	10088-05-mw9

Results Begin on Page Two

DILUTION FACTOR CRITERIA

Whenever one or more components in a sample are in excess of the method's calibration, dilution is appropriate. Accordingly, the new detection limit = Dilution Factor x Method Detection Limit.

Xinhua Chen 10/24/94
Respectfully submitted,
XINHUA CHEN, Ph.D., ORGANICS SUPERVISOR

PROFESSIONAL SERVICE INDUSTRIES, INC.

EPA 624 PURGEABLES - part 1

Sample ID	10088-02	10088-04	10088-05
PSI Lab #.	410575	410577	410578

Compound Name	Concentration ppb, (ug/L)			Rpt Limits ppb, (ug/L)
Benzene	BRL	BRL	BRL	10
Bromodichloromethane	BRL	BRL	BRL	10
Bromoform	BRL	BRL	BRL	10
Bromomethane	BRL	BRL	BRL	10
Carbon Tetrachloride	BRL	BRL	BRL	10
Chlorobenzene	BRL	BRL	BRL	10
Chloroethane	BRL	BRL	BRL	10
2-Chloroethyl vinyl ether	BRL	BRL	BRL	10
Chloromethane	BRL	BRL	BRL	10
Chloroform	BRL	BRL	BRL	10
Dibromochloromethane	BRL	BRL	BRL	10
1,2-Dichlorobenzene	BRL	BRL	BRL	10
1,3-Dichlorobenzene	BRL	BRL	BRL	10
1,4-Dichlorobenzene	BRL	BRL	BRL	10
1,1-Dichloroethane	BRL	BRL	BRL	10
1,2-Dichloroethane	BRL	BRL	BRL	10
1,1-Dichloroethene	BRL	BRL	BRL	10
Trans-1,2-Dichloroethene	BRL	BRL	BRL	10
1,2-Dichloropropane	BRL	BRL	BRL	10
cis-1,3-Dichloropropene	BRL	BRL	BRL	10
Trans-1,3-Dichloropropene	BRL	BRL	BRL	10
Ethyl benzene	BRL	BRL	BRL	10
Methylene chloride	62	96	96	10
1,1,2,2-Tetrachloroethane	BRL	BRL	BRL	10
Tetrachloroethene	BRL	BRL	BRL	10
Toluene	BRL	BRL	BRL	10

(Continued)

EPA 624 PURGEABLES - part 2

Sample ID	10088-02	10088-04	10088-05
PSI Lab #	410575	410577	410578

Compound Name	Concentration ppb, (ug/L)			Rpt Limits ppb, (ug/L)
1,1,1-Trichloroethane	BRL	BRL	BRL	10
1,1,2-Trichloroethane	BRL	BRL	BRL	10
Trichloroethene	BRL	BRL	BRL	10
Trichlorofluoromethane	BRL	BRL	BRL	10
Vinyl Chloride	BRL	BRL	BRL	10

BRL = Below Reporting Limits

Dilution Factor:	x5	x5	x5
------------------	----	----	----

Received:	10/15/94	10/15/94	10/15/94
Analyzed:	10/21/94 KO	10/21/94 KO	10/21/94 KO

SURROGATE RECOVERIES, %

1,2-Dichloroethane-d4	101	106	109
Toluene-d8	95	100	98
4-Bromofluorobenzene	97	100	98

EPA 624 PURGEABLES - part 1

Sample ID

ANALYTICAL
BLANK

PSI Lab #

1W-VBK-102194-GCMS

Compound Name	Concentration ppb, (ug/L)	Rpt Limits ppb, (ug/L)
Benzene	BRL	10
Bromodichloromethane	BRL	10
Bromoform	BRL	10
Bromomethane	BRL	10
Carbon Tetrachloride	BRL	10
Chlorobenzene	BRL	10
Chloroethane	BRL	10
2-Chloroethyl vinyl ether	BRL	10
Chloromethane	BRL	10
Chloroform	BRL	10
Dibromochloromethane	BRL	10
1,2-Dichlorobenzene	BRL	10
1,3-Dichlorobenzene	BRL	10
1,4-Dichlorobenzene	BRL	10
1,1-Dichloroethane	BRL	10
1,2-Dichloroethane	BRL	10
1,1-Dichloroethene	BRL	10
Trans-1,2-Dichloroethene	BRL	10
1,2-Dichloropropane	BRL	10
cis-1,3-Dichloropropene	BRL	10
Trans-1,3-Dichloropropene	BRL	10
Ethyl benzene	BRL	10
Methylene chloride	BRL	10
1,1,2,2-Tetrachloroethane	BRL	10
Tetrachloroethene	BRL	10
Toluene	BRL	10

(Continued)

EPA 624 PURGEABLES - part 2

Sample ID

ANALYTICAL
BLANK

PSI Lab #

1W-VBK-102194-GCMS

Compound Name	Concentration ppb, (ug/L)	Rpt Limits ppb, (ug/L)
1,1,1-Trichloroethane	BRL	10
1,1,2-Trichloroethane	BRL	10
Trichloroethene	BRL	10
Trichlorofluoromethane	BRL	10
Vinyl Chloride	BRL	10

BRL = Below Reporting Limits

Dilution Factor:

x1

Analyzed:

10/21/94 KO

SURROGATE RECOVERIES, %

1,2-Dichloroethane-d4	102
Toluene-d8	99
4-Bromofluorobenzene	99

EPA 624 PURGEABLES - part 1

Sample ID

MATRIX
SPIKE

PSI Lab #

1W-VMS-102194-GCMS

Compound Name	Recovery (%)
Benzene	99
Bromodichloromethane	100
Bromoform	
Bromomethane	91
Carbon Tetrachloride	101
Chlorobenzene	99
Chloroethane	113
2-Chloroethyl vinyl ether	101
Chloromethane	71
Chloroform	105
Dibromochloromethane	110
1,2-Dichlorobenzene	104
1,3-Dichlorobenzene	106
1,4-Dichlorobenzene	111
1,1-Dichloroethane	103
1,2-Dichloroethane	103
1,1-Dichloroethene	103
Trans-1,2-Dichloroethene	101
1,2-Dichloropropane	98
cis-1,3-Dichloropropene	83
Trans-1,3-Dichloropropene	101
Ethyl benzene	98
Methylene chloride	94
1,1,2,2-Tetrachloroethane	102
Tetrachloroethene	102
Toluene	95

(Continued)

EPA 624 PURGEABLES - part 2

Sample ID

MATRIX
SPIKE

PSI Lab #

1W-VMS-102194-GCMS

Compound Name

Recovery (%)

1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichlorofluoromethane
Vinyl Chloride

104
101
101
118
107

Analyzed:

10/21/94 KO

SURROGATE RECOVERIES, %

1,2-Dichloroethane-d4
Toluene-d8
4-Bromofluorobenzene

105
94
99

EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 1

Sample ID	10088-01	10088-02	10088-03
PSI Lab #	410574	410575	410576

Compound Name	Concentration ppb, (ug/L)			Rpt Limits ppb, (ug/L)
Acenaphthene	BRL	BRL	BRL	10
Acenaphthylene	BRL	BRL	BRL	10
Anthracene	BRL	BRL	BRL	10
Aldrin	BRL	BRL	BRL	10
Benzo (a) anthracene	BRL	BRL	BRL	10
Benzo (b) fluoranthene	BRL	BRL	BRL	10
Benzo (k) fluoranthene	BRL	BRL	BRL	10
Benzo (g,h,i) perylene	BRL	BRL	BRL	10
Benzo (a) pyrene	BRL	BRL	BRL	10
Benzyl butyl phthalate	BRL	BRL	BRL	10
Beta-BHC	BRL	BRL	BRL	10
Delta-BHC	BRL	BRL	BRL	10
Bis (2-Chloroethoxy) methane	BRL	BRL	BRL	10
Bis (2-Chloroethyl) ether	BRL	BRL	BRL	10
Bis (2-Chloroisopropyl) ether	BRL	BRL	BRL	10
Bis (2-ethyl hexyl) phthalate	BRL	BRL	BRL	10
4-Bromophenyl phenyl ether	BRL	BRL	BRL	10
Chlordane	BRL	BRL	BRL	50
2-Chloronaphthalene	BRL	BRL	BRL	10
4-Chlorophenyl phenyl ether	BRL	BRL	BRL	10
Chrysene	BRL	BRL	BRL	10
4,4'-DDD	BRL	BRL	BRL	10
4,4'-DDE	BRL	BRL	BRL	10
4,4'-DDT	BRL	BRL	BRL	10
Dibenzo (a,h) anthracene	BRL	BRL	BRL	10
Di-n-butylphthalate	BRL	BRL	BRL	10
1,3-Dichlorobenzene	BRL	BRL	BRL	10
1,2-Dichlorobenzene	BRL	BRL	BRL	10
1,4-Dichlorobenzene	BRL	BRL	BRL	10
3,3'-Dichlorobenzidine	BRL	BRL	BRL	10
Dieldrin	BRL	BRL	BRL	10
Diethyl phthalate	BRL	BRL	BRL	10
Dimethyl phthalate	BRL	BRL	BRL	10
2,4-Dinitrotoluene	BRL	BRL	BRL	10
2,6-Dinitrotoluene	BRL	BRL	BRL	10
Di-n-octylphthalate	BRL	BRL	BRL	10

(Continued)

EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 2

Sample ID	10088-01	10088-02	10088-03	
PSI Lab #	410574	410575	410576	
Compound Name	Concentration ppb, (ug/L)			Rpt Limits ppb, (ug/L)
Endosulfan sulfate	BRL	BRL	BRL	10
Endrin aldehyde	BRL	BRL	BRL	10
Fluoranthene	BRL	BRL	BRL	10
Fluorene	BRL	BRL	BRL	10
Heptachlor	BRL	BRL	BRL	100
Heptachlor epoxide	BRL	BRL	BRL	10
Hexachlorobenzene	BRL	BRL	BRL	10
Hexachlorobutadiene	BRL	BRL	BRL	10
Hexachloroethane	BRL	BRL	BRL	10
Indeno (1,2,3-cd) pyrene	BRL	BRL	BRL	10
Isophorone	BRL	BRL	BRL	10
Naphthalene	BRL	BRL	BRL	10
Nitrobenzene	BRL	BRL	BRL	10
N-Nitrosodi-n-propylamine	BRL	BRL	BRL	10
PCB 1016	BRL	BRL	BRL	10
PCB 1221	BRL	BRL	BRL	10
PCB 1232	BRL	BRL	BRL	10
PCB 1242	BRL	BRL	BRL	10
PCB 1248	BRL	BRL	BRL	10
PCB 1254	BRL	BRL	BRL	10
PCB 1260	BRL	BRL	BRL	10
Phenanthrene	BRL	BRL	BRL	10
Pyrene	BRL	BRL	BRL	10
Toxaphene	BRL	BRL	BRL	100
1,2,4-Trichlorobenzene	BRL	BRL	BRL	10
4-Chloro-3-methylphenol	BRL	BRL	BRL	10
2-Chlorophenol	BRL	BRL	BRL	10
2,4-Dichlorophenol	BRL	BRL	BRL	10
2,4-Dimethylphenol	BRL	BRL	BRL	10
2,4-Dinitrophenol	BRL	BRL	BRL	50
2-Methyl-4,6-dinitrophenol	BRL	BRL	BRL	50
2-Nitrophenol	BRL	BRL	BRL	10
4-Nitrophenol	BRL	BRL	BRL	50
Pentachlorophenol	BRL	BRL	BRL	50

(Continued)

EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 3

Sample ID	10088-01	10088-02	10088-03
PSI Lab #	410574	410575	410576

Compound Name	Concentration ppb, (ug/L)			Rpt Limits ppb, (ug/L)
Phenol	BRL	BRL	BRL	10
2,4,6-Trichlorophenol	BRL	BRL	BRL	10

BRL = Below Reporting Limits

Dilution Factor:	x1	x1	x1
------------------	----	----	----

Received:	10/15/94	10/15/94	10/15/94
Extracted:	10/18/94 PG/	10/18/94 PG/	10/18/94 PG/
	JC	JC	JC
Analyzed:	10/20/94 DA	10/20/94 DA	10/20/94 DA

SURROGATE RECOVERIES, %

Nitrobenzene-d5	79	80	80
2-Fluorobiphenyl	84	80	81
Terphenyl-d14	75	73	73
2-Fluorophenol	40	57	60
Phenol-d6	41	52	54
2,4,6-Tribromophenol	54	64	68

EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 1

Sample ID	10088-04	10088-05
PSI Lab #	410577	410578

Compound Name	Concentration ppb, (ug/L)	Rpt Limits ppb, (ug/L)
Acenaphthene	BRL	10
Acenaphthylene	BRL	10
Anthracene	BRL	10
Aldrin	BRL	10
Benzo (a) anthracene	BRL	10
Benzo (b) fluoranthene	BRL	10
Benzo (k) fluoranthene	BRL	10
Benzo (g,h,i) perylene	BRL	10
Benzo (a) pyrene	BRL	10
Benzyl butyl phthalate	BRL	10
Beta-BHC	BRL	10
Delta-BHC	BRL	10
Bis (2-Chloroethoxy) methane	BRL	10
Bis (2-Chloroethyl) ether	BRL	10
Bis (2-Chloroisopropyl) ether	BRL	10
Bis (2-ethyl hexyl) phthalate	BRL	10
4-Bromophenyl phenyl ether	BRL	10
Chlordane	BRL	50
2-Chloronaphthalene	BRL	10
4-Chlorophenyl phenyl ether	BRL	10
Chrysene	BRL	10
4,4'-DDD	BRL	10
4,4'-DDE	BRL	10
4,4'-DDT	BRL	10
Dibenzo (a,h) anthracene	BRL	10
Di-n-butylphthalate	BRL	10
1,3-Dichlorobenzene	BRL	10
1,2-Dichlorobenzene	BRL	10
1,4-Dichlorobenzene	BRL	10
3,3'-Dichlorobenzidine	BRL	10
Dieldrin	BRL	10
Diethyl phthalate	BRL	10
Dimethyl phthalate	BRL	10
2,4-Dinitrotoluene	BRL	10
2,6-Dinitrotoluene	BRL	10
Di-n-octylphthalate	BRL	10

(Continued)

EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 2

Sample ID	10088-04	10088-05
PSI Lab #	410577	410578

Compound Name	Concentration ppb, (ug/L)	Rpt Limits ppb, (ug/L)
Endosulfan sulfate	BRL	10
Endrin aldehyde	BRL	10
Fluoranthene	BRL	10
Fluorene	BRL	10
Heptachlor	BRL	100
Heptachlor epoxide	BRL	10
Hexachlorobenzene	BRL	10
Hexachlorobutadiene	BRL	10
Hexachloroethane	BRL	10
Indeno (1,2,3-cd) pyrene	BRL	10
Isophorone	BRL	10
Naphthalene	BRL	10
Nitrobenzene	BRL	10
N-Nitrosodi-n-propylamine	BRL	10
PCB 1016	BRL	10
PCB 1221	BRL	10
PCB 1232	BRL	10
PCB 1242	BRL	10
PCB 1248	BRL	10
PCB 1254	BRL	10
PCB 1260	BRL	10
Phenanthrene	BRL	10
Pyrene	BRL	10
Toxaphene	BRL	100
1,2,4-Trichlorobenzene	BRL	10
4-Chloro-3-methylphenol	BRL	10
2-Chlorophenol	BRL	10
2,4-Dichlorophenol	BRL	10
2,4-Dimethylphenol	BRL	10
2,4-Dinitrophenol	BRL	50
2-Methyl-4,6-dinitrophenol	BRL	50
2-Nitrophenol	BRL	10
4-Nitrophenol	BRL	50
Pentachlorophenol	BRL	50

(Continued)

EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 3

Sample ID	10088-04	10088-05
PSI Lab #	410577	410578

Compound Name	Concentration ppb, (ug/L)	Rpt Limits ppb, (ug/L)
Phenol	BRL	10
2,4,6-Trichlorophenol	BRL	10

BRL = Below Reporting Limits

Dilution Factor:	x1	x1
------------------	----	----

Received:	10/15/94	10/15/94
Extracted:	10/18/94 PG/JC	10/18/94 PG/JC
Analyzed:	10/20/94 DA	10/20/94 DA

SURROGATE RECOVERIES, %

Nitrobenzene-d5	80	79
2-Fluorobiphenyl	78	79
Terphenyl-d14	70	71
2-Fluorophenol	66	65
Phenol-d6	58	59
2,4,6-Tribromophenol	61	69

EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 1

Sample ID

ANALYTICAL
BLANK

PSI Lab #

1W-BNABK-101894

Compound Name	Concentration ppb, (ug/L)	Rpt Limits ppb, (ug/L)
Acenaphthene	BRL	10
Acenaphthylene	BRL	10
Anthracene	BRL	10
Aldrin	BRL	10
Benzo (a) anthracene	BRL	10
Benzo (b) fluoranthene	BRL	10
Benzo (k) fluoranthene	BRL	10
Benzo (g,h,i) perylene	BRL	10
Benzo (a) pyrene	BRL	10
Benzyl butyl phthalate	BRL	10
Beta-BHC	BRL	10
Delta-BHC	BRL	10
Bis (2-Chloroethoxy) methane	BRL	10
Bis (2-Chloroethyl) ether	BRL	10
Bis (2-Chloroisopropyl) ether	BRL	10
Bis (2-ethyl hexyl) phthalate	BRL	10
4-Bromophenyl phenyl ether	BRL	10
Chlordane	BRL	50
2-Chloronaphthalene	BRL	10
4-Chlorophenyl phenyl ether	BRL	10
Chrysene	BRL	10
4,4'-DDD	BRL	10
4,4'-DDE	BRL	10
4,4'-DDT	BRL	10
Dibenzo (a,h) anthracene	BRL	10
Di-n-butylphthalate	BRL	10
1,3-Dichlorobenzene	BRL	10
1,2-Dichlorobenzene	BRL	10
1,4-Dichlorobenzene	BRL	10
3,3'-Dichlorobenzidine	BRL	10
Dieldrin	BRL	10
Diethyl phthalate	BRL	10
Dimethyl phthalate	BRL	10
2,4-Dinitrotoluene	BRL	10
2,6-Dinitrotoluene	BRL	10
Di-n-octylphthalate	BRL	10

(Continued)

EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 2

Sample ID

ANALYTICAL
BLANK

PSI Lab #

1W-BNABK-101894

Compound Name	Concentration ppb, (ug/L)	Rpt Limits ppb, (ug/L)
Endosulfan sulfate	BRL	10
Endrin aldehyde	BRL	10
Fluoranthene	BRL	10
Fluorene	BRL	10
Heptachlor	BRL	100
Heptachlor epoxide	BRL	10
Hexachlorobenzene	BRL	10
Hexachlorobutadiene	BRL	10
Hexachloroethane	BRL	10
Indeno (1,2,3-cd) pyrene	BRL	10
Isophorone	BRL	10
Naphthalene	BRL	10
Nitrobenzene	BRL	10
N-Nitrosodi-n-propylamine	BRL	10
PCB 1016	BRL	10
PCB 1221	BRL	10
PCB 1232	BRL	10
PCB 1242	BRL	10
PCB 1248	BRL	10
PCB 1254	BRL	10
PCB 1260	BRL	10
Phenanthrene	BRL	10
Pyrene	BRL	10
Toxaphene	BRL	100
1,2,4-Trichlorobenzene	BRL	10
4-Chloro-3-methylphenol	BRL	10
2-Chlorophenol	BRL	10
2,4-Dichlorophenol	BRL	10
2,4-Dimethylphenol	BRL	10
2,4-Dinitrophenol	BRL	50
2-Methyl-4,6-dinitrophenol	BRL	50
2-Nitrophenol	BRL	10
4-Nitrophenol	BRL	50
Pentachlorophenol	BRL	50

(Continued)

EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 3

Sample ID	ANALYTICAL BLANK
PSI Lab #	1W-BNABK-101894

Compound Name	Concentration ppb, (ug/L)	Rpt Limits ppb, (ug/L)
Phenol	BRL	10
2,4,6-Trichlorophenol	BRL	10

BRL = Below Reporting Limits

Dilution Factor: x1

Extracted:	10/18/94 PG/JC
Analyzed:	10/20/94 DA

SURROGATE RECOVERIES, %

Nitrobenzene-d5	83
2-Fluorobiphenyl	86
Terphenyl-d14	79
2-Fluorophenol	78
Phenol-d6	72
2,4,6-Tribromophenol	63

EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 1

Sample ID	MATRIX SPIKE
PSI Lab #	1W-BNAS-101894

Compound Name	Recovery (%)
Acenaphthene	92
Acenaphthylene	
Anthracene	
Aldrin	
Benzo (a) anthracene	
Benzo (b) fluoranthene	
Benzo (k) fluoranthene	
Benzo (g,h,i) perylene	
Benzo (a) pyrene	
Benzyl butyl phthalate	
Beta-BHC	
Delta-BHC	
Bis (2-Chloroethoxy) methane	
Bis (2-Chloroethyl) ether	
Bis (2-Chloroisopropyl) ether	
Bis (2-ethyl hexyl) phthalate	
4-Bromophenyl phenyl ether	
Chlordane	
2-Chloronaphthalene	
4-Chlorophenyl phenyl ether	
Chrysene	
4,4'-DDD	
4,4'-DDE	
4,4'-DDT	
Dibenzo (a,h) anthracene	
Di-n-butylphthalate	70
1,3-Dichlorobenzene	
1,2-Dichlorobenzene	
1,4-Dichlorobenzene	82
3,3'-Dichlorobenzidine	
Dieldrin	
Diethyl phthalate	
Dimethyl phthalate	
2,4-Dinitrotoluene	105
2,6-Dinitrotoluene	
Di-n-octylphthalate	

(Continued)

EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 2

Sample ID	MATRIX SPIKE
PSI Lab #	1W-BNAS-101894

Compound Name	Recovery (%)
Endosulfan sulfate	
Endrin aldehyde	
Fluoranthene	
Fluorene	
Heptachlor	
Heptachlor epoxide	
Hexachlorobenzene	
Hexachlorobutadiene	
Hexachloroethane	
Indeno (1,2,3-cd) pyrene	
Isophorone	
Naphthalene	
Nitrobenzene	
N-Nitrosodi-n-propylamine	77
PCB 1016	
PCB 1221	
PCB 1232	
PCB 1242	
PCB 1248	
PCB 1254	
PCB 1260	
Phenanthrene	
Pyrene	87
Toxaphene	
1,2,4-Trichlorobenzene	88
4-Chloro-3-methylphenol	70
2-Chlorophenol	70
2,4-Dichlorophenol	
2,4-Dimethylphenol	
2,4-Dinitrophenol	
2-Methyl-4,6-dinitrophenol	
2-Nitrophenol	
4-Nitrophenol	58
Pentachlorophenol	80

(Continued)

PSI/ST. PETERSBURG
214-2P090-437-O
Page 19 of 19

EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 3

Sample ID	MATRIX SPIKE
PSI Lab #	1W-BNAS-101894

Compound Name	Recovery (%)
Phenol	63
2,4,6-Trichlorophenol	

Extracted:	10/18/94 PG/JC
Analyzed:	10/20/94 DA

SURROGATE RECOVERIES, %

Nitrobenzene-d5	86
2-Fluorobiphenyl	89
Terphenyl-d14	86
2-Fluorophenol	74
Phenol-d6	63
2,4,6-Tribromophenol	71

15.

OCT 25 '94 04:04PM PSI DEER PARK ANALYTICAL

PROJECT NAME 10088		REPORT TO A. Ebbert		INVOICE TO	
PROJECT NUMBER		PROJECT MANAGER		ADDRESS	
P.O. NUMBER		ADDRESS 1770 Commerce Ave N		CITY / STATE / ZIP St Pete, FL 33716	
REQUIRED DUE DATE 10-25-94		CITY / STATE / ZIP		ATTENTION S.M.C.	
SAMPLES TO LAB VIA Fed Ex		TELEPHONE (813) 579-4464		TELEPHONE	
NUMBER OF COOLERS		FAX 577-6984			
TRANSFER NUMBER		RELINQUISHED BY DATE / TIME		ACCEPTED BY DATE / TIME	
SEAL NUMBER		(U.S. MAIL OVERNIGHT)		LABORATORY USE ONLY	
FIELD SERVICES		Y/N \$		SHIPPING	
Y/N \$		LABORATORY USE ONLY		ANALYTICAL DUE DATE	
REPORT DUE DATE		INORGANIC Sect _____ Row _____		ORGANIC Sect _____ Row _____	
PSI PROJECT NAME		PSI PROJECT #		PSI BATCH #	
PARAMETER LIST		NUMBER OF CONTAINERS			
SAMPLE IDENTIFICATION		DATE / TIME		COMP-C GRAB-B	
SOIL-S WATER-W WASTE-X		LAB USE ONLY		LAB NUMBER	
10088-01		W		410574	
10088-02		W		410575	
10088-03		W		410576	
10088-04		W		410577	
10088-05		W		410578	

ADDITIONAL REMARKS

SAMPLER'S SIGNATURE



Professional Service Industries, Inc.

ANALYTICAL REPORT

TESTED FOR: PROFESSIONAL SERVICE
INDUSTRIES, INC.
1770 Commerce Ave. N.
St. Petersburg, FL 33716

PSI REPORT # 214-2P090-444-O
CLW #10106

ATTN: ANTHONY FEBBRARO

DATE: OCTOBER 28, 1994

PROJECT: Manatex County Park & Recreation;
#378-4I058
DATE RECEIVED: October 19, 1994
SAMPLE MATRIX: Water
METHODOLOGY EMPLOYED: EPA 624, EPA 625

<u>PSI LAB #</u>		<u>CLIENT SAMPLE ID</u>
410761	-	MW-3, 10/13/94
410762	-	MW-06, 10/14/94, 1630
410763	-	MW-07, 10/14/94, 1245
410764	-	MW-08, 10/14/94, 1430
410765	-	MW-09, 10/14/94, 1400

Results Begin on Page Two

DILUTION FACTOR CRITERIA

Whenever one or more components in a sample are in excess of the method's calibration, dilution is appropriate. Accordingly, the new detection limit = Dilution Factor x Method Detection Limit.

Xinhua Chen
Respectfully submitted,
XINHUA CHEN, Ph.D., ORGANICS SUPERVISOR

10/28/94

PROFESSIONAL SERVICE INDUSTRIES, INC.

EPA 624 PURGEABLES - part 1

Sample ID	MW-3 10/13/94	MW-06 10/14/94	MW-07 10/14/94	
PSI Lab #	410761	410762	410763	
Compound Name	Concentration ppb, (ug/L)			Rpt Limits ppb, (ug/L)
Benzene	BRL	BRL	BRL	10
Bromodichloromethane	BRL	BRL	BRL	10
Bromoform	BRL	BRL	BRL	10
Bromomethane	BRL	BRL	BRL	10
Carbon Tetrachloride	BRL	BRL	BRL	10
Chlorobenzene	BRL	BRL	11	10
Chloroethane	BRL	BRL	BRL	10
2-Chloroethyl vinyl ether	BRL	BRL	BRL	10
Chloromethane	BRL	BRL	BRL	10
Chloroform	BRL	BRL	BRL	10
Dibromochloromethane	BRL	BRL	BRL	10
1,2-Dichlorobenzene	BRL	BRL	BRL	10
1,3-Dichlorobenzene	BRL	BRL	BRL	10
1,4-Dichlorobenzene	BRL	BRL	BRL	10
1,1-Dichloroethane	BRL	BRL	BRL	10
1,2-Dichloroethane	BRL	BRL	BRL	10
1,1-Dichloroethene	BRL	BRL	BRL	10
Trans-1,2-Dichloroethene	BRL	BRL	BRL	10
1,2-Dichloropropane	BRL	BRL	BRL	10
cis-1,3-Dichloropropene	BRL	BRL	BRL	10
Trans-1,3-Dichloropropene	BRL	BRL	BRL	10
Ethyl benzene	BRL	BRL	BRL	10
Methylene chloride	24	BRL	BRL	10
1,1,2,2-Tetrachloroethane	BRL	BRL	BRL	10
Tetrachloroethene	BRL	BRL	BRL	10
Toluene	BRL	BRL	BRL	10

(Continued)

EPA 624 PURGEABLES - part 2

Sample ID	MW-3 10/13/94	MW-06 10/14/94	MW-07 10/14/94
PSI Lab #	410761	410762	410763

Compound Name	Concentration ppb, (ug/L)			Rpt Limits ppb, (ug/L)
1,1,1-Trichloroethane	BRL	BRL	BRL	10
1,1,2-Trichloroethane	BRL	BRL	BRL	10
Trichloroethene	BRL	BRL	BRL	10
Trichlorofluoromethane	BRL	BRL	BRL	10
Vinyl Chloride	BRL	BRL	BRL	10

BRL = Below Reporting Limits

Dilution Factor:	x1	x1	x1
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Received:	10/19/94	10/19/94	10/19/94
Analyzed:	10/26/94 KO	10/27/94 KO	10/27/94 KO

SURROGATE RECOVERIES, %

1,2-Dichloroethane-d4	95	105	103
Toluene-d8	96	112	93
4-Bromofluorobenzene	103	92	93

EPA 624 PURGEABLES - part 1

Sample ID	MW-08 10/14/94	MW-09 10/14/94
PSI Lab #	410764	410765

Compound Name	Concentration ppb, (ug/L)	Rpt Limits ppb, (ug/L)
Benzene	BRL	10
Bromodichloromethane	BRL	10
Bromoform	BRL	10
Bromomethane	BRL	10
Carbon Tetrachloride	BRL	10
Chlorobenzene	BRL	10
Chloroethane	BRL	10
2-Chloroethyl vinyl ether	BRL	10
Chloromethane	BRL	10
Chloroform	BRL	10
Dibromochloromethane	BRL	10
1,2-Dichlorobenzene	BRL	10
1,3-Dichlorobenzene	BRL	10
1,4-Dichlorobenzene	BRL	10
1,1-Dichloroethane	BRL	10
1,2-Dichloroethane	BRL	10
1,1-Dichloroethene	BRL	10
Trans-1,2-Dichloroethene	BRL	10
1,2-Dichloropropane	BRL	10
cis-1,3-Dichloropropene	BRL	10
Trans-1,3-Dichloropropene	BRL	10
Ethyl benzene	BRL	10
Methylene chloride	BRL	10
1,1,2,2-Tetrachloroethane	BRL	10
Tetrachloroethene	BRL	10
Toluene	BRL	10

(Continued)

EPA 624 PURGEABLES - part 2

Sample ID	MW-08 10/14/94	MW-09 10/14/94
PSI Lab #	410764	410765

Compound Name	Concentration ppb, (ug/L)		Rpt Limits ppb, (ug/L)
1,1,1-Trichloroethane	BRL	BRL	10
1,1,2-Trichloroethane	BRL	BRL	10
Trichloroethene	BRL	BRL	10
Trichlorofluoromethane	BRL	BRL	10
Vinyl Chloride	BRL	BRL	10

BRL = Below Reporting Limits

Dilution Factor:	x1	x1
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Received:	10/19/94	10/19/94
Analyzed:	10/27/94 KO	10/27/94 KO

SURROGATE RECOVERIES, %

1,2-Dichloroethane-d4	105	106
Toluene-d8	104	109
4-Bromofluorobenzene	95	94

EPA 624 PURGEABLES - part 1

Sample ID	ANALYTICAL BLANK		ANALYTICAL BLANK
PSI Lab #	1W-VBK-102794-GCMS		1W-VBK102694-GCMS
Compound Name	Concentration ppb, (ug/L)		Rpt Limits ppb, (ug/L)
Benzene	BRL	BRL	10
Bromodichloromethane	BRL	BRL	10
Bromoform	BRL	BRL	10
Bromomethane	BRL	BRL	10
Carbon Tetrachloride	BRL	BRL	10
Chlorobenzene	BRL	BRL	10
Chloroethane	BRL	BRL	10
2-Chloroethyl vinyl ether	BRL	BRL	10
Chloromethane	BRL	BRL	10
Chloroform	BRL	BRL	10
Dibromochloromethane	BRL	BRL	10
1,2-Dichlorobenzene	BRL	BRL	10
1,3-Dichlorobenzene	BRL	BRL	10
1,4-Dichlorobenzene	BRL	BRL	10
1,1-Dichloroethane	BRL	BRL	10
1,2-Dichloroethane	BRL	BRL	10
1,1-Dichloroethene	BRL	BRL	10
Trans-1,2-Dichloroethene	BRL	BRL	10
1,2-Dichloropropane	BRL	BRL	10
cis-1,3-Dichloropropene	BRL	BRL	10
Trans-1,3-Dichloropropene	BRL	BRL	10
Ethyl benzene	BRL	BRL	10
Methylene chloride	BRL	BRL	10
1,1,2,2-Tetrachloroethane	BRL	BRL	10
Tetrachloroethene	BRL	BRL	10
Toluene	BRL	BRL	10

(Continued)

EPA 624 PURGEABLES - part 2

Sample ID	ANALYTICAL BLANK	ANALYTICAL BLANK
PSI Lab #	1W-VBK-102794-GCMS	1W-VBK102694-GCMS

Compound Name	Concentration ppb, (ug/L)	Rpt Limits ppb, (ug/L)
1,1,1-Trichloroethane	BRL	BRL 10
1,1,2-Trichloroethane	BRL	BRL 10
Trichloroethene	BRL	BRL 10
Trichlorofluoromethane	BRL	BRL 10
Vinyl Chloride	BRL	BRL 10

BRL = Below Reporting Limits

Dilution Factor: x1 x1

Analyzed:	10/27/94 KO	10/26/94 KO
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SURROGATE RECOVERIES, %

1,2-Dichloroethane-d4	100	97
Toluene-d8	103	99
4-Bromofluorobenzene	94	107

EPA 624 PURGEABLES - part 1

Sample ID	MATRIX SPIKE	MATRIX SPIKE
PSI Lab #	1W-VMS-102694-GCMS	1W-VMS102794-GCMS

Compound Name	Recovery (%)	
Benzene	89	103
Bromodichloromethane	91	113
Bromoform	92	105
Bromomethane	61	112
Carbon Tetrachloride	92	
Chlorobenzene	87	102
Chloroethane	68	
2-Chloroethyl vinyl ether		
Chloromethane	114	58
Chloroform	83	119
Dibromochloromethane	92	
1,2-Dichlorobenzene	89	103
1,3-Dichlorobenzene	86	103
1,4-Dichlorobenzene	91	107
1,1-Dichloroethane	84	
1,2-Dichloroethane	90	107
1,1-Dichloroethene		
Trans-1,2-Dichloroethene	80	119
1,2-Dichloropropane	93	117
cis-1,3-Dichloropropene		98
Trans-1,3-Dichloropropene		
Ethyl benzene	88	103
Methylene chloride	126	108
1,1,2,2-Tetrachloroethane	89	108
Tetrachloroethene	85	100
Toluene	91	112

(Continued)

EPA 624 PURGEABLES - part 2

Sample ID	MATRIX SPIKE	MATRIX SPIKE
PSI Lab #	1W-VMS-102694-GCMS	1W-VMS102794-GCMS

Compound Name	Recovery (%)	
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1,1,1-Trichloroethane		
1,1,2-Trichloroethane	92	114
Trichloroethene	88	106
Trichlorofluoromethane		116
Vinyl Chloride	70	97

Analyzed:	10/26/94 KO	10/27/94 KO
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SURROGATE RECOVERIES, %

1,2-Dichloroethane-d4	103	102
Toluene-d8	98	104
4-Bromofluorobenzene	102	91

EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 1

Sample ID	MW-06 10/14/94	MW-07 10/14/94	MW-08 10/14/94	
PSI Lab #	410762	410763	410764	
Compound Name.	Concentration ppb, (ug/L)			Rpt Limits ppb, (ug/L)
Acenaphthene	BRL	BRL	BRL	10
Acenaphthylene	BRL	BRL	BRL	10
Anthracene	BRL	BRL	BRL	10
Aldrin	BRL	BRL	BRL	10
Benzo (a) anthracene	BRL	BRL	BRL	10
Benzo (b) fluoranthene	BRL	BRL	BRL	10
Benzo (k) fluoranthene	BRL	BRL	BRL	10
Benzo (g,h,i) perylene	BRL	BRL	BRL	10
Benzo (a) pyrene	BRL	BRL	BRL	10
Benzyl butyl phthalate	BRL	BRL	BRL	10
Beta-BHC	BRL	BRL	BRL	10
Delta-BHC	BRL	BRL	BRL	10
Bis (2-Chloroethoxy) methane	BRL	BRL	BRL	10
Bis (2-Chloroethyl) ether	BRL	BRL	BRL	10
Bis (2-Chloroisopropyl) ether	BRL	BRL	BRL	10
Bis (2-ethyl hexyl) phthalate	BRL	BRL	BRL	10
4-Bromophenyl phenyl ether	BRL	BRL	BRL	10
Chlordane	BRL	BRL	BRL	50
2-Chloronaphthalene	BRL	BRL	BRL	10
4-Chlorophenyl phenyl ether	BRL	BRL	BRL	10
Chrysene	BRL	BRL	BRL	10
4,4'-DDD	BRL	BRL	BRL	10
4,4'-DDE	BRL	BRL	BRL	10
4,4'-DDT	BRL	BRL	BRL	10
Dibenzo (a,h) anthracene	BRL	BRL	BRL	10
Di-n-butylphthalate	130	BRL	BRL	10
1,3-Dichlorobenzene	BRL	BRL	BRL	10
1,2-Dichlorobenzene	BRL	BRL	BRL	10
1,4-Dichlorobenzene	BRL	BRL	BRL	10
3,3'-Dichlorobenzidine	BRL	BRL	BRL	10
Dieldrin	BRL	BRL	BRL	10
Diethyl phthalate	BRL	BRL	BRL	10
Dimethyl phthalate	BRL	BRL	BRL	10
2,4-Dinitrotoluene	BRL	BRL	BRL	10
2,6-Dinitrotoluene	BRL	BRL	BRL	10
Di-n-octylphthalate	BRL	BRL	BRL	10

(Continued)

EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 2

Sample ID	MW-06 10/14/94	MW-07 10/14/94	MW-08 10/14/94
PSI Lab #	410762	410763	410764

Compound Name	Concentration ppb, (ug/L)			Rpt Limits ppb, (ug/L)
Endosulfan sulfate	BRL	BRL	BRL	10
Endrin aldehyde	BRL	BRL	BRL	10
Fluoranthene	BRL	BRL	BRL	10
Fluorene	BRL	BRL	BRL	10
Heptachlor	BRL	BRL	BRL	100
Heptachlor epoxide	BRL	BRL	BRL	10
Hexachlorobenzene	BRL	BRL	BRL	10
Hexachlorobutadiene	BRL	BRL	BRL	10
Hexachloroethane	BRL	BRL	BRL	10
Indeno (1,2,3-cd) pyrene	BRL	BRL	BRL	10
Isophorone	BRL	BRL	BRL	10
Naphthalene	BRL	BRL	BRL	10
Nitrobenzene	BRL	BRL	BRL	10
N-Nitrosodi-n-propylamine	BRL	BRL	BRL	10
PCB 1016	BRL	BRL	BRL	10
PCB 1221	BRL	BRL	BRL	10
PCB 1232	BRL	BRL	BRL	10
PCB 1242	BRL	BRL	BRL	10
PCB 1248	BRL	BRL	BRL	10
PCB 1254	BRL	BRL	BRL	10
PCB 1260	BRL	BRL	BRL	10
Phenanthrene	BRL	BRL	BRL	10
Pyrene	BRL	BRL	BRL	10
Toxaphene	BRL	BRL	BRL	100
1,2,4-Trichlorobenzene	BRL	BRL	BRL	10
4-Chloro-3-methylphenol	BRL	BRL	BRL	10
2-Chlorophenol	BRL	BRL	BRL	10
2,4-Dichlorophenol	BRL	BRL	BRL	10
2,4-Dimethylphenol	BRL	BRL	BRL	10
2,4-Dinitrophenol	BRL	BRL	BRL	50
2-Methyl-4,6-dinitrophenol	BRL	BRL	BRL	50
2-Nitrophenol	BRL	BRL	BRL	10
4-Nitrophenol	BRL	BRL	BRL	50
Pentachlorophenol	BRL	BRL	BRL	50

(Continued)

EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 3

Sample ID	MW-06 10/14/94	MW-07 10/14/94	MW-08 10/14/94
PSI Lab #	410762	410763	410764

Compound Name	Concentration ppb, (ug/L)			Rpt Limits ppb, (ug/L)
Phenol	68	BRL	BRL	10
2,4,6-Trichlorophenol	BRL	BRL	BRL	10

BRL = Below Reporting Limits

Dilution Factor:	x1	x1	x1
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Received:	10/19/94	10/19/94	10/19/94
Extracted:	10/19/94	PG/10/19/94 JC	PG/10/19/94 JC
Analyzed:	10/27/94	DA 10/27/94	DA 10/27/94

SURROGATE RECOVERIES, %

Nitrobenzene-d5	119	125	103
2-Fluorobiphenyl	105	77	102
Terphenyl-d14	86	79	125
2-Fluorophenol	88	83	46
Phenol-d6	85	71	63
2,4,6-Tribromophenol	92	71	72

EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 1

Sample ID	MW-09 10/14/94	ANALYTICAL BLANK
PSI Lab #	410765	1W-BNABK-101994
Compound Name	Concentration ppb, (ug/L)	Rpt Limits ppb, (ug/L)
Acenaphthene	BRL	10
Acenaphthylene	BRL	10
Anthracene	BRL	10
Aldrin	BRL	10
Benzo (a) anthracene	BRL	10
Benzo (b) fluoranthene	BRL	10
Benzo (k) fluoranthene	BRL	10
Benzo (g,h,i) perylene	BRL	10
Benzo (a) pyrene	BRL	10
Benzyl butyl phthalate	BRL	10
Beta-BHC	BRL	10
Delta-BHC	BRL	10
Bis (2-Chloroethoxy) methane	BRL	10
Bis (2-Chloroethyl) ether	BRL	10
Bis (2-Chloroisopropyl) ether	BRL	10
Bis (2-ethyl hexyl) phthalate	BRL	10
4-Bromophenyl phenyl ether	BRL	10
Chlordane	BRL	50
2-Chloronaphthalene	BRL	10
4-Chlorophenyl phenyl ether	BRL	10
Chrysene	BRL	10
4,4'-DDD	BRL	10
4,4'-DDE	BRL	10
4,4'-DDT	BRL	10
Dibenzo (a,h) anthracene	BRL	10
Di-n-butylphthalate	BRL	10
1,3-Dichlorobenzene	BRL	10
1,2-Dichlorobenzene	BRL	10
1,4-Dichlorobenzene	BRL	10
3,3'-Dichlorobenzidine	BRL	10
Dieldrin	BRL	10
Diethyl phthalate	BRL	10
Dimethyl phthalate	BRL	10
2,4-Dinitrotoluene	BRL	10
2,6-Dinitrotoluene	BRL	10
Di-n-octylphthalate	BRL	10

(Continued)

EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 2

Sample ID	MW-09 10/14/94	ANALYTICAL BLANK
PSI Lab #	410765	1W-BNABK-101994
Compound Name	Concentration ppb, (ug/L)	Rpt Limits ppb, (ug/L)
Endosulfan sulfate	BRL	BRL 10
Endrin aldehyde	BRL	BRL 10
Fluoranthene	BRL	BRL 10
Fluorene	BRL	BRL 10
Heptachlor	BRL	BRL 100
Heptachlor epoxide	BRL	BRL 10
Hexachlorobenzene	BRL	BRL 10
Hexachlorobutadiene	BRL	BRL 10
Hexachloroethane	BRL	BRL 10
Indeno (1,2,3-cd) pyrene	BRL	BRL 10
Isophorone	BRL	BRL 10
Naphthalene	BRL	BRL 10
Nitrobenzene	BRL	BRL 10
N-Nitrosodi-n-propylamine	BRL	BRL 10
PCB 1016	BRL	BRL 10
PCB 1221	BRL	BRL 10
PCB 1232	BRL	BRL 10
PCB 1242	BRL	BRL 10
PCB 1248	BRL	BRL 10
PCB 1254	BRL	BRL 10
PCB 1260	BRL	BRL 10
Phenanthrene	BRL	BRL 10
Pyrene	BRL	BRL 10
Toxaphene	BRL	BRL 100
1,2,4-Trichlorobenzene	BRL	BRL 10
4-Chloro-3-methylphenol	BRL	BRL 10
2-Chlorophenol	BRL	BRL 10
2,4-Dichlorophenol	BRL	BRL 10
2,4-Dimethylphenol	BRL	BRL 10
2,4-Dinitrophenol	BRL	BRL 50
2-Methyl-4,6-dinitrophenol	BRL	BRL 50
2-Nitrophenol	BRL	BRL 10
4-Nitrophenol	BRL	BRL 50
Pentachlorophenol	BRL	BRL 50

(Continued)

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EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 3

Sample ID	MW-09 10/14/94	ANALYTICAL BLANK
PSI Lab #	410765	1W-BNABK-101994

Compound Name	Concentration ppb, (ug/L)	Rpt Limits ppb, (ug/L)
Phenol	BRL	10
2,4,6-Trichlorophenol	BRL	10

BRL = Below Reporting Limits

Dilution Factor:	x1	x1
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Received:	10/19/94	
Extracted:	10/19/94 PG/JC	10/19/94 PG/JC
Analyzed:	10/28/94 DA	10/28/94 DA

SURROGATE RECOVERIES, %

Nitrobenzene-d5	109	109
2-Fluorobiphenyl	95	88
Terphenyl-d14	86	84
2-Fluorophenol	66	77
Phenol-d6	63	79
2,4,6-Tribromophenol	88	73

EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 1

Sample ID	MATRIX SPIKE
PSI Lab #	1W-BNAS-101994

Compound Name	Recovery (%)
Acenaphthene	85
Acenaphthylene	
Anthracene	
Aldrin	
Benzo (a) anthracene	
Benzo (b) fluoranthene	
Benzo (k) fluoranthene	
Benzo (g,h,i) perylene	
Benzo (a) pyrene	
Benzyl butyl phthalate	
Beta-BHC	
Delta-BHC	
Bis (2-Chloroethoxy) methane	
Bis (2-Chloroethyl) ether	
Bis (2-Chloroisopropyl) ether	
Bis (2-ethyl hexyl) phthalate	
4-Bromophenyl phenyl ether	
Chlordane	
2-Chloronaphthalene	
4-Chlorophenyl phenyl ether	
Chrysene	
4,4'-DDD	
4,4'-DDE	
4,4'-DDT	
Dibenzo (a,h) anthracene	
Di-n-butylphthalate	105
1,3-Dichlorobenzene	
1,2-Dichlorobenzene	
1,4-Dichlorobenzene	75
3,3'-Dichlorobenzidine	
Dieldrin	
Diethyl phthalate	
Dimethyl phthalate	
2,4-Dinitrotoluene	93
2,6-Dinitrotoluene	
Di-n-octylphthalate	

(Continued)

EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 2

Sample ID	MATRIX SPIKE
PSI Lab #	1W-BNAS-101994

Compound Name	Recovery (%)
Endosulfan sulfate	
Endrin aldehyde	
Fluoranthene	
Fluorene	
Heptachlor	
Heptachlor epoxide	
Hexachlorobenzene	
Hexachlorobutadiene	
Hexachloroethane	
Indeno (1,2,3-cd) pyrene	
Isophorone	
Naphthalene	
Nitrobenzene	
N-Nitrosodi-n-propylamine	101
PCB 1016	
PCB 1221	
PCB 1232	
PCB 1242	
PCB 1248	
PCB 1254	
PCB 1260	
Phenanthrene	
Pyrene	86
Toxaphene	
1,2,4-Trichlorobenzene	72
4-Chloro-3-methylphenol	67
2-Chlorophenol	63
2,4-Dichlorophenol	
2,4-Dimethylphenol	
2,4-Dinitrophenol	
2-Methyl-4,6-dinitrophenol	
2-Nitrophenol	
4-Nitrophenol	91
Pentachlorophenol	132

(Continued)

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EPA 625 BASE NEUTRAL EXTRACTABLES AND ACID EXTRACTABLES - part 3

Sample ID	MATRIX SPIKE
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PSI Lab #	1W-BNAS-101994
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Compound Name	Recovery (%)
Phenol	61
2,4,6-Trichlorophenol	

Extracted:	10/19/94 PG/JF
Analyzed:	10/28/94 XC

SURROGATE RECOVERIES, %

Nitrobenzene-d5	102
2-Fluorobiphenyl	87
Terphenyl-d14	83
2-Fluorophenol	63
Phenol-d6	65
2,4,6-Tribromophenol	88

To DEER PARK

CHAIN OF CUSTODY RECORD



Professional Service Industries, Inc.

PROJECT NAME MANATEE COUNTY Parks + Recreation		REPORT TO Clw Analytical		INVOICE TO	
PROJECT NUMBER 378-41058		PROJECT MANAGER Anthony Fernandez		ADDRESS	
P.O. NUMBER 10106		ADDRESS		CITY / STATE / ZIP STAMP	
REQUIRED DUE DATE 10/26/94		CITY / STATE / ZIP		ATTENTION	
SAMPLES TO LAB VIA Feb Exp		TELEPHONE 813-579-4464		TELEPHONE	
NUMBER OF COOLERS 1		FAX Fax +		VERBAL FAX	
TRANSFER NUMBER		RELINQUISHED BY PSI		DATE / TIME	
		ACCEPTED BY Churruar		DATE / TIME 10-19-94/3:40pm	
		SEAL NUMBER			
LABORATORY USE ONLY					
SAMPLE CUSTODIAN		DATE / TIME			
SAMPLE IDENTIFICATION		DATE / TIME	COMP-C GRAB-B	SOIL-S WATER-W WASTE-X	LAB USE ONLY LAB NUMBER
MW-3	10/13	B	W	410761	2X
MW-06	10/14 16:30	B	W	410762	2X
MW-07	10/14 12:45	B	W	410763	2X
MW-08	10/14 2:30	B	W	410764	2X
MW-09	10/14 2:00	B	W	410765	2X

LABORATORY SUBMITTED TO:

☒ 6913 Hwy. 225
Deer Park, TX 77536
(713) 479-8307

☐ 4820 W. 15th Street
Lawrence, KS 66049
(800) 548-7901

☐ 6056 Unionton Road
Clearwater, FL 34620
(813) 531-1446

☐ 850 Poplar Street
Pittsburgh, PA 15220
(412) 922-4000

LABORATORY USE ONLY

ANALYTICAL DUE DATE

REPORT DUE DATE

INORGANIC

Sect _____ Row _____

ORGANIC

Sect _____ Row _____

PSI PROJECT NAME

PSI PROJECT #

PSI BATCH #

PARAMETER LIST

NUMBER OF CONTAINERS

EVA 624
EVA 625
Asbestos
Barium
Thallium

ADDITIONAL REMARKS

All Direct Parties

SAMPLES SIGNATURE



Professional Service Industries, Inc.

ANALYTICAL REPORT

TESTED FOR: PSI, Inc.
Environmental Department
4400 - 140th Avenue North
Suite 100
Clearwater, Florida 34622

PROJECT: Manatee County Parks & Recreation
378-41058

SAMPLE DATE: October 13, 1994

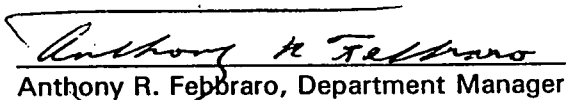
ATTENTION: Jim Watkins

DATE: October 26, 1994

OUR REPORT NUMBER: 385-4P025-0054

Attached, please find our analytical report for samples described on the Chain-of-Custody (C-O-C). Please note that our laboratory has assigned unique sample numbers to each of your samples as shown on the attached C-O-C. Please reference our report number and direct any questions on this report to the individual designated below or to one of our Customer Service Representatives.

Reviewed By,


Anthony R. Febraro, Department Manager

Respectfully submitted,
Professional Service Industries, Inc.

HRS #84218
HRS #E84388

cc: Kathleen Theisen

/dlr

LAB #: 10088-01
Client ID: MW-1

PCB'S

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
PCB 1016	<0.5	ug/l	EPA 608	0.5/1
PCB 1221	<0.5	ug/l	EPA 608	0.5/1
PCB 1232	<0.5	ug/l	EPA 608	0.5/1
PCB 1242	<0.5	ug/l	EPA 608	0.5/1
PCB 1248	<0.5	ug/l	EPA 608	0.5/1
PCB 1254	<0.5	ug/l	EPA 608	0.5/1
PCB 1260	<0.5	ug/l	EPA 608	0.5/1

Extraction Date:
10/18/94
Analysis Date:
10/24/94
Analyst: SP

NUTRIENT ANALYSES

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Cyanide	<0.05	mg/l	EPA 335.2	10/26/94	MC	0.05

METALS ANALYSIS

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Arsenic	0.006	mg/l	EPA 206.2	10/19/94	CP	0.005
Total Barium	<0.200	mg/l	EPA 208.1	10/20/94	CP	0.200
Total Cadmium	1.01	ug/l	EPA 213.2	10/25/94	CP	0.800
Total Chromium	<0.050	mg/l	EPA 218.1	10/18/94	CP	0.050
Total Lead	<5.00	ug/l	EPA 239.2	10/25/94	CP	5.00
Total Mercury	<0.001	mg/l	EPA 245.1	10/24/94	CP	0.001
Total Nickel	<0.050	mg/l	EPA 249.1	10/20/94	CP	0.050
Total Selenium	<0.005	mg/l	EPA 270.2	10/19/94	CP	0.005
Total Silver	<0.020	mg/l	EPA 272.1	10/20/94	CP	0.020
Total Zinc	<0.010	mg/l	EPA 289.1	10/20/94	CP	0.010



LAB #: 10088-02
Client ID: MW-2

PCB'S

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
PCB 1016	<0.5	ug/l	EPA 608	0.5/1
PCB 1221	<0.5	ug/l	EPA 608	0.5/1
PCB 1232	<0.5	ug/l	EPA 608	0.5/1
PCB 1242	<0.5	ug/l	EPA 608	0.5/1
PCB 1248	<0.5	ug/l	EPA 608	0.5/1
PCB 1254	<0.5	ug/l	EPA 608	0.5/1
PCB 1260	<0.5	ug/l	EPA 608	0.5/1

Extraction Date:
10/18/94
Analysis Date:
10/24/94
Analyst: SP

NUTRIENT ANALYSES

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Cyanide	<0.05	mg/l	EPA 335.2	10/26/94	MC	0.05

METALS ANALYSIS

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Arsenic	0.078	mg/l	EPA 206.2	10/19/94	CP	0.005
Total Barium	<0.200	mg/l	EPA 208.1	10/20/94	CP	0.200
Total Cadmium	<0.800	ug/l	EPA 213.2	10/25/94	CP	0.800
Total Chromium	0.218	mg/l	EPA 218.1	10/18/94	CP	0.050
Total Lead	<5.00	ug/l	EPA 239.2	10/25/94	CP	5.00
Total Mercury	0.001	mg/l	EPA 245.1	10/24/94	CP	0.001
Total Nickel	0.111	mg/l	EPA 249.1	10/20/94	CP	0.050
Total Selenium	<0.005	mg/l	EPA 270.2	10/19/94	CP	0.005
Total Silver	<0.020	mg/l	EPA 272.1	10/20/94	CP	0.020
Total Zinc	1.96	mg/l	EPA 289.1	10/20/94	CP	0.010



LAB #: 10088-03
Client ID: MW-3

PCB'S

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
PCB 1016	<0.5	ug/l	EPA 608	0.5/1
PCB 1221	<0.5	ug/l	EPA 608	0.5/1
PCB 1232	<0.5	ug/l	EPA 608	0.5/1
PCB 1242	<0.5	ug/l	EPA 608	0.5/1
PCB 1248	<0.5	ug/l	EPA 608	0.5/1
PCB 1254	<0.5	ug/l	EPA 608	0.5/1
PCB 1260	<0.5	ug/l	EPA 608	0.5/1

-Extraction Date:
10/18/94
Analysis Date:
10/24/94
Analyst: SP

NUTRIENT ANALYSES

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Cyanide	<0.05	mg/l	EPA 335.2	10/26/94	MC	0.05

METALS ANALYSIS

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Arsenic	0.011	mg/l	EPA 206.2	10/19/94	CP	0.005
Total Barium	<0.200	mg/l	EPA 208.1	10/20/94	CP	0.200
Total Cadmium	<0.800	ug/l	EPA 213.2	10/25/94	CP	0.800
Total Chromium	<0.050	mg/l	EPA 218.1	10/18/94	CP	0.050
Total Lead	<5.00	ug/l	EPA 239.2	10/25/94	CP	5.00
Total Mercury	<0.001	mg/l	EPA 245.1	10/24/94	CP	0.001
Total Nickel	<0.050	mg/l	EPA 249.1	10/20/94	CP	0.050
Total Selenium	<0.005	mg/l	EPA 270.2	10/19/94	CP	0.005
Total Silver	<0.020	mg/l	EPA 272.1	10/20/94	CP	0.020
Total Zinc	0.164	mg/l	EPA 289.1	10/20/94	CP	0.010



LAB #: 10088-04
Client ID: MW-4

PCB'S

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
PCB 1016	<0.5	ug/l	EPA 608	0.5/1
PCB 1221	<0.5	ug/l	EPA 608	0.5/1
PCB 1232	<0.5	ug/l	EPA 608	0.5/1
PCB 1242	<0.5	ug/l	EPA 608	0.5/1
PCB 1248	<0.5	ug/l	EPA 608	0.5/1
PCB 1254	<0.5	ug/l	EPA 608	0.5/1
PCB 1260	<0.5	ug/l	EPA 608	0.5/1

Extraction Date:
10/18/94
Analysis Date:
10/24/94
Analyst: SP

NUTRIENT ANALYSES

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Cyanide	<0.05	mg/l	EPA 335.2	10/26/94	MC	0.05

METALS ANALYSIS

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Arsenic	0.054	mg/l	EPA 206.2	10/19/94	CP	0.005
Total Barium	<0.200	mg/l	EPA 208.1	10/20/94	CP	0.200
Total Cadmium	1.51	ug/l	EPA 213.2	10/25/94	CP	0.800
Total Chromium	<0.050	mg/l	EPA 218.1	10/18/94	CP	0.050
Total Lead	<5.00	ug/l	EPA 239.2	10/25/94	CP	5.00
Total Mercury	<0.001	mg/l	EPA 245.1	10/24/94	CP	0.001
Total Nickel	<0.050	mg/l	EPA 249.1	10/20/94	CP	0.050
Total Selenium	<0.005	mg/l	EPA 270.2	10/19/94	CP	0.005
Total Silver	<0.020	mg/l	EPA 272.1	10/20/94	CP	0.020
Total Zinc	0.619	mg/l	EPA 289.1	10/20/94	CP	0.010



LAB #: 10088-05
Client ID: MW-5

PCB'S

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
PCB 1016	<0.5	ug/l	EPA 608	0.5/1
PCB 1221	<0.5	ug/l	EPA 608	0.5/1
PCB 1232	<0.5	ug/l	EPA 608	0.5/1
PCB 1242	<0.5	ug/l	EPA 608	0.5/1
PCB 1248	<0.5	ug/l	EPA 608	0.5/1
PCB 1254	<0.5	ug/l	EPA 608	0.5/1
PCB 1260	<0.5	ug/l	EPA 608	0.5/1

Extraction Date:
10/18/94
Analysis Date:
10/24/94
Analyst: SP

NUTRIENT ANALYSES

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Cyanide	<0.05	mg/l	EPA 335.2	10/26/94	MC	0.05

METALS ANALYSIS

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL</u>
Total Arsenic	0.010	mg/l	EPA 206.2	10/19/94	CP	0.005
Total Barium	<0.200	mg/l	EPA 208.1	10/20/94	CP	0.200
Total Cadmium	<0.800	ug/l	EPA 213.2	10/25/94	CP	0.800
Total Chromium	<0.050	mg/l	EPA 218.1	10/18/94	CP	0.050
Total Lead	<5.00	ug/l	EPA 239.2	10/25/94	CP	5.00
Total Mercury	<0.001	mg/l	EPA 245.1	10/24/94	CP	0.001
Total Nickel	<0.050	mg/l	EPA 249.1	10/20/94	CP	0.050
Total Selenium	<0.005	mg/l	EPA 270.2	10/19/94	CP	0.005
Total Silver	<0.020	mg/l	EPA 272.1	10/20/94	CP	0.020
Total Zinc	0.042	mg/l	EPA 289.1	10/20/94	CP	0.010



QUALITY CONTROL DATA: ORGANIC ANALYTES

Matrix: Water

<u>Analyte</u>	<u>Lab Batch#</u>	<u>Analytical Blank</u>	<u>MDL</u>	<u>Units</u>	<u>QC %REC</u>	<u>Spike %REC</u>	<u>Dup %RPD</u>	<u>Method</u>
PCB 1016	AB1018	<0.5	0.5	ug/l				608
PCB 1221		<0.5	0.5	ug/l				608
PCB 1232		<0.5	0.5	ug/l				608
PCB 1242		<0.5	0.5	ug/l				608
PCB 1248		<0.5	0.5	ug/l				608
PCB 1254		<0.5	0.5	ug/l				608
PCB 1260		<0.5	0.5	ug/l		89		608

QUALITY CONTROL DATA: INORGANIC ANALYTES

Matrix: Water

<u>Analyte</u>	<u>Lab Batch#</u>	<u>Analytical Blank</u>	<u>MDL</u>	<u>Units</u>	<u>QC %REC</u>	<u>Spike %REC</u>	<u>Dup %RPD</u>	<u>Method</u>
Arsenic	AB1019	0.005	0.005	mg/l	92	90	0	206.2
Barium	AB1020	0.200	0.200	mg/l	94	83	0	208.1
Cadmium	AB1025	0.800	0.800	ug/l	103	103	0	213.2
Chromium	AB1018	0.050	0.050	mg/l	127	96	0	218.1
Lead	AB1025	5.00	5.00	mg/l	90	107	0	239.2
Mercury	AB1024	0.001	0.001	mg/l	74	125	0	245.1
Nickel	AB1020	0.050	0.050	mg/l	105	96	0	249.1
Selenium	AB1019	0.005	0.005	mg/l	100	104	0	270.2
Silver	AB1020	0.020	0.020	mg/l	86	82	0	272.1
Zinc	AB1020	0.010	0.010	mg/l	107	95	0	289.1

SURROGATE RECOVERY SUMMARY

Matrix: Water

<u>PSI LAB #</u>	<u>1-Bromo-2 -Dichloropropane (601/8010)</u>	<u>a,a,a-TFT (602/8020)</u>	<u>2,4,5,6-Tetrachloro m-xylene (608/8080)</u>	<u>Dibutyl Chlorendate (608/8080)</u>	<u>2-Fluorobiphenyl (610/8100)</u>	<u>Nitrobenzene (610/8100)</u>
10088-01				68		
10088-02				76		
10088-03				76		
10088-04				88		
10088-05				102		



CHAIN OF CUSTODY RECORD



Professional Service Industries, Inc.

PROJECT NAME <i>Monter County Parks & Recreation</i>		REPORT TO <i>Jim Watkins</i>		INVOICE TO	
PROJECT NUMBER <i>378-4058</i>		PROJECT MANAGER <i>Jim Watkins</i>		ADDRESS	
P.O. NUMBER		ADDRESS <i>PSI Center</i>		CITY / STATE / ZIP	
REQUIRED DUE DATE		CITY / STATE / ZIP		ATTENTION	
SAMPLES TO LAB VIA		TELEPHONE		TELEPHONE	
NUMBER OF COOLERS		FAX REPORT VIA		VERBAL FAX	
		U.S. MAIL/OVERNIGHT			
TRANSFER NUMBER	RELINQUISHED BY DATE / TIME	ACCEPTED BY DATE / TIME	SEAL NUMBER	LABORATORY USE ONLY	
	<i>10/13/94</i>	<i>10/13/94</i>	<i>1100</i>	FIELD SERVICES Y/N \$ SHIPPING Y/N \$	
				LABORATORY USE ONLY	
LABORATORY USE ONLY				ANALYTICAL DUE DATE <i>10-25-94</i>	
SAMPLE CUSTODIAN				REPORT DUE DATE	
DATE / TIME				INORGANIC Sect _____ Row _____	
				ORGANIC Sect _____ Row _____	
				PSI PROJECT NAME	
				PSI PROJECT # <i>40025-0054</i>	
				PSI BATCH #	
				PARAMETER LIST	
				<i>6024</i> <i>5-Vols</i> <i>Phenols</i> <i>PCBs</i> <i>Cyanide</i> <i>Metals</i>	
LABORATORY USE ONLY				NUMBER OF CONTAINERS	
SAMPLE IDENTIFICATION		DATE / TIME	COMP-C GRAB-B	SOIL-S WATER-W WASTE-X	LAB USE ONLY LAB NUMBER
<i>10088</i>					
<i>01</i>	<i>MW-1</i>	<i>10/13/94 1130</i>	<i>B</i>		<i>12</i>
<i>02</i>	<i>MW-2</i>	<i>1230</i>	<i>B</i>		<i>11</i>
<i>03</i>	<i>MW-3</i>	<i>2:00pm</i>	<i>B</i>		<i>11</i>
<i>04</i>	<i>MW-4</i>	<i>3:00pm</i>	<i>B</i>		<i>11</i>
<i>05</i>	<i>MW-5</i>	<i>1600</i>	<i>B</i>		<i>11</i>

ADDITIONAL REMARKS

SAMPLER'S SIGNATURE

APPENDIX A: NARRATIVE

LABORATORY PROJECT ID: 10088

INORGANIC

ORGANIC

A. SAMPLE RECEIPT

YES

NO

COMMENT

INIT.

1. C-O-C present & complete

L

—

—

BP

2. Samples match with C-O-C

L

—

—

BP

3. Temperature @ 4°C

✓

—

—

BP

4. Shuttle Seal Present

L

—

—

BP

5. Container Condition
Acceptable

L

—

—

BP

6. Other

—

—

—

—

B. GENERAL OBSERVATIONS

YES

NO

COMMENT

INIT.

1. Sediment

✓

—

—

CP

2. Headspace

—

✓

—

—

3. Appropriate Container

✓

—

—

—

4. Enough Sample

✓

—

—

—

5. Odor/Color (Describe)

✓

—

Turbid

—

6. Homogeneous

✓

—

—

—

7. MultiPhasic

—

—

—

—

8. Other

—

—

—

—

C. ANALYTICAL OBSERVATIONS

YES

NO

COMMENT

INIT.

1. Analyzed within
Holding times

✓

—

—

✓

2. Confirmation (Describe
MS, 2nd Column,
2nd Detection)

—

—

—

—

3. Matrix interferences

—

—

—

—

4. Other

—

—

—

—

D. GENERAL COMMENTS:

BY:

DATE:



Professional Service Industries, Inc.

ANALYTICAL REPORT

TESTED FOR: PSI/ST. PETERSBURG PROJECT: Manatee Co. Parks & Rec.
1770 Commerce Ave. North
Metropoint Centre
St. Petersburg, Fl 33716 PROJECT #: 378-4I058

P.O. #: 10106

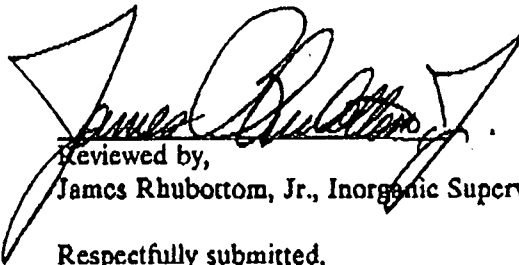
ATTENTION: Tony Febbraro

Lab# 410761 through #410765

DATE: October 25, 1994

OUR REPORT NUMBER# 214-2P090-444

Attached, please find our analytical report for samples described on the Chain-of-Custody (COC). Please note that our laboratory has assigned unique sample numbers to each of your samples as shown on the attached COC. Please reference our report number and direct any questions on this report to the individual designated below or to our Manager. Thank you for supporting our laboratory.


Reviewed by,
James Rhubottom, Jr., Inorganic Supervisor

Respectfully submitted,
PROFESSIONAL SERVICE INDUSTRIES, INC.

Client #: MW-06 Grab 10/14/94, 1630
Lab #: 410762

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL/DF</u>
T. Antimony	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1
T. Beryllium	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1
T. Thallium	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1

Client #: MW-07 Grab 10/14/94, 1245
Lab #: 410763

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL/DF</u>
T. Antimony	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1
T. Beryllium	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1
T. Thallium	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1

Client #: MW-08 Grab 10/14/94, 1430
Lab #: 410764

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL/DF</u>
T. Antimony	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1
T. Beryllium	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1
T. Thallium	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1

Client #: MW-09 Grab 10/14/94, 1400
Lab #: 410765

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL/DF</u>
T. Antimony	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1
T. Beryllium	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1
T. Thallium	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1

QUALITY CONTROL DATA: INORGANIC ANALYTES

<u>Analyte</u>	<u>Blank</u>	<u>MDL</u>	<u>Units</u>	<u>%RSD</u>	<u>%REC</u>	<u>Method</u>	<u>Matrix</u>
T. Antimony	<0.10	0.10	mg/L	0	91	EPA 200.7	Water
T. Beryllium	<0.10	0.10	mg/L	0	103	EPA 200.7	Water
T. Thallium	<0.10	0.10	mg/L	0	90	EPA 200.7	Water

SAMPLER'S SIGNATURE



Professional Service Industries, Inc.

ANALYTICAL REPORT

TESTED FOR: PSI, Inc.
Environmental Department
4400 - 140th Avenue North
Suite 100
Clearwater, Florida 34622

PROJECT: Manatee County Parks & Recreation
378-41058

SAMPLE DATE: October 13, 1994

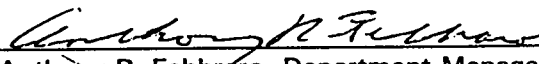
ATTENTION: Jim Watkins

DATE: November 2, 1994

OUR REPORT NUMBER: 385-4P025-0054
ADDENDUM

Attached, please find our analytical report for samples described on the Chain-of-Custody (C-O-C). Please note that our laboratory has assigned unique sample numbers to each of your samples as shown on the attached C-O-C. Please reference our report number and direct any questions on this report to the individual designated below or to one of our Customer Service Representatives.

Reviewed By,


Anthony R. Febbraro, Department Manager

Respectfully submitted,
Professional Service Industries, Inc.

HRS #84218
HRS #E84388

cc: Kathleen Theisen

/dlt

LAB #: 10088-01
Client ID: MW-1

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
2-Chloroethylvinyl Ether	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:

NA

Analysis Date:

11/01/94

Analyst: KT

PURGEABLE AROMATICS

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Benzene	<1	ug/l	EPA 602	1/1
Toluene	<1	ug/l	EPA 602	1/1
Ethylbenzene	<1	ug/l	EPA 602	1/1
Total Xylenes	<1	ug/l	EPA 602	1/1
Total VOAs	<1	ug/l	EPA 602	-/-
MTBE	<1	ug/l	EPA 602	1/1

Extraction Date:

NA

Analysis Date:

11/01/94

Analyst: KT



QUALITY CONTROL DATA: ORGANIC ANALYTES

Matrix: Water

Analyte	Lab Batch#	Analytical Blank	MDL	Units	QC %REC	Spike %REC	Dup %RPD	Method
Bromodichloromethane	AB1101	<1	1	ug/l	102	76		601
Bromoform		<1	1	ug/l	104	93		601
Bromomethane		<1	1	ug/l	103	94		601
Carbon Tetrachloride		<1	1	ug/l	89	93		601
Chlorobenzene		<1	1	ug/l	99	91		601
Chloroethane		<1	1	ug/l	96	91		601
2-Chloroethylvinyl Ether		<1	1	ug/l				601
Chloroform		<1	1	ug/l	95	96		601
Chloromethane		<1	1	ug/l	99	96		601
Dibromochloromethane		<1	1	ug/l	103	94		601
1,2-Dichlorobenzene		<1	1	ug/l	102	97		601
1,3-Dichlorobenzene		<1	1	ug/l	97	95		601
1,4-Dichlorobenzene		<1	1	ug/l	96	101		601
Dichlorodifluoromethane		<1	1	ug/l	90	81		601
1,1-Dichloroethane		<1	1	ug/l	96	93		601
1,2-Dichloroethane		<1	1	ug/l	92	90		601
1,1-Dichloroethene		<1	1	ug/l	93	96		601
trans-1,2-Dichloroethene		<1	1	ug/l	97	103		601
1,2-Dichloropropane		<1	1	ug/l	103	79		601
cis-1,3-Dichloropropene		<1	1	ug/l	100	91		601
trans-1,3-Dichloropropene		<1	1	ug/l	103	89		601
Methylene Chloride		<1	1	ug/l	93	94		601
1,1,2,2-Tetrachloroethane		<1	1	ug/l	101	92		601
Tetrachloroethene		<1	1	ug/l	101	95		601
1,1,1-Trichloroethane		<1	1	ug/l	89	93		601
1,1,2-Trichloroethane		<1	1	ug/l	103	98		601
Trichloroethene		<1	1	ug/l	101	87		601
Trichlorofluoromethane		<1	1	ug/l	88	96		601
Vinyl Chloride		<1	1	ug/l	98	95		601

Matrix: Water

Analyte	Lab Batch#	Analytical Blank	MDL	Units	QC %REC	Spike %REC	Dup %RPD	Method
Benzene	AB1101	<1	1	ug/l	101	91		602
Toluene		<1	1	ug/l	99	96		602
Ethylbenzene		<1	1	ug/l	98	99		602
Total Xylenes		<1	1	ug/l	99	91		602
MTBE		<1	1	ug/l	88	91		602

SURROGATE RECOVERY SUMMARY

Matrix: Water

PSI LAB #	1-Bromo-2 -Dichloropropane (601/8010)	a,a,a-TFT (602/8020)	2,4,5,6-Tetrachloro m-xylene (608/8080)	Dibutyl Chlorendate (608/8080)	2-Fluorobiphenyl (610/8100)	Nitrobenzene (610/8100)
10088-01	75	107				





Professional Service Industries, Inc.

ANALYTICAL REPORT

TESTED FOR: PSI/ST. PETERSBURG
1770 Commerce Ave. North
Metropoint Centre
St. Petersburg, Fl 33716

PROJECT: Manatee Co. Parks

PROJECT #: 378-41058

P.O. #: 10088

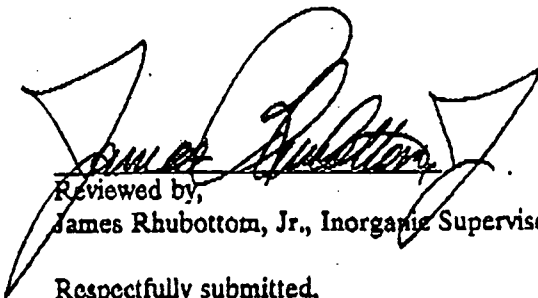
ATTENTION: Tony Febbraro

Lab# 410756 through #410760

DATE: October 25, 1994

OUR REPORT NUMBER# 214-2P090-443

Attached, please find our analytical report for samples described on the Chain-of-Custody (COC). Please note that our laboratory has assigned unique sample numbers to each of your samples as shown on the attached COC. Please reference our report number and direct any questions on this report to the individual designated below or to our Manager. Thank you for supporting our laboratory.



Reviewed by,
James Rhubottom, Jr., Inorganic Supervisor

Respectfully submitted,
PROFESSIONAL SERVICE INDUSTRIES, INC.

PSI/ST. PETERSBURG
214-2P090-443

Client #: MW-1 Grab 10/13/94, 1130
Lab #: 410756

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL/DF</u>
T. Antimony	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1
T. Beryllium	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1
T. Thallium	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1

Client #: MW-2 Grab 10/13/94, 1230
Lab #: 410757

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL/DF</u>
T. Antimony	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1
T. Beryllium	0.11	mg/L	EPA 200.7	10/24/94	SM	0.10/1
T. Thallium	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1

Client #: MW-3 Grab 10/13/94, 1400
Lab #: 410758

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL/DF</u>
T. Antimony	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1
T. Beryllium	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1
T. Thallium	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1

Client #: MW-4 Grab 10/13/94, 1500
Lab #: 410759

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL/DF</u>
T. Antimony	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1
T. Beryllium	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1
T. Thallium	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1

Client #: MW-5 Grab 10/13/94, 1600
Lab #: 410760

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>	<u>MDL/DF</u>
T. Antimony	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1
T. Beryllium	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1
T. Thallium	<0.10	mg/L	EPA 200.7	10/24/94	SM	0.10/1

QUALITY CONTROL DATA: INORGANIC ANALYTES

<u>Analyte</u>	<u>Blank</u>	<u>MDL</u>	<u>Units</u>	<u>%RSD</u>	<u>%REC</u>	<u>Method</u>	<u>Matrix</u>
T. Antimony	<0.10	0.10	mg/L	0	91	EPA 200.7	Water
T. Beryllium	<0.10	0.10	mg/L	0	103	EPA 200.7	Water
T. Thallium	<0.10	0.10	mg/L	0	90	EPA 200.7	Water

CHAIN OF CUSTODY RECORD



Professional Service Industries, Inc.

PROJECT NAME Marathon Co Parks		REPORT TO Ch Analytical		INVOICE TO	
PROJECT NUMBER 378-41058		PROJECT MANAGER Anthony FELDNER		ADDRESS Same	
P.O. NUMBER 10088		ADDRESS		CITY/STATE/ZIP	
REQUIRED DUE DATE 10/25/94		CITY/STATE/ZIP		ATTENTION	
SAMPLES TO LAB VIA Fed Exp		TELEPHONE (813) 578-4464		TELEPHONE	
NUMBER OF COOLERS 1		FAX		VERBAL FAX	
		REPORT VIA		U.S. MAIL/OVERNIGHT	
TRANSFER NUMBER		RELINQUISHED BY DATE / TIME RDH		ACCEPTED BY DATE / TIME C. Purpus	
				SEAL NUMBER	
				10-19-94/3:30pm	
LABORATORY USE ONLY					
SAMPLE CUSTODIAN		DATE / TIME			
SAMPLE IDENTIFICATION		DATE / TIME	COMP-C GRAB-B	SOIL-S WATER-W WASTE-X	LAB USE ONLY LAB NUMBER
MW-1		9/13 11:30	B	W	410756
MW-2		" 12:30	B	W	410757
MW-3		" 14:00	B	W	410758
MW-4		" 15:00	B	W	410759
MW-5		" 16:00	B	W	410760
PARAMETER LIST					
INORGANIC Sect _____ Row _____					
ORGANIC Sect _____ Row _____					
PSI PROJECT NAME					
PSI PROJECT #					
PSI BATCH #					

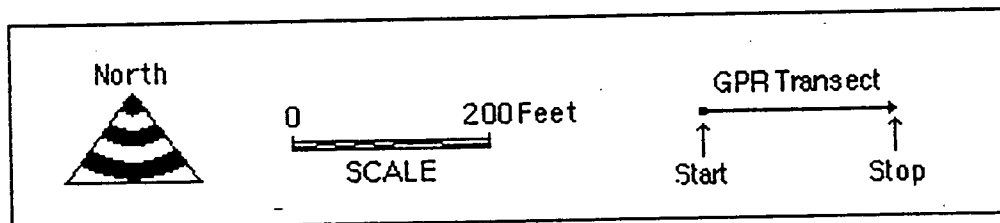
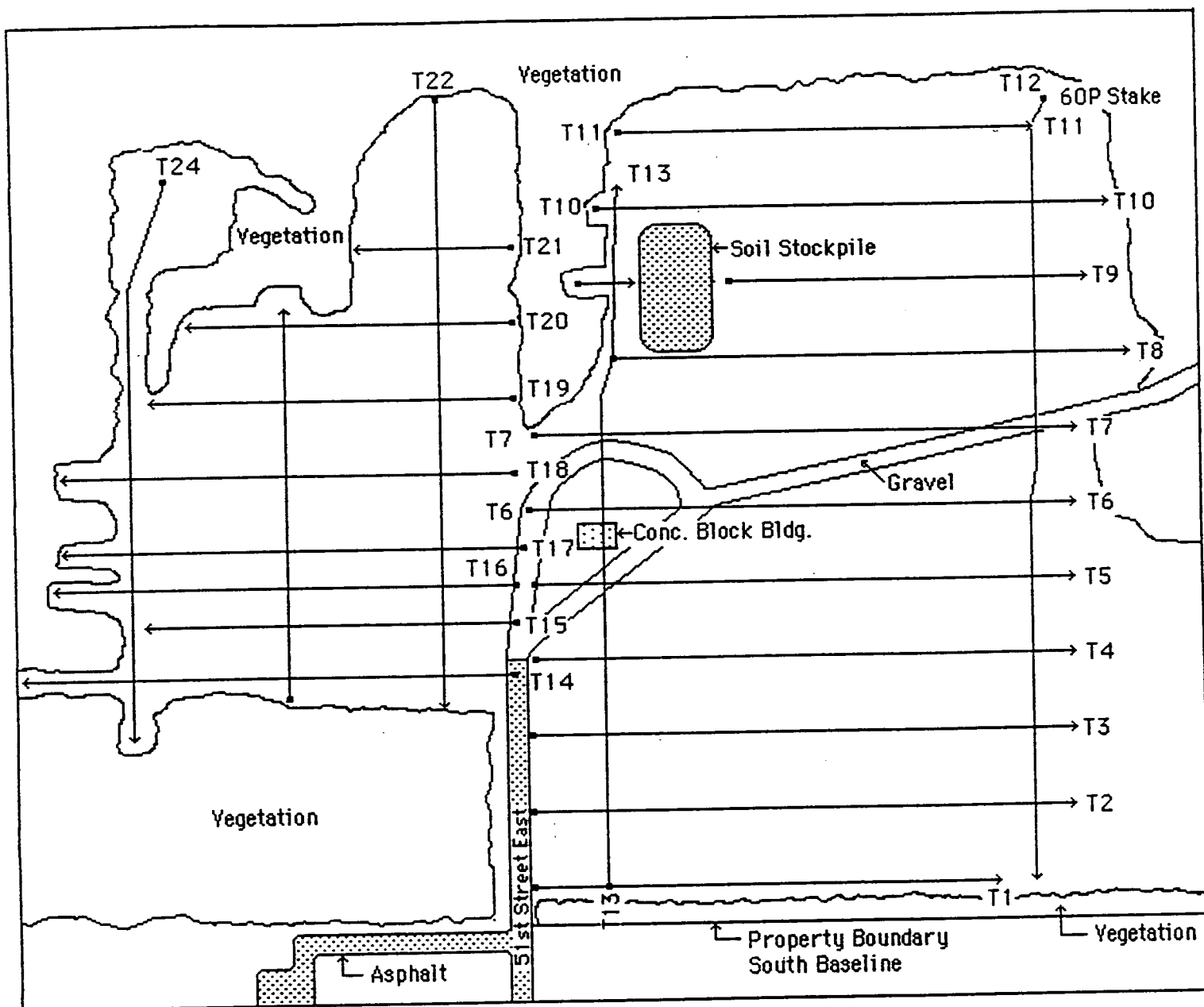
ADDITIONAL REMARKS

10. (c) and (d) are correct

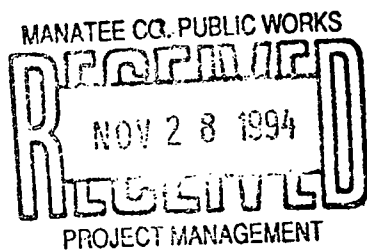
NAME IS SIGNATURE

APPENDIX C
COMMUNICATIONS





**ADDENDUM TO GROUND WATER TESTING
BRADEN RIVER PARK PROJECT
51ST STREET EAST
BRADENTON, MANATEE COUNTY, FLORIDA
PSI PROJECT NO. 378-41097**





Professional Service Industries, Inc.
Environmental & Analytical Division

October 21, 1994

Public Works Department, Manatee County
Project Management, Solid Waste
4422-A West 66th Street
Bradenton, Florida 34240-0000

Attention: Mr. Tom Yarger

Re: Addendum to Ground Water Testing
Braden River Park Project
51st Street East
Bradenton, Manatee County, Florida
PSI Project No. 378-4I097

Dear Mr. Yarger:

Please accept the attached report for the above-referenced project. This report is a compilation of data collected under the authorization of Manatee County by the Purchase Order No. 102107. Recommendations for future actions are included in this report. PSI would welcome the opportunity to answer any questions concerning this project.

PSI is pleased to have been selected to perform this service for Manatee County Park and Recreation Department and hopes to continue to fill your environmental needs. Please feel free to contact the undersigned at your convenience.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

T. James M. Watkins, P.G.
Senior Project Manager

Adel M. Blassy
Manager, Environmental Services

TJMW/AMB:tms

**ADDENDUM TO GROUND WATER TESTING
BRADEN RIVER PARK PROJECT
51ST STREET EAST
BRADENTON, MANATEE COUNTY, FLORIDA**

**PREPARED FOR
PUBLIC WORKS DEPARTMENT, MANATEE COUNTY
PROJECT MANAGEMENT/SOLID WASTE
4422-A WEST 66TH STREET
BRADENTON, FLORIDA 34240-0000**

**PREPARED BY
PROFESSIONAL SERVICE INDUSTRIES, INC.**

OCTOBER 21, 1994

PSI NUMBER: 378-4I097



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INTRODUCTION

General

The initial sampling of the groundwater from the Braden River Park indicated elevated concentrations of methylene chloride. Some of these levels were in excess of 20 times the Florida Department of Environmental Protection (FDEP) Drinking Water Standards of 1989. Methylene chloride is one (1) of the five (5) most often detected contaminants from hazardous waste disposal sites in the United States, according to an article by Plumb and Pitchford, in the National Water Well Association magazine (Proceeding 1985). Attention was also given in this testing to the other dense, non-aqueous phase liquid frequent indicators identified as tetrachloroethylene and trichloroethylene.

The results from the initial sampling event were reviewed in a meeting between Professional Service Industries, Inc. (PSI), Manatee County Parks and Recreation Department (MCPRD), Manatee County Public Works Commission (MCPWC), and Manatee County Environmental Action Committee (MCEAC) representatives on November 8, 1994. The verbal laboratory analysis results for the groundwater sampled on November 9, 1994 were received and transmitted to Tom Yarger of MCPWC and Dan Ramsey of MCPRD on November 13, 1994. Authorization to proceed with a third sampling event was given verbally on November 13, 1994. Samples from seven (7) wells were obtained following PSI's FDER approved protocols for groundwater sampling. No stagnate water samples were taken in this round of sampling.

Purpose and Scope

The purpose of this testing is to verify the concentration levels of methylene chloride in four (4) of the monitoring wells on the referenced site. The four (4) wells with detectable levels of methylene chloride were chosen for re-sampling, as were the wells immediately adjacent to them. These included MW-1, MW-2, MW-3, MW-4, MW-5, MW-6 and MW-8. The recommendations from the meeting of November 8, 1994 included a double sampling event. The first sample from each of the seven (7) selected wells was to be from the bottom of the well prior to purging. The second sample was to be taken according to the PSI FDEP approved protocols. To facilitate the speed of the analysis and increase accuracy, testing for methylene chloride by gas chromatograph using EPA Method 601 was recommended. This method is used for a narrower range of organic substances than the EPA Method 624 previously performed, however, the minimum detection level of the EPA 601 method is one-tenth (1/10) that of the EPA 624 method. In the event that conflicting results were obtained, a third sampling event was recommended to statistically eliminate the false result.

Methodologies

Field Activities

On November 9, 1994, an environmental technician was mobilized to the Braden River Park in Manatee County. The well was uncapped and a water level was established with a decontaminated steel measuring tape. A disposable bailer was then introduced into the well and allowed to sink to the bottom of the well. Samples of groundwater were taken from this first bailer of water. The well was then purged of three (3) well volumes of water. The pH, conductivity and temperature of the groundwater was recorded and the well was then sampled.

The November 14, 1994 sampling event was performed on the same seven (7) wells according to the protocols set forth in PSI's FDEP-approved Comprehensive Quality Assurance Plan.

The samples were stored on wet ice and transported to PSI's FDEP approved laboratory in St. Petersburg, Florida for analysis. The samples were analyzed on a gas chromatograph by EPA Method 601. The results are appended to this Addendum.

Laboratory Results

The sampling event of November 9, 1994 was analyzed in PSI's St. Petersburg laboratory for purgeable hydrocarbons using EPA Method 601. The results were reported to the Clearwater Environmental Consulting Group on November 12, 1994, in report number 385-4P025-0062. This report is appended. The sampling event of November 14, 1994 was analyzed in the PSI St. Petersburg Laboratory for purgeable hydrocarbon by EPA Method 601. These results are appended in Report 385-4P025-0065.

Conclusions

No methylene chloride was detected in the sampling event of November 9, 1994 in the seven (7) temporary monitoring wells on-site. As this result is in contrast with previous findings, PSI was requested by Mr. Tom Yarger of Manatee County Public Works Department, to perform additional sampling.

The additional sampling was discussed as an alternative in the November 8, 1994 meeting between Manatee County EAC, Manatee County Public Works Department, Manatee County Park and Recreation Department, and PSI. The detectable quantities of purgeable hydrocarbons from the EPA 601 testing are tabulated in Table No. 1.

A third sequence of sampling was authorized for this site as discussed previously. The water quality parameters for each sampling event are tabulated and included with the analytical reports in Appendix B. The results of the target compounds are shown in Table No. 1 below.

TABLE NO. 1

SUMMARY OF PURGEABLE HALOCARBONS (REPORTED IN UG/L)

SAMPLING EVENT - NOVEMBER 9, 1994								
Compound Name	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-8	MCL
Methylene Chloride	*	*	*	*	*	*	*	5
Chlorobenzene	*	*	2	*	*	*	*	10
1,4 Dichlorobenzene	*	*	*	*	*	*	*	250
SAMPLING EVENT - NOVEMBER 14, 1994								
Compound Name	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-8	MCL
Methylene Chloride	*	*	*	*	*	*	*	5
Chlorobenzene	1	*	2	*	*	*	*	10
1,4 Dichlorobenzene	1	*	*	*	*	*	*	250

ug/l = Microgram per liter

MCL = Maximum Contaminant Level, According to Florida Drinking Water Standards
Prescribed in Chapter 62-550.310 FAC

* = Not Detected

Recommendations

The last two sampling events failed to confirm the initial groundwater analytical report. In the last two (2) limited sampling events, no contaminants were discovered in excess of the maximum guidance contaminate levels set forth by the Florida Department of Environmental Protection (FDEP) (1989).

As the source of contaminants for the original analysis remains undiscovered, the results cannot be discounted, however, the contaminate concentration has not been duplicated. PSI recommends the placement of three (3) additional permanent monitoring wells of similar construction as the present on-site groundwater wells (Figure 6). The placement of these wells should be in an upgradient position of the proposed pond and the temporary wells, MW-3, MW-7 and MW-9, should be converted to permanent wells. This upgrade should include protective locking well covers and a 2 x 2 concrete pad. A periodic monitoring program is recommended to include a monthly sampling event of the six (6) wells and analysis for methylene chloride, phenols, and lead concentrations by EPA Methods 601, 239.1 and 402.1 to address the concerns raised by the October 13 and 14, 1994 sampling events. It is suggested that, based on the metals detected, the samples be filtered prior to analysis to confirm that presently detected elevated levels are due to turbid groundwater conditions (Within the suspended soil matrix rather than dissolved ionic concentrations). After three (3) consecutive months, quarterly sampling for one (1) year should follow. If any sampling event indicates elevated levels of the target compounds, immediate confirmation samples are recommended. The results of the monitoring program should be reviewed with Manatee County EAC upon any elevated compound detections, and at the end of one (1) year to decide the validity of continued monitoring.

b:reports5/braden.add

APPENDICES

NORTH

GAP CREEK

BRADEN RIVER

MW-3

MW-7

MW-9

MW-11

MW-12

MW-10

BASEBALL
FIELDS (TYP.)

CONCRETE
BUILDING

SOCCER
FIELDS

PARKING

PARKING

JOHN DEERE
FACILITY

BUILDING

STATE HIGHWAY
PATROL STATION

51st STREET EAST

LEGEND

- ⊕ GROUNDWATER MONITOR WELL
- ⊙ COMBINATION WELLS
- ⊕ RECOMMENDED MONITOR WELL LOCATION

RECOMMENDED MONITOR WELL PLACEMENT
BRADEN RIVER PARK PROJECT
MANATEE COUNTY PARK AND RECREATION
MANATEE COUNTY, FLORIDA



PROFESSIONAL SERVICE INDUSTRIES, INC.

4400 - 140th AVENUE NORTH
SUITE 100
CLEARWATER, FLORIDA 34622

DRAWN BY: KT	SCALE: N.T.S.	PROJ. NO.: 378-41058
CHKD. BY:	DATE: 10/12/94	OWG: FIGURE 6

APPENDIX A

FIGURE 6

APPENDIX B

LABORATORY ANALYTICAL REPORTS



Professional Service Industries, Inc.

ANALYTICAL REPORT

TESTED FOR: PSI, Inc.
Clearwater Environmental
4400-140th Avenue North
Suite 100
Clearwater, FL 34622

PROJECT: Braden River Park
378-41058

ATTENTION: Jim Watkins

SAMPLE DATE: November 9, 1994

DATE: November 11, 1994

OUR REPORT NUMBER: 385-4P025-0062

Attached, please find our analytical report for samples described on the Chain-of-Custody (C-O-C). Please note that our laboratory has assigned unique sample numbers to each of your samples as shown on the attached C-O-C. Please reference our report number and direct any questions on this report to the individual designated below or to one of our Customer Service Representatives.

Reviewed By,


Anthony R. Febbraro, Department Manager

Respectfully submitted,
Professional Service Industries, Inc.

HRS #84218
HRS #E84388
cc: Kathleen Theisen
/bb

LAB #: 11064-01
Client ID: MW-1

PURGEABLE HALOCARBONS

Matrix: Water

Analyte	Results	Units	Method	MDL/DF
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	<1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

- Extraction Date:
NA
Analysis Date:
11/10/94
Analyst: LB

LAB #: 11064-02
Client ID: MW-2

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	<1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:

NA

Analysis Date:

11/10/94

Analyst: LB

LAB #: 11064-03
Client ID: MW-2A

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	<1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:
NA
Analysis Date:
11/10/94
Analyst: LB

LAB #: 11064-04
Client ID: MW-3

PURGEABLE HALOCARBONS

Matrix: Water

Analyte	Results	Units	Method	MDL/DF
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	2	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:
NA
Analysis Date:
11/10/94
Analyst: LB

LAB #: 11064-05
Client ID: MW-3A

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	2	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:
NA
Analysis Date:
11/10/94
Analyst: LB

LAB #: 11064-06
Client ID: MW-4

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	<1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:

NA

Analysis Date:

11/10/94

Analyst: LB

LAB #: 11064-07
Client ID: MW-4A

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	<1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:

NA

Analysis Date:

11/10/94

Analyst: LB

LAB #: 11064-08
Client ID: MW-5

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	<1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:

NA

Analysis Date:

11/10/94

Analyst: LB

LAB #: 11064-09
Client ID: MW-5A

PURGEABLE HALOCARBONS

Matrix: Water

Analyte	Results	Units	Method	MDL/DF
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	<1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:
NA
Analysis Date:
11/10/94
Analyst: LB

LAB #: 11064-10
Client ID: MW-6

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	<1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

- Extraction Date:
NA
Analysis Date:
11/10/94
Analyst: LB

LAB #: 11064-11
Client ID: MW-8

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	<1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:

NA

Analysis Date:

11/10/94

Analyst: LB

LAB #: 11064-12
Client ID: Trip

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	<1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:
NA
Analysis Date:
11/10/94
Analyst: LB

QUALITY CONTROL DATA: ORGANIC ANALYTES

Analyte	Lab Batch#	Analytical			QC %REC	Spike %REC	Dup %RPD	Matrix: Water
		Blank	MDL	Units				Method
Bromodichloromethane	AB1110	<1	1	ug/l	115	121		601
Bromoform		<1	1	ug/l	108	108		601
Bromomethane		<1	1	ug/l	79	79		601
Carbon Tetrachloride		<1	1	ug/l	52	44		601
Chlorobenzene		<1	1	ug/l	65	49		601
Chloroethane		<1	1	ug/l	71			601
Chloroform		<1	1	ug/l	90	95		601
Chloromethane		<1	1	ug/l	98	136		601
Dibromochloromethane		<1	1	ug/l	73	63		601
1,2-Dichlorobenzene		<1	1	ug/l	83	58		601
1,3-Dichlorobenzene		<1	1	ug/l	81	58		601
1,4-Dichlorobenzene		<1	1	ug/l	82	59		601
Dichlorodifluoromethane		<1	1	ug/l	122	146		601
1,1-Dichloroethane		<1	1	ug/l	93	113		601
1,2-Dichloroethane		<1	1	ug/l	89	94		601
1,1-Dichloroethene		<1	1	ug/l	97	106		601
trans-1,2-Dichloroethene		<1	1	ug/l	100	104		601
1,2-Dichloropropane		<1	1	ug/l	68	63		601
cis-1,3-Dichloropropene		<1	1	ug/l	109	115		601
trans-1,3-Dichloropropene		<1	1	ug/l	97	99		601
Methylene Chloride		<1	1	ug/l	105	95		601
1,1,2,2-Tetrachloroethane		<1	1	ug/l	92	84		601
Tetrachloroethene		<1	1	ug/l	108	109		601
1,1,1-Trichloroethane		<1	1	ug/l	104	109		601
1,1,2-Trichloroethane		<1	1	ug/l	86	79		601
Trichloroethene		<1	1	ug/l	91	88		601
Trichlorofluoromethane		<1	1	ug/l	101	127		601
Vinyl Chloride		<1	1	ug/l	71	99		601

SURROGATE RECOVERY SUMMARY

PSI LAB #	1-Bromo-2		2,4,5,6-Tetrachloro		Dibutyl	Matrix: Water	
	-Dichloropropane (601/8010)	a,a,a-TFT (602/8020)	m-xylene (608/8080)	Chlorendate (608/8080)	2-Fluorobiphenyl (610/8100)	Nitrobenzene (610/8100)	
11064-01	100						
11064-02	100						
11064-03	101						
11064-04	104						
11064-05	109						
11064-06	109						
11064-07	99						
11064-08	108						
11064-09	113						
11064-10	113						
11064-11	110						
11064-12	110						

P.1 of 2

CHAIN OF CUSTODY RECORD



Professional Service Industries, Inc.

PROJECT NAME Braden River Park	REPORT TO	INVOICE TO
PROJECT NUMBER 378-41058	PROJECT MANAGER Jim Watkins	ADDRESS
P.O. NUMBER	ADDRESS PSI Clearwater	CITY / STATE / ZIP
REQUIRED DUE DATE 11/11/94 RUSH	CITY / STATE / ZIP	ATTENTION
SAMPLES TO LAB VIA	TELEPHONE	TELEPHONE
	FAX	
NUMBER OF COOLERS 1	REPORT VIA U.S. MAIL/OVERNIGHT	VERBAL FAX

LABORATORY SUBMITTED TO:

☐ 6913 Hwy. 225
Deer Park, TX 77536
(713) 479-8307

☐ 4820 W. 15th Street
Lawrence, KS 66049
(800) 548-7901

☐ 6056 Ulmerton Road
Clearwater, FL 34620
(813) 531-1446

☐ 850 Poplar Street
Pittsburgh, PA 15220
(412) 922-4000

TRANSFER NUMBER	RELINQUISHED BY DATE / TIME	ACCEPTED BY DATE / TIME BB Bryan 11/9	SEAL NUMBER
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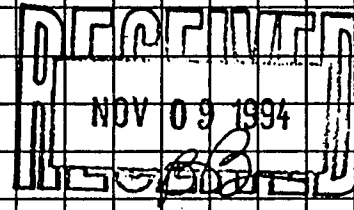
LABORATORY USE ONLY
FIELD SERVICES Y/N/S
SHIPPING Y/N/S

LABORATORY USE ONLY
ANALYTICAL DUE DATE 11-14-94
REPORT DUE DATE
INORGANIC Sediment For
ORGANIC Sediment For
PSI PROJECT NAME
PSI PROJECT # 41025-0001
PSI BATCH #

LABORATORY USE ONLY
SAMPLE CUSTODIAN
DATE / TIME

11064	DATE / TIME	COMP-C GRAB-B	SOIL-S WATER-W WASTE-X	LAB USE ONLY LAB NUMBER
05 MW 3A	11/9/94 11:45	B	W	
04 MW 3	12:00			
01 MW 1	12:45			
03 MW 2A	1:00			
02 MW 2	1:15			
09 MW 5A	1:45			
08 MW 5	2:00			
07 MW 4A	2:30			
06 MW 4	2:45			

NUMBER OF CONTAINERS	PARAMETER LIST
601	
2	X
2	X
2	X
2	X
2	X
2	X
2	X
2	X
2	X
2	X



ADDITIONAL REMARKS ~~*~~ Needs verbals, at least, by 5:00 pm Friday!

SAMPLER'S SIGNATURE

✓ 14.12



RECEIVED
NOV 09 1994
FBI

SAMPLER'S SIGNATURE

APPENDIX A: NARRATIVE

LABORATORY PROJECT ID: 11064INORGANIC / ORGANIC

=====				
A. <u>SAMPLE RECEIPT</u>	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT</u>
1. C-O-C present & complete	<u>L</u>	___	_____	<u>BP</u>
2. Samples match with C-O-C	<u>L</u>	___	_____	<u>BP</u>
3. Temperature @ 4°C	<u>L</u>	___	_____	<u>BP</u>
4. Shuttle Seal Present	<u>L</u>	___	_____	<u>BP</u>
5. Container Condition Acceptable	<u>L</u>	___	_____	<u>BP</u>
6. Other _____	___	___	_____	___
B. <u>GENERAL OBSERVATIONS</u>	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT</u>
1. Sediment	___	___	_____	___
2. Headspace	___	___	_____	___
3. Appropriate Container	___	___	_____	___
4. Enough sample	___	___	_____	___
5. Odor/Color (Describe)	___	___	_____	___
6. Homogeneous	___	___	_____	___
7. MultiPhasic	___	___	_____	___
8. Other _____	___	___	_____	___
C. <u>ANALYTICAL OBSERVATIONS</u>	<u>YES</u>	<u>NO</u>	<u>COMMENT</u>	<u>INIT</u>
1. Analyzed within Holding times	___	___	_____	___
2. Confirmation (Describe MS, 2nd Column, 2nd Detection)	___	___	_____	___
3. Matrix interferences	___	___	_____	___
4. Other _____	___	___	_____	___

D. GENERAL COMMENTS:

BY: _____ DATE: _____



Professional Service Industries, Inc.

ANALYTICAL REPORT

TESTED FOR: PSI, Inc.
Environmental Department
4400 - 140th Avenue North
Suite 100
Clearwater, Florida 34622

PROJECT: Braden River Park
378-41097

SAMPLE DATE: November 14, 1994

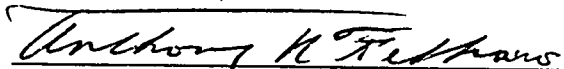
ATTENTION: Jim Watkins

DATE: November 17, 1994

OUR REPORT NUMBER: 385-4P025-0065

Attached, please find our analytical report for samples described on the Chain-of-Custody (C-O-C). Please note that our laboratory has assigned unique sample numbers to each of your samples as shown on the attached C-O-C. Please reference our report number and direct any questions on this report to the individual designated below or to one of our Customer Service Representatives.

Reviewed By,


Anthony R. Febbraro, Department Manager

Respectfully submitted,
Professional Service Industries, Inc.

HRS #84218
HRS #E84388

cc: Kathleen Theisen

/dlr

LAB #: 11204-01
Client ID: MW-1

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
2-Chloroethylvinyl Ether	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:

NA

Analysis Date:

11/16/94

Analyst: KT



LAB #: 11204-02
Client ID: MW-2

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	<1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
2-Chloroethylvinyl Ether	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:

NA

Analysis Date:

11/16/94

Analyst: KT



LAB #: 11204-03
Client ID: MW-3

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	2	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
2-Chloroethylvinyl Ether	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:

NA

Analysis Date:

11/16/94

Analyst: KT



LAB #: 11204-04
Client ID: MW-4

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	<1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
2-Chloroethylvinyl Ether	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:
NA
Analysis Date:
11/16/94
Analyst: KT



LAB #: 11204-05
Client ID: MW-5

PURGEABLE HALOCARBONS

Matrix: Water

Analyte	Results	Units	Method	MDL/DF
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	<1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
2-Chloroethylvinyl Ether	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:
NA
Analysis Date:
11/16/94
Analyst: KT



LAB #: 11204-06
Client ID: MW-6

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	<1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
2-Chloroethylvinyl Ether	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:

NA

Analysis Date:

11/16/94

Analyst: KT



LAB #: 11204-07
Client ID: MW-8

PURGEABLE HALOCARBONS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Bromodichloromethane	<1	ug/l	EPA 601	1/1
Bromoform	<1	ug/l	EPA 601	1/1
Bromomethane	<1	ug/l	EPA 601	1/1
Carbon Tetrachloride	<1	ug/l	EPA 601	1/1
Chlorobenzene	<1	ug/l	EPA 601	1/1
Chloroethane	<1	ug/l	EPA 601	1/1
2-Chloroethylvinyl Ether	<1	ug/l	EPA 601	1/1
Chloroform	<1	ug/l	EPA 601	1/1
Chloromethane	<1	ug/l	EPA 601	1/1
Dibromochloromethane	<1	ug/l	EPA 601	1/1
1,2-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,3-Dichlorobenzene	<1	ug/l	EPA 601	1/1
1,4-Dichlorobenzene	<1	ug/l	EPA 601	1/1
Dichlorodifluoromethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethane	<1	ug/l	EPA 601	1/1
1,2-Dichloroethane	<1	ug/l	EPA 601	1/1
1,1-Dichloroethene	<1	ug/l	EPA 601	1/1
trans-1,2-Dichloroethene	<1	ug/l	EPA 601	1/1
1,2-Dichloropropane	<1	ug/l	EPA 601	1/1
cis-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
trans-1,3-Dichloropropene	<1	ug/l	EPA 601	1/1
Methylene Chloride	<1	ug/l	EPA 601	1/1
1,1,2,2-Tetrachloroethane	<1	ug/l	EPA 601	1/1
Tetrachloroethene	<1	ug/l	EPA 601	1/1
1,1,1-Trichloroethane	<1	ug/l	EPA 601	1/1
1,1,2-Trichloroethane	<1	ug/l	EPA 601	1/1
Trichloroethene	<1	ug/l	EPA 601	1/1
Trichlorofluoromethane	<1	ug/l	EPA 601	1/1
Vinyl Chloride	<1	ug/l	EPA 601	1/1

Extraction Date:
NA
Analysis Date:
11/16/94
Analyst: KT

LAB #: 11204-08
Client ID: Trip Blank

PURGEABLE AROMATICS

Matrix: Water

<u>Analyte</u>	<u>Results</u>	<u>Units</u>	<u>Method</u>	<u>MDL/DF</u>
Benzene	<1	ug/l	EPA 602	1/1
Toluene	<1	ug/l	EPA 602	1/1
Ethylbenzene	<1	ug/l	EPA 602	1/1
Total Xylenes	<1	ug/l	EPA 602	1/1
Total VOAs	<1	ug/l	EPA 602	-/-
MTBE	<1	ug/l	EPA 602	1/1

Extraction Date:
NA
Analysis Date:
11/16/94
Analyst: KT



QUALITY CONTROL DATA: ORGANIC ANALYTES

Matrix: Water

<u>Analyte</u>	<u>Lab Batch#</u>	<u>Analytical Blank</u>	<u>MDL</u>	<u>Units</u>	<u>QC %REC</u>	<u>Spike %REC</u>	<u>Dup %RPD</u>	<u>Method</u>
Bromodichloromethane	AB1116	<1	1	ug/l	107	132		601
Bromoform		<1	1	ug/l	111	102		601
Bromomethane		<1	1	ug/l	118	143		601
Carbon Tetrachloride		<1	1	ug/l	103	117		601
Chlorobenzene		<1	1	ug/l	103	126		601
Chloroethane		<1	1	ug/l	99	123		601
2-Chloroethylvinyl Ether		<1	1	ug/l				601
Chloroform		<1	1	ug/l	94	117		601
Chloromethane		<1	1	ug/l	99	103		601
Dibromochloromethane		<1	1	ug/l	97	136		601
1,2-Dichlorobenzene		<1	1	ug/l	89	146		601
1,3-Dichlorobenzene		<1	1	ug/l	93	166		601
1,4-Dichlorobenzene		<1	1	ug/l	88	132		601
Dichlorodifluoromethane		<1	1	ug/l	101	118		601
1,1-Dichloroethane		<1	1	ug/l	97	116		601
1,2-Dichloroethane		<1	1	ug/l	101	117		601
1,1-Dichloroethene		<1	1	ug/l	88	123		601
trans-1,2-Dichloroethene		<1	1	ug/l	91	116		601
1,2-Dichloropropane		<1	1	ug/l	105	125		601
cis-1,3-Dichloropropene		<1	1	ug/l	101	131		601
trans-1,3-Dichloropropene		<1	1	ug/l	94	137		601
Methylene Chloride		<1	1	ug/l	84	117		601
1,1,2,2-Tetrachloroethane		<1	1	ug/l	100	117		601
Tetrachloroethene		<1	1	ug/l	101	124		601
1,1,1-Trichloroethane		<1	1	ug/l	99	114		601
1,1,2-Trichloroethane		<1	1	ug/l	101	141		601
Trichloroethene		<1	1	ug/l	106	126		601
Trichlorofluoromethane		<1	1	ug/l	89	133		601
Vinyl Chloride		<1	1	ug/l	101	115		601

Matrix: Water

<u>Analyte</u>	<u>Lab Batch#</u>	<u>Analytical Blank</u>	<u>MDL</u>	<u>Units</u>	<u>QC %REC</u>	<u>Spike %REC</u>	<u>Dup %RPD</u>	<u>Method</u>
Benzene	AB1116	<1	1	ug/l	104	104		602
Toluene		<1	1	ug/l	100	109		602
Ethylbenzene		<1	1	ug/l	99	118		602
Total Xylenes		<1	1	ug/l	100	102		602
MTBE		<1	1	ug/l	99	110		602



SURROGATE RECOVERY SUMMARY

Matrix: Water

PSI LAB #	1-Bromo-2 -Dichloropropane (601/8010)	a,a,a-TFT (602/8020)	2,4,5,6-Tetrachloro m-xylene (608/8080)	Dibutyl Chlorendate (608/8080)	2-Fluorobiphenyl (610/8100)	Nitrobenzene (610/8100)
11204-01	70					
11204-02	91					
11204-03	82					
11204-04	96					
11204-05	70					
11204-06	92					
11204-07	97					
11204-08		112				



PS ANALYTICAL SERVICES GROUP

APPENDIX A: NARRATIVE

LABORATORY PROJECT ID: 11204 INORGANIC ORGANIC

A. SAMPLE RECEIPT	YES	NO	COMMENT	INIT
1. C-O-C present & complete	☒	☐		BP
2. Samples match with C-O-C	☒	☐		BP
3. Temperature @ 4°C	☒	☐		BP
4. Shuttle Seal Present	☒	☐		BP
5. Container Condition Acceptable	☒	☐		BP
6. Other _____	☐	☐		

B. GENERAL OBSERVATIONS	YES	NO	COMMENT	INIT
1. Sediment	☐	☒		
2. Headspace	☐	☒		
3. Appropriate Container	☒	☐		
4. Enough sample	☒	☐		
5. Odor/Color (Describe)	☐	☒		
6. Homogeneous	☒	☐		
7. MultiPhasic	☐	☐		
8. Other _____	☐	☐		

C. ANALYTICAL OBSERVATIONS	YES	NO	COMMENT	INIT
1. Analyzed within Holding times	☒	☐		BP
2. Confirmation (Describe MS, 2nd Column, 2nd Detection)	☐	☐		
3. Matrix interferences	☐	☐		
4. Other _____	☐	☐		

D. GENERAL COMMENTS:

No chlorobenzene peaks observed. only chlorobenzene.

BY: BP

DATE: 11-17-99