

**RECEIVED**

APR 15 1997

Department of Environmental Protection  
SOUTHWEST DISTRICT

BY \_\_\_\_\_

**GROUNDWATER MONITORING REPORT  
2ND QUARTER, 1997  
BRADEN RIVER PARK  
MANATEE COUNTY, FLORIDA  
PSI PROJECT NO. 552-51014**



D.E.P.  
APR 15 1997  
SOUTHWEST DISTRICT  
TAMPA

**GROUNDWATER MONITORING REPORT  
2ND QUARTER, APRIL 1997  
BRADEN RIVER PARK  
MANATEE COUNTY, FLORIDA**

**PREPARED FOR**

**MANATEE COUNTY GOVERNMENT  
PROJECT MANAGEMENT DEPARTMENT  
4422-A 66TH STREET WEST  
BRADENTON, FLORIDA 34210**

**PREPARED BY**

**PROFESSIONAL SERVICE INDUSTRIES, INC.  
4400 140TH AVENUE NORTH, SUITE 100  
CLEARWATER, FLORIDA 34622  
PSI PROJECT NO. 552-51014**

**APRIL 1997**





April 8, 1997

Manatee County Government  
Project Management Department  
4422-A 66<sup>th</sup> Street West  
Bradenton, Florida 34210

D.E.P.  
APR 15 1997  
RECEIVED  
TAMPA

Attention: Mr. Tom Yarger, Project Manager

Re: 2nd Quarter Groundwater Monitoring Report  
**Braden River Park**  
Manatee County, Florida  
PSI Project Number: 552-5I014  
Manatee County Work Assignment No. 96

Dear Mr. Yarger:

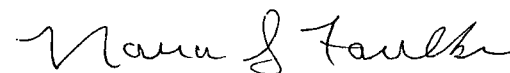
In accordance with our agreement, Professional Service Industries, Inc. (PSI) is pleased to submit the 2nd Quarter Groundwater Monitoring Report for the Braden River Park site. This report presents the results of the groundwater sampling event conducted at the Braden River Park site on February 5 and 6, 1997.

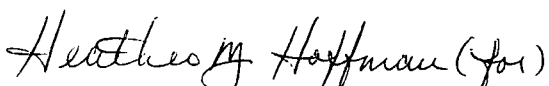
PSI appreciates the opportunity to be of service to you and your company. Please feel free to call Keith Butts at our Sarasota office (941-378-9001) with comments or questions.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

  
Nancy S. Castricone, E.I.  
Staff Engineer

  
Nana G. Faulkner, P.G.  
Senior Project Manager

  
Keith Butts, E.I.  
Branch Manager, PSI Sarasota Office

cc: Manatee County Parks & Recreation, Mr. Danny Hopkins  
Manatee County Environmental Management Department, Mr. Douglas Means  
Florida Department of Environmental Protection, Ms. Allison Amram, P.G.  
PSI Sarasota Office, Mr. Keith Butts, E.I.

*Information To Build On*

## TABLE OF CONTENTS

|                                               |   |
|-----------------------------------------------|---|
| Acronym Key .....                             | 1 |
| <b>1.0 INTRODUCTION</b>                       |   |
| 1.1 General .....                             | 2 |
| 1.2 Authorization .....                       | 2 |
| 1.3 Objective .....                           | 2 |
| 1.4 Project Background .....                  | 2 |
| 1.5 Scope.....                                | 2 |
| <b>2.0 SAMPLING METHODOLOGIES</b>             |   |
| 2.1 Sample Procedures .....                   | 3 |
| 2.2 Field Measurements.....                   | 3 |
| 2.3 Groundwater Measurements .....            | 4 |
| <b>3.0 GROUNDWATER ANALYTICAL RESULTS</b>     |   |
| 3.1 Analytical Summary .....                  | 4 |
| <b>4.0 OBSERVABLE TRENDS</b>                  |   |
| 4.1 Conclusion .....                          | 5 |
| <b>APPENDIX</b>                               |   |
| Drawing 1 - Site Map                          |   |
| Drawing 2 - Groundwater Elevation Contour Map |   |
| Table 3 - Groundwater Analytical Summary      |   |
| Laboratory Analytical Results                 |   |
| Field Data Sheets                             |   |

### ACRONYM KEY

|         |   |                                                         |
|---------|---|---------------------------------------------------------|
| PSI     | = | Professional Service Industries, Inc.                   |
| FDEP    | = | Florida Department of Environmental Protection          |
| CompQAP | = | Comprehensive Quality Assurance Plan                    |
| MCL     | = | Maximum Contaminant Level, Chapter 62-550, FAC          |
| GC      | = | Guidance Concentration, Chapter 62-520, FAC             |
| DL      | = | Detection limits                                        |
| µg/l    | = | Micrograms per liter                                    |
| mg/l    | = | Milligrams per liter                                    |
| pg/l    | = | Picograms per liter                                     |
| BIS-2   | = | Bis(2-ethylhexyl)phthalate or Di(2-ethylhexyl)phthalate |
| TDS     | = | Total Dissolved Solids                                  |
| DDD     | = | p, p'-Dichlorodiphenyl dichloroethane                   |
| DDE     | = | p, p'-Dichlorodiphenyl dichloroethene                   |
| DDT     | = | p, p'-Dichlorodiphenyl trichloroethane                  |
| CFU     | = | Colony Forming Units                                    |
| mls     | = | milliliters                                             |
| pCi/l   | = | Picocuries per liter                                    |

## **1.0 INTRODUCTION**

### **1.1 General**

This report presents the results of the groundwater sampling event conducted in February 1997 at the Braden River Park site.

### **1.2 Authorization**

Authorization to perform these services was in the form of Manatee County Work Assignment No. 96, identifying the Consultant as PSI and as per the terms and conditions within the annual written contract between Manatee County and PSI.

### **1.3 Objective**

The objective of the sampling event was to analyze groundwater samples from the on-site monitor wells for various parameters at the Braden River Park site, and to determine which of the tested compounds are present in the groundwater at the tested locations. The results will be presented to the FDEP for evaluation.

### **1.4 Project Background**

The Braden River Park facility, formerly known as State Road 70 Landfill, is a former construction debris landfill located in Manatee County. The facility is currently undergoing improvements which will result in a multi-use county recreational area.

A groundwater monitoring plan program has been performed by PSI since October 1994 for a variety of chemical parameters. Recent correspondence from the FDEP requests implementing the quarterly groundwater sampling for various parameters for monitoring wells MW-2, MW-3, MW-4, MW-5, MW-6, and MW-7. In addition, the FDEP requests field measurements be obtained during groundwater sampling for pH, specific conductivity, dissolved oxygen, turbidity, temperature, and depth to water. This groundwater monitoring plan, as described above, is to continue for four quarters, after which an evaluation is to be made. The plan will also include a one-time analysis in the last quarter for additional parameters.

### **1.5 Scope**

The project scope of services included the sampling of the on-site monitor wells, the collection and analysis of one equipment blank and one duplicate for quality control purposes, and the generation of a report summarizing the results and findings. In addition, field measurements for pH, specific conductivity, dissolved oxygen, turbidity, temperature, and depth to water were taken.



## 2.0 SAMPLING METHODOLOGIES

### 2.1 Sampling Procedures

On February 5 and 6, 1997, groundwater samples were collected by PSI personnel from monitor wells MW-3, MW-4, MW-5, and MW-6. Reconstruction of the retention pond in the northeastern portion of the site rendered monitor well MW-2 useless, and it was abandoned by PSI on February 10, 1997. A replacement monitor well, monitor well MW-8, is scheduled for installation in April. Construction of the access road around the retention pond was being performed at the time of sampling, and monitor well MW-7 was displaced and damaged, preventing PSI personnel from obtaining a groundwater sample from this monitor well. The structural integrity and sampling condition of monitor well MW-7 will be investigated in April when monitor well MW-8 is installed. A site map is presented as Drawing 1, located in the Appendix.

The monitor wells were purged with a peristaltic pump and disposable Tygon tubing. Three well volumes of groundwater were removed at a low flow rate, approximately 0.25 gallons per minute, to minimize disturbance of the filter pack and groundwater. Samples of the groundwater were obtained with a decontaminated, stainless steel bailer. The bailer was lowered into the wells as slowly as possible to avoid creating groundwater turbulence, and the groundwater samples were placed in the appropriate sampling bottles and vials. The samples were stored on ice in a cooler and transported to PSI's Analytical Laboratory in St. Petersburg, Florida, in accordance with our FDEP approved laboratory CompQAP No. 860130. All field sampling was performed in accordance with ComQAP No. 880374G, amended and FDEP approved on July 25, 1996.

### 2.2 Field Measurements

Field parameters were measured after each well volume was purged, which included pH, specific conductivity, dissolved oxygen, turbidity, temperature, and depth to water. The results for the field parameter measurements are presented in Table 1. The field data sheets are included in the Appendix.



**TABLE 1: SUMMARY OF FIELD MEASUREMENTS**  
(measurements are of final purged well volume)

| Well Identification | Temperature (°C) | Specific Conductivity (µmhos) | pH   | Dissolved Oxygen (mg/l) | Turbidity (NTU) |
|---------------------|------------------|-------------------------------|------|-------------------------|-----------------|
| MW-3                | 23.6             | 987                           | 7.03 | 1.4                     | 6.82            |
| MW-4                | 23.2             | 578                           | 6.48 | 1.3                     | 22.8            |
| MW-5                | 24.1             | 730                           | 6.79 | 1.4                     | 4.53            |
| MW-6                | 24.5             | 440                           | 6.73 | 1.5                     | 25.4            |

°C = Degrees Celsius      mg/l = Milligrams per liter  
µmhos = Micromhos      NTU = Nephelometric turbidity units  
All measurements taken on February 5 and 6, 1997

### 2.3 Groundwater Measurements

The depth to water was measured from the top of the well casing for all of the monitor wells prior to purging. A summary of the depth to water measurements and groundwater elevations are presented in Table 2. The groundwater flow, as measured during the February 5 and 6 sampling events, was toward the north-northeast direction. A groundwater elevation contour map is presented as Drawing 2, located in the Appendix.

**TABLE 2: MONITOR WELL GROUNDWATER ELEVATIONS**

| Well Identification | Casing Elevation (feet) <sup>1</sup> | Depth to Groundwater (feet) <sup>2</sup> | Groundwater Elevation (feet) |
|---------------------|--------------------------------------|------------------------------------------|------------------------------|
| MW-3                | 7.34                                 | 1.62                                     | 5.72                         |
| MW-4                | 12.00                                | 4.21                                     | 7.79                         |
| MW-5                | 13.65                                | 7.91                                     | 5.74                         |
| MW-6                | 12.89                                | 3.42                                     | 9.47                         |

<sup>1</sup> Obtained from PSI's Primary and Secondary Groundwater Testing report, March, 1996

<sup>2</sup> Measured from top of well casing on December 11 and 12, 1996

## 3.0 GROUNDWATER ANALYTICAL RESULTS

### 3.1 Analytical Summary

A chart, comparing recent groundwater analytical results to data from previous sampling events, is presented as Table 3, located in the Appendix. The complete laboratory analytical reports, including the chain of custodies, is also included.



## 4.0 OBSERVABLE TRENDS

### 4.1 Conclusion

The groundwater sampling has been performed for the Braden River Park site on behalf of the Manatee County Government, Project Management Department. Four on-site monitor wells were tested for various parameters as per the FDEP.

As previously discussed, monitor well MW-2 was abandoned and a replacement well, MW-8, will be installed in order to monitor the groundwater condition at the monitor well MW-2 location.

The groundwater analytical results indicate that Secondary Drinking Water Standards have been exceeded in several wells. Specifically, iron and manganese were found at elevated levels in all of the sampled monitor wells.

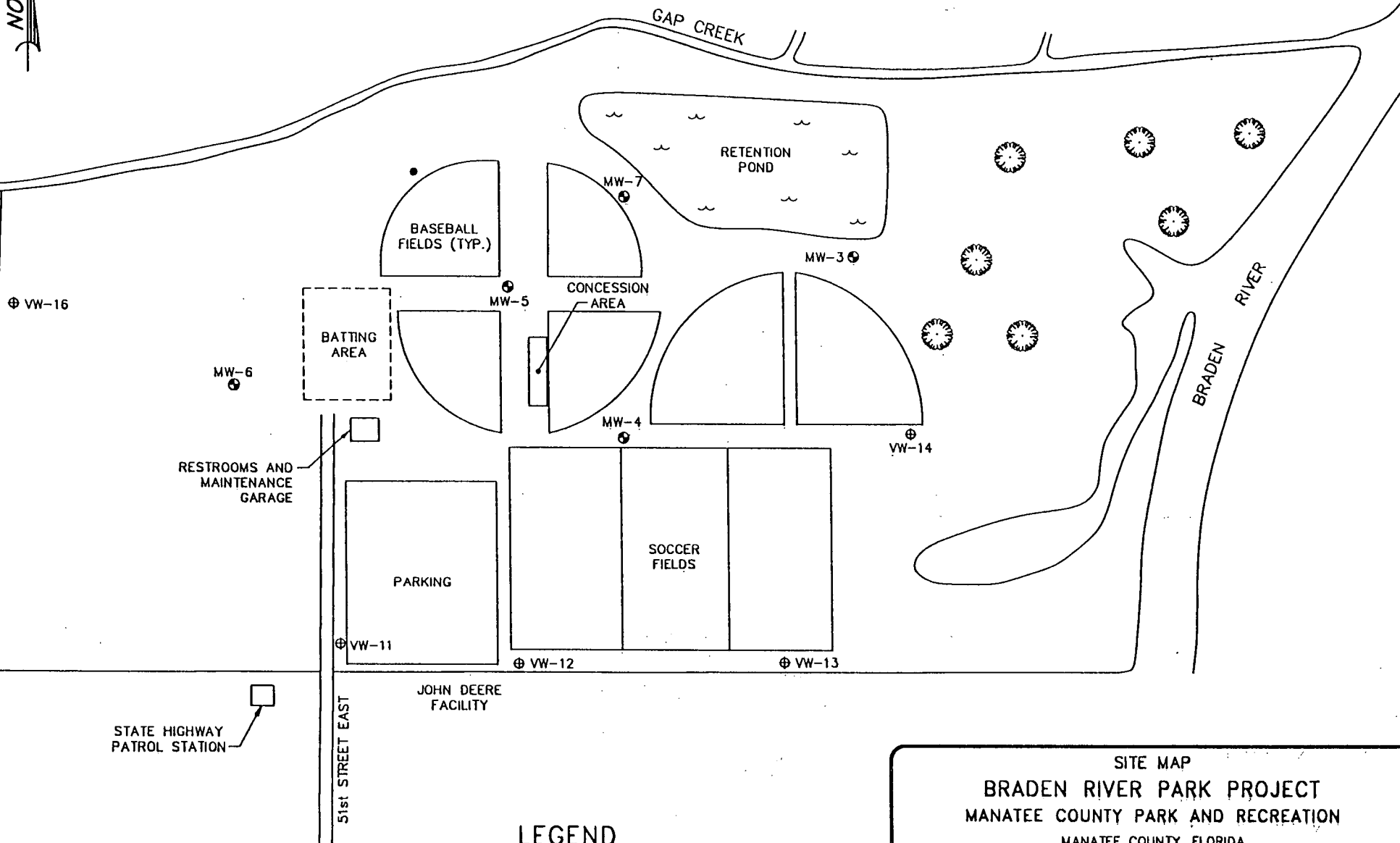
Primary Drinking Water Standards for total coliform were elevated in all four of the monitor wells that were sampled. No pesticides were found at elevated levels, as compared to previous results which have indicated DDD, DDE, or DDT. The results also reveal a continued presence of purgeable halocarbons in monitor well MW-3, although not in concentrations that exceed state guidelines.

It is recommended that the groundwater monitoring plan be continued, as outlined in previous correspondence.



## APPENDIX





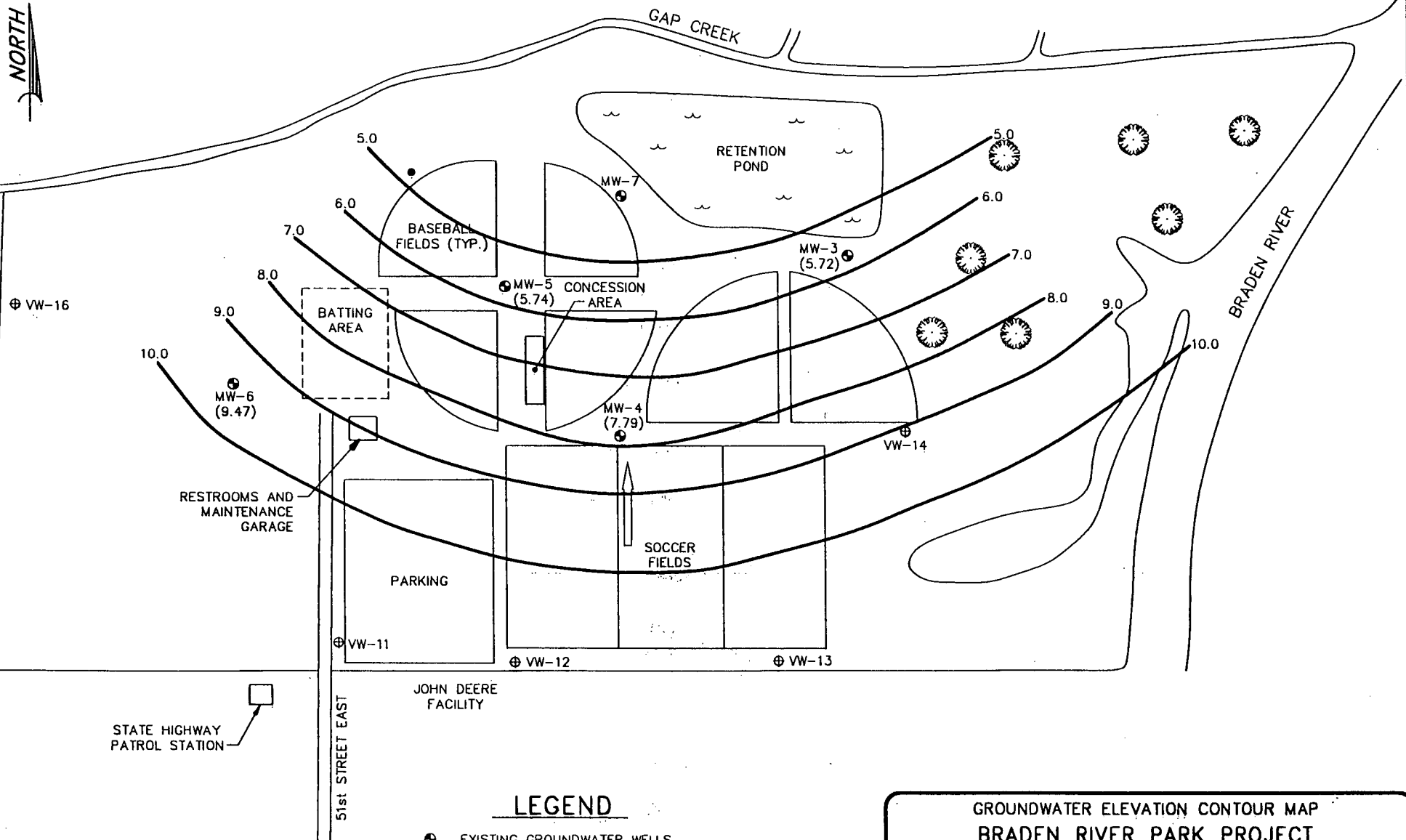
### LEGEND

- ⊕ EXISTING GROUNDWATER WELLS
- ⊕ METHANE MONITOR WELLS (INSTALLED 3/4/96)
- GAS VENT
- ☼ TREES

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

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

|               |               |                      |
|---------------|---------------|----------------------|
| DRAWN BY: KEK | SCALE: N.T.S. | PROJ. NO.: 552-51014 |
| CHKD. BY:     | DATE: 3/31/97 | DWG.: 1              |



GROUNDWATER ELEVATION CONTOUR MAP  
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: KEK | SCALE: N.T.S. | PROJ. NO.: 552-51014 |
| CHKD. BY:     | DATE: 3/31/97 | DWG.: 2              |

**TABLE 3: Groundwater Analytical Summary**  
**Bradley River Park, Manatee County, Florida**  
**PSI Project Number 552-5I014**

| Well<br>Identi-<br>fication | Sample<br>Date | Purgeable<br>Halocarbons<br>(ug/l) | Organo-<br>Chlorine<br>Pesticides<br>(ug/l) | BIS<br>(ug/l) | Phenols<br>(ug/l) | Iron <sup>1,2</sup><br>(mg/l) | Lead <sup>1,2</sup><br>(mg/l) | Manganese <sup>1,2</sup><br>(mg/l) | Sodium <sup>1,2</sup><br>(mg/l) | Chloride<br>(mg/l) | TDS<br>(mg/l) | Total<br>Coliform<br>(CFU) | Gross<br>Alpha<br>(pCi/l) | Radium<br>226<br>&228<br>(pCi/l) |
|-----------------------------|----------------|------------------------------------|---------------------------------------------|---------------|-------------------|-------------------------------|-------------------------------|------------------------------------|---------------------------------|--------------------|---------------|----------------------------|---------------------------|----------------------------------|
| MW-01                       | 2/21/95        | 2                                  | NA                                          | NA            | 102               | NA                            | < 0.005, < 0.005              | NA                                 | NA                              | NA                 | NA            | NA                         | NA                        | NA                               |
| MW-2                        | 2/21/95        | 11                                 | NA                                          | NA            | 171               | NA                            | < 0.005, < 0.005              | NA                                 | NA                              | NA                 | NA            | NA                         | NA                        | NA                               |
|                             | 6/23/95        | 26                                 | < 0.5                                       | NA            | < 50              | NA                            | <b>0.024, 0.016</b>           | NA                                 | NA                              | NA                 | NA            | NA                         | NA                        | NA                               |
|                             | 2/19/96        | 14                                 | < 0.5                                       | NA            | < 5               | NA                            | <b>0.154, 0.003</b>           | NA                                 | NA                              | NA                 | NA            | NA                         | NA                        | NA                               |
| MW-3                        | 2/21/95        | 15                                 | NA                                          | NA            | < 10              | NA                            | < 0.005, < 0.005              | NA                                 | NA                              | NA                 | NA            | NA                         | NA                        | NA                               |
|                             | 6/29/95        | 6                                  | < 0.5                                       | NA            | 90                | NA                            | <b>0.033, 0.008</b>           | NA                                 | NA                              | NA                 | NA            | NA                         | NA                        | NA                               |
|                             | 8/4/95         | 9                                  | < 0.5                                       | NA            | 70                | NA                            | <b>0.084, 0.006</b>           | NA                                 | NA                              | NA                 | NA            | NA                         | NA                        | NA                               |
|                             | 9/22/95        | 16                                 | < 0.05                                      | NA            | < 50              | NA                            | 0.012, < 0.005                | NA                                 | NA                              | NA                 | NA            | NA                         | NA                        | NA                               |
|                             | 10/27/95       | 8                                  | < 0.05                                      | NA            | < 50              | NA                            | 0.006, < 0.001                | NA                                 | NA                              | NA                 | NA            | NA                         | NA                        | NA                               |
|                             | 2/19/96        | 5                                  | < 0.05                                      | NA            | < 5               | NA                            | 0.002, < 0.001                | NA                                 | NA                              | NA                 | NA            | NA                         | NA                        | NA                               |
|                             | 12/11/96       | 10                                 | < 0.5                                       | < 10          | NA                | 17, 16                        | 0.006, < 0.005                | <b>0.48, 0.47</b>                  | <b>182, 173</b>                 | 182                | <b>1,410</b>  | <b>110</b>                 | 7.1 +/- 17                | < 0.60,<br>< 2.0                 |
|                             | 2/5/97         | 8                                  | < 0.5                                       | < 10          | NA                | 15, 1.8                       | < 0.005, < 0.005              | <b>0.41, 0.46</b>                  | <b>217, 223</b>                 | 226                | <b>1,476</b>  | < 100*                     | 22 +/- 23                 | < 0.60,<br>< 1.0                 |
| <b>MCL</b>                  |                | <b>**</b>                          | <b>**</b>                                   | <b>6</b>      | <b>10</b>         | <b>0.3</b>                    | <b>0.015</b>                  | <b>0.05</b>                        | <b>160</b>                      | <b>250</b>         | <b>500</b>    | <b>1</b>                   | <b>15</b>                 | <b>5</b>                         |

Notes:

1,2 = The first value is total, the second value is filtered

MCL = Maximum Contaminant Level per Chapter 62-550, FAC

NA = Not analyzed for this parameter

BIS = Bis(2-ethylhexyl)phthalate

\*\* = Parameter specific

ug/l = Micrograms per liter

mg/l = milligrams per liter

CFU = Colony forming units

pCi/l = Picocuries per liter

\* = Duplicate sample revealed 200 CFU/100mls

**TABLE 3: Groundwater Analytical Summary**  
**Braden River Park, Manatee County, Florida**  
**PSI Project Number 552-5I014**

page 2 of 4

| Well<br>Identi-<br>fication | Sample<br>Date | Purgeable<br>Halocarbons<br>(ug/l) | Organo-<br>Chlorine<br>Pesticides<br>(ug/l) | BIS<br>(ug/l) | Phenols<br>(ug/l) | Iron <sup>1,2</sup><br>(mg/l) | Lead <sup>1,2</sup><br>(mg/l) | Manganese <sup>1,2</sup><br>(mg/l) | Sodium <sup>1,2</sup><br>(mg/l) | Chloride<br>(mg/l) | TDS<br>mg/l | Total<br>Coliform<br>(CFU) | Gross<br>Alpha<br>(pCi/l) | Radium<br>226<br>&228<br>(pCi/l) |
|-----------------------------|----------------|------------------------------------|---------------------------------------------|---------------|-------------------|-------------------------------|-------------------------------|------------------------------------|---------------------------------|--------------------|-------------|----------------------------|---------------------------|----------------------------------|
| MW-4                        | 2/21/95        | < 1                                | NA                                          | NA            | < 10              | NA                            | < 0.005, < 0.005              | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 9/22/95        | < 1                                | 4.7                                         | NA            | 70                | NA                            | 1.70, < 0.005                 | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 10/27/95       | < 1                                | 2.0                                         | NA            | < 50              | NA                            | 0.167, < 0.001                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 2/19/96        | < 1                                | 6.8                                         | NA            | < 5*              | NA                            | 0.600, < 0.001                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 12/12/96       | < 1                                | < 0.5                                       | < 10          | NA                | 28, 27                        | < 0.005, < 0.005              | 0.50, 0.50                         | 11, 12                          | 29                 | 416         | 10                         | 6.3 +/-<br>7.4            | 2.2 +/- 0.11,<br>< 2.0           |
|                             | 2/5/97         | < 1                                | < 0.5                                       | < 10          | NA                | 29, 28                        | < 0.005, < 0.005              | 0.37, 0.43                         | 11.6, 11.3                      | 29                 | 460         | < 10                       | 3.1 +/-<br>4.5            | < 0.60,<br>< 1.0                 |
| MW-5                        | 2/21/95        | < 1                                | NA                                          | NA            | 242               | NA                            | < 0.005, < 0.005              | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 6/29/95        | < 1                                | < 0.5                                       | NA            | 100               | NA                            | 1.100, 0.006                  | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 8/4/95         | < 1                                | < 0.5                                       | NA            | 80                | NA                            | 1.640, 0.008                  | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 8/25/95        | < 1                                | < 0.5                                       | NA            | < 50              | NA                            | 0.510, < 0.005                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 9/22/95        | < 1                                | < 0.5                                       | NA            | < 50              | NA                            | 0.948, < 0.005                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 10/27/95       | < 1                                | < 0.5                                       | NA            | 120               | NA                            | 0.643, < 0.001                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 2/19/96        | < 1                                | < 0.5                                       | NA            | 2                 | NA                            | 0.400, < 0.001                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 12/12/96       | < 1                                | < 0.5                                       | < 10          | NA                | 23, 25                        | < 0.005, < 0.005              | 0.41, 0.39                         | 41, 42                          | 75                 | 808         | 100                        | 14 +/-<br>13              | < 0.60<br>< 2.0                  |
|                             | 2/6/97         | < 1                                | < 0.5                                       | < 10          | NA                | 27, 21                        | < 0.005, < 0.005              | 0.27, 0.31                         | 52.3, 50.2                      | 79                 | 790         | < 10                       | 11 +/-<br>29              | < 0.60,<br>< 1.0                 |
| MCL                         |                | **                                 | **                                          | 6             | 10                | 0.3                           | 0.015                         | 0.05                               | 160                             | 250                | 500         | 1                          | 15                        | 5                                |

Notes:

1,2 = The first value is total, the second value is filtered

MCL = Maximum Contaminant Level per Chapter 62-550, FAC

NA = Not analyzed for this parameter

BIS = Bis(2-ethylhexyl)phthalate

\* = Phenol at 7mg/l was detected by EPA Method 420.1, but not by EPA Method 604

ug/l = Micrograms per liter

mg/l = milligrams per liter

CFU = Colony forming units

pCi/l = Picocuries per liter

\*\* = Parameter specific

**TABLE 3: Groundwater Analytical Summary**  
**Braden River Park, Manatee County, Florida**  
**PSI Project Number 552-5I014**

| Well<br>Identi-<br>fication | Sample<br>Date | Purgeable<br>Halocarbons<br>(ug/l) | Organo-<br>Chlorine<br>Pesticides<br>(ug/l) | BIS<br>(ug/l) | Phenols<br>(ug/l) | Iron <sup>1,2</sup><br>(mg/l) | Lead <sup>1,2</sup><br>(mg/l) | Manganese <sup>1,2</sup><br>(mg/l) | Sodium <sup>1,2</sup><br>(mg/l) | Chloride<br>(mg/l) | TDS<br>mg/l | Total<br>Coliform<br>(CFU) | Gross<br>Alpha<br>(pCi/l) | Radium<br>226<br>&228<br>(pCi/l) |
|-----------------------------|----------------|------------------------------------|---------------------------------------------|---------------|-------------------|-------------------------------|-------------------------------|------------------------------------|---------------------------------|--------------------|-------------|----------------------------|---------------------------|----------------------------------|
| MW-6                        | 2/21/95        | < 1                                | NA                                          | NA            | < 10              | NA                            | < 0.005, < 0.005              | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 6/14/95        | < 1                                | < 0.5                                       | NA            | < 50              | NA                            | 0.005, < 0.005                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 8/4/95         | 9                                  | < 0.5                                       | NA            | 100               | NA                            | 0.051, < 0.005                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 8/25/95        | 30                                 | < 0.5                                       | NA            | 200               | NA                            | 0.006, < 0.005                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 9/22/95        | < 1                                | < 0.5                                       | NA            | < 50              | NA                            | 0.027, < 0.005                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 10/27/95       | < 1                                | < 0.5                                       | NA            | < 50              | NA                            | 0.015, < 0.001                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 2/19/96        | < 1                                | < 0.5                                       | NA            | < 5               | NA                            | 0.023, < 0.001                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 12/11/96       | < 1                                | < 0.5                                       | < 10          | NA                | 25, 24                        | < 0.005, < 0.005              | 0.40, 0.39                         | 8, 7                            | 16                 | 228         | < 10                       | < 3.0                     | 0.93 +/- 0.08<br>< 2.0           |
|                             | 2/5/97         | < 1                                | < 0.5                                       | < 10          | NA                | 27, 26                        | 0.006, < 0.005                | 0.32, 0.33                         | 6.9, 7.9                        | 13                 | 206         | < 100***                   | 24 +/-<br>8.1             | 11 +/- 0.24,<br>1.5 +/- 0.46     |
| MW-7                        | 9/22/95        | 14                                 | < 0.5                                       | NA            | < 50              | NA                            | 0.063, < 0.005                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 10/27/95       | 9                                  | < 0.5                                       | NA            | 70                | NA                            | 0.075, < 0.001                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 2/19/96        | 3                                  | < 0.5                                       | NA            | 1                 | NA                            | 0.066, < 0.001                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 12/11/96       | 6                                  | < 0.5                                       | < 10          | NA                | 17, 20                        | < 0.005,<br>< 0.005           | 0.26, 0.26                         | 18, 18                          | 21                 | 652         | 1500*                      | 6.3 +/-<br>8.8            | 0.66 +/- 0.06<br>< 2.0           |
| MCL                         |                | **                                 | **                                          | 6             | 10                | 0.3                           | 0.015                         | 0.05                               | 160                             | 250                | 500         | 1                          | 15                        | 5                                |

**Notes:**

1,2 = The first value is total, the second value is filtered

MCL = Maximum Contaminant Level per Chapter 62-550, FAC

NA = Not analyzed for this parameter

BIS = Bis(2-ethylhexyl)phthalate

ug/l = Micrograms per liter

mg/l = milligrams per liter

CFU = Colony forming units

pCi/l = Picocuries per liter

\* = Duplicate sample revealed 200 CFU

\*\* = Parameter specific

\*\*\* = Lab was unable to read sample due to silt and high turbidity

**TABLE 3: Groundwater Analytical Summary  
Braden River Park, Manatee County, Florida  
PSI Project Number 552-5I014**

page 4 of 4

| Well<br>Identification | Sample<br>Date | Dioxins<br>(2,3,7,8-TCDD)<br>(pg/l) |
|------------------------|----------------|-------------------------------------|
| MW-3                   | 12/11/96       | < 2.0                               |
| MW-4                   | 12/12/96       | < 2.1                               |
| MW-5                   | 12/12/96       | < 1.8                               |
| MW-6                   | 12/11/96       | < 3.3                               |
|                        | <b>MCL</b>     | <b>3 E -12</b>                      |

pg/l = Picograms per liter

ug/l = micrograms per liter

3 E -12 pg/l = 3 E -6 ug/l = MCL

(2.7 pg/l = 2.7 E -6 ug/l)

ANALYTICAL REPORT

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

PROJECT: Braden River Park  
552-5I014

ATTENTION: Nancy Castricone

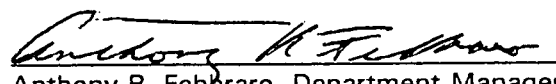
SAMPLE DATE: February 5, 1997

DATE: February 12, 1997

OUR REPORT NUMBER: 385-7P051-0014

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  
FL CQAP #860130

/dlr

*Information To Build On*

LAB #: 702055-01  
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           |
| 2-Chloroethylvinyl ether  | <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           |
| cis-1,2-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:  
02/11/97  
Analyst: TH

**ORGANOCHLORINE PESTICIDES**

| <u>Analyte</u> | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>MDL/DF</u> |
|----------------|----------------|--------------|---------------|---------------|
| p,p'-DDE       | <0.5           | µg/l         | EPA 608       | 0.5/1         |
| p,p'-DDD       | <0.5           | µg/l         | EPA 608       | 0.5/1         |
| p,p'-DDT       | <0.5           | µg/l         | EPA 608       | 0.5/1         |

Extraction Date:  
02/11/97  
Analysis Date:  
02/12/97  
Analyst: SP

**BASE/NEUTRALS BY GC/MS**

| <u>Analyte</u>             | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>MDL/DF</u> |
|----------------------------|----------------|--------------|---------------|---------------|
| Bis(2-ethylhexyl)phthalate | <10            | µg/l         | EPA 625       | 10/1          |

Extraction Date:  
02/11/97  
Analysis Date:  
02/11/97  
Analyst: SP



LAB #: 702055-01  
Client ID: MW-6

### METALS ANALYSIS

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 Aluminum      | 2.4            | mg/l         | EPA 202.1     | 02/11/97             | JS             | 1.0        |
| Total Iron          | 27             | mg/l         | EPA 236.1     | 02/11/97             | JS             | 0.1        |
| Total Lead          | 0.006          | mg/l         | EPA 239.2     | 02/10/97             | JS             | 0.005      |
| Total Manganese     | 0.32           | mg/l         | EPA 243.1     | 02/11/97             | JS             | 0.02       |
| Total Sodium        | 6.9            | mg/l         | EPA 273.1     | 02/12/97             | JS             | 1.0        |
| Dissolved Aluminum  | <1.0           | mg/l         | EPA 202.1     | 02/11/97             | JS             | 1.0        |
| Dissolved Iron      | 26             | mg/l         | EPA 236.1     | 02/11/97             | JS             | 0.1        |
| Dissolved Lead      | <0.005         | mg/l         | EPA 239.2     | 02/10/97             | JS             | 0.005      |
| Dissolved Manganese | 0.33           | mg/l         | EPA 243.1     | 02/11/97             | JS             | 0.02       |
| Dissolved Sodium    | 7.9            | mg/l         | EPA 273.1     | 02/12/97             | JS             | 1.0        |

### INORGANIC ANALYSES

| <u>Analyte</u> | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>Analysis Date</u> | <u>Analyst</u> | <u>MDL</u> |
|----------------|----------------|--------------|---------------|----------------------|----------------|------------|
| Chloride       | 13             | mg/l         | SM 4500-Cl B  | 02/05/97             | MB             | 1          |
| TDS            | 206            | mg/l         | EPA 160.1     | 02/11/97             | HB             | 5          |

### MICROBIOLOGY

| <u>Analyte</u> | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>Analysis Date</u> | <u>Analyst</u> | <u>MDL</u> |
|----------------|----------------|--------------|---------------|----------------------|----------------|------------|
| Total Coliform | <100           | CFU/100 mls  | SM 9222 B     | 02/05/97             | HB             | 1          |



LAB #: 702055-02  
Client ID: MW-3

**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             | 6       | µg/l  | EPA 601 | 1/1    |
| Chloroethane              | <1      | µg/l  | EPA 601 | 1/1    |
| 2-Chloroethylvinyl ether  | <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       | 2       | 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    |
| cis-1,2-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:  
02/11/97  
Analyst: TH

**ORGANOCHLORINE PESTICIDES**

| Analyte  | Results | Units | Method  | MDL/DF |
|----------|---------|-------|---------|--------|
| p,p'-DDE | <0.5    | µg/l  | EPA 608 | 0.5/1  |
| p,p'-DDD | <0.5    | µg/l  | EPA 608 | 0.5/1  |
| p,p'-DDT | <0.5    | µg/l  | EPA 608 | 0.5/1  |

Extraction Date:  
02/11/97  
Analysis Date:  
02/12/97  
Analyst: SP

**BASE/NEUTRALS BY GC/MS**

| Analyte                    | Results | Units | Method  | MDL/DF |
|----------------------------|---------|-------|---------|--------|
| Bis(2-ethylhexyl)phthalate | <10     | µg/l  | EPA 625 | 10/1   |

Extraction Date:  
02/11/97  
Analysis Date:  
02/11/97  
Analyst: SP



LAB #: 702055-02  
Client ID: MW-3

### METALS ANALYSIS

too high

Matrix: Water

| Analyte             | Results | Units | Method    | Analysis Date | Analyst | MDL   |
|---------------------|---------|-------|-----------|---------------|---------|-------|
| Total Aluminum      | <1.0    | mg/l  | EPA 202.1 | 02/11/97      | JS      | 1.0   |
| Total Iron          | 15      | mg/l  | EPA 236.1 | 02/11/97      | JS      | 0.1   |
| Total Lead          | <0.005  | mg/l  | EPA 239.2 | 02/10/97      | JS      | 0.005 |
| Total Manganese     | 0.41    | mg/l  | EPA 243.1 | 02/11/97      | JS      | 0.02  |
| Total Sodium        | 217     | mg/l  | EPA 273.1 | 02/12/97      | JS      | 1.0   |
| Dissolved Aluminum  | <1.0    | mg/l  | EPA 202.1 | 02/11/97      | JS      | 1.0   |
| Dissolved Iron      | 1.8     | mg/l  | EPA 236.1 | 02/11/97      | JS      | 0.1   |
| Dissolved Lead      | <0.005  | mg/l  | EPA 239.2 | 02/10/97      | JS      | 0.005 |
| Dissolved Manganese | 0.46    | mg/l  | EPA 243.1 | 02/11/97      | JS      | 0.02  |
| Dissolved Sodium    | 223     | mg/l  | EPA 273.1 | 02/12/97      | JS      | 1.0   |

### INORGANIC ANALYSES

| Analyte  | Results | Units | Method       | Analysis Date | Analyst | MDL |
|----------|---------|-------|--------------|---------------|---------|-----|
| Chloride | 226     | mg/l  | SM 4500-Cl B | 02/05/97      | MB      | 1   |
| TDS      | 1476    | mg/l  | EPA 160.1    | 02/11/97      | HB      | 5   |

### MICROBIOLOGY

| Analyte        | Results | Units       | Method    | Analysis Date | Analyst | MDL |
|----------------|---------|-------------|-----------|---------------|---------|-----|
| Total Coliform | <100    | CFU/100 mls | SM 9222 B | 02/05/97      | HB      | 1   |

LAB #: 702055-03  
Client ID: MW-4

# 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    |
| 2-Chloroethylvinyl ether  | <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    |
| cis-1,2-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:  
02/11/97  
Analyst: TH

# ORGANOCHLORINE PESTICIDES

| Analyte  | Results | Units | Method  | MDL/DF |
|----------|---------|-------|---------|--------|
| p,p'-DDE | <0.5    | µg/l  | EPA 608 | 0.5/1  |
| p,p'-DDD | <0.5    | µg/l  | EPA 608 | 0.5/1  |
| p,p'-DDT | <0.5    | µg/l  | EPA 608 | 0.5/1  |

Extraction Date:  
02/11/97  
Analysis Date:  
02/12/97  
Analyst: SP

# BASE/NEUTRALS BY GC/MS

| Analyte                    | Results | Units | Method  | MDL/DF |
|----------------------------|---------|-------|---------|--------|
| Bis(2-ethylhexyl)phthalate | <10     | µg/l  | EPA 625 | 10/1   |

Extraction Date:  
02/11/97  
Analysis Date:  
02/11/97  
Analyst: SP



LAB #: 702055-03  
Client ID: MW-4

# METALS ANALYSIS

Matrix: Water

| Analyte             | Results | Units | Method    | Analysis Date | Analyst | MDL   |
|---------------------|---------|-------|-----------|---------------|---------|-------|
| Total Aluminum      | <1.0    | mg/l  | EPA 202.1 | 02/11/97      | JS      | 1.0   |
| Total Iron          | 29      | mg/l  | EPA 236.1 | 02/11/97      | JS      | 0.1   |
| Total Lead          | <0.005  | mg/l  | EPA 239.2 | 02/10/97      | JS      | 0.005 |
| Total Manganese     | 0.37    | mg/l  | EPA 243.1 | 02/11/97      | JS      | 0.02  |
| Total Sodium        | 11.6    | mg/l  | EPA 273.1 | 02/12/97      | JS      | 1.0   |
| Dissolved Aluminum  | <1.0    | mg/l  | EPA 202.1 | 02/11/97      | JS      | 1.0   |
| Dissolved Iron      | 28      | mg/l  | EPA 236.1 | 02/11/97      | JS      | 0.1   |
| Dissolved Lead      | <0.005  | mg/l  | EPA 239.2 | 02/10/97      | JS      | 0.005 |
| Dissolved Manganese | 0.43    | mg/l  | EPA 243.1 | 02/11/97      | JS      | 0.02  |
| Dissolved Sodium    | 11.3    | mg/l  | EPA 273.1 | 02/12/97      | JS      | 1.0   |

# INORGANIC ANALYSES

| Analyte  | Results | Units | Method       | Analysis Date | Analyst | MDL |
|----------|---------|-------|--------------|---------------|---------|-----|
| Chloride | 29      | mg/l  | SM 4500-Cl B | 02/05/97      | MB      | 1   |
| TDS      | 460     | mg/l  | EPA 160.1    | 02/11/97      | HB      | 5   |

# MICROBIOLOGY

| Analyte        | Results | Units       | Method    | Analysis Date | Analyst | MDL |
|----------------|---------|-------------|-----------|---------------|---------|-----|
| Total Coliform | <10     | CFU/100 mls | SM 9222 B | 02/05/97      | HB      | 1   |



LAB #: 702055-04

Client ID: DUPE

### 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             | 4       | µg/l  | EPA 601 | 1/1    |
| Chloroethane              | <1      | µg/l  | EPA 601 | 1/1    |
| 2-Chloroethylvinyl ether  | <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    |
| cis-1,2-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:  
02/11/97  
Analyst: TH

### ORGANOCHLORINE PESTICIDES

| Analyte  | Results | Units | Method  | MDL/DF |
|----------|---------|-------|---------|--------|
| p,p'-DDE | <0.5    | µg/l  | EPA 608 | 0.5/1  |
| p,p'-DDD | <0.5    | µg/l  | EPA 608 | 0.5/1  |
| p,p'-DDT | <0.5    | µg/l  | EPA 608 | 0.5/1  |

Extraction Date:  
02/11/97  
Analysis Date:  
02/12/97  
Analyst: SP

### BASE/NEUTRALS BY GC/MS

| Analyte                    | Results | Units | Method  | MDL/DF |
|----------------------------|---------|-------|---------|--------|
| Bis(2-ethylhexyl)phthalate | <10     | µg/l  | EPA 625 | 10/1   |

Extraction Date:  
02/11/97  
Analysis Date:  
02/11/97  
Analyst: SP



LAB #: 702055-04  
Client ID: DUPE

# METALS ANALYSIS

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 Aluminum      | 1.5            | mg/l         | EPA 202.1     | 02/11/97             | JS             | 1.0        |
| Total Iron          | 21             | mg/l         | EPA 236.1     | 02/11/97             | JS             | 0.1        |
| Total Lead          | 0.015          | mg/l         | EPA 239.2     | 02/10/97             | JS             | 0.005      |
| Total Manganese     | 0.42           | mg/l         | EPA 243.1     | 02/11/97             | JS             | 0.02       |
| Total Sodium        | 190            | mg/l         | EPA 273.1     | 02/12/97             | JS             | 1.0        |
| Dissolved Aluminum  | <1.0           | mg/l         | EPA 202.1     | 02/11/97             | JS             | 1.0        |
| Dissolved Iron      | 6              | mg/l         | EPA 236.1     | 02/11/97             | JS             | 0.1        |
| Dissolved Lead      | <0.005         | mg/l         | EPA 239.2     | 02/10/97             | JS             | 0.005      |
| Dissolved Manganese | 0.43           | mg/l         | EPA 243.1     | 02/11/97             | JS             | 0.02       |
| Dissolved Sodium    | 178            | mg/l         | EPA 273.1     | 02/12/97             | JS             | 1.0        |

# INORGANIC ANALYSES

| <u>Analyte</u> | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>Analysis Date</u> | <u>Analyst</u> | <u>MDL</u> |
|----------------|----------------|--------------|---------------|----------------------|----------------|------------|
| Chloride       | 205            | mg/l         | SM 4500-Cl B  | 02/05/97             | MB             | 1          |
| TDS            | 1408           | mg/l         | EPA 160.1     | 02/11/97             | HB             | 5          |

# MICROBIOLOGY

| <u>Analyte</u> | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>Analysis Date</u> | <u>Analyst</u> | <u>MDL</u> |
|----------------|----------------|--------------|---------------|----------------------|----------------|------------|
| Total Coliform | 200            | CFU/100 mls  | SM 9222 B     | 02/05/97             | HB             | 1          |



LAB #: 702055-05  
Client ID: Eq. Blank

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    |
| 2-Chloroethylvinyl ether  | <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    |
| cis-1,2-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:  
02/11/97  
Analyst: TH

ORGANOCHLORINE PESTICIDES

| Analyte  | Results | Units | Method  | MDL/DF |
|----------|---------|-------|---------|--------|
| p,p'-DDE | <0.5    | µg/l  | EPA 608 | 0.5/1  |
| p,p'-DDD | <0.5    | µg/l  | EPA 608 | 0.5/1  |
| p,p'-DDT | <0.5    | µg/l  | EPA 608 | 0.5/1  |

Extraction Date:  
02/11/97  
Analysis Date:  
02/12/97  
Analyst: SP

BASE/NEUTRALS BY GC/MS

| Analyte                    | Results | Units | Method  | MDL/DF |
|----------------------------|---------|-------|---------|--------|
| Bis(2-ethylhexyl)phthalate | <10     | µg/l  | EPA 625 | 10/1   |

Extraction Date:  
02/11/97  
Analysis Date:  
02/11/97  
Analyst: SP



LAB #: 702055-05  
Client ID: Eq. Blank

# METALS ANALYSIS

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 Aluminum      | <1.0           | mg/l         | EPA 202.1     | 02/11/97             | JS             | 1.0        |
| Total Iron          | <0.1           | mg/l         | EPA 236.1     | 02/11/97             | JS             | 0.1        |
| Total Lead          | <0.005         | mg/l         | EPA 239.2     | 02/10/97             | JS             | 0.005      |
| Total Manganese     | <0.02          | mg/l         | EPA 243.1     | 02/11/97             | JS             | 0.02       |
| Total Sodium        | <1.0           | mg/l         | EPA 273.1     | 02/12/97             | JS             | 1.0        |
| Dissolved Aluminum  | <1.0           | mg/l         | EPA 202.1     | 02/11/97             | JS             | 1.0        |
| Dissolved Iron      | <0.1           | mg/l         | EPA 236.1     | 02/11/97             | JS             | 0.1        |
| Dissolved Lead      | <0.005         | mg/l         | EPA 239.2     | 02/10/97             | JS             | 0.005      |
| Dissolved Manganese | <0.02          | mg/l         | EPA 243.1     | 02/11/97             | JS             | 0.02       |
| Dissolved Sodium    | <1.0           | mg/l         | EPA 273.1     | 02/12/97             | JS             | 1.0        |

# INORGANIC ANALYSES

| <u>Analyte</u> | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>Analysis Date</u> | <u>Analyst</u> | <u>MDL</u> |
|----------------|----------------|--------------|---------------|----------------------|----------------|------------|
| Chloride       | 1              | mg/l         | SM 4500-Cl B  | 02/05/97             | MB             | 1          |
| TDS            | <5             | mg/l         | EPA 160.1     | 02/11/97             | HB             | 5          |

# MICROBIOLOGY

| <u>Analyte</u> | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>Analysis Date</u> | <u>Analyst</u> | <u>MDL</u> |
|----------------|----------------|--------------|---------------|----------------------|----------------|------------|
| Total Coliform | <1             | CFU/100 mls  | SM 9222 B     | 02/05/97             | HB             | 1          |



LAB #: 702055-06  
Client ID: Trip

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    |
| 2-Chloroethylvinyl ether  | <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    |
| cis-1,2-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:  
02/11/97  
Analyst: TH



### QUALITY CONTROL DATA: ORGANIC ANALYTES

Matrix: Water

| Analyte                   | Lab<br>Batch# | Analytical<br>Blank | MDL | Units | QC<br>%REC | Spike<br>%REC | Dup<br>%RPD | Method |
|---------------------------|---------------|---------------------|-----|-------|------------|---------------|-------------|--------|
| Bromodichloromethane      | AB0211        | <1                  | 1   | µg/l  |            | 88            |             | 601    |
| Bromoform                 |               | <1                  | 1   | µg/l  |            | 78            |             | 601    |
| Bromomethane              |               | <1                  | 1   | µg/l  |            | 77            |             | 601    |
| Carbon tetrachloride      |               | <1                  | 1   | µg/l  |            | 76            |             | 601    |
| Chlorobenzene             |               | <1                  | 1   | µg/l  |            | 74            |             | 601    |
| Chloroethane              |               | <1                  | 1   | µg/l  |            | 67            |             | 601    |
| Chloroform                |               | <1                  | 1   | µg/l  |            | 90            |             | 601    |
| Chloromethane             |               | <1                  | 1   | µg/l  |            | -             |             | 601    |
| Dibromochloromethane      |               | <1                  | 1   | µg/l  |            | 75            |             | 601    |
| 1,2-Dichlorobenzene       |               | <1                  | 1   | µg/l  |            | 70            |             | 601    |
| 1,3-Dichlorobenzene       |               | <1                  | 1   | µg/l  |            | 62            |             | 601    |
| 1,4-Dichlorobenzene       |               | <1                  | 1   | µg/l  |            | 73            |             | 601    |
| Dichlorodifluoromethane   |               | <1                  | 1   | µg/l  |            | 88            |             | 601    |
| 1,1-Dichloroethane        |               | <1                  | 1   | µg/l  |            | 80            |             | 601    |
| 1,2-Dichloroethane        |               | <1                  | 1   | µg/l  |            | 76            |             | 601    |
| 1,1-Dichloroethene        |               | <1                  | 1   | µg/l  |            | 76            |             | 601    |
| cis-1,2-Dichloroethene    |               | <1                  | 1   | µg/l  |            | -             |             | 601    |
| trans-1,2-Dichloroethene  |               | <1                  | 1   | µg/l  |            | 84            |             | 601    |
| 1,2-Dichloropropane       |               | <1                  | 1   | µg/l  |            | 84            |             | 601    |
| cis-1,3-Dichloropropene   |               | <1                  | 1   | µg/l  |            | 81            |             | 601    |
| trans-1,3-Dichloropropene |               | <1                  | 1   | µg/l  |            | 75            |             | 601    |
| Methylene chloride        |               | <1                  | 1   | µg/l  |            | 77            |             | 601    |
| 1,1,2,2-Tetrachloroethane |               | <1                  | 1   | µg/l  |            | 76            |             | 601    |
| Tetrachloroethene         |               | <1                  | 1   | µg/l  |            | 90            |             | 601    |
| 1,1,1-Trichloroethane     |               | <1                  | 1   | µg/l  |            | 88            |             | 601    |
| 1,1,2-Trichloroethane     |               | <1                  | 1   | µg/l  |            | 81            |             | 601    |
| Trichloroethene           |               | <1                  | 1   | µg/l  |            | 91            |             | 601    |
| Trichlorofluoromethane    |               | <1                  | 1   | µg/l  |            | 77            |             | 601    |
| Vinyl chloride            |               | <1                  | 1   | µg/l  |            | 64            |             | 601    |

Matrix: Water

| Analyte  | Lab<br>Batch# | Analytical<br>Blank | MDL | Units | QC<br>%REC | Spike<br>%REC | Dup<br>%RPD | Method |
|----------|---------------|---------------------|-----|-------|------------|---------------|-------------|--------|
| p,p'-DDE | MB0211        | <0.5                | 0.5 | µg/l  |            | 79            |             | 608    |
| p,p'-DDD |               | <0.5                | 0.5 | µg/l  |            | 92            |             | 608    |
| p,p'-DDT |               | <0.5                | 0.5 | µg/l  |            | 87            |             | 608    |

### QUALITY CONTROL DATA: INORGANIC ANALYTES

Matrix: Water

| Analyte   | Lab<br>Batch# | Analytical<br>Blank | MDL   | Units | QC<br>%REC | Spike<br>%REC | Dup<br>%RPD | Method    |
|-----------|---------------|---------------------|-------|-------|------------|---------------|-------------|-----------|
| Aluminum  | AB0211        | 1.0                 | 1.0   | mg/l  | 108        | 100           | 0           | 202.1     |
| Iron      | AB0211        | 0.1                 | 0.1   | mg/l  | 110        | 105           | 0           | 236.1     |
| Lead      | AB0210        | 0.005               | 0.005 | mg/l  | 105        | 102           | 5           | 239.2     |
| Manganese | AB0211        | 0.02                | 0.02  | mg/l  | 100        | 98            | 0           | 243.1     |
| Sodium    | AB0212        | 1.0                 | 1.0   | mg/l  | 105        | 102           | 0           | 273.1     |
| Chloride  | AB0205        | <1                  | 1     | mg/l  | 103        | 100           | 2           | 4500 Cl B |
| TDS       | AB0211        | <10                 | 10    | mg/l  | 91         | -             | 3           | 160.1     |



# SURROGATE RECOVERY SUMMARY

Matrix: Water

| PSI LAB # | 2-Bromo-1<br>-Dichloropropane<br>(601/8010) | a,a,a-TFT<br>(602/8020) | 2,4,5,6-Tetrachloro<br>m-xylene<br>(608/8080) | Dibutyl<br>Chlorendate<br>(608/8080) | 2-Fluorobiphenyl<br>(610/8100) | Nitrobenzene<br>(610/8100) |
|-----------|---------------------------------------------|-------------------------|-----------------------------------------------|--------------------------------------|--------------------------------|----------------------------|
| 702055-01 | 70                                          |                         |                                               | 66                                   |                                |                            |
| 702055-02 | 69                                          |                         |                                               | 79                                   |                                |                            |
| 702055-03 | 74                                          |                         |                                               | 75                                   |                                |                            |
| 702055-04 | 54                                          |                         |                                               | 82                                   |                                |                            |
| 702055-05 | 78                                          |                         |                                               | 73                                   |                                |                            |
| 702055-06 | 78                                          |                         |                                               |                                      |                                |                            |

## ACID EXTRACTABLES

## BASE NEUTRAL EXTRACTABLES

| PSI LAB # | 2,4,6-                       |                         |                              |                               |                                |                             |
|-----------|------------------------------|-------------------------|------------------------------|-------------------------------|--------------------------------|-----------------------------|
|           | 2-Fluorophenol<br>(625/8270) | Phenol-d5<br>(625/8270) | Tribromophenol<br>(625/8270) | Nitrobenzene-d5<br>(625/8270) | 2-Fluorobiphenyl<br>(625/8270) | Terphenyl-d14<br>(625/8270) |
| 702055-01 | 40                           | 20                      | 34                           | 50                            | 44                             | 71                          |
| 702055-02 | 42                           | 29                      | 36                           | 52                            | 46                             | 61                          |
| 702055-03 | 31                           | 16                      | 26                           | 39                            | 35                             | 76                          |
| 702055-04 | 46                           | 29                      | 32                           | 55                            | 45                             | 73                          |
| 702055-05 |                              | 14                      | 19                           | 44                            | 59                             | 102                         |



# CHAIN OF CUSTODY RECORD



|                                                |                                            |                                                 |
|------------------------------------------------|--------------------------------------------|-------------------------------------------------|
| PROJECT NAME<br><b>Braden River Park</b>       | REPORT TO<br><b>Nancy Castrone</b>         | INVOICE TO<br><b>Dave Mc Carley</b>             |
| PROJECT NUMBER<br><b>552-5I014</b>             | PROJECT MANAGER<br><b>Nana F./Keith B.</b> | ADDRESS<br><b>4400 140<sup>th</sup> Ave. N.</b> |
| P.O. NUMBER<br><b>—</b>                        | ADDRESS<br><b>same →</b>                   | CITY / STATE / ZIP<br><b>Clearwater 34622</b>   |
| REQUIRED DUE DATE (MM-DD-YY)<br><b>2-12-97</b> | CITY / STATE / ZIP<br><b>—</b>             | ATTENTION<br><b>Nancy Castrone</b>              |
| SAMPLES TO LAB VIA<br><b>hand</b>              | TELEPHONE<br><b>—</b>                      | TELEPHONE<br><b>538-2300</b>                    |
| NUMBER OF COOLERS<br><b>3</b>                  | REPORT VIA<br><b>—</b>                     | VERBAL FAX<br><b>—</b>                          |
| U.S. MAIL/OVERNIGHT                            |                                            |                                                 |

## LABORATORY SUBMITTED TO:

- |                                                                                                            |                                                                                      |
|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <input type="checkbox"/> 6913 Hwy. 225<br>Deer Park, TX 77536<br>(713) 479-8307                            | <input type="checkbox"/> 4820 W. 15th Street<br>Lawrence, KS 66049<br>(800) 548-7901 |
| <input checked="" type="checkbox"/> 1770 Commerce Ave. North<br>St. Petersburg, FL 33716<br>(813) 579-4464 | <input type="checkbox"/> 850 Poplar Street<br>Pittsburgh, PA 15220<br>(412) 922-4000 |

| RELINQUISHED BY<br>DATE / TIME  | ACCEPTED BY<br>DATE / TIME     | SEAL<br>NUMBER |
|---------------------------------|--------------------------------|----------------|
| <i>[Signature]</i> 1-31-97/0941 | <i>[Signature]</i> 2-5-97/1500 | 4574-<br>4577  |
| <i>[Signature]</i> 2-5-97/1500  | <i>[Signature]</i> 2-5-97/1500 |                |

| LABORATORY USE ONLY                       |                                   |
|-------------------------------------------|-----------------------------------|
| ANALYTICAL DUE DATE<br><b>2-12-97</b>     | REPORT DUE DATE<br><b>2-12-97</b> |
| INORGANIC<br>Sect _____ Row _____         | ORGANIC<br>Sect _____ Row _____   |
| PSI PROJECT NAME<br><b>385-7p051-0014</b> |                                   |
| PSI PROJECT #<br><b>—</b>                 |                                   |
| PSI BATCH #<br><b>—</b>                   |                                   |

| LABORATORY USE ONLY |             |                  |                              |                               |
|---------------------|-------------|------------------|------------------------------|-------------------------------|
| SAMPLE CUSTODIAN    | DATE / TIME | COMP-C<br>GRAB-B | SOIL-S<br>WATER-W<br>WASTE-X | LAB USE<br>ONLY<br>LAB NUMBER |
| <b>102055</b>       |             |                  |                              |                               |
| MW-6                | 2.5.97/1000 | B                | W                            | 01                            |
| MW-3                | 2.5.97/1230 | B                | W                            | 02                            |
| MW-4                | 2.5.97/1330 | B                | W                            | 03                            |
| DUPE                | 2.5.97/—    | B                | W                            | 04                            |
| EQ. BLANK           | 2.5.97/1200 | B                | W                            | 05                            |
| TRIP                |             |                  |                              | 06                            |

| NUMBER OF CONTAINERS | PARAMETER LIST |               |               |             |                 |             |            |            |          |         |
|----------------------|----------------|---------------|---------------|-------------|-----------------|-------------|------------|------------|----------|---------|
|                      | TDS            | Total Calcium | Bis phthalate | Grass Alpha | Radium 226 f228 | DDT-DDD-DDD | Fe, Mn, Na | Al, Pb, Cr | Chloride | EPA 601 |
| 13                   | X              | X             | X             | X           | X               | X           | X          | X          | X        | X       |
| 13                   | X              | X             | X             | X           | X               | X           | X          | X          | X        | X       |
| 13                   | X              | X             | X             | X           | X               | X           | X          | X          | X        | X       |
| 13                   | X              | X             | X             | X           | X               | X           | X          | X          | X        | X       |
| 13                   | X              | X             | X             | X           | X               | X           | X          | X          | X        | X       |
| 6                    | X              | X             | X             | X           | X               | X           | X          | X          | X        | X       |

ADDITIONAL REMARKS **For Iron, Manganese, Sodium, Aluminum, & Lead:**  
**Field Filtered Samples and Total Samples**

SAMPLER'S SIGNATURE *[Signature]*

ANALYTICAL REPORT

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

PROJECT: Braden River Park  
552-51014

ATTENTION: Nancy Castricone

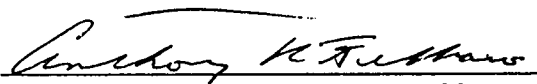
SAMPLE DATE: February 6, 1997

DATE: February 13, 1997

OUR REPORT NUMBER: 385-7P051-0015

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  
FL CQAP #860130

/jm

*Information To Build On*

LAB #: 702069-01  
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    |
| 2-Chloroethylvinyl ether  | < 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    |
| cis-1,2-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:  
02/12/97  
Analyst: TH

# ORGANOCHLORINE PESTICIDES

| Analyte  | Results | Units | Method  | MDL/DF |
|----------|---------|-------|---------|--------|
| p,p'-DDE | < 0.5   | µg/l  | EPA 608 | 0.5/1  |
| p,p'-DDD | < 0.5   | µg/l  | EPA 608 | 0.5/1  |
| p,p'-DDT | < 0.5   | µg/l  | EPA 608 | 0.5/1  |

Extraction Date:  
02/11/97  
Analysis Date:  
02/12/97  
Analyst: SP

# BASE/NEUTRALS BY GC/MS

| Analyte                    | Results | Units | Method  | MDL/DF |
|----------------------------|---------|-------|---------|--------|
| Bis(2-ethylhexyl)phthalate | < 10    | µg/l  | EPA 625 | 10/1   |

Extraction Date:  
02/12/97  
Analysis Date:  
02/12/97  
Analyst: SP



LAB #: 702069-01  
Client ID: MW-5

**METALS ANALYSIS**

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 Aluminum      | <1.0           | mg/l         | EPA 202.1     | 02/11/97             | JS             | 1.0        |
| Total Iron          | 27             | mg/l         | EPA 236.1     | 02/11/97             | JS             | 0.1        |
| Total Lead          | <0.005         | mg/l         | EPA 239.2     | 02/11/97             | JS             | 0.005      |
| Total Manganese     | 0.27           | mg/l         | EPA 243.1     | 02/11/97             | JS             | 0.02       |
| Total Sodium        | 52.3           | mg/l         | EPA 273.1     | 02/11/97             | JS             | 1.0        |
| Dissolved Aluminum  | <1.0           | mg/l         | EPA 202.1     | 02/11/97             | JS             | 1.0        |
| Dissolved Iron      | 21             | mg/l         | EPA 236.1     | 02/11/97             | JS             | 0.1        |
| Dissolved Lead      | <0.005         | mg/l         | EPA 239.2     | 02/11/97             | JS             | 0.005      |
| Dissolved Manganese | 0.31           | mg/l         | EPA 243.1     | 02/11/97             | JS             | 0.02       |
| Dissolved Sodium    | 50.2           | mg/l         | EPA 273.1     | 02/11/97             | JS             | 1.0        |

**INORGANIC ANALYSES**

| <u>Analyte</u> | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>Analysis Date</u> | <u>Analyst</u> | <u>MDL</u> |
|----------------|----------------|--------------|---------------|----------------------|----------------|------------|
| Chloride       | 79             | mg/l         | SM 4500-Cl B  | 02/10/97             | MB             | 1          |
| TDS            | 790            | mg/l         | EPA 160.1     | 02/11/97             | HB             | 10         |

**MICROBIOLOGY**

| <u>Analyte</u> | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>Analysis Date</u> | <u>Analyst</u> | <u>MDL</u> |
|----------------|----------------|--------------|---------------|----------------------|----------------|------------|
| Total Coliform | <10            | CFU/100 mls  | SM 9222 B     | 02/06/97             | HB             | 1          |



LAB #: 702069-02

PURGEABLE HALOCARBONS

Client ID: Trip

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           |
| 2-Chloroethylvinyl ether  | <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           |
| cis-1,2-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:

02/12/97

Analyst: TH



QUALITY CONTROL DATA: ORGANIC ANALYTES

Matrix: Water

| Analyte                   | Lab<br>Batch# | Analytical<br>Blank | MDL | Units | QC<br>%REC | Spike<br>%REC | Dup<br>%RPD | Method |
|---------------------------|---------------|---------------------|-----|-------|------------|---------------|-------------|--------|
| Bromodichloromethane      | AB0212        | <1                  | 1   | µg/l  |            | 99            |             | 601    |
| Bromoform                 |               | <1                  | 1   | µg/l  |            | 136           |             | 601    |
| Bromomethane              |               | <1                  | 1   | µg/l  |            | 73            |             | 601    |
| Carbon tetrachloride      |               | <1                  | 1   | µg/l  |            | 80            |             | 601    |
| Chlorobenzene             |               | <1                  | 1   | µg/l  |            | 95            |             | 601    |
| Chloroethane              |               | <1                  | 1   | µg/l  |            | 81            |             | 601    |
| 2-Chloroethylvinyl ether  |               | <1                  | 1   | µg/l  |            | -             |             | 601    |
| Chloroform                |               | <1                  | 1   | µg/l  |            | 105           |             | 601    |
| Chloromethane             |               | <1                  | 1   | µg/l  |            | 63            |             | 601    |
| Dibromochloromethane      |               | <1                  | 1   | µg/l  |            | 102           |             | 601    |
| 1,2-Dichlorobenzene       |               | <1                  | 1   | µg/l  |            | 99            |             | 601    |
| 1,3-Dichlorobenzene       |               | <1                  | 1   | µg/l  |            | 97            |             | 601    |
| 1,4-Dichlorobenzene       |               | <1                  | 1   | µg/l  |            | 92            |             | 601    |
| Dichlorodifluoromethane   |               | <1                  | 1   | µg/l  |            | 88            |             | 601    |
| 1,1-Dichloroethane        |               | <1                  | 1   | µg/l  |            | 102           |             | 601    |
| 1,2-Dichloroethane        |               | <1                  | 1   | µg/l  |            | 87            |             | 601    |
| 1,1-Dichloroethene        |               | <1                  | 1   | µg/l  |            | 87            |             | 601    |
| cis-1,2-Dichloroethene    |               | <1                  | 1   | µg/l  |            | 92            |             | 601    |
| trans-1,2-Dichloroethene  |               | <1                  | 1   | µg/l  |            | 119           |             | 601    |
| 1,2-Dichloropropane       |               | <1                  | 1   | µg/l  |            | 97            |             | 601    |
| cis-1,3-Dichloropropene   |               | <1                  | 1   | µg/l  |            | 100           |             | 601    |
| trans-1,3-Dichloropropene |               | <1                  | 1   | µg/l  |            | 100           |             | 601    |
| Methylene chloride        |               | <1                  | 1   | µg/l  |            | -             |             | 601    |
| 1,1,2,2-Tetrachloroethane |               | <1                  | 1   | µg/l  |            | 109           |             | 601    |
| Tetrachloroethene         |               | <1                  | 1   | µg/l  |            | 92            |             | 601    |
| 1,1,1-Trichloroethane     |               | <1                  | 1   | µg/l  |            | 77            |             | 601    |
| 1,1,2-Trichloroethane     |               | <1                  | 1   | µg/l  |            | 101           |             | 601    |
| Trichloroethene           |               | <1                  | 1   | µg/l  |            | 91            |             | 601    |
| Trichlorofluoromethane    |               | <1                  | 1   | µg/l  |            | 88            |             | 601    |
| Vinyl chloride            |               | <1                  | 1   | µg/l  |            | 101           |             | 601    |

Matrix: Water

| Analyte  | Lab<br>Batch# | Analytical<br>Blank | MDL | Units | QC<br>%REC | Spike<br>%REC | Dup<br>%RPD | Method |
|----------|---------------|---------------------|-----|-------|------------|---------------|-------------|--------|
| p,p'-DDE | AB0211        | <0.5                | 0.5 | µg/l  |            | 79            |             | 608    |
| p,p'-DDD |               | <0.5                | 0.5 | µg/l  |            | 92            |             | 608    |
| p,p'-DDT |               | <0.5                | 0.5 | µg/l  |            | 87            |             | 608    |

QUALITY CONTROL DATA: INORGANIC ANALYTES

Matrix: Water

| Analyte   | Lab<br>Batch# | Analytical<br>Blank | MDL   | Units | QC<br>%REC | Spike<br>%REC | Dup<br>%RPD | Method    |
|-----------|---------------|---------------------|-------|-------|------------|---------------|-------------|-----------|
| Aluminum  | AB0211        | <1.0                | 1.0   | mg/l  | 108        | 100           | 0           | 202.1     |
| Iron      | AB0211        | <0.1                | 0.1   | mg/l  | 110        | 105           | 0           | 236.1     |
| Lead      | AB0211        | <0.005              | 0.005 | mg/l  | 105        | 102           | 5           | 239.2     |
| Manganese | AB0211        | <0.02               | 0.02  | mg/l  | 100        | 98            | 0           | 243.1     |
| Sodium    | AB0211        | <1.0                | 1.0   | mg/l  | 105        | 102           | 0           | 273.1     |
| Chloride  | AB0210        | <1                  | 1     | mg/l  | 103        | 102           | 2           | 4500 Cl B |
| TDS       | AB0211        | <10                 | 10    | mg/l  | 91         | -             | 3           | 160.1     |



# SURROGATE RECOVERY SUMMARY

Matrix: Water

| PSI LAB # | 2-Bromo-1<br>-Dichloropropane<br>(601) | a,a,a-TFT<br>(602/8020) | 2,4,5,6-Tetrachloro<br>m-xylene<br>(608/8080) | Dibutyl<br>Chlorendate<br>(608) | 2-Fluorobiphenyl<br>(610/8100) | Nitrobenzene<br>(610/8100) |
|-----------|----------------------------------------|-------------------------|-----------------------------------------------|---------------------------------|--------------------------------|----------------------------|
| 702069-01 | 75                                     |                         |                                               | 86                              |                                |                            |
| 702069-02 | 66                                     |                         |                                               |                                 |                                |                            |

## ACID EXTRACTABLES

## BASE NEUTRAL EXTRACTABLES

| PSI LAB # | 2-Fluorophenol<br>(625) | Phenol-d5<br>(625) | 2,4,6-<br>Tribromophenol<br>(625) | Nitrobenzene-d5<br>(625) | 2-Fluorobiphenyl<br>(625) | Terphenyl-d14<br>(625) |
|-----------|-------------------------|--------------------|-----------------------------------|--------------------------|---------------------------|------------------------|
| 702069-01 | 25                      | 19                 | 28                                | 29                       | 41                        | 49                     |



**psi** Environmental  
Geotechnical  
Construction  
Consulting • Engineering • Testing

LABORATORY SUBMITTED TO:

- |                                                                                                 |                                                                                      |
|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <input type="checkbox"/> 6913 Hwy. 225<br>Deer Park, TX 77536<br>(713) 479-8307                 | <input type="checkbox"/> 4820 W. 15th Street<br>Lawrence, KS 66049<br>(800) 548-7901 |
| <input type="checkbox"/> 1770 Commerce Ave. North<br>St. Petersburg, FL 33716<br>(813) 579-4464 | <input type="checkbox"/> 850 Poplar Street<br>Pittsburgh, PA 15220<br>(412) 922-4000 |

|                     |      |                |      |
|---------------------|------|----------------|------|
| LABORATORY USE ONLY |      |                |      |
| ANALYTICAL DUE DATE |      | 2-13-97        |      |
| REPORT DUE DATE     |      | 2-13-97        |      |
| INORGANIC           |      | ORGANIC        |      |
| Sect                | Flow | Sect           | Flow |
| PSI PROJECT NAME    |      | 385-7p057.0015 |      |
| PSI PROJECT #       |      | 385-7p057.0015 |      |
| PSI BATCH #         |      | 385-7p057.0015 |      |

[illegible]

SAMPLER'S SIGNATURE

TLI Project: 40648r1  
Client Sample: MW-3

1613A TCDD Analysis (DB-5)  
Analysis File: W032906

|                 |                   |                  |          |             |          |
|-----------------|-------------------|------------------|----------|-------------|----------|
| Client Project: | Braden River Park | Date Received:   | 02/07/97 | Spike File: | SP161F2S |
| Sample Matrix:  | AQUEOUS           | Date Extracted:  | 02/20/97 | ICal:       | WF52107  |
| TLI ID:         | 156-93-2B         | Date Analyzed:   | 02/25/97 | ConCal:     | W032802  |
| Sample Size:    | 1.000 L           | Dilution Factor: | n/a      | % Moisture: | 100.0    |
| Dry Weight:     | n/a               | Blank File:      | W032902  | % Lipid:    | n/a      |
| GC Column:      | DB-5              | Analyst:         | HLM      | % Solids:   | 0.0      |

| Analytes     | Conc. (pg/L) | DL  | Ratio | RT | Flags |
|--------------|--------------|-----|-------|----|-------|
| 2,3,7,8-TCDD | ND           | 2.0 |       |    | —     |

| Internal Standard                           | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD | 1070         | 53.3       | 25%-150%  | 0.80  | 30:53 | —     |

| Surrogate Standard (Type C)                 | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD | 122          | 60.8       | 25%-150%  |       | 30:54 | —     |

| Recovery Standard                           | Ratio | RT    | Flags |
|---------------------------------------------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD | 0.81  | 30:39 | —     |

Data Reviewer: RB 02/26/97

TLI Project: 40648r1  
 Client Sample: MW-4

1613A TCDD Analysis (DB-5)  
 Analysis File: W032907

|                 |                   |                  |          |             |          |
|-----------------|-------------------|------------------|----------|-------------|----------|
| Client Project: | Braden River Park | Date Received:   | 02/07/97 | Spike File: | SP161F2S |
| Sample Matrix:  | AQUEOUS           | Date Extracted:  | 02/20/97 | ICal:       | WF52107  |
| TLI ID:         | 156-93-3B         | Date Analyzed:   | 02/25/97 | ConCal:     | W032802  |
| Sample Size:    | 1.000 L           | Dilution Factor: | n/a      | % Moisture: | 100.0    |
| Dry Weight:     | n/a               | Blank File:      | W032902  | % Lipid:    | n/a      |
| GC Column:      | DB-5              | Analyst:         | HLM      | % Solids:   | 0.0      |

| Analytes     | Conc. (pg/L) | DL  | Ratio | RT | Flags |
|--------------|--------------|-----|-------|----|-------|
| 2,3,7,8-TCDD | ND           | 2.1 |       |    | —     |

| Internal Standard                           | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD | 990          | 49.5       | 25%-150%  | 0.80  | 30:53 | —     |

| Surrogate Standard (Type C)   | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|-------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>37</sup> Cl-2,3,7,8-TCDD | 138          | 68.9       | 25%-150%  |       | 30:54 | —     |

| Recovery Standard                           | Ratio | RT    | Flags |
|---------------------------------------------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD | 0.80  | 30:39 | —     |

Data Reviewer: RB 02/26/97

TLI Project: 40648.1

1013A TCDD Analysis (DB-5)

Client Sample: MW-5

Analysis File: W032910

|                 |                   |                  |          |             |          |
|-----------------|-------------------|------------------|----------|-------------|----------|
| Client Project: | Braden River Park | Date Received:   | 02/07/97 | Spike File: | SP161F2S |
| Sample Matrix:  | AQUEOUS           | Date Extracted:  | 02/20/97 | ICal:       | WF52107  |
| TLI ID:         | 156-93-6B         | Date Analyzed:   | 02/25/97 | ConCal:     | W032802  |
| Sample Size:    | 1.000 L           | Dilution Factor: | n/a      | % Moisture: | 100.0    |
| Dry Weight:     | n/a               | Blank File:      | W032902  | % Lipid:    | n/a      |
| GC Column:      | DB-5              | Analyst:         | HLM      | % Solids:   | 0.0      |

| Analytes     | Conc. (pg/L) | DL  | Ratio | RT | Flags |
|--------------|--------------|-----|-------|----|-------|
| 2,3,7,8-TCDD | ND           | 1.8 |       |    | —     |

| Internal Standard                           | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD | 1330         | 66.4       | 25%-150%  | 0.80  | 30:53 | —     |

| Surrogate Standard (Type C)                 | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD | 132          | 66.2       | 25%-150%  |       | 30:55 | —     |

| Recovery Standard                           | Ratio | RT    | Flags |
|---------------------------------------------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD | 0.80  | 30:40 | —     |

Data Reviewer: RB 02/26/97

TLI Project: 4-548r1

1613A TCDD Analysis (DB-5)

Client Sample: MW-6

Analysis File: W032905

|                 |                   |                  |          |             |          |
|-----------------|-------------------|------------------|----------|-------------|----------|
| Client Project: | Braden River Park | Date Received:   | 02/07/97 | Spike File: | SP161F2S |
| Sample Matrix:  | AQUEOUS           | Date Extracted:  | 02/20/97 | ICal:       | WF52107  |
| TLI ID:         | 156-93-1B         | Date Analyzed:   | 02/25/97 | ConCal:     | W032802  |
| Sample Size:    | 1.000 L           | Dilution Factor: | n/a      | % Moisture: | 100.0    |
| Dry Weight:     | n/a               | Blank File:      | W032902  | % Lipid:    | n/a      |
| GC Column:      | DB-5              | Analyst:         | HLM      | % Solids:   | 0.0      |

| Analytes     | Conc. (pg/L) | DL | Ratio | RT | Flags |
|--------------|--------------|----|-------|----|-------|
| 2,3,7,8-TCDD | ND           | 33 |       |    | —     |

| Internal Standard                           | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD | 682          | 34.1       | 25%-150%  | 0.78  | 30:54 | —     |

| Surrogate Standard (Type C)   | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|-------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>37</sup> Cl-2,3,7,8-TCDD | 136          | 68.1       | 25%-150%  |       | 30:54 | —     |

| Recovery Standard                           | Ratio | RT    | Flags |
|---------------------------------------------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD | 0.80  | 30:39 | —     |

Data Reviewer: RB 02/26/97

TLI Project: 40648r1  
 Client Sample: DUPE

1613A TCDD Analysis (DB-5)  
 Analysis File: W032909

|                 |                   |                  |          |             |          |
|-----------------|-------------------|------------------|----------|-------------|----------|
| Client Project: | Braden River Park | Date Received:   | 02/07/97 | Spike File: | SP161F2S |
| Sample Matrix:  | AQUEOUS           | Date Extracted:  | 02/20/97 | ICal:       | WF52107  |
| TLI ID:         | 156-93-5B         | Date Analyzed:   | 02/25/97 | ConCal:     | W032802  |
| Sample Size:    | 1.000 L           | Dilution Factor: | n/a      | % Moisture: | 100.0    |
| Dry Weight:     | n/a               | Blank File:      | W032902  | % Lipid:    | n/a      |
| GC Column:      | DB-5              | Analyst:         | HLM      | % Solids:   | 0.0      |

| Analytes     | Conc. (pg/L) | DL  | Ratio | RT | Flags |
|--------------|--------------|-----|-------|----|-------|
| 2,3,7,8-TCDD | ND           | 1.6 |       |    | —     |

| Internal Standard                           | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD | 1350         | 67.7       | 25%-150%  | 0.80  | 30:53 | —     |

| Surrogate Standard (Type C)                 | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD | 142          | 71.0       | 25%-150%  |       | 30:54 | —     |

| Recovery Standard                           | Ratio | RT    | Flags |
|---------------------------------------------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD | 0.81  | 30:39 | —     |

Data Reviewer: RB 02/26/97

TLI Project: 40648r1  
 Client Sample: EQ-BLANK

1613A TCDD Analysis (DB-5)  
 Analysis File: W032908

|                 |                   |                  |          |             |          |
|-----------------|-------------------|------------------|----------|-------------|----------|
| Client Project: | Braden River Park | Date Received:   | 02/07/97 | Spike File: | SP161F2S |
| Sample Matrix:  | AQUEOUS           | Date Extracted:  | 02/20/97 | ICal:       | WF52107  |
| TLI ID:         | 156-93-4B         | Date Analyzed:   | 02/25/97 | ConCal:     | W032802  |
| Sample Size:    | 1.000 L           | Dilution Factor: | n/a      | % Moisture: | 100.0    |
| Dry Weight:     | n/a               | Blank File:      | W032902  | % Lipid:    | n/a      |
| GC Column:      | DB-5              | Analyst:         | HLM      | % Solids:   | 0.0      |

| Analytes     | Conc. (pg/L) | DE  | Ratio | RT | Flags |
|--------------|--------------|-----|-------|----|-------|
| 2,3,7,8-TCDD | ND           | 2.0 |       |    | —     |

| Internal Standard                           | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD | 1330         | 66.7       | 25%-150%  | 0.79  | 30:52 | —     |

| Surrogate Standard (Type C)   | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|-------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>37</sup> Cl-2,3,7,8-TCDD | 139          | 69.5       | 25%-150%  |       | 30:54 | —     |

| Recovery Standard                           | Ratio | RT    | Flags |
|---------------------------------------------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD | 0.80  | 30:39 | —     |

Data Reviewer: RB 02/26/97

## CLIENT CHAIN OF CUSTODY

## SAMPLER'S SIGNATURE \_\_\_\_\_

Quote 0400000667

From: PSI  
4400 140 Ave. N., Suite 100

Contact: Nancy Castricone

Phone: 813-538-2300

Clearwater, FL 34622

Fax: 813-538-2244

Project:

Bradley River Park

P.O.#:

552-51014 PSI

Total Number of  
Containers:

Analysis Wanted:

Drinking Water  
Method 1613A  
2,3,7,8-TCDD Only

(PSJOB /WM)

Data to be reported to the state of FL.

| STA NO.   | Date   | Time | Comp | Grab | Sample Id.# | Sample Amt. |   |  |  |  |  | Remarks      |
|-----------|--------|------|------|------|-------------|-------------|---|--|--|--|--|--------------|
| MW-6      | 2-5-97 | 1000 |      | X    | MW-6        | 2,040 mls   | 3 |  |  |  |  | Samples      |
| MW-3      | 2-5-97 | 1230 |      | X    | MW-3        | "           | 3 |  |  |  |  | are in       |
| MW-4      | 2-5-97 | 1330 |      | X    | MW-4        | "           | 3 |  |  |  |  | two coolers  |
| EQ. BLANK | 2-5-97 | 1200 |      | X    | EQ. BLANK   | "           | 3 |  |  |  |  | with two     |
| DUPE      | 2-5-97 | -    |      | X    | DUPE        | "           | 3 |  |  |  |  | temp. blanks |
| MW-7      | 2-6-97 |      |      | X    | MW-7        | "           | 3 |  |  |  |  | Unable to    |
| MW-5      | 2-6-97 |      |      | X    | MW-5        | "           | 3 |  |  |  |  | sample MW-7  |
|           |        |      |      |      |             |             |   |  |  |  |  |              |
|           |        |      |      |      |             |             |   |  |  |  |  |              |
|           |        |      |      |      |             |             |   |  |  |  |  |              |
|           |        |      |      |      |             |             |   |  |  |  |  |              |
|           |        |      |      |      |             |             |   |  |  |  |  |              |
|           |        |      |      |      |             |             |   |  |  |  |  |              |

|                       |             |                   |                       |           |                   |
|-----------------------|-------------|-------------------|-----------------------|-----------|-------------------|
| Relinquished By/Sign. | Date/Time   | Received By/Sign. | Relinquished By/Sign. | Date/Time | Received By/Sign. |
| <i>[Signature]</i>    | 2-6-97/1600 |                   |                       |           |                   |
| Relinquished By/Sign. | Date/Time   | Received By/Sign. | Relinquished By/Sign. | Date/Time | Received By/Sign. |
|                       |             |                   |                       |           |                   |

|                                      |                 |                                                                                                                                                                     |
|--------------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Received for Laboratory By/Signature | Date/Time       | Send Samples to: Triangle Laboratories, Inc.<br>Attn: Sample Custodian<br>801 Capitola Drive<br>Durham, NC 27713 USA<br>Phone: (919) 544-5729 • Fax: (919) 544-5491 |
| <i>Bill Hunt</i>                     | 2/7/97<br>19:00 |                                                                                                                                                                     |

6712 Benjamin Road • Suite 100 • Tampa, FL 33634 • (813) 885-7427 • Fax (813) 885-7049

Mr. Anthony Febbraro  
Professional Service Industries, Inc  
1770 Commerce Avenue, North  
St. Petersburg, FL 33716

LOG NO: B7-40329  
Received: 06 FEB 97  
Reported: 27 FEB 97

Project: 702055  
Sampled By: Client  
Code: 163670227  
Page 1

## REPORT OF RESULTS

| LOG NO             | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/<br>TIME SAMPLED |           |             |             |
|--------------------|-------------------------------------|-----------------------|-----------|-------------|-------------|
| 40329-1            | 702055-01 MW-6                      | 02-05-97/1000         |           |             |             |
| 40329-2            | 702055-02 MW-3                      | 02-05-97/1230         |           |             |             |
| 40329-3            | 702055-03 MW-4                      | 02-05-97/1330         |           |             |             |
| 40329-4            | 702055-04 DUPE (MW-3)               | 02-05-97              |           |             |             |
| 40329-5            | 702055-05 EB                        | 02-05-97/1200         |           |             |             |
| PARAMETER          | 40329-1                             | 40329-2               | 40329-3   | 40329-4     | 40329-5     |
| Gross Alpha, pCi/l | 24+/-8.1                            | 22+/-23               | 3.1+/-4.5 | 7.0+/-14    | <3.0+/-1.46 |
| Radium 226, pCi/l  | 11+/-0.24                           | <0.60                 | <0.60     | 0.89+/-0.08 | <0.60       |
| Radium 228, pCi/l  | 1.5+/-0.46                          | <1.0                  | <1.0      | 1.5+/-0.46  | <1.0        |
|                    | MW-6                                | MW-3                  | MW-4      | DUPE        | EB          |

Laboratories In Savannah, GA • Tallahassee, FL • Tampa, FL • Deerfield Beach, FL • Mobile, AL • New Orleans, LA

6712 Benjamin Road • Suite 100 • Tampa, FL 33634 • (813) 885-7427 • Fax (813) 885-7049

Mr. Anthony Febbraro  
Professional Service Industries, Inc  
1770 Commerce Avenue, North  
St. Petersburg, FL 33716

LOG NO: B7-40329  
Received: 06 FEB 97  
Reported: 27 FEB 97

Project: 702055  
Sampled By: Client  
Code: 163670227  
Page 2

## REPORT OF RESULTS

LOG NO SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES

40329-6 Lab Blank  
40329-7 Accuracy (I Recovery)  
40329-8 Precision (I RPD)  
40329-9 Date Analyzed  
40329-10 Method Number

| PARAMETER          | 40329-6 | 40329-7 | 40329-8 | 40329-9  | 40329-10  |
|--------------------|---------|---------|---------|----------|-----------|
| Gross Alpha, pCi/l | <3.0    | 69 Z    | 5.8 Z   | 02.26.97 | EPA 900.0 |
| Radium 226, pCi/l  | <0.60   | 117 Z   | 21 Z    | 02.24.97 | EPA 903.1 |
| Radium 228, pCi/l  | <1.0    | 101 Z   | 12 Z    | 02.26.97 | BB        |

Method: EPA 600/4-80-032

HRS Certification #'s: 84385, E84262

*Kathy Sheffield*  
Kathy Sheffield, Project Manager

Laboratories in Savannah, GA • Tallahassee, FL • Tampa, FL • Daytona Beach, FL • Mobile, AL • New Orleans, LA  
TOTAL P.02

**SL SAVANNAH LABORATORIES**  
& ENVIRONMENTAL SERVICES, INC.

6712 Benjamin Road • Suite 100 • Tampa, FL 33634 • (813) 885-7427 • Fax (813) 885-7049

LOG NO: B7-40328  
Received: 06 FEB 97  
Reported: 27 FEB 97Mr. Anthony Febbraro  
Professional Service Industries, Inc  
1770 Commerce Avenue, North  
St. Petersburg, FL 33716Project: 702069  
Sampled By: Client  
Code: 140770414  
Page 1

## REPORT OF RESULTS

| LOG NO             | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE SAMPLED |
|--------------------|-------------------------------------|--------------|
| 40328-1            | 702069-01                           | 02-06-97     |
| PARAMETER          | 40328-1                             |              |
| Gross Alpha, pCi/l | 11+/-29                             |              |
| Radium 226, pCi/l  | <0.60                               |              |
| Radium 228, pCi/l  | <1.0                                |              |

MW-5

**SL SAVANNAH LABORATORIES**  
& ENVIRONMENTAL SERVICES, INC.

6712 Benjamin Road • Suite 100 • Tampa, FL 33634 • (813) 885-7427 • Fax (813) 885-7049

LOG NO: B7-40328  
Received: 06 FEB 97  
Reported: 27 FEB 97Mr. Anthony Febbraro  
Professional Service Industries, Inc  
1770 Commerce Avenue, North  
St. Petersburg, FL 33716Project: 702069  
Sampled By: Client  
Code: 140770414  
Page 2

## REPORT OF RESULTS

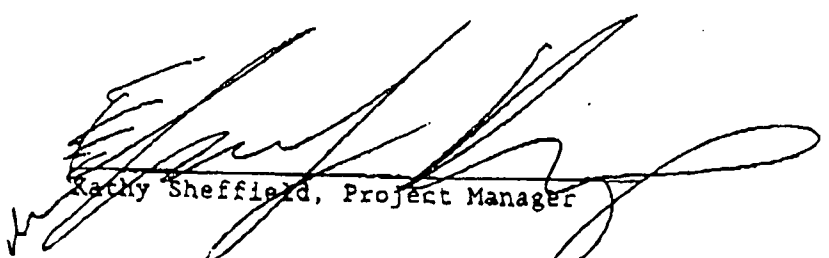
LOG NO SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES

|         |                       |
|---------|-----------------------|
| 40328-2 | Lab Blank             |
| 40328-3 | Accuracy (% Recovery) |
| 40328-4 | Precision (% RPD)     |
| 40328-5 | Date Analyzed         |
| 40328-6 | Method Number         |

| PARAMETER          | 40328-2 | 40328-3 | 40328-4 | 40328-5  | 40328-6 |
|--------------------|---------|---------|---------|----------|---------|
| Gross Alpha, pCi/l | <3.0    | 69 %    | 5.8 %   | 02.25.97 | 900.0   |
| Radium 226, pCi/l  | <0.60   | 117 %   | 21 %    | 02.24.97 | 903.1   |
| Radium 229, pCi/l  | <1.0    | 101 %   | 12 %    | 02.26.97 | BB      |

Method: EPA 600/4-80-032

HRS Certification #'s: 84385, E84282

  
Kathy Sheffield, Project Manager

Laboratories in Savannah, GA • Tallahassee, FL • Tampa, FL • Deerfield Beach, FL • Mobile, AL • New Orleans, LA

# WELL PURGING AND SAMPLING DATA

|                                                                                                                                                                        |                     |                                                                                                                                                       |             |                                                                                                                           |                                                                                           |                                  |         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|----------------------------------|---------|
|                                                                                                                                                                        |                     |                                                                                                                                                       |             |                                                                                                                           |                                                                                           | WELL/SAMPLE NO: <u>NW-3</u>      |         |
| DATE: <u>2.5.97</u>                                                                                                                                                    |                     | PROJECT NAME: <u>Braden River Park</u>                                                                                                                |             |                                                                                                                           |                                                                                           | PROJECT NO: <u>552-51014</u>     |         |
| WEATHER CONDITIONS: <u>Cloudy, Breezy</u>                                                                                                                              |                     |                                                                                                                                                       |             |                                                                                                                           |                                                                                           |                                  |         |
| WELL DIAMETER (IN.)                                                                                                                                                    |                     | <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 4 <input type="checkbox"/> 6 <input type="checkbox"/> OTHER |             |                                                                                                                           |                                                                                           |                                  |         |
| SAMPLE TYPE: <input checked="" type="checkbox"/> GROUNDWATER <input type="checkbox"/> WASTEWATER <input type="checkbox"/> SURFACE WATER <input type="checkbox"/> OTHER |                     |                                                                                                                                                       |             |                                                                                                                           |                                                                                           |                                  |         |
| WELL DEPTH (TOC)                                                                                                                                                       |                     | <u>9.90</u> FT.                                                                                                                                       |             | WATER LEVEL (TOC)                                                                                                         |                                                                                           | <u>1.62</u> FT.                  |         |
| LENGTH OF WATER                                                                                                                                                        |                     | <u>8.28</u> FT.                                                                                                                                       |             | CALCULATED ONE WELL VOLUME: <u>1.41</u> GAL                                                                               |                                                                                           |                                  |         |
| PURGING DEVICE: <u>peristaltic</u>                                                                                                                                     |                     |                                                                                                                                                       |             | <input checked="" type="checkbox"/> DEDICATED <input type="checkbox"/> DISPOSABLE <input type="checkbox"/> DECONTAMINATED |                                                                                           |                                  |         |
| SAMPLING DEVICE: <u>bailer</u>                                                                                                                                         |                     |                                                                                                                                                       |             | <input type="checkbox"/> DEDICATED <input type="checkbox"/> DISPOSABLE <input checked="" type="checkbox"/> DECONTAMINATED |                                                                                           |                                  |         |
| EQUIP. DECON.                                                                                                                                                          |                     |                                                                                                                                                       |             |                                                                                                                           |                                                                                           |                                  |         |
| <input type="checkbox"/> TAP WATER WASH                                                                                                                                |                     | <input type="checkbox"/> ISOPROPANOL                                                                                                                  |             | <input type="checkbox"/> ANALYTE FREE FINAL RINSE                                                                         |                                                                                           |                                  |         |
| <input checked="" type="checkbox"/> ALCONOX WASH                                                                                                                       |                     | <input type="checkbox"/> DIST/DEION 1 RINSE                                                                                                           |             | <input type="checkbox"/> OTHER SOLVENT <input checked="" type="checkbox"/> DIST/DEION FINAL RINSE                         |                                                                                           |                                  |         |
| <input type="checkbox"/> LIQUINOX WASH                                                                                                                                 |                     | <input type="checkbox"/> DIST/DEION 2 RINSE                                                                                                           |             | <input type="checkbox"/> TAP WATER FINAL RINSE                                                                            |                                                                                           | <input type="checkbox"/> AIR DRY |         |
| CONTAINER PRESERVATION: <input checked="" type="checkbox"/> LAB PRESERVED <input type="checkbox"/> FIELD PRESERVED                                                     |                     |                                                                                                                                                       |             |                                                                                                                           |                                                                                           |                                  |         |
| ANALYTICAL PARAMETERS: <u>See list</u>                                                                                                                                 |                     |                                                                                                                                                       |             |                                                                                                                           |                                                                                           |                                  |         |
| LABORATORY PERFORMING ANALYSIS: <u>PSI Analytical SE. Pete</u>                                                                                                         |                     |                                                                                                                                                       |             |                                                                                                                           |                                                                                           |                                  |         |
| WATER ANALYZER MODEL:                                                                                                                                                  |                     |                                                                                                                                                       |             |                                                                                                                           |                                                                                           | SERIAL NO:                       |         |
| ACTUAL TIME                                                                                                                                                            | VOLUME PURGED (GAL) | TEMP (DEG C)                                                                                                                                          | SPEC. COND. | pH                                                                                                                        | DISS. OXYGEN                                                                              | TURBIDITY (NTUs)                 | REMARKS |
| 1220                                                                                                                                                                   | 1.41                | 21.9                                                                                                                                                  | 1190        | 6.75                                                                                                                      | 1.3                                                                                       | 4.53                             |         |
| 1222                                                                                                                                                                   | 2.82                | 21.7                                                                                                                                                  | 1125        | 6.80                                                                                                                      | 1.2                                                                                       | 8.52                             |         |
| 1225                                                                                                                                                                   | 4.23                | 23.3                                                                                                                                                  | 1037        | 6.98                                                                                                                      | 1.4                                                                                       | 8.42                             |         |
| 1228                                                                                                                                                                   | 5.64                | 23.6                                                                                                                                                  | 987         | 7.03                                                                                                                      | 1.4                                                                                       | 6.82                             |         |
|                                                                                                                                                                        | 7.05                |                                                                                                                                                       |             |                                                                                                                           | (2.69)                                                                                    |                                  |         |
|                                                                                                                                                                        |                     |                                                                                                                                                       |             |                                                                                                                           |                                                                                           |                                  |         |
|                                                                                                                                                                        |                     |                                                                                                                                                       |             |                                                                                                                           |                                                                                           |                                  |         |
|                                                                                                                                                                        |                     |                                                                                                                                                       |             |                                                                                                                           |                                                                                           |                                  |         |
|                                                                                                                                                                        |                     |                                                                                                                                                       |             |                                                                                                                           |                                                                                           |                                  |         |
| COMMENTS ON WELL RECOVERY/OTHER:                                                                                                                                       |                     |                                                                                                                                                       |             |                                                                                                                           | SAMPLE COLLECTION TIME: <u>1230</u>                                                       |                                  |         |
|                                                                                                                                                                        |                     |                                                                                                                                                       |             |                                                                                                                           | DUPLICATE <input checked="" type="checkbox"/> TIME: <u>1210</u> ID#: <u>DUPE</u>          |                                  |         |
|                                                                                                                                                                        |                     |                                                                                                                                                       |             |                                                                                                                           | EQUIP. BLANK: <input checked="" type="checkbox"/> TIME: <u>1200</u> ID#: <u>EQ. BLANK</u> |                                  |         |
|                                                                                                                                                                        |                     |                                                                                                                                                       |             |                                                                                                                           | PREPARED BY: <u>NSC</u>                                                                   |                                  |         |

CALCULATION OF GALLONS OF WATER IN A LENGTH OF PIPE =  $3.14 \times (\text{PIPE RADIUS IN FEET})^2 \times \text{LENGTH OF WATER} \times 7.48$   
 A 1 FOOT LENGTH OF WATER = 0.05 GAL IN 1" DIA PIPE    0.17 GAL IN 2" DIA PIPE    0.65 GAL IN 4" DIA PIPE    1.5 GAL IN 6" DIA PIPE

Metals Field Filtered w/ 1.0  $\mu$ m Filter

# WELL PURGING AND SAMPLING DATA

|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                      |                                                   |                  |         |
|--------------------------------------------------------------------------------------------------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------------|---------------------------------------------------|------------------|---------|
| WELL/SAMPLE NO: MW-4                                                                                               |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                      |                                                   |                  |         |
| DATE: 2.5.97                                                                                                       |                     | PROJECT NAME: Braden River Park                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | PROJECT NO: 552-51014                |                                                   |                  |         |
| WEATHER CONDITIONS: Breezy Warm                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                      |                                                   |                  |         |
| WELL DIAMETER (IN.)                                                                                                |                     | <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 4 <input type="checkbox"/> 6 <input type="checkbox"/> OTHER                                                                                                                                                                                                                                                                                                                                                  |             |                                      |                                                   |                  |         |
| SAMPLE TYPE:                                                                                                       |                     | <input checked="" type="checkbox"/> GROUNDWATER <input type="checkbox"/> WASTEWATER <input type="checkbox"/> SURFACE WATER <input type="checkbox"/> OTHER                                                                                                                                                                                                                                                                                                                                              |             |                                      |                                                   |                  |         |
| WELL DEPTH (TOC)                                                                                                   |                     | 12.70 FT.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | WATER LEVEL (TOC) 4.21 FT.           |                                                   |                  |         |
| LENGTH OF WATER                                                                                                    |                     | 8.49 FT.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             | CALCULATED ONE WELL VOLUME: 1.44 GAL |                                                   |                  |         |
| PURGING DEVICE: peristaltic                                                                                        |                     | <input checked="" type="checkbox"/> DEDICATED <input type="checkbox"/> DISPOSABLE <input type="checkbox"/> DECONTAMINATED                                                                                                                                                                                                                                                                                                                                                                              |             |                                      |                                                   |                  |         |
| SAMPLING DEVICE: bailer                                                                                            |                     | <input type="checkbox"/> DEDICATED <input type="checkbox"/> DISPOSABLE <input checked="" type="checkbox"/> DECONTAMINATED                                                                                                                                                                                                                                                                                                                                                                              |             |                                      |                                                   |                  |         |
| EQUIP. DECON.                                                                                                      |                     | <input type="checkbox"/> TAP WATER WASH <input type="checkbox"/> ISOPROPANOL <input type="checkbox"/> ANALYTE FREE FINAL RINSE<br><input checked="" type="checkbox"/> ALCONOX WASH <input type="checkbox"/> DIST/DEION 1 RINSE <input type="checkbox"/> OTHER SOLVENT <input checked="" type="checkbox"/> DIST/DEION FINAL RINSE<br><input type="checkbox"/> LIQUINOX WASH <input type="checkbox"/> DIST/DEION 2 RINSE <input type="checkbox"/> TAP WATER FINAL RINSE <input type="checkbox"/> AIR DRY |             |                                      |                                                   |                  |         |
| CONTAINER PRESERVATION: <input checked="" type="checkbox"/> LAB PRESERVED <input type="checkbox"/> FIELD PRESERVED |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                      |                                                   |                  |         |
| ANALYTICAL PARAMETERS: See list                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                      |                                                   |                  |         |
| LABORATORY PERFORMING/ANALYSIS: PSI St. Pete                                                                       |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                      |                                                   |                  |         |
| WATER ANALYZER MODEL:                                                                                              |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                      | SERIAL NO:                                        |                  |         |
| ACTUAL TIME                                                                                                        | VOLUME PURGED (GAL) | TEMP (DEG C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SPEC. COND. | pH                                   | DISS. OXYGEN (MG/L)                               | TURBIDITY (NTUs) | REMARKS |
| 1320                                                                                                               | 1.44                | 23.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 572         | 6.46                                 | 1.2                                               | 180              |         |
| 1323                                                                                                               | 2.88                | 23.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 579         | 6.32                                 | 1.0                                               | 158.0            |         |
| 1326                                                                                                               | 4.32                | 22.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 576         | 6.38                                 | 1.2                                               | 30.2             |         |
| 1330                                                                                                               | 5.77                | 23.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 578         | 6.48                                 | 1.3                                               | 22.8             |         |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                      |                                                   |                  |         |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                      |                                                   |                  |         |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                      |                                                   |                  |         |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                      |                                                   |                  |         |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                      |                                                   |                  |         |
| COMMENTS ON WELL RECOVERY/OTHER:                                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                      | SAMPLE COLLECTION TIME: 1330                      |                  |         |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                      | DUPLICATE <input type="checkbox"/> TIME: ID#:     |                  |         |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                      | EQUIP. BLANK: <input type="checkbox"/> TIME: ID#: |                  |         |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                      | PREPARED BY: [Signature]                          |                  |         |

CALCULATION OF GALLONS OF WATER IN A LENGTH OF PIPE =  $[3.14 \times (\text{PIPE RADIUS IN FEET})^2 \times \text{LENGTH OF WATER} \times 7.48]$   
 A 1 FOOT LENGTH OF WATER = 0.05 GAL IN 1" DIA PIPE 0.17 GAL IN 2" DIA PIPE 0.65 GAL IN 4" DIA PIPE 1.5 GAL IN 6" DIA. PIPE

Metals Field Filtered w/ 1.0 µm Filter  
 D.O. measured 2.6.97, ~ same times

# WELL PURGING AND SAMPLING DATA

|                                  |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                      |              |                                      |         |
|----------------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------------------------------------------|--------------|--------------------------------------|---------|
|                                  |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                      |              | WELL/SAMPLE NO: MW-5                 |         |
| DATE: 2.6.97                     |                     | PROJECT NAME: Braden River Park                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                      |              | PROJECT NO: 552-5I014                |         |
| WEATHER CONDITIONS: Warm Sunny   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                      |              |                                      |         |
| WELL DIAMETER (IN.)              |                     | <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 4 <input type="checkbox"/> 6 <input type="checkbox"/> OTHER                                                                                                                                                                                                                                                                                                                                                  |             |                                                      |              |                                      |         |
| SAMPLE TYPE:                     |                     | <input checked="" type="checkbox"/> GROUNDWATER <input type="checkbox"/> WASTEWATER <input type="checkbox"/> SURFACE WATER <input type="checkbox"/> OTHER                                                                                                                                                                                                                                                                                                                                              |             |                                                      |              |                                      |         |
| WELL DEPTH (TOC)                 |                     | 13.40                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             | FT.                                                  |              | WATER LEVEL (TOC) 7.91 FT.           |         |
| LENGTH OF WATER                  |                     | 5.49                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             | FT.                                                  |              | CALCULATED ONE WELL VOLUME: 0.93 GAL |         |
| PURGING DEVICE:                  |                     | penstaltic <input checked="" type="checkbox"/> DEDICATED <input type="checkbox"/> DISPOSABLE <input type="checkbox"/> DECONTAMINATED                                                                                                                                                                                                                                                                                                                                                                   |             |                                                      |              |                                      |         |
| SAMPLING DEVICE:                 |                     | bailer <input type="checkbox"/> DEDICATED <input type="checkbox"/> DISPOSABLE <input checked="" type="checkbox"/> DECONTAMINATED                                                                                                                                                                                                                                                                                                                                                                       |             |                                                      |              |                                      |         |
| EQUIP. DECON.                    |                     | <input type="checkbox"/> TAP WATER WASH <input type="checkbox"/> ISOPROPANOL <input type="checkbox"/> ANALYTE FREE FINAL RINSE<br><input checked="" type="checkbox"/> ALCONOX WASH <input type="checkbox"/> DIST/DEION 1 RINSE <input type="checkbox"/> OTHER SOLVENT <input checked="" type="checkbox"/> DIST/DEION FINAL RINSE<br><input type="checkbox"/> LIQUINOX WASH <input type="checkbox"/> DIST/DEION 2 RINSE <input type="checkbox"/> TAP WATER FINAL RINSE <input type="checkbox"/> AIR DRY |             |                                                      |              |                                      |         |
| CONTAINER PRESERVATION:          |                     | <input checked="" type="checkbox"/> LAB PRESERVED <input type="checkbox"/> FIELD PRESERVED                                                                                                                                                                                                                                                                                                                                                                                                             |             |                                                      |              |                                      |         |
| ANALYTICAL PARAMETERS:           |                     | See List                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |                                                      |              |                                      |         |
| LABORATORY PERFORMING ANALYSIS:  |                     | PSI Analytical                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             |                                                      |              |                                      |         |
| WATER ANALYZER MODEL:            |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                      |              | SERIAL NO:                           |         |
| ACTUAL TIME                      | VOLUME PURGED (GAL) | TEMP (DEG C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SPEC. COND. | pH                                                   | DISS. OXYGEN | TURBIDITY (NTUs)                     | REMARKS |
| 1105                             | 0.93                | 25.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 750         | 6.80                                                 | 1.5          | 5.1                                  |         |
| 1107                             | 1.86                | 24.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 702         | 6.82                                                 | 1.5          | 9.1                                  |         |
| 1109                             | 2.80                | 24.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 730         | 6.79                                                 | 1.4          | 4.53                                 |         |
| 1112                             | 3.73                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                      |              |                                      |         |
|                                  |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                      |              |                                      |         |
|                                  |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                      |              |                                      |         |
|                                  |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                      |              |                                      |         |
|                                  |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                      |              |                                      |         |
|                                  |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                      |              |                                      |         |
| COMMENTS ON WELL RECOVERY/OTHER: |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | SAMPLE COLLECTION TIME: 1115                         |              |                                      |         |
|                                  |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | DUPLICATE <input type="checkbox"/> TIME:    ID#:     |              |                                      |         |
|                                  |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | EQUIP. BLANK: <input type="checkbox"/> TIME:    ID#: |              |                                      |         |
|                                  |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | PREPARED BY: M. Castiglione                          |              |                                      |         |

CALCULATION OF GALLONS OF WATER IN A LENGTH OF PIPE =  $[3.14 \times (\text{PIPE RADIUS IN FEET})^2 \times \text{LENGTH OF WATER} \times 7.48]$   
 A 1 FOOT LENGTH OF WATER = 0.05 GAL IN 1" DIA PIPE    0.17 GAL IN 2" DIA PIPE    0.65 GAL IN 4" DIA PIPE    1.5 GAL IN 6" DIA PIPE

Metals Field Filtered w/ 1.0  $\mu$ m Filter

# WELL PURGING AND SAMPLING DATA

|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                             |                                                   |                       |         |
|--------------------------------------------------------------------------------------------------------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-----------------------------|---------------------------------------------------|-----------------------|---------|
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                             |                                                   | WELL/SAMPLE NO: MW-6  |         |
| DATE: 2.6.97                                                                                                       |                     | PROJECT NAME: Braden River Park                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                             |                                                   | PROJECT NO: 552-SI014 |         |
| WEATHER CONDITIONS: Breezy, Hot, Clear ~78°                                                                        |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                             |                                                   |                       |         |
| WELL DIAMETER (IN.)                                                                                                |                     | <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 4 <input type="checkbox"/> 6 <input type="checkbox"/> OTHER                                                                                                                                                                                                                                                                                                                                                  |             |                             |                                                   |                       |         |
| SAMPLE TYPE:                                                                                                       |                     | <input checked="" type="checkbox"/> GROUNDWATER <input type="checkbox"/> WASTEWATER <input type="checkbox"/> SURFACE WATER <input type="checkbox"/> OTHER                                                                                                                                                                                                                                                                                                                                              |             |                             |                                                   |                       |         |
| WELL DEPTH (TOC)                                                                                                   |                     | 12.65 FT.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | WATER LEVEL (TOC)           |                                                   | 3.42 FT.              |         |
| LENGTH OF WATER                                                                                                    |                     | 9.23 FT.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             | CALCULATED ONE WELL VOLUME: |                                                   | 1.6 GAL.              |         |
| PURGING DEVICE:                                                                                                    |                     | Peristaltic <input checked="" type="checkbox"/> DEDICATED <input type="checkbox"/> DISPOSABLE <input type="checkbox"/> DECONTAMINATED                                                                                                                                                                                                                                                                                                                                                                  |             |                             |                                                   |                       |         |
| SAMPLING DEVICE:                                                                                                   |                     | bailer <input type="checkbox"/> DEDICATED <input type="checkbox"/> DISPOSABLE <input checked="" type="checkbox"/> DECONTAMINATED                                                                                                                                                                                                                                                                                                                                                                       |             |                             |                                                   |                       |         |
| EQUIP. DECON.                                                                                                      |                     | <input type="checkbox"/> TAP WATER WASH <input type="checkbox"/> ISOPROPANOL <input type="checkbox"/> ANALYTE FREE FINAL RINSE<br><input checked="" type="checkbox"/> ALCONOX WASH <input type="checkbox"/> DIST/DEION 1 RINSE <input type="checkbox"/> OTHER SOLVENT <input checked="" type="checkbox"/> DIST/DEION FINAL RINSE<br><input type="checkbox"/> LIQUINOX WASH <input type="checkbox"/> DIST/DEION 2 RINSE <input type="checkbox"/> TAP WATER FINAL RINSE <input type="checkbox"/> AIR DRY |             |                             |                                                   |                       |         |
| CONTAINER PRESERVATION: <input checked="" type="checkbox"/> LAB PRESERVED <input type="checkbox"/> FIELD PRESERVED |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                             |                                                   |                       |         |
| ANALYTICAL PARAMETERS: See list                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                             |                                                   |                       |         |
| LABORATORY PERFORMING ANALYSIS: PSI St. Pete                                                                       |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                             |                                                   |                       |         |
| WATER ANALYZER MODEL:                                                                                              |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                             |                                                   | SERIAL NO:            |         |
| ACTUAL TIME                                                                                                        | VOLUME PURGED (GAL) | TEMP (DEG C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SPEC. COND. | pH                          | DISS. OXYGEN mg/L                                 | TURBIDITY (NTUs)      | REMARKS |
| 955                                                                                                                | 1.56                | 23.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 482         | 6.78                        | 1.2 mg/L                                          | 16.0                  |         |
| 957                                                                                                                | 3.12                | 23.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 441         | 6.71                        | 1.5                                               | 15.1                  |         |
| 959                                                                                                                | 4.70                | 24.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 440         | 6.73                        | 1.5                                               | 25.4                  |         |
|                                                                                                                    | 6.23                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                             |                                                   |                       |         |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                             |                                                   |                       |         |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                             |                                                   |                       |         |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                             |                                                   |                       |         |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                             |                                                   |                       |         |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                             |                                                   |                       |         |
| COMMENTS ON WELL RECOVERY/OTHER:                                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                             | SAMPLE COLLECTION TIME: 1000                      |                       |         |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                             | DUPLICATE <input type="checkbox"/> TIME: ID#:     |                       |         |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                             | EQUIP. BLANK: <input type="checkbox"/> TIME: ID#: |                       |         |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                             | PREPARED BY: N. Cardone                           |                       |         |

CALCULATION OF GALLONS OF WATER IN A LENGTH OF PIPE =  $3.14 \times (\text{PIPE RADIUS IN FEET})^2 \times \text{LENGTH OF WATER} \times 7.48$   
 A 1 FOOT LENGTH OF WATER = 0.05 GAL IN 1" DIA PIPE 0.17 GAL IN 2" DIA PIPE 0.65 GAL IN 4" DIA PIPE 1.5 GAL IN 6" DIA PIPE

Metals Field Filtered w/1.0um Filter  
 D.O. measured 2.6.97, approx. same times

RECEIVED  
JAN 14 1997  
Dep.  
By  
DISTRICT protection

GROUNDWATER MONITORING REPORT  
4<sup>th</sup> QUARTER, 1997  
BRADEN RIVER PARK  
MANATEE COUNTY, FLORIDA  
PSI PROJECT NO. 552-5I014





January 10, 1997

Manatee County Government  
Project Management Department  
4422-A 66<sup>th</sup> Street West  
Bradenton, Florida 34210

Attention: Mr. Tom Yarger, Project Manager

Re: 1<sup>st</sup> Quarter Groundwater Monitoring Report  
**Braden River Park**  
Manatee County, Florida  
PSI Project Number: 552-51014  
Manatee County Work Assignment No. 96

Dear Mr. Yarger:

In accordance with our agreement, Professional Service Industries, Inc. (PSI) is pleased to submit the 1<sup>st</sup> Quarter Groundwater Monitoring Report for the Braden River Park site. This report presents the results of the groundwater sampling event conducted at the Braden River Park site on December 11 and 12, 1996.

PSI appreciates the opportunity to be of service to you and your organization. Please feel free to call Keith Butts at our Sarasota office (941-378-9001) with comments or questions.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Nancy S. Castricone, E.I.  
Staff Engineer

Nana G. Faulkner, P.G.  
Senior Project Manager

Keith L. Butts, E.I.  
Branch Manager, PSI Sarasota Office

cc: Manatee County Parks & Recreation, Mr. Danny Hopkins  
Manatee County Environmental Management Department, Mr. Douglas Means  
Florida Department of Environmental Protection, Ms. Allison Amram, P.G.  
PSI Sarasota Office, Mr. Keith Butts, E.I.

*Information To Build On*

**GROUNDWATER MONITORING REPORT**  
**4<sup>th</sup> QUARTER, JANUARY 1997**  
**BRADEN RIVER PARK**  
**MANATEE COUNTY, FLORIDA**

*Prepared for*

**Manatee County Government**  
**Project Management Department**  
**4422-A 66<sup>th</sup> Street West**  
**Bradenton, Florida 34210**

*Prepared by:*

**PROFESSIONAL SERVICE INDUSTRIES, INC.**  
**4400 140<sup>th</sup> Avenue North, Suite 100**  
**Clearwater, Florida 34622**  
**PSI Project No. 552-5I014**

January 1997

**D.E.P.**  
**JAN 14 1997**  
**SOUTHWEST DISTRICT**  
**TAMPA**



## TABLE OF CONTENTS

|                                               |   |
|-----------------------------------------------|---|
| Acronym Key .....                             | 1 |
| <b>1.0 INTRODUCTION</b>                       |   |
| 1.1 General .....                             | 2 |
| 1.2 Authorization .....                       | 2 |
| 1.3 Objective .....                           | 2 |
| 1.4 Project Background.....                   | 2 |
| 1.5 Scope.....                                | 2 |
| <b>2.0 SAMPLING METHODOLOGIES</b>             |   |
| 2.1 Sample Procedures.....                    | 3 |
| 2.2 Field Measurements .....                  | 3 |
| 2.3 Groundwater Measurements .....            | 4 |
| <b>3.0 GROUNDWATER ANALYTICAL RESULTS</b>     |   |
| 3.1 Analytical Summary.....                   | 4 |
| <b>4.0 OBSERVABLE TRENDS</b>                  |   |
| 4.1 Conclusion .....                          | 4 |
| <b>APPENDICES</b>                             |   |
| Drawing 1 - Site Map                          |   |
| Drawing 2 - Groundwater Elevation Contour Map |   |
| Table 3 - Groundwater Analytical Summary      |   |
| Laboratory Analytical Results                 |   |
| Field Data Sheets                             |   |



### ACRONYM KEY

---

|         |   |                                                         |
|---------|---|---------------------------------------------------------|
| PSI     | = | Professional Service Industries, Inc.                   |
| FDEP    | = | Florida Department of Environmental Protection          |
| CompQAP | = | Comprehensive Quality Assurance Plan                    |
| MCL     | = | Maximum Contaminant Level, Chapter 62-550, FAC          |
| GC      | = | Guidance Concentration, Chapter 62-520, FAC             |
| DL      | = | Detection limits                                        |
| µg/l    | = | Micrograms per liter                                    |
| mg/l    | = | Milligrams per liter                                    |
| pg/l    | = | Picograms per liter                                     |
| BIS-2   | = | Bis(2-ethylhexyl)phthalate or Di(2-ethylhexyl)phthalate |
| TDS     | = | Total Dissolved Solids                                  |
| DDD     | = | p, p'-Dichlorodiphenyl dichloroethane                   |
| DDE     | = | p, p'-Dichlorodiphenyl dichloroethene                   |
| DDT     | = | p, p'-Dichlorodiphenyl trichloroethane                  |
| CFU     | = | Colony Forming Units                                    |
| mls     | = | milliliters                                             |
| pCi/l   | = | Picocuries per liter                                    |



## **1.0 INTRODUCTION**

### **1.1 General**

This report presents the results of the groundwater sampling event conducted in December 1996 at the Braden River Park site.

### **1.2 Authorization**

Authorization to perform these services was in the form of Manatee County Work Assignment No. 96, identifying the Consultant as PSI and as per terms and conditions within the annual written contract between Manatee County and PSI.

### **1.3 Objective**

The objective of the sampling event is to analyze groundwater samples from the on-site monitor wells for various parameters at the Braden River Park site, and to determine which of the tested compounds are present in the groundwater at the tested locations. The results will be presented to the FDEP for evaluation.

### **1.4 Project Background**

The Braden River Park facility, formerly known as State Road 70 Landfill, is a former construction debris landfill located in Manatee County. The facility is currently undergoing improvements which will result in a multi-use county recreational area.

A groundwater monitoring plan program has been performed by PSI since October 1994 for a variety of chemical parameters. Recent correspondence from the FDEP requests implementing the quarterly groundwater sampling for various parameters for monitoring wells MW-2, MW-3, MW-4, MW-5, MW-6, and MW-7. In addition, the FDEP requests field measurements be obtained during groundwater sampling for pH, specific conductivity, dissolved oxygen, turbidity, temperature, and depth to water. This groundwater monitoring plan, as described above, is to continue for four quarters, after which an evaluation is to be made. The plan will also include a one-time analysis in the last quarter for additional parameters.

### **1.5 Scope**

The project scope of services included the sampling of the on-site monitor wells, the collection and analysis of one equipment blank and one duplicate for quality control purposes, and the generation of a report summarizing the results and findings. In addition, field measurements for pH, specific conductivity, dissolved oxygen, turbidity, temperature, and depth to water were taken.



## 2.0 SAMPLING METHODOLOGIES

### 2.1 Sampling Procedures

On December 11 and 12, 1996, groundwater samples were collected by PSI personnel from monitor wells MW-3, MW-4, MW-5, MW-6, and MW-7. Reconstruction and dewatering of the retention pond in the northeastern portion of the site was being performed at the time of sampling. This activity caused the land surface and groundwater level to drop below the screened interval of monitor well MW-2, preventing PSI personnel from obtaining a groundwater sample from this monitor well. A site map is presented as Drawing 1, located in the Appendix.

The monitor wells were purged with a peristaltic pump and disposable Tygon tubing. Three well volumes of groundwater were removed at a low flow rate, approximately 0.25 gallons per minute, to minimize disturbance of the filter pack and groundwater. Samples of the groundwater were obtained with a decontaminated, stainless steel bailer. The bailer was lowered into the wells as slowly as possible to avoid creating groundwater turbulence, and the groundwater samples were placed in the appropriate sampling bottles and vials. The samples were stored on ice in a cooler and transported to PSI's Analytical Laboratory in St. Petersburg, Florida, in accordance with our FDEP approved laboratory CompQAP No. 860130. All field sampling was performed in accordance with ComQAP No. 880374G, amended and FDEP approved on July 25, 1996.

### 2.2 Field Measurements

Field parameters were measured after each well volume was purged, which included pH, specific conductivity, dissolved oxygen, turbidity, temperature, and depth to water. The results for the field parameter measurements are presented in Table 1. The field data sheets are included in the Appendix.

**TABLE 1: SUMMARY OF FIELD MEASUREMENTS**  
(measurements are of final purged well volume)

| Well Identification | Temperature (°C) | Specific Conductivity (µmhos) | pH   | Dissolved Oxygen (mg/l) | Turbidity (NTU) |
|---------------------|------------------|-------------------------------|------|-------------------------|-----------------|
| MW-3                | 22.5             | 1047                          | 6.72 | 2.9                     | 2.45            |
| MW-4                | 23.8             | 563                           | 6.62 | 2.6                     | 1.60            |
| MW-5                | 24.6             | 689                           | 6.72 | 2.6                     | 3.25            |
| MW-6                | 24.7             | 437                           | 6.67 | 4.9                     | 2.45            |
| MW-7                | 24.1             | 804                           | 6.67 | 2.3                     | 9.87            |

°C = Degrees Celsius      mg/l = Milligrams per liter  
µmhos = Micromhos      NTU = Nephelometric turbidity units  
All measurements taken on December 11 and 12, 1996



## 2.3 Groundwater Measurements

The depth to water was measured from the top of the well casing for all of the monitor wells prior to purging. A summary of the depth to water measurements and groundwater elevations are presented in Table 2. The groundwater flow, as measured during the December 11 and 12 sampling events, was toward the north-northeast direction. A groundwater elevation contour map is presented as Drawing 2, located in the Appendix.

**TABLE 2: MONITOR WELL GROUNDWATER ELEVATIONS**

| Well Identification | Casing Elevation (feet) <sup>1</sup> | Depth to Groundwater (feet) <sup>2</sup> | Groundwater Elevation (feet) |
|---------------------|--------------------------------------|------------------------------------------|------------------------------|
| MW-3                | 7.34                                 | 3.42                                     | 3.92                         |
| MW-4                | 12.00                                | 4.51                                     | 7.49                         |
| MW-5                | 13.65                                | 8.80                                     | 4.85                         |
| MW-6                | 12.89                                | 3.00                                     | 9.89                         |
| MW-7                | 8.50                                 | 5.68                                     | 2.82                         |

1 Obtained from PSI's Primary and Secondary Groundwater Testing report, March, 1996

2 Measured from top of well casing on December 11 and 12, 1996

## 3.0 GROUNDWATER ANALYTICAL RESULTS

### 3.1 Analytical Summary

A chart, summarizing recent groundwater analytical results in comparison to analytical data from previous sampling events, is presented as Table 3, located in the Appendix. The complete laboratory analytical reports, including the chain of custodies, are also included in the Appendix.

## 4.0 OBSERVABLE TRENDS

### 4.1 Conclusion

The groundwater sampling has been performed for the Braden River Park site on behalf of the Manatee County Government, Project Management Department. Five, on-site monitor wells were tested for various parameters as per the FDEP.

As previously discussed, monitor well MW-2 was not sampled due to physical conditions. It is recommended that a replacement well be installed in order to monitor the groundwater condition at the monitor well MW-2 location.



The groundwater analytical results indicate that Secondary Drinking Water Standards have been exceeded in several wells. Specifically, iron, manganese and TDS were found at elevated levels in all of the sampled monitor wells.

Primary Drinking Water Standards for total coliform were elevated in four of the five monitor wells that were sampled. No pesticides were found at elevated levels, as compared to previous results which have indicated DDD, DDE, or DDT. The results also reveal a continued presence of purgeable halocarbons in monitor wells MW-3 and MW-7, although not in concentrations that exceed state guidelines.

It is recommended that the groundwater monitoring plan be continued, as outlined in previous correspondence.



## APPENDIX



**TABLE 3: Groundwater Analytical Summary**  
**Braden River Park, Manatee County, Florida**  
**PSI Project Number 552-5I014**

page 1 of 4

| Well<br>Identi-<br>fication | Sample<br>Date | Purgeable<br>Halocarbons<br>(ug/l) | Organo-<br>Chlorine<br>Pesticides<br>(ug/l) | BIS<br>(ug/l) | Phenols<br>(ug/l) | Iron <sup>1,2</sup><br>(mg/l) | Lead <sup>1,2</sup><br>(mg/l) | Manganese <sup>1,2</sup><br>(mg/l) | Sodium <sup>1,2</sup><br>(mg/l) | Chloride<br>(mg/l) | TDS<br>(mg/l) | Total<br>Coliform<br>(CFU) | Gross<br>Alpha<br>(pCi/l) | Radium<br>226<br>&228<br>(pCi/l) |
|-----------------------------|----------------|------------------------------------|---------------------------------------------|---------------|-------------------|-------------------------------|-------------------------------|------------------------------------|---------------------------------|--------------------|---------------|----------------------------|---------------------------|----------------------------------|
| MW-01                       | 2/21/95        | 2                                  | NA                                          | NA            | 102               | NA                            | < 0.005, < 0.005              | NA                                 | NA                              | NA                 | NA            | NA                         | NA                        | NA                               |
| MW-2                        | 2/21/95        | 11                                 | NA                                          | NA            | 171               | NA                            | < 0.005, < 0.005              | NA                                 | NA                              | NA                 | NA            | NA                         | NA                        | NA                               |
|                             | 6/23/95        | 26                                 | < 0.5                                       | NA            | < 50              | NA                            | 0.024, 0.016                  | NA                                 | NA                              | NA                 | NA            | NA                         | NA                        | NA                               |
|                             | 2/19/96        | 14                                 | < 0.5                                       | NA            | < 5               | NA                            | 0.154, 0.003                  | NA                                 | NA                              | NA                 | NA            | NA                         | NA                        | NA                               |
| MW-3                        | 2/21/95        | 15                                 | NA                                          | NA            | < 10              | NA                            | < 0.005, < 0.005              | NA                                 | NA                              | NA                 | NA            | NA                         | NA                        | NA                               |
|                             | 6/29/95        | 6                                  | < 0.5                                       | NA            | 90                | NA                            | 0.033, 0.008                  | NA                                 | NA                              | NA                 | NA            | NA                         | NA                        | NA                               |
|                             | 8/4/95         | 9                                  | < 0.5                                       | NA            | 70                | NA                            | 0.084, 0.006                  | NA                                 | NA                              | NA                 | NA            | NA                         | NA                        | NA                               |
|                             | 9/22/95        | 16                                 | < 0.05                                      | NA            | < 50              | NA                            | 0.012, < 0.005                | NA                                 | NA                              | NA                 | NA            | NA                         | NA                        | NA                               |
|                             | 10/27/95       | 8                                  | < 0.05                                      | NA            | < 50              | NA                            | 0.006, < 0.001                | NA                                 | NA                              | NA                 | NA            | NA                         | NA                        | NA                               |
|                             | 2/19/96        | 5                                  | < 0.05                                      | NA            | < 5               | NA                            | 0.002, < 0.001                | NA                                 | NA                              | NA                 | NA            | NA                         | NA                        | NA                               |
|                             | 12/11/96       | 10                                 | < 0.5                                       | < 10          | NA                | 17, 16                        | 0.006, < 0.005                | 0.48, 0.47                         | 182, 173                        | 182                | 1,410         | 110                        | 7.1 +/- 17                | < 0.60,<br>< 2.0                 |
| <b>MCL</b>                  |                | <b>**</b>                          | <b>**</b>                                   | <b>6</b>      | <b>10</b>         | <b>0.3</b>                    | <b>0.015</b>                  | <b>0.05</b>                        | <b>160</b>                      | <b>250</b>         | <b>500</b>    | <b>1</b>                   | <b>15</b>                 | <b>5</b>                         |

Notes:

1,2 = The first value is total, the second value is filtered

MCL = Maximum Contaminant Level per Chapter 62-550, FAC

NA = Not analyzed for this parameter

BIS = Bis(2-ethylhexyl)phthalate

\*\* = Parameter specific

ug/l = Micrograms per liter

mg/l = milligrams per liter

CFU = Colony forming units

pCi/l = Picocuries per liter

**TABLE 3: Groundwater Analytical Summary**  
**Braden River Park, Manatee County, Florida**  
**PSI Project Number 552-5I014**

page 2 of 4

| Well<br>Identi-<br>fication | Sample<br>Date | Purgeable<br>Halocarbons<br>(ug/l) | Organo-<br>Chlorine<br>Pesticides<br>(ug/l) | BIS<br>(ug/l) | Phenols<br>(ug/l) | Iron <sup>1,2</sup><br>(mg/l) | Lead <sup>1,2</sup><br>(mg/l) | Manganese <sup>1,2</sup><br>(mg/l) | Sodium <sup>1,2</sup><br>(mg/l) | Chloride<br>(mg/l) | TDS<br>mg/l | Total<br>Coliform<br>(CFU) | Gross<br>Alpha<br>(pCi/l) | Radium<br>226<br>&228<br>(pCi/l) |
|-----------------------------|----------------|------------------------------------|---------------------------------------------|---------------|-------------------|-------------------------------|-------------------------------|------------------------------------|---------------------------------|--------------------|-------------|----------------------------|---------------------------|----------------------------------|
| MW-4                        | 2/21/95        | < 1                                | NA                                          | NA            | < 10              | NA                            | < 0.005, < 0.005              | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 9/22/95        | < 1                                | 4.7                                         | NA            | 70                | NA                            | 1.70, < 0.005                 | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 10/27/95       | < 1                                | 2.0                                         | NA            | < 50              | NA                            | 0.167, < 0.001                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 2/19/96        | < 1                                | 6.8                                         | NA            | < 5*              | NA                            | 0.600, < 0.001                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 12/12/96       | < 1                                | < 0.5                                       | < 10          | NA                | 28, 27                        | < 0.005,<br>< 0.005           | 0.50, 0.50                         | 11, 12                          | 29                 | 416         | 10                         | 6.3 +/-<br>7.4            | 2.2 +/- 0.11,<br>< 2.0           |
| MW-5                        | 2/21/95        | < 1                                | NA                                          | NA            | 242               | NA                            | <0.005, < 0.005               | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 6/29/95        | < 1                                | < 0.5                                       | NA            | 100               | NA                            | 1.100, 0.006                  | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 8/4/95         | < 1                                | < 0.5                                       | NA            | 80                | NA                            | 1.640, 0.008                  | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 8/25/95        | < 1                                | < 0.5                                       | NA            | < 50              | NA                            | 0.510, < 0.005                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 9/22/95        | < 1                                | < 0.5                                       | NA            | < 50              | NA                            | 0.948, < 0.005                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 10/27/95       | < 1                                | < 0.5                                       | NA            | 120               | NA                            | 0.643, < 0.001                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 2/19/96        | < 1                                | < 0.5                                       | NA            | 2                 | NA                            | 0.400, < 0.001                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 12/12/96       | < 1                                | < 0.5                                       | < 10          | NA                | 23, 25                        | < 0.005,<br>< 0.005           | 0.41, 0.39                         | 41, 42                          | 75                 | 808         | 100                        | 14 +/-<br>13              | < 0.60<br>< 2.0                  |
| MCL                         |                | **                                 | **                                          | 6             | 10                | 0.3                           | 0.015                         | 0.05                               | 160                             | 250                | 500         | 1                          | 15                        | 5                                |

Notes:

1,2 = The first value is total, the second value is filtered

MCL = Maximum Contaminant Level per Chapter 62-550, FAC

NA = Not analyzed for this parameter

BIS = Bis(2-ethylhexyl)phthalate

\* = Phenol at 7mg/l was detected by EPA Method 420.1, but not by EPA Method 604

ug/l = Micrograms per liter

mg/l = milligrams per liter

CFU = Colony forming units

pCi/l = Picocuries per liter

\*\* = Parameter specific

**TABLE 3: Groundwater Analytical Summary**  
**Braden River Park, Manatee County, Florida**  
**PSI Project Number 552-5I014**

page 3 of 4

| Well<br>Identi-<br>fication | Sample<br>Date | Purgeable<br>Halocarbons<br>(ug/l) | Organo-<br>Chlorine<br>Pesticides<br>(ug/l) | BIS<br>(ug/l) | Phenols<br>(ug/l) | Iron <sup>1,2</sup><br>(mg/l) | Lead <sup>1,2</sup><br>(mg/l) | Manganese <sup>1,2</sup><br>(mg/l) | Sodium <sup>1,2</sup><br>(mg/l) | Chloride<br>(mg/l) | TDS<br>mg/l | Total<br>Coliform<br>(CFU) | Gross<br>Alpha<br>(pCi/l) | Radium<br>226<br>&228<br>(pCi/l) |
|-----------------------------|----------------|------------------------------------|---------------------------------------------|---------------|-------------------|-------------------------------|-------------------------------|------------------------------------|---------------------------------|--------------------|-------------|----------------------------|---------------------------|----------------------------------|
| MW-6                        | 2/21/95        | < 1                                | NA                                          | NA            | < 10              | NA                            | < 0.005, < 0.005              | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 6/14/95        | < 1                                | < 0.5                                       | NA            | < 50              | NA                            | 0.005, < 0.005                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 8/4/95         | 9                                  | < 0.5                                       | NA            | <b>100</b>        | NA                            | <b>0.051</b> , < 0.005        | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 8/25/95        | 30                                 | < 0.5                                       | NA            | <b>200</b>        | NA                            | 0.006, < 0.005                | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 9/22/95        | < 1                                | < 0.5                                       | NA            | < 50              | NA                            | <b>0.027</b> , < 0.005        | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 10/27/95       | < 1                                | < 0.5                                       | NA            | < 50              | NA                            | <b>0.015</b> , < 0.001        | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 2/19/96        | < 1                                | < 0.5                                       | NA            | < 5               | NA                            | <b>0.023</b> , < 0.001        | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 12/11/96       | < 1                                | < 0.5                                       | < 10          | NA                | <b>25, 24</b>                 | < 0.005,<br>< 0.005           | <b>0.40, 0.39</b>                  | 8, 7                            | 16                 | 228         | < 10                       | <b>&lt; 3.0</b>           | 0.93 +/- 0.08<br>< 2.0           |
| MW-7                        | 9/22/95        | 14                                 | < 0.5                                       | NA            | < 50              | NA                            | <b>0.063</b> , < 0.005        | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 10/27/95       | 9                                  | < 0.5                                       | NA            | <b>70</b>         | NA                            | <b>0.075</b> , < 0.001        | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 2/19/96        | 3                                  | < 0.5                                       | NA            | 1                 | NA                            | <b>0.066</b> , < 0.001        | NA                                 | NA                              | NA                 | NA          | NA                         | NA                        | NA                               |
|                             | 12/11/96       | 6                                  | < 0.5                                       | < 10          | NA                | <b>17, 20</b>                 | < 0.005,<br>< 0.005           | <b>0.26, 0.26</b>                  | 18, 18                          | 21                 | <b>652</b>  | <b>1500*</b>               | <b>6.3 +/-<br/>8.8</b>    | 0.66 +/-<br>< 2.0                |
| <b>MCL</b>                  |                | <b>**</b>                          | <b>**</b>                                   | <b>6</b>      | <b>10</b>         | <b>0.3</b>                    | <b>0.015</b>                  | <b>0.05</b>                        | <b>160</b>                      | <b>250</b>         | <b>500</b>  | <b>1</b>                   | <b>15</b>                 | <b>5</b>                         |

Notes:

1,2 = The first value is total, the second value is filtered

MCL = Maximum Contaminant Level per Chapter 62-550, FAC

NA = Not analyzed for this parameter

BIS = Bis(2-ethylhexyl)phthalate

ug/l = Micrograms per liter

mg/l = milligrams per liter

CFU = Colony forming units

pCi/l = Picocuries per liter

\*\* = Parameter specific

\* = Duplicate sample revealed 200 CFU

**TABLE 3: Groundwater Analytical Summary**  
**Braden River Park, Manatee County, Florida**  
**PSI Project Number 552-5I014**

page 4 of 4

| Well Identification | Sample Date | Dioxins (2,3,7,8-TCDD) (pg/l) |
|---------------------|-------------|-------------------------------|
| MW-3                | 12/11/96    | < 2.7                         |
| MW-4                | 12/12/96    | < 3.5                         |
| MW-5                | 12/12/96    | < 1.9                         |
| MW-6                | 12/11/96    | < 0.9                         |
| MW-7                | 12/11/96    | < 0.9                         |
|                     | <b>MCL</b>  | <b>3 E -12</b>                |

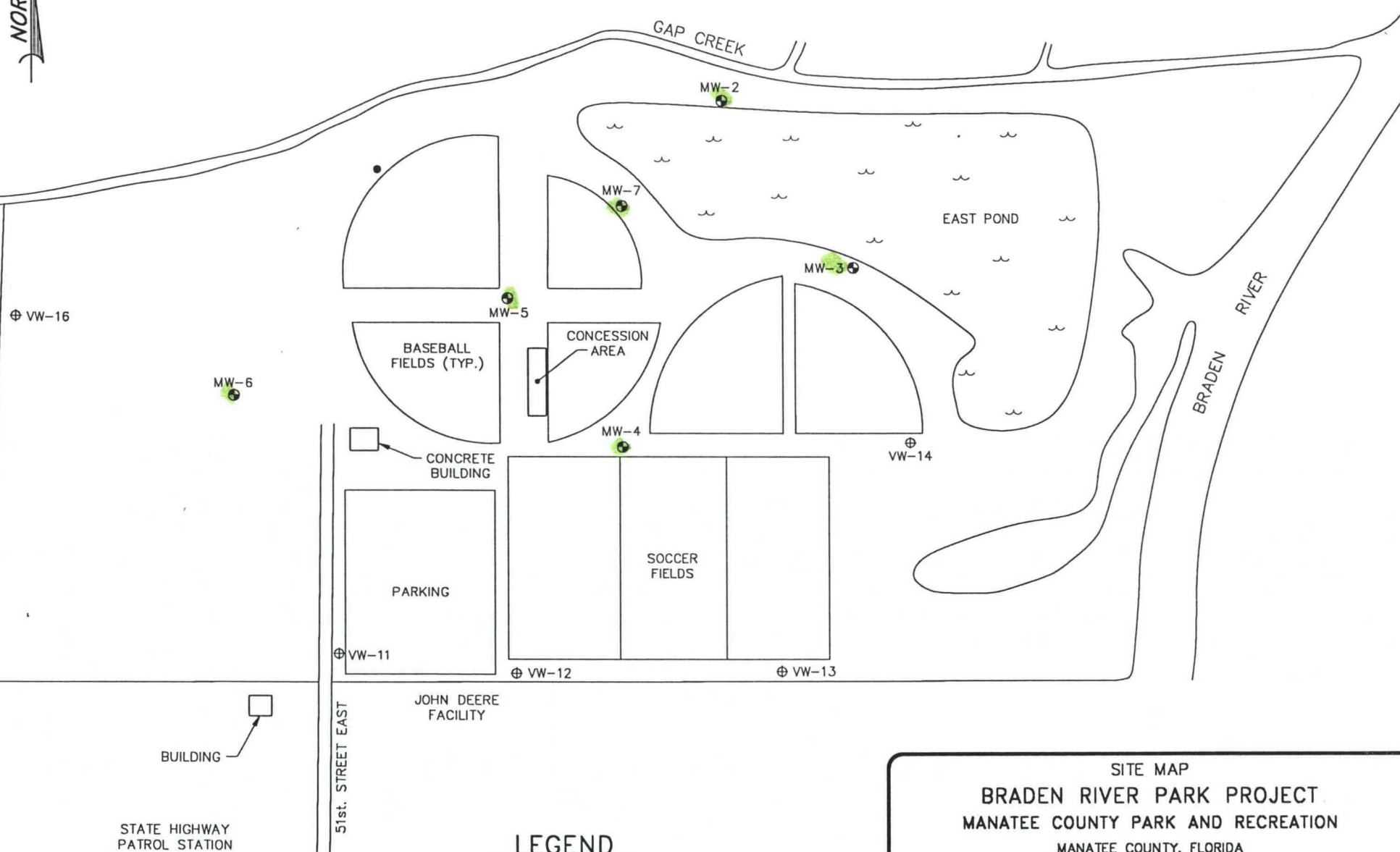
pg/l = Picograms per liter

ug/l = micrograms per liter

3 E -12 pg/l = 3 E -6 ug/l = MCL

(2.7 pg/l = 2.7 E -6 ug/l)

NORTH

**LEGEND**

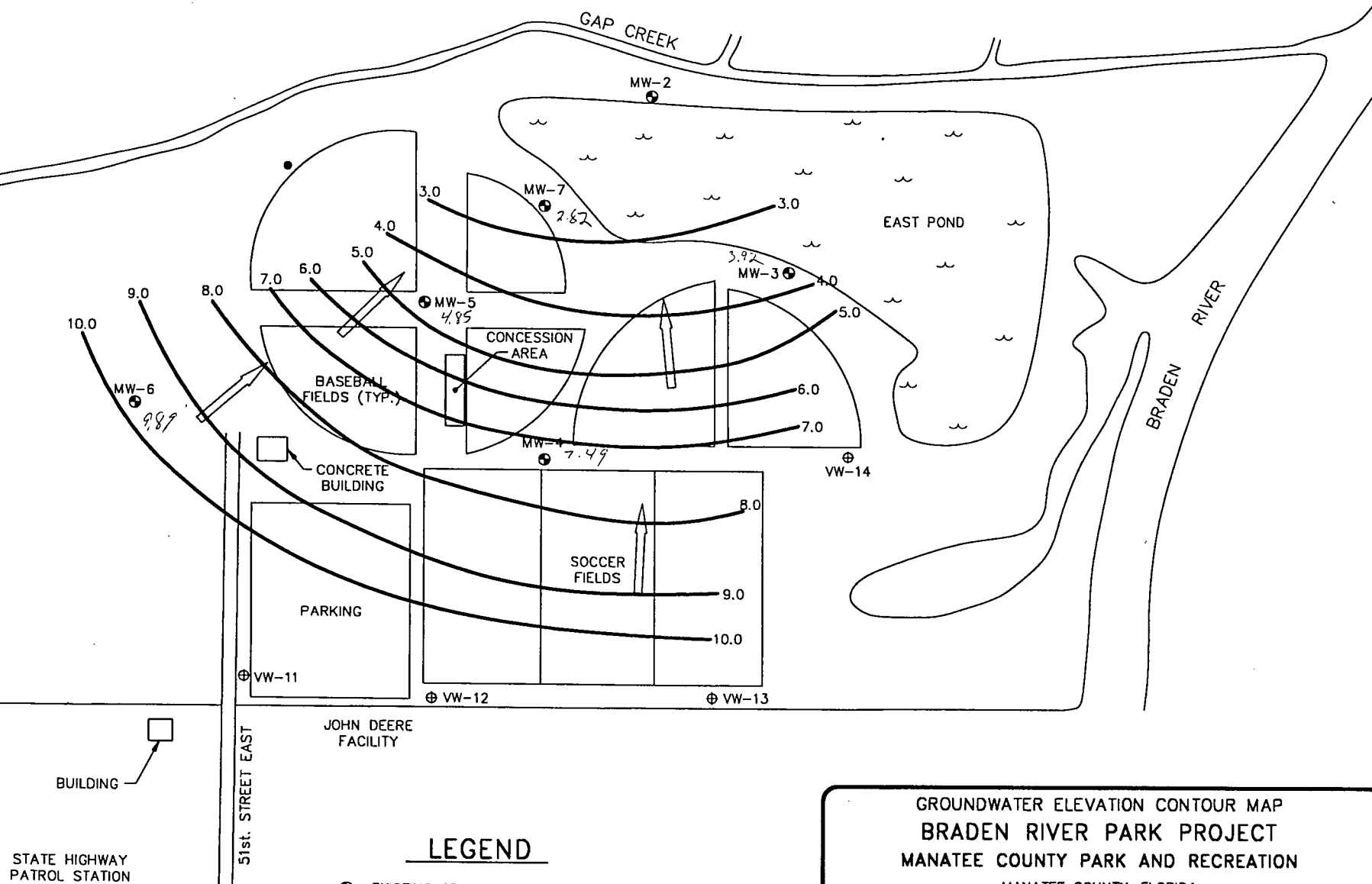
- EXISTING GROUNDWATER WELLS
- ⊕ METHANE MONITOR WELLS (INSTALLED 3/4/96)
- GAS VENT

SITE MAP  
 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: KEK        | SCALE: N.T.S.  | PROJ. NO.: 552-5I014 |
| CHKD. BY: <i>WV1</i> | DATE: 12/16/96 | DWG.: 1              |



### LEGEND

- EXISTING GROUNDWATER WELLS
- ⊕ METHANE MONITOR WELLS (INSTALLED 3/4/96)
- GAS VENT
- 3.0 GROUNDWATER ELEVATION CONTOUR LINE (FT.)
- ➔ DIRECTION OF GROUNDWATER FLOW

GROUNDWATER ELEVATION CONTOUR MAP  
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: KEK       | SCALE: N.T.S.  | PROJ. NO.: 552-51014 |
| CHKD. BY: <i>Wb</i> | DATE: 12/16/96 | DWG.: 2              |

ANALYTICAL REPORT

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

PROJECT: Braden River  
552-5I014

SAMPLE DATE: December 12, 1996

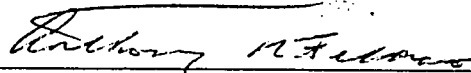
ATTENTION: Nana Faulkner

DATE: December 20, 1996

OUR REPORT NUMBER: 385-6P051-0177

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  
FL CQAP #860130

/dlt

*Information To Build On*

LAB #: 612123-01  
Client ID: MW-4

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    |
| cis-1,2-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:  
12/16/96  
Analyst: TH

ORGANOCHLORINE PESTICIDES

| Analyte  | Results | Units | Method  | MDL/DF |
|----------|---------|-------|---------|--------|
| p,p'-DDE | <0.5    | µg/l  | EPA 608 | 0.5/1  |
| p,p'-DDD | <0.5    | µg/l  | EPA 608 | 0.5/1  |
| p,p'-DDT | <0.5    | µg/l  | EPA 608 | 0.5/1  |

Extraction Date:  
12/16/96  
Analysis Date:  
12/17/96  
Analyst: JC

BASE/NEUTRALS BY GC/MS

| Analyte                      | Results | Units | Method  | MDL/DF |
|------------------------------|---------|-------|---------|--------|
| Bis (2-ethylhexyl) phthalate | <10     | ug/l  | EPA 625 | 10/1   |

Extraction Date:  
12/13/96  
Analysis Date:  
12/17/96  
Analyst: SA



LAB #: 612123-01  
Client ID: MW-4

**METALS ANALYSIS**

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 Aluminum           | <0.2           | mg/l         | EPA 202.1     | 12/17/96             | HB             | 0.2        |
| Total Iron               | 28             | mg/l         | EPA 236.1     | 12/17/96             | HB             | 0.1        |
| Total Lead               | <0.005         | mg/l         | EPA 239.2     | 12/16/96             | MC             | 0.005      |
| Total Manganese          | 0.50           | mg/l         | EPA 243.1     | 12/17/96             | MC             | 0.02       |
| Total Sodium             | 11             | mg/l         | EPA 273.1     | 12/17/96             | HB             | 1          |
| Field Filtered Aluminum  | <0.2           | mg/l         | EPA 202.1     | 12/17/96             | HB             | 0.2        |
| Field Filtered Iron      | 27             | mg/l         | EPA 236.1     | 12/17/96             | HB             | 0.1        |
| Field Filtered Lead      | <0.005         | mg/l         | EPA 239.2     | 12/16/96             | MC             | 0.005      |
| Field Filtered Manganese | 0.50           | mg/l         | EPA 243.1     | 12/17/96             | MC             | 0.02       |
| Field Filtered Sodium    | 12             | mg/l         | EPA 273.1     | 12/17/96             | HB             | 1          |

**INORGANIC ANALYSES**

| <u>Analyte</u>  | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>Analysis Date</u> | <u>Analyst</u> | <u>MDL</u> |
|-----------------|----------------|--------------|---------------|----------------------|----------------|------------|
| Total Coliforms | 10             | CFU/100 mls  | SM 9222-B     | 12/12/96             | HB             | 1          |
| Chloride        | 29             | mg/l         | SM 4500 Cl-B  | 12/12/96             | MB             | 1          |
| TDS             | 416            | mg/l         | EPA 160.1     | 12/18/96             | HB             | 10         |



LAB #: 612123-02  
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             | 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           |
| cis-1,2-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:  
12/16/96  
Analyst: TH

**ORGANOCHLORINE PESTICIDES**

| <u>Analyte</u> | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>MDL/DF</u> |
|----------------|----------------|--------------|---------------|---------------|
| p,p'-DDE       | <0.5           | µg/l         | EPA 608       | 0.5/1         |
| p,p'-DDD       | <0.5           | µg/l         | EPA 608       | 0.5/1         |
| p,p'-DDT       | <0.5           | µg/l         | EPA 608       | 0.5/1         |

Extraction Date:  
12/16/96  
Analysis Date:  
12/17/96  
Analyst: JC

**BASE/NEUTRALS BY GC/MS**

| <u>Analyte</u>               | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>MDL/DF</u> |
|------------------------------|----------------|--------------|---------------|---------------|
| Bis (2-ethylhexyl) phthalate | <10            | ug/l         | EPA 625       | 10/1          |

Extraction Date:  
12/13/96  
Analysis Date:  
12/17/96  
Analyst: SA



LAB #: 612123-02  
Client ID: MW-5

**METALS ANALYSIS**

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 Aluminum           | <0.2           | mg/l         | EPA 202.1     | 12/17/96             | HB             | 0.2        |
| Total Iron               | 23             | mg/l         | EPA 236.1     | 12/17/96             | HB             | 0.1        |
| Total Lead               | <0.005         | mg/l         | EPA 239.2     | 12/16/96             | MC             | 0.005      |
| Total Manganese          | 0.41           | mg/l         | EPA 243.1     | 12/17/96             | MC             | 0.02       |
| Total Sodium             | 41             | mg/l         | EPA 273.1     | 12/17/96             | HB             | 1          |
| Field Filtered Aluminum  | <0.2           | mg/l         | EPA 202.1     | 12/17/96             | HB             | 0.2        |
| Field Filtered Iron      | 25             | mg/l         | EPA 236.1     | 12/17/96             | HB             | 0.1        |
| Field Filtered Lead      | <0.005         | mg/l         | EPA 239.2     | 12/16/96             | MC             | 0.005      |
| Field Filtered Manganese | 0.39           | mg/l         | EPA 243.1     | 12/17/96             | MC             | 0.02       |
| Field Filtered Sodium    | 42             | mg/l         | EPA 273.1     | 12/17/96             | HB             | 1          |

**INORGANIC ANALYSES**

| <u>Analyte</u>  | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>Analysis Date</u> | <u>Analyst</u> | <u>MDL</u> |
|-----------------|----------------|--------------|---------------|----------------------|----------------|------------|
| Total Coliforms | 100            | CFU/100 mls  | SM 9222-B     | 12/12/96             | HB             | 1          |
| Chloride        | 75             | mg/l         | SM 4500 Cl-B  | 12/12/96             | MB             | 1          |
| TDS             | 808            | mg/l         | EPA 160.1     | 12/18/96             | HB             | 10         |



QUALITY CONTROL DATA: ORGANIC ANALYTES

Matrix: Water

| Analyte                   | Lab<br>Batch# | Analytical<br>Blank | MDL | Units | QC<br>%REC | Spike<br>%REC | Dup<br>%RPD | Method |
|---------------------------|---------------|---------------------|-----|-------|------------|---------------|-------------|--------|
| Bromodichloromethane      | AB1216        | <1                  | 1   | µg/l  |            | 120           |             | 601    |
| Bromoform                 |               | <1                  | 1   | µg/l  |            | 106           |             | 601    |
| Bromomethane              |               | <1                  | 1   | µg/l  |            | 105           |             | 601    |
| Carbon Tetrachloride      |               | <1                  | 1   | µg/l  |            | 124           |             | 601    |
| Chlorobenzene             |               | <1                  | 1   | µg/l  |            | 93            |             | 601    |
| Chloroethane              |               | <1                  | 1   | µg/l  |            | 111           |             | 601    |
| 2-Chloroethylvinyl Ether  |               | <1                  | 1   | µg/l  |            | -             |             | 601    |
| Chloroform                |               | <1                  | 1   | µg/l  |            | 122           |             | 601    |
| Chloromethane             |               | <1                  | 1   | µg/l  |            | 105           |             | 601    |
| Dibromochloromethane      |               | <1                  | 1   | µg/l  |            | 108           |             | 601    |
| 1,2-Dichlorobenzene       |               | <1                  | 1   | µg/l  |            | 91            |             | 601    |
| 1,3-Dichlorobenzene       |               | <1                  | 1   | µg/l  |            | 93            |             | 601    |
| 1,4-Dichlorobenzene       |               | <1                  | 1   | µg/l  |            | 95            |             | 601    |
| Dichlorodifluoromethane   |               | <1                  | 1   | µg/l  |            | 87            |             | 601    |
| 1,1-Dichloroethane        |               | <1                  | 1   | µg/l  |            | 104           |             | 601    |
| 1,2-Dichloroethane        |               | <1                  | 1   | µg/l  |            | 114           |             | 601    |
| 1,1-Dichloroethene        |               | <1                  | 1   | µg/l  |            | 104           |             | 601    |
| cis-1,2-Dichloroethene    |               | <1                  | 1   | µg/l  |            | 112           |             | 601    |
| trans-1,2-Dichloroethene  |               | <1                  | 1   | µg/l  |            | 102           |             | 601    |
| 1,2-Dichloropropane       |               | <1                  | 1   | µg/l  |            | 120           |             | 601    |
| cis-1,3-Dichloropropene   |               | <1                  | 1   | µg/l  |            | 110           |             | 601    |
| trans-1,3-Dichloropropene |               | <1                  | 1   | µg/l  |            | 107           |             | 601    |
| Methylene Chloride        |               | <1                  | 1   | µg/l  |            | 106           |             | 601    |
| 1,1,2,2-Tetrachloroethane |               | <1                  | 1   | µg/l  |            | 94            |             | 601    |
| Tetrachloroethene         |               | <1                  | 1   | µg/l  |            | 97            |             | 601    |
| 1,1,1-Trichloroethane     |               | <1                  | 1   | µg/l  |            | 114           |             | 601    |
| 1,1,2-Trichloroethane     |               | <1                  | 1   | µg/l  |            | 122           |             | 601    |
| Trichloroethene           |               | <1                  | 1   | µg/l  |            | 118           |             | 601    |
| Trichlorofluoromethane    |               | <1                  | 1   | µg/l  |            | 95            |             | 601    |
| Vinyl Chloride            |               | <1                  | 1   | µg/l  |            | 107           |             | 601    |

Matrix: Water

| Analyte  | Lab<br>Batch# | Analytical<br>Blank | MDL | Units | QC<br>%REC | Spike<br>%REC | Dup<br>%RPD | Method |
|----------|---------------|---------------------|-----|-------|------------|---------------|-------------|--------|
| p,p'-DDE | AB1216        | <0.5                | 0.5 | µg/l  |            | 82            |             | 608    |
| p,p'-DDD |               | <0.5                | 0.5 | µg/l  |            | 111           |             | 608    |
| p,p'-DDT |               | <0.5                | 0.5 | µg/l  |            | 98            |             | 608    |

QUALITY CONTROL DATA: INORGANIC ANALYTES

Matrix: Water

| Analyte   | Lab<br>Batch# | Analytical<br>Blank | MDL   | Units | QC<br>%REC | Spike<br>%REC | Dup<br>%RPD | Method    |
|-----------|---------------|---------------------|-------|-------|------------|---------------|-------------|-----------|
| Aluminum  | AB1217        | <0.2                | 0.2   | mg/l  | 100        | 78            | 0           | 202.1     |
| Iron      | AB1217        | <0.1                | 0.1   | mg/l  | 104        | 100           | 0           | 236.1     |
| Lead      | AB1216        | <0.005              | 0.005 | mg/l  | 104        | 105           | 0           | 239.2     |
| Manganese | AB1217        | <0.02               | 0.02  | mg/l  | 104        | 104           | 0           | 243.1     |
| Sodium    | AB1217        | <1                  | 1     | mg/l  | 105        | 108           | 0           | 273.1     |
| Chloride  | AB1212        | <1                  | 1     | mg/l  | 103        | 101           | 2           | 4500 Cl-B |
| TDS       | AB1218        | <10                 | 10    | mg/l  | 92         | -             | 1           | 160.1     |



# SURROGATE RECOVERY SUMMARY

Matrix: Water/Soil

| PSI LAB # | 2-Bromo-1<br>-Dichloropropane<br>(601/8010) | a,a,a-TFT<br>(602/8020) | 2,4,5,6-Tetrachloro<br>m-xylene<br>(608/8080) | Dibutyl<br>Chlorendate<br>(608/8080) | 2-Fluorobiphenyl<br>(610/8100) | Nitrobenzene<br>(610/8100) |
|-----------|---------------------------------------------|-------------------------|-----------------------------------------------|--------------------------------------|--------------------------------|----------------------------|
| 612123-01 | 95                                          |                         |                                               | 95                                   |                                |                            |
| 612123-02 | 106                                         |                         |                                               | 84                                   |                                |                            |

## ACID EXTRACTABLES

## BASE NEUTRAL EXTRACTABLES

| PSI LAB # | 2-Fluorophenol<br>(625/8270) | Phenol-d5<br>(625/8270) | 2,4,6-<br>Tribromophenol<br>(625/8270) | Nitrobenzene-d5<br>(625/8270) | 2-Fluorobiphenyl<br>(625/8270) | Terphenyl-d14<br>(625/8270) |
|-----------|------------------------------|-------------------------|----------------------------------------|-------------------------------|--------------------------------|-----------------------------|
| 612123-01 | 35                           | 25                      | 11                                     | 114                           | 102                            | 50                          |
| 612123-02 | 31                           | 30                      | *                                      | *                             | 90                             | 48                          |

\* Matrix Interference



**SL SAVANNAH LABORATORIES**  
 & ENVIRONMENTAL SERVICES, INC.

6712 Benjamin Road • Suite 100 • Tampa, FL 33634 • (813) 885-7427 • Fax (813) 885-7049

 LOG NO: B6-33145A  
 Received: 12 DEC 96  
 Reported: 31 DEC 96

 Mr. Anthony Febbraro  
 Professional Service Industries, Inc  
 1770 Commerce Avenue, North  
 St. Petersburg, FL 33716

 Project: 612123  
 Sampled By: Client  
 Code: 092861231  
 Page 1

## REPORT OF RESULTS

| LOG NO             | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE SAMPLED |
|--------------------|-------------------------------------|--------------|
| 33145A-1           | 612123-01 MW-4                      | 12-12-96     |
| 33145A-2           | 612123-02 MW-5                      | 12-12-96     |
| PARAMETER          | 33145A-1                            | 33145A-2     |
| Gross Alpha, pCi/l | 6.3+/-7.4                           | 14+/-13      |
| Radium 226, pCi/l  | 2.2+/-0.11                          | <0.60        |
| Radium 228, pCi/l  | <2.0                                | <2.0         |
|                    | MW-4                                | MW-5         |

# SL SAVANNAH LABORATORIES

& ENVIRONMENTAL SERVICES, INC.

6712 Benjamin Road • Suite 100 • Tampa, FL 33634 • (813) 885-7427 • Fax (813) 885-7049

Mr. Anthony Febbraro  
Professional Service Industries, Inc  
1770 Commerce Avenue, North  
St. Petersburg, FL 33716

LOG NO: 86-33145A  
Received: 12 DEC 96  
Reported: 31 DEC 96

Project: 612123  
Sampled By: Client  
Code: 092861231  
Page 2

## REPORT OF RESULTS

LOG NO SAMPLE DESCRIPTION . QC REPORT FOR LIQUID SAMPLES

33145A-3 Lab Blank  
33145A-4 Accuracy (% Recovery)  
33145A-5 Precision (% RPD)  
33145A-6 Date Analyzed

| PARAMETER          | 33145A-3 | 33145A-4 | 33145A-5 | 33145A-6 |
|--------------------|----------|----------|----------|----------|
| Gross Alpha, pCi/l |          |          |          |          |
| Radium 226, pCi/l  | <3.0     | 100 %    | 24 %     | 12.18.96 |
| Radium 228, pCi/l  | <0.60    | 94 %     | 30 %     | 12.24.96 |
|                    | <2.0     | 113 %    | 19 %     | 12.30.96 |

Method: EPA 500/4-80-032

HRS Certification #'s: 84385, E84282

*Kathy Sheffield*  
Kathy Sheffield, Project Manager

## CHAIN OF CUSTODY RECORD



|                                          |                                |                            |
|------------------------------------------|--------------------------------|----------------------------|
| PROJECT NAME<br>Braden River             | REPORT TO<br>Nana Faulkner     | INVOICE TO<br>Dave McCarty |
| PROJECT NUMBER<br>552-SI014              | PROJECT MANAGER<br>Keith Butts | ADDRESS                    |
| P.O. NUMBER                              | ADDRESS                        | CITY / STATE / ZIP         |
| REQUIRED DUE DATE (MM-DD-YY)<br>12/18/96 | CITY / STATE / ZIP             | ATTENTION                  |
| SAMPLES TO LAB VIA<br>Truck              | TELEPHONE                      | TELEPHONE                  |
| NUMBER OF COOLERS<br>1                   | REPORT VIA                     | VERBAL FAX                 |
|                                          | U.S. MAIL/OVERNIGHT            |                            |

## LABORATORY SUBMITTED TO:

- |                                                                                                            |                                                                                      |
|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <input type="checkbox"/> 6913 Hwy. 225<br>Deer Park, TX 77536<br>(713) 479-8307                            | <input type="checkbox"/> 4820 W. 15th Street<br>Lawrence, KS 66049<br>(800) 548-7901 |
| <input checked="" type="checkbox"/> 1770 Commerce Ave. North<br>St. Petersburg, FL 33716<br>(813) 579-4464 | <input type="checkbox"/> 850 Poplar Street<br>Pittsburgh, PA 15220<br>(412) 922-4000 |

[illegible]

ADDITIONAL REMARKS

SAMPLER'S SIGNATURE

ANALYTICAL REPORT

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

PROJECT: Braden River  
552-51014

ATTENTION: Nana Faulkner

SAMPLE DATE: December 11, 1996

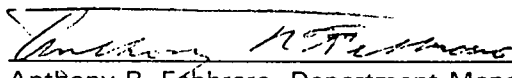
DATE: December 17, 1996

OUR REPORT NUMBER: 385-6P051-0176

REVISED DATE: December 20, 1996

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  
FL CQAP #860130

/jm

LAB #: 612113-01  
Client ID: MW-3

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             | 9       | µg/l  | EPA 601 | 1/1    |
| Chloroethane              | <1      | µg/l  | EPA 601 | 1/1    |
| 2-Chloroethylvinyl Ether  | <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    |
| cis-1,2-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:  
12/13/96  
Analyst: TH



LAB #: 612113-01  
Client ID: 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> |
|----------------|----------------|--------------|---------------|---------------|
| p,p'-DDE       | <0.5           | µg/l         | EPA 608       | 0.5/1         |
| p,p'-DDD       | <0.5           | µg/l         | EPA 608       | 0.5/1         |
| p,p'-DDT       | <0.5           | µg/l         | EPA 608       | 0.5/1         |

Extraction Date:  
12/16/96  
Analysis Date:  
12/17/96  
Analyst: JC

**BASE/NEUTRAL AND ACID EXTRACTABLES BY GC/MS**

| <u>Analyte</u>             | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>MDL/DF</u> |
|----------------------------|----------------|--------------|---------------|---------------|
| Bis(2-ethylhexyl)phthalate | <10            | µg/l         | EPA 625       | 10/1          |

Extraction Date:  
12/13/96  
Analysis Date:  
12/16/96  
Analyst: SA

**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 Aluminum           | <0.2           | mg/l         | EPA 202.1     | 12/17/96             | HB             | 0.2        |
| Total Iron               | 17             | mg/l         | EPA 236.1     | 12/17/96             | HB             | 0.1        |
| Total Lead               | 0.006          | mg/l         | EPA 239.2     | 12/16/96             | MC             | 0.005      |
| Total Manganese          | 0.48           | mg/l         | EPA 243.1     | 12/17/96             | MC             | 0.02       |
| Total Sodium             | 182            | mg/l         | EPA 273.1     | 12/17/96             | HB             | 1          |
| Field Filtered Aluminum  | <0.2           | mg/l         | EPA 202.1     | 12/17/96             | HB             | 0.2        |
| Field Filtered Iron      | 16             | mg/l         | EPA 236.1     | 12/17/96             | HB             | 0.1        |
| Field Filtered Lead      | <0.005         | mg/l         | EPA 239.2     | 12/16/96             | MC             | 0.005      |
| Field Filtered Manganese | 0.47           | mg/l         | EPA 243.1     | 12/17/96             | MC             | 0.02       |
| Field Filtered Sodium    | 173            | mg/l         | EPA 273.1     | 12/17/96             | HB             | 1          |

**INORGANIC ANALYSES**

| <u>Analyte</u> | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>Analysis Date</u> | <u>Analyst</u> | <u>MDL</u> |
|----------------|----------------|--------------|---------------|----------------------|----------------|------------|
| Chloride       | 182            | mg/l         | SM 4500-Cl B  | 12/12/96             | MB             | 1          |
| TDS            | 1,410          | mg/l         | EPA 160.1     | 12/13/96             | HB             | 5          |

**MICROBIOLOGY**

| <u>Analyte</u> | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>Analysis Date</u> | <u>Analyst</u> | <u>MDL</u> |
|----------------|----------------|--------------|---------------|----------------------|----------------|------------|
| Total Coliform | 110            | CFU/100 mls  | SM 9222 B     | 12/11/96             | MB             | 1          |



LAB #: 612113-02  
Client ID: MW-6

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    |
| 2-Chloroethylvinyl Ether  | <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    |
| cis-1,2-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:  
12/13/96  
Analyst: TH



LAB #: 612113-02  
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> |
|----------------|----------------|--------------|---------------|---------------|
| p,p'-DDE       | <0.5           | µg/l         | EPA 608       | 0.5/1         |
| p,p'-DDD       | <0.5           | µg/l         | EPA 608       | 0.5/1         |
| p,p'-DDT       | <0.5           | µg/l         | EPA 608       | 0.5/1         |

Extraction Date:  
12/16/96  
Analysis Date:  
12/17/96  
Analyst: JC

## BASE/NEUTRAL AND ACID EXTRACTABLES BY GC/MS

| <u>Analyte</u>             | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>MDL/DF</u> |
|----------------------------|----------------|--------------|---------------|---------------|
| Bis(2-ethylhexyl)phthalate | <10            | µg/l         | EPA 625       | 10/1          |

Extraction Date:  
12/13/96  
Analysis Date:  
12/16/96  
Analyst: SA

## 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 Aluminum           | <0.2           | mg/l         | EPA 202.1     | 12/17/96             | HB             | 0.2        |
| Total Iron               | 25             | mg/l         | EPA 236.1     | 12/17/96             | HB             | 0.1        |
| Total Lead               | <0.005         | mg/l         | EPA 239.2     | 12/16/96             | MC             | 0.005      |
| Total Manganese          | 0.40           | mg/l         | EPA 243.1     | 12/17/96             | MC             | 0.02       |
| Total Sodium             | 8              | mg/l         | EPA 273.1     | 12/17/96             | HB             | 1          |
| Field Filtered Aluminum  | <0.2           | mg/l         | EPA 202.1     | 12/17/96             | HB             | 0.2        |
| Field Filtered Iron      | 24             | mg/l         | EPA 236.1     | 12/17/96             | HB             | 0.1        |
| Field Filtered Lead      | <0.005         | mg/l         | EPA 239.2     | 12/16/96             | MC             | 0.005      |
| Field Filtered Manganese | 0.39           | mg/l         | EPA 243.1     | 12/17/96             | MC             | 0.02       |
| Field Filtered Sodium    | 7              | mg/l         | EPA 273.1     | 12/17/96             | HB             | 1          |

## INORGANIC ANALYSES

| <u>Analyte</u> | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>Analysis Date</u> | <u>Analyst</u> | <u>MDL</u> |
|----------------|----------------|--------------|---------------|----------------------|----------------|------------|
| Chloride       | 16             | mg/l         | SM 4500-Cl B  | 12/12/96             | MB             | 1          |
| TDS            | 228            | mg/l         | EPA 160.1     | 12/13/96             | HB             | 5          |

## MICROBIOLOGY

| <u>Analyte</u> | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>Analysis Date</u> | <u>Analyst</u> | <u>MDL</u> |
|----------------|----------------|--------------|---------------|----------------------|----------------|------------|
| Total Coliform | <10            | CFU/100 mls  | SM 9222 B     | 12/11/96             | MB             | 1          |



LAB #: 612113-03  
Client ID: MW-7

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             | 4       | µg/l  | EPA 601 | 1/1    |
| Chloroethane              | <1      | µg/l  | EPA 601 | 1/1    |
| 2-Chloroethylvinyl Ether  | <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    |
| cis-1,2-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:

12/13/96

Analyst: TH



LAB #: 612113-03  
Client ID: MW-7

ORGANOCHLORINE PESTICIDES AND PCB'S

Matrix: Water

| <u>Analyte</u> | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>MDL/DF</u> |
|----------------|----------------|--------------|---------------|---------------|
| p,p'-DDE       | <0.5           | µg/l         | EPA 608       | 0.5/1         |
| p,p'-DDD       | <0.5           | µg/l         | EPA 608       | 0.5/1         |
| p,p'-DDT       | <0.5           | µg/l         | EPA 608       | 0.5/1         |

Extraction Date:  
12/16/96  
Analysis Date:  
12/17/96  
Analyst: JC

BASE/NEUTRAL AND ACID EXTRACTABLES BY GC/MS

| <u>Analyte</u>             | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>MDL/DF</u> |
|----------------------------|----------------|--------------|---------------|---------------|
| Bis(2-ethylhexyl)phthalate | < 10           | µg/l         | EPA 625       | 10/1          |

Extraction Date:  
12/13/96  
Analysis Date:  
12/16/96  
Analyst: SA

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 Aluminum           | <0.2           | mg/l         | EPA 202.1     | 12/17/96             | HB             | 0.2        |
| Total Iron               | 17             | mg/l         | EPA 236.1     | 12/17/96             | HB             | 0.1        |
| Total Lead               | <0.005         | mg/l         | EPA 239.2     | 12/16/96             | MC             | 0.005      |
| Total Manganese          | 0.26           | mg/l         | EPA 243.1     | 12/17/96             | MC             | 0.02       |
| Total Sodium             | 18             | mg/l         | EPA 273.1     | 12/17/96             | HB             | 1          |
| Field Filtered Aluminum  | <0.2           | mg/l         | EPA 202.1     | 12/17/96             | HB             | 0.2        |
| Field Filtered Iron      | 20             | mg/l         | EPA 236.1     | 12/17/96             | HB             | 0.1        |
| Field Filtered Lead      | <0.005         | mg/l         | EPA 239.2     | 12/16/96             | MC             | 0.005      |
| Field Filtered Manganese | 0.26           | mg/l         | EPA 243.1     | 12/17/96             | MC             | 0.02       |
| Field Filtered Sodium    | 18             | mg/l         | EPA 273.1     | 12/17/96             | HB             | 1          |

INORGANIC ANALYSES

| <u>Analyte</u> | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>Analysis Date</u> | <u>Analyst</u> | <u>MDL</u> |
|----------------|----------------|--------------|---------------|----------------------|----------------|------------|
| Chloride       | 21             | mg/l         | SM 4500-Cl B  | 12/12/96             | MB             | 1          |
| TDS            | 652            | mg/l         | EPA 160.1     | 12/13/96             | HB             | 5          |

MICROBIOLOGY

| <u>Analyte</u> | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>Analysis Date</u> | <u>Analyst</u> | <u>MDL</u> |
|----------------|----------------|--------------|---------------|----------------------|----------------|------------|
| Total Coliform | 1,500          | CFU/100 mls  | SM 9222 B     | 12/11/96             | MB             | 1          |



LAB #: 612113-04  
Client ID: Duplicate

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             | 3       | µg/l  | EPA 601 | 1/1    |
| Chloroethane              | <1      | µg/l  | EPA 601 | 1/1    |
| 2-Chloroethylvinyl Ether  | <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    |
| cis-1,2-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:  
12/13/96  
Analyst: TH



LAB #: 612113-04  
Client ID: Duplicate

ORGANOCHLORINE PESTICIDES AND PCB'S

Matrix: Water

| Analyte  | Results | Units | Method  | MDL/DF |
|----------|---------|-------|---------|--------|
| p,p'-DDE | <0.5    | µg/l  | EPA 608 | 0.5/1  |
| p,p'-DDD | <0.5    | µg/l  | EPA 608 | 0.5/1  |
| p,p'-DDT | <0.5    | µg/l  | EPA 608 | 0.5/1  |

Extraction Date:  
12/16/96  
Analysis Date:  
12/17/96  
Analyst: JC

BASE/NEUTRAL AND ACID EXTRACTABLES BY GC/MS

| Analyte                    | Results | Units | Method  | MDL/DF |
|----------------------------|---------|-------|---------|--------|
| Bis(2-ethylhexyl)phthalate | <10     | µg/l  | EPA 625 | 10/1   |

Extraction Date:  
12/13/96  
Analysis Date:  
12/16/96  
Analyst: SA

METALS ANALYSIS

| Analyte                  | Results | Units | Method    | Analysis Date | Analyst | MDL   |
|--------------------------|---------|-------|-----------|---------------|---------|-------|
| Total Aluminum           | <0.2    | mg/l  | EPA 202.1 | 12/17/96      | HB      | 0.2   |
| Total Iron               | 20      | mg/l  | EPA 236.1 | 12/17/96      | HB      | 0.1   |
| Total Lead               | <0.005  | mg/l  | EPA 239.2 | 12/16/96      | MC      | 0.005 |
| Total Manganese          | <0.02   | mg/l  | EPA 243.1 | 12/17/96      | MC      | 0.02  |
| Total Sodium             | 19      | mg/l  | EPA 273.1 | 12/17/96      | HB      | 1     |
| Field Filtered Aluminum  | <0.2    | mg/l  | EPA 202.1 | 12/17/96      | HB      | 0.2   |
| Field Filtered Iron      | 19      | mg/l  | EPA 236.1 | 12/17/96      | HB      | 0.1   |
| Field Filtered Lead      | <0.005  | mg/l  | EPA 239.2 | 12/16/96      | MC      | 0.005 |
| Field Filtered Manganese | 0.27    | mg/l  | EPA 243.1 | 12/17/96      | MC      | 0.02  |
| Field Filtered Sodium    | 18      | mg/l  | EPA 273.1 | 12/17/96      | HB      | 1     |

INORGANIC ANALYSES

| Analyte  | Results | Units | Method       | Analysis Date | Analyst | MDL |
|----------|---------|-------|--------------|---------------|---------|-----|
| Chloride | 21      | mg/l  | SM 4500-Cl B | 12/12/96      | MB      | 1   |
| TDS      | 708     | mg/l  | EPA 160.1    | 12/13/96      | HB      | 5   |

MICROBIOLOGY

| Analyte        | Results | Units       | Method    | Analysis Date | Analyst | MDL |
|----------------|---------|-------------|-----------|---------------|---------|-----|
| Total Coliform | 200     | CFU/100 mls | SM 9222 B | 12/11/96      | MB      | 1   |



LAB #: 612113-05  
Client ID: EQ Blank

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    |
| 2-Chloroethylvinyl Ether  | <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    |
| cis-1,2-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:  
12/13/96  
Analyst: TH



LAB #: 612113-05  
Client ID: EQ Blank

ORGANOCHLORINE PESTICIDES AND PCB'S

Matrix: Water

| <u>Analyte</u> | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>MDL/DF</u> |
|----------------|----------------|--------------|---------------|---------------|
| p,p'-DDE       | <0.5           | µg/l         | EPA 608       | 0.5/1         |
| p,p'-DDD       | <0.5           | µg/l         | EPA 608       | 0.5/1         |
| p,p'-DDT       | <0.5           | µg/l         | EPA 608       | 0.5/1         |

Extraction Date:  
12/16/96  
Analysis Date:  
12/17/96  
Analyst: JC

BASE/NEUTRAL AND ACID EXTRACTABLES BY GC/MS

| <u>Analyte</u>             | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>MDL/DF</u> |
|----------------------------|----------------|--------------|---------------|---------------|
| Bis(2-ethylhexyl)phthalate | <10            | µg/l         | EPA 625       | 10/1          |

Extraction Date:  
12/13/96  
Analysis Date:  
12/16/96  
Analyst: SA

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 Aluminum           | <0.2           | mg/l         | EPA 202.1     | 12/17/96             | HB             | 0.2        |
| Total Iron               | <0.1           | mg/l         | EPA 236.1     | 12/17/96             | HB             | 0.1        |
| Total Lead               | <0.005         | mg/l         | EPA 239.2     | 12/16/96             | MC             | 0.005      |
| Total Manganese          | <0.02          | mg/l         | EPA 243.1     | 12/17/96             | MC             | 0.02       |
| Total Sodium             | 1              | mg/l         | EPA 273.1     | 12/17/96             | HB             | 1          |
| Field Filtered Aluminum  | <0.02          | mg/l         | EPA 202.1     | 12/17/96             | HB             | 0.2        |
| Field Filtered Iron      | <0.1           | mg/l         | EPA 236.1     | 12/17/96             | HB             | 0.1        |
| Field Filtered Lead      | <0.005         | mg/l         | EPA 239.2     | 12/16/96             | MC             | 0.005      |
| Field Filtered Manganese | <0.02          | mg/l         | EPA 243.1     | 12/17/96             | MC             | 0.02       |
| Field Filtered Sodium    | 1              | mg/l         | EPA 273.1     | 12/17/96             | HB             | 1          |

INORGANIC ANALYSES

| <u>Analyte</u> | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>Analysis Date</u> | <u>Analyst</u> | <u>MDL</u> |
|----------------|----------------|--------------|---------------|----------------------|----------------|------------|
| Chloride       | 1              | mg/l         | SM 4500-Cl B  | 12/12/96             | MB             | 1          |
| TDS            | 16             | mg/l         | EPA 160.1     | 12/13/96             | HB             | 5          |

MICROBIOLOGY

| <u>Analyte</u> | <u>Results</u> | <u>Units</u> | <u>Method</u> | <u>Analysis Date</u> | <u>Analyst</u> | <u>MDL</u> |
|----------------|----------------|--------------|---------------|----------------------|----------------|------------|
| Total Coliform | <1             | CFU/100 mls  | SM 9222 B     | 12/11/96             | MB             | 1          |



LAB #: 612113-06

PURGEABLE HALOCARBONS

Client ID: Trip

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    |
| 2-Chloroethylvinyl Ether  | <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    |
| cis-1,2-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:

12/13/96

Analyst: TH



LAB #: 612113-07  
Client ID: Trip

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    |
| 2-Chloroethylvinyl Ether  | <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    |
| cis-1,2-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:  
12/13/96  
Analyst: TH



LAB #: 612113-08  
Client ID: Trip

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    |
| 2-Chloroethylvinyl Ether  | <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    |
| cis-1,2-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:  
12/13/96  
Analyst: TH



QUALITY CONTROL DATA: ORGANIC ANALYTES

Matrix: Water

| Analyte                   | Lab<br>Batch# | Analytical<br>Blank | MDL | Units | QC<br>%REC | Spike<br>%REC | Dup<br>%RPD | Method |
|---------------------------|---------------|---------------------|-----|-------|------------|---------------|-------------|--------|
| Bromodichloromethane      | AB1213        | <1                  | 1   | µg/l  |            | 104           |             | 601    |
| Bromoform                 |               | <1                  | 1   | µg/l  |            | 110           |             | 601    |
| Bromomethane              |               | <1                  | 1   | µg/l  |            | 99            |             | 601    |
| Carbon tetrachloride      |               | <1                  | 1   | µg/l  |            | 98            |             | 601    |
| Chlorobenzene             |               | <1                  | 1   | µg/l  |            | 108           |             | 601    |
| Chloroethane              |               | <1                  | 1   | µg/l  |            | 122           |             | 601    |
| Chloroform                |               | <1                  | 1   | µg/l  |            | 103           |             | 601    |
| Chloromethane             |               | <1                  | 1   | µg/l  |            | 78            |             | 601    |
| Dibromochloromethane      |               | <1                  | 1   | µg/l  |            | 104           |             | 601    |
| 1,2-Dichlorobenzene       |               | <1                  | 1   | µg/l  |            | 101           |             | 601    |
| 1,3-Dichlorobenzene       |               | <1                  | 1   | µg/l  |            | 104           |             | 601    |
| 1,4-Dichlorobenzene       |               | <1                  | 1   | µg/l  |            | 100           |             | 601    |
| Dichlorodifluoromethane   |               | <1                  | 1   | µg/l  |            | 106           |             | 601    |
| 1,1-Dichloroethane        |               | <1                  | 1   | µg/l  |            | 104           |             | 601    |
| 1,2-Dichloroethane        |               | <1                  | 1   | µg/l  |            | 98            |             | 601    |
| 1,1-Dichloroethene        |               | <1                  | 1   | µg/l  |            | 107           |             | 601    |
| cis-1,2-Dichloroethene    |               | <1                  | 1   | µg/l  |            | 118           |             | 601    |
| trans-1,2-Dichloroethene  |               | <1                  | 1   | µg/l  |            | 110           |             | 601    |
| 1,2-Dichloropropane       |               | <1                  | 1   | µg/l  |            | 100           |             | 601    |
| cis-1,3-Dichloropropene   |               | <1                  | 1   | µg/l  |            | 96            |             | 601    |
| trans-1,3-Dichloropropene |               | <1                  | 1   | µg/l  |            | 105           |             | 601    |
| Methylene chloride        |               | <1                  | 1   | µg/l  |            | 100           |             | 601    |
| 1,1,2,2-Tetrachloroethane |               | <1                  | 1   | µg/l  |            | 95            |             | 601    |
| Tetrachloroethene         |               | <1                  | 1   | µg/l  |            | 98            |             | 601    |
| 1,1,1-Trichloroethane     |               | <1                  | 1   | µg/l  |            | 102           |             | 601    |
| 1,1,2-Trichloroethane     |               | <1                  | 1   | µg/l  |            | 118           |             | 601    |
| Trichloroethene           |               | <1                  | 1   | µg/l  |            | 111           |             | 601    |
| Trichlorofluoromethane    |               | <1                  | 1   | µg/l  |            | 91            |             | 601    |
| Vinyl chloride            |               | <1                  | 1   | µg/l  |            | 99            |             | 601    |

QUALITY CONTROL DATA: ORGANIC ANALYTES

| Analyte  | Lab<br>Batch# | Analytical<br>Blank | MDL | Units | QC<br>%REC | Spike<br>%REC | Dup<br>%RPD | Matrix: Water |  |
|----------|---------------|---------------------|-----|-------|------------|---------------|-------------|---------------|--|
|          |               |                     |     |       |            |               |             | Method        |  |
| p,p'-DDE | AB1213        | <0.5                | 0.5 | µg/l  |            | 83            |             | 608           |  |
| p,p'-DDD |               | <0.5                | 0.5 | µg/l  |            | 129           |             | 608           |  |
| p,p'-DDT |               | <0.5                | 0.5 | µg/l  |            | 103           |             | 608           |  |

QUALITY CONTROL: ORGANIC ANALYTES

|                                  |                             |                                   |            |              |                          |                           |                            |             | Matrix: Water |               |
|----------------------------------|-----------------------------|-----------------------------------|------------|--------------|--------------------------|---------------------------|----------------------------|-------------|---------------|---------------|
| <u>Analyte</u>                   | <u>Lab</u><br><u>Batch#</u> | <u>Analytical</u><br><u>Blank</u> | <u>MDL</u> | <u>Units</u> | <u>MS</u><br><u>%REC</u> | <u>MSD</u><br><u>%REC</u> | <u>QC</u><br><u>Limits</u> | <u>%RPD</u> | <u>%RL</u>    | <u>Method</u> |
| <u>BASE NEUTRAL EXTRACTABLES</u> |                             |                                   |            |              |                          |                           |                            |             |               |               |
| 1,4-Dichlorobenzene              | AB1213                      | <10                               | 10         | µg/l         | 64                       | 63                        | 36-97                      | 2           | 28            | 625           |
| N-Nitroso di-n-propyl amine      |                             | <10                               | 10         | µg/l         | 60                       | 61                        | 41-116                     | 2           | 38            | 625           |
| 1,2,4-Trichlorobenzene           |                             | <10                               | 10         | µg/l         | 68                       | 69                        | 39-98                      | 2           | 28            | 625           |
| 2,4-Dinitrotoluene               |                             | <10                               | 10         | µg/l         | 67                       | 68                        | 24-96                      | 2           | 38            | 625           |
| Acenaphthene                     |                             | <10                               | 10         | µg/l         | 47                       | 48                        | 46-118                     | 3           | 31            | 625           |
| Pyrene                           |                             | <10                               | 10         | µg/l         | 68                       | 65                        | 26-127                     | 4           | 31            | 625           |

QUALITY CONTROL DATA: INORGANIC ANALYTES

| Analyte   | Lab<br>Batch# | Analytical<br>Blank | MDL   | Units | QC<br>%REC | Spike<br>%REC | Dup<br>%RPD | Matrix: Water |  |
|-----------|---------------|---------------------|-------|-------|------------|---------------|-------------|---------------|--|
|           |               |                     |       |       |            |               |             | Method        |  |
| Aluminum  | AB1217        | <0.02               | 0.02  | mg/l  | 100        | 78            | 0           | 202.1         |  |
| Iron      | AB1217        | <0.1                | 0.1   | mg/l  | 104        | 100           | 0           | 236.1         |  |
| Lead      | AB1216        | <0.005              | 0.005 | mg/l  | 104        | 105           | 0           | 239.2         |  |
| Manganese | AB1217        | <0.02               | 0.02  | mg/l  | 104        | 104           | 0           | 243.1         |  |
| Sodium    | AB1217        | <0.1                | 0.1   | mg/l  | 105        | 108           | 0           | 273.1         |  |

QUALITY CONTROL DATA: INORGANIC ANALYTES

| Analyte  | Lab<br>Batch# | Analytical<br>Blank | MDL | Units | QC<br>%REC | Spike<br>%REC | Dup<br>%RPD | Matrix: Water |  |
|----------|---------------|---------------------|-----|-------|------------|---------------|-------------|---------------|--|
|          |               |                     |     |       |            |               |             | Method        |  |
| Chloride | AB1212        | <1                  | 1   | mg/l  | 103        | 101           | 2           | 4500 Cl-B     |  |
| TDS      | AB1213        | <10                 | 10  | mg/l  | 97         | -             | 8           | 160.1         |  |



# SURROGATE RECOVERY SUMMARY

Matrix: Water

| PSI LAB # | 2-Bromo-1<br>-Dichloropropane<br>(601) | a,a,a-TFT<br>(602/8020) | 2,4,5,6-Tetrachloro<br>m-xylene<br>(608) | Dibutyl<br>Chlorendate<br>(608) | 2-Fluorobiphenyl<br>(610/8100) | Nitrobenzene<br>(610/8100) |
|-----------|----------------------------------------|-------------------------|------------------------------------------|---------------------------------|--------------------------------|----------------------------|
| 612113-01 | 112                                    |                         |                                          | 93                              |                                |                            |
| 612113-02 | 105                                    |                         |                                          | 63                              |                                |                            |
| 612113-03 | 105                                    |                         |                                          | 91                              |                                |                            |
| 612113-04 | 104                                    |                         |                                          | 91                              |                                |                            |
| 612113-05 | 105                                    |                         |                                          | 93                              |                                |                            |
| 612113-06 | 103                                    |                         |                                          |                                 |                                |                            |
| 612113-07 | 125                                    |                         |                                          |                                 |                                |                            |
| 612113-08 | 103                                    |                         |                                          |                                 |                                |                            |

## ACID EXTRACTABLES

## BASE NEUTRAL EXTRACTABLES

| PSI LAB # | 2-Fluorophenol<br>(625) | Phenol-d5<br>(625) | 2,4,6-<br>Tribromophenol<br>(625) | Nitrobenzene-d5<br>(625) | 2-Fluorobiphenyl<br>(625) | Terphenyl-d14<br>(625) |
|-----------|-------------------------|--------------------|-----------------------------------|--------------------------|---------------------------|------------------------|
| 612113-01 | 65                      | 47                 | 45                                | 109                      | 104                       | 77                     |
| 612113-02 | 70                      | 43                 | 59                                | 114                      | 114                       | 116                    |
| 612113-03 | 62                      | 43                 | 89                                | 105                      | 117                       | 91                     |
| 612113-04 | 37                      | 23                 | 45                                | 114                      | 112                       | 88                     |
| 612113-05 | 22                      | 12                 | 24                                | 78                       | 87                        | 89                     |



6712 Benjamin Road • Suite 100 • Tampa, FL 33634 • (813) 885-7427 • Fax (813) 885-7049

LOG NO: B6-33145  
Received: 12 DEC 96  
Reported: 31 DEC 96Mr. Anthony Febbraro  
Professional Service Industries, Inc  
1770 Commerce Avenue, North  
St. Petersburg, FL 33716Project: 612113  
Sampled By: Client  
Code: 092861231  
Page 1

## REPORT OF RESULTS

| LOG NO             | SAMPLE DESCRIPTION , LIQUID SAMPLES |              |             |             |         | DATE SAMPLED |
|--------------------|-------------------------------------|--------------|-------------|-------------|---------|--------------|
| 33145-1            | 612113-01                           | MW-3         |             |             |         | 12-11-96     |
| 33145-2            | 612113-02                           | MW-6         |             |             |         | 12-11-96     |
| 33145-3            | 612113-03                           | MW-7         |             |             |         | 12-11-96     |
| 33145-4            | 612113-04                           | dup. of MW-7 |             |             |         | 12-11-96     |
| 33145-5            | 612113-05                           | equip. blank |             |             |         | 12-11-96     |
| PARAMETER          | 33145-1                             | 33145-2      | 33145-3     | 33145-4     | 33145-5 |              |
| Gross Alpha, pCi/l | 7.1+/-17                            | <3.0         | 6.3+/-8.8   | <3.0        | <3.0    |              |
| Radium 226, pCi/l  | <0.60                               | 0.93+/-0.08  | 0.66+/-0.06 | 0.69+/-0.07 | <0.60   |              |
| Radium 228, pCi/l  | <2.0                                | <2.0         | <2.0        | <2.0        | <2.0    |              |
|                    | MW-3                                | MW-6         | MW-7        |             |         |              |

Laboratories in Savannah, GA • Tallahassee, FL • Tampa, FL • Deerfield Beach, FL • Mobile, AL • New Orleans, LA



**SAVANNAH LABORATORIES**  
**& ENVIRONMENTAL SERVICES, INC.**

6712 Benjamin Road • Suite 100 • Tampa, FL 33634 • (813) 885-7427 • Fax (813) 885-7049

LOG NO: B6-33145  
 Received: 12 DEC 96  
 Reported: 31 DEC 96

Mr. Anthony Febbraro  
 Professional Service Industries, Inc  
 1770 Commerce Avenue, North  
 St. Petersburg, FL 33716

Project: 612113  
 Sampled By: Client  
 Code: 092861231  
 Page 2

# REPORT OF RESULTS

LOG NO SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES

33145-6 Lab Blank  
 33145-7 Accuracy (1 Recovery)  
 33145-8 Precision (1 RPD)  
 33145-9 Date Analyzed

| PARAMETER          | 33145-6 | 33145-7 | 33145-8 | 33145-9  |
|--------------------|---------|---------|---------|----------|
| Gross Alpha, pCi/l | <3.0    | 100 %   | 24 %    | 12.18.96 |
| Radium 226, pCi/l  | <0.60   | 94 %    | 30 %    | 12.26.96 |
| Radium 228, pCi/l  | <2.0    | 113 %   | 19 %    | 12.30.96 |

Method: EPA 600/4-80-032

HRS Certification #'s: 84385, E84282

*Kathy Sheffield*  
 Kathy Sheffield, Project Manager

Laboratories in Savannah, GA • Tallahassee, FL • Tampa, FL • Deerfield Beach, FL • Mobile, AL • New Orleans, LA



|                                                                                                            |                                                                                      |
|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <input type="checkbox"/> 6913 Hwy. 225<br>Deer Park, TX 77536<br>(713) 479-8307                            | <input type="checkbox"/> 4820 W. 15th Street<br>Lawrence, KS 66049<br>(800) 548-7901 |
| <input checked="" type="checkbox"/> 1770 Commerce Ave. North<br>St. Petersburg, FL 33716<br>(813) 579-4464 | <input type="checkbox"/> 850 Poplar Street<br>Pittsburgh, PA 15220<br>(412) 922-4000 |

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

|                     |              |
|---------------------|--------------|
| LABORATORY USE ONLY |              |
| ANALYTICAL DUE DATE | 12-17-96     |
| REPORT DUE DATE     | 12-17-96     |
| ORGANIC             | ORGANIC      |
| Sample Row          | Sample Row   |
| PSI PROJECT NAME    | 385-6p051176 |
| PSI PROJECT         |              |
| PSI BATCH #         |              |

[illegible]

ADDITIONAL REMARKS

ADDITIONAL REMARKS: EQ Blank was received out of Hold time for T. Cali -

SAMPLER'S SIGNATURE

E *Michael J. Daul*

TLI Project: 40048  
Client Sample: MW-3

1613A TCDD Analysis (DB-5)  
Analysis File: P970087

|                 |              |                  |          |             |          |
|-----------------|--------------|------------------|----------|-------------|----------|
| Client Project: | BRADEN RIVER | Date Received:   | 12/13/96 | Spike File: | SP161F2S |
| Sample Matrix:  | AQUEOUS      | Date Extracted:  | 12/19/96 | ICal:       | PF51276  |
| TLI ID:         | 150-87-6A    | Date Analyzed:   | 01/08/97 | ConCal:     | P970083  |
| Sample Size:    | 1.000 L      | Dilution Factor: | n/a      | % Moisture: | 100.0    |
| Dry Weight:     | n/a          | Blank File:      | P970074  | % Lipid:    | n/a      |
| GC Column:      | DB-5         | Analyst:         | MC       | % Solids:   | 0.0      |

| Analytes     | Conc. (pg/L) | DL  | Ratio | RT | Flags |
|--------------|--------------|-----|-------|----|-------|
| 2,3,7,8-TCDD | ND           | 2.7 |       |    | —     |

| Internal Standard                           | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD | 1600         | 79.9       | 25%-150%  | 0.79  | 33:21 | —     |

| Surrogate Standard (Type C)                 | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD | 163          | 81.5       | 25%-150%  |       | 33:22 | —     |

| Recovery Standard                           | Ratio | RT    | Flags |
|---------------------------------------------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD | 0.85  | 33:08 | —     |

Data Reviewer: BB 01/08/97

TLI Project: 40048  
Client Sample: MW-4

1613A TCDD Analysis (DB-5)  
Analysis File: P970084

Client Project: BRADEN RIVER  
Sample Matrix: AQUEOUS  
TLI ID: 150-87-5A

Date Received: 12/13/96  
Date Extracted: 12/19/96  
Date Analyzed: 01/08/97

Spike File: SP161F2S  
ICal: PF51276  
ConCal: P970083

Sample Size: 1.000 L  
Dry Weight: n/a  
GC Column: DB-5

Dilution Factor: n/a  
Blank File: P970074  
Analyst: MC

% Moisture: 99.9  
% Lipid: n/a  
% Solids: 0.1

| Analytes     | Conc. (pg/L) | DL  | Ratio | RT | Flags |
|--------------|--------------|-----|-------|----|-------|
| 2,3,7,8-TCDD | ND           | 3.5 |       |    | —     |

| Internal Standard                           | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD | 1650         | 82.6       | 25%-150%  | 0.83  | 33:21 | —     |

| Surrogate Standard (Type C)                 | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD | 148          | 74.2       | 25%-150%  |       | 33:23 | —     |

| Recovery Standard                           | Ratio | RT    | Flags |
|---------------------------------------------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD | 0.85  | 33:09 | —     |

Data Reviewer: RB 01/08/97

TLI Project: 40048  
Client Sample: MW-5

1613A TCDD Analysis (DB-5)  
Analysis File: P970086

Client Project: BRADEN RIVER  
Sample Matrix: AQUEOUS  
TLI ID: 150-87-7A

Date Received: 12/13/96  
Date Extracted: 12/19/96  
Date Analyzed: 01/08/97

Spike File: SP161F2S  
ICal: PF51276  
ConCal: P970083

Sample Size: 1.000 L  
Dry Weight: n/a  
GC Column: DB-5

Dilution Factor: n/a  
Blank File: P970074  
Analyst: MC

% Moisture: 100.0  
% Lipid: n/a  
% Solids: 0.0

| Analytes     | Conc. (pg/L) | DL  | Ratio | RT | Flags |
|--------------|--------------|-----|-------|----|-------|
| 2,3,7,8-TCDD | ND           | 1.9 |       |    | —     |

| Internal Standard                           | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD | 1880         | 94.1       | 25%-150%  | 0.83  | 33:21 | —     |

| Surrogate Standard (Type C)   | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|-------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>37</sup> Cl-2,3,7,8-TCDD | 180          | 90.1       | 25%-150%  |       | 33:22 | —     |

| Recovery Standard                           | Ratio | RT    | Flags |
|---------------------------------------------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD | 0.84  | 33:09 | —     |

Data Reviewer: RB 01/08/97

## PSI

TLI Project: 40048  
Client Sample: MW-6

1613A TCDD Analysis (DB-5)  
Analysis File: P970076

|                 |              |                 |          |             |          |
|-----------------|--------------|-----------------|----------|-------------|----------|
| Client Project: | BRADEN RIVER | Date Received:  | 12/13/96 | Spike File: | SP161F2S |
| Sample Matrix:  | AQUEOUS      | Date Extracted: | 12/19/96 | ICal:       | PF51276  |
| TLI ID:         | 150-87-2A    | Date Analyzed:  | 01/07/97 | ConCal:     | P970071  |

|              |         |                  |         |             |       |
|--------------|---------|------------------|---------|-------------|-------|
| Sample Size: | 1.000 L | Dilution Factor: | n/a     | % Moisture: | 100.0 |
| Dry Weight:  | n/a     | Blank File:      | P970074 | % Lipid:    | n/a   |
| GC Column:   | DB-5    | Analyst:         | DL      | % Solids:   | 0.0   |

| Analytes     | Conc. (pg/L) | DL  | Ratio | RT | Flags |
|--------------|--------------|-----|-------|----|-------|
| 2,3,7,8-TCDD | ND           | 0.9 |       |    | —     |

| Internal Standard                           | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD | 1720         | 86.0       | 25%-150%  | 0.79  | 33:20 | —     |

| Surrogate Standard (Type C)                 | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD | 151          | 75.6       | 25%-150%  |       | 33:21 | —     |

| Recovery Standard                           | Ratio | RT    | Flags |
|---------------------------------------------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD | 0.81  | 33:07 | —     |

Data Reviewer: RB 01/08/97

TLI Project: 40048  
Client Sample: MW-7

1613A TCDD Analysis (DB-5)  
Analysis File: P970077

Client Project: BRADEN RIVER  
Sample Matrix: AQUEOUS  
TLI ID: 150-87-3A

Date Received: 12/13/96  
Date Extracted: 12/19/96  
Date Analyzed: 01/07/97

Spike File: SP161F2S  
ICal: PF51276  
ConCal: P970071

Sample Size: 1.000 L  
Dry Weight: n/a  
GC Column: DB-5

Dilution Factor: n/a  
Blank File: P970074  
Analyst: MS

% Moisture: 100.0  
% Lipid: n/a  
% Solids: 0.0

| Analytes     | Conc. (pg/L) | DL  | Ratio | RT | Flags |
|--------------|--------------|-----|-------|----|-------|
| 2,3,7,8-TCDD | ND           | 0.9 |       |    | —     |

| Internal Standard                           | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD | 1660         | 83.2       | 25%-150%  | 0.80  | 33:19 | —     |

| Surrogate Standard (Type C)                 | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD | 149          | 74.4       | 25%-150%  |       | 33:19 | —     |

| Recovery Standard                           | Ratio | RT    | Flags |
|---------------------------------------------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD | 0.80  | 33:06 | —     |

Data Reviewer: RB 01/08/97

Client Project: 40048  
Client Sample: DUPE

1613A TCDD Analysis (DB-5)  
Analysis File: P970078

Client Project: BRADEN RIVER  
Sample Matrix: AQUEOUS  
TLI ID: 150-87-4A

Date Received: 12/13/96  
Date Extracted: 12/19/96  
Date Analyzed: 01/07/97

Spike File: SP161F2S  
ICal: PF51276  
ConCal: P970071

Sample Size: 1.000 L  
Dry Weight: n/a  
GC Column: DB-5

Dilution Factor: n/a  
Blank File: P970074  
Analyst: MS

% Moisture: 100.0  
% Lipid: n/a  
% Solids: 0.0

| Analytes     | Conc. (pg/L) | DL  | Ratio | RT | Flags |
|--------------|--------------|-----|-------|----|-------|
| 2,3,7,8-TCDD | ND           | 1.0 |       |    | —     |

| Internal Standard                           | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD | 1550         | 77.5       | 25%-150%  | 0.81  | 33:19 | —     |

| Surrogate Standard (Type C)                 | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD | 139          | 69.4       | 25%-150%  |       | 33:20 | —     |

| Recovery Standard                           | Ratio | RT    | Flags |
|---------------------------------------------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD | 0.80  | 33:06 | —     |

Data Reviewer: RB 01/08/97

TLI Project: 40048  
Client Sample: EQ BLANK

1613A TCDD Analysis (DB-5)  
Analysis File: P970075

|                 |              |                  |          |             |          |
|-----------------|--------------|------------------|----------|-------------|----------|
| Client Project: | BRADEN RIVER | Date Received:   | 12/13/96 | Spike File: | SP161F2S |
| Sample Matrix:  | AQUEOUS      | Date Extracted:  | 12/19/96 | ICal:       | PF51276  |
| TLI ID:         | 150-87-1A    | Date Analyzed:   | 01/07/97 | ConCal:     | P970071  |
| Sample Size:    | 1.000 L      | Dilution Factor: | n/a      | % Moisture: | 100.0    |
| Dry Weight:     | n/a          | Blank File:      | P970074  | % Lipid:    | n/a      |
| GC Column:      | DB-5         | Analyst:         | DL       | % Solids:   | 0.0      |

| Analytes     | Conc. (pg/L) | DL  | Ratio | RT | Flags |
|--------------|--------------|-----|-------|----|-------|
| 2,3,7,8-TCDD | ND           | 1.8 |       |    | —     |

| Internal Standard                           | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD | 1640         | 82.1       | 25%-150%  | 0.79  | 33:19 | —     |

| Surrogate Standard (Type C)                 | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD | 159          | 79.4       | 25%-150%  |       | 33:21 | —     |

| Recovery Standard                           | Ratio | RT    | Flags |
|---------------------------------------------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD | 0.80  | 33:06 | —     |

Data Reviewer: RB 01/08/97

TLI Project: 40048  
Client Sample: TLI HPLC Water Blank

1613A TCDD Analysis (DB-5)  
Analysis File: P970074

Client Project: BRADEN RIVER  
Sample Matrix: AQUEOUS  
TLI ID: TLI Blank

Date Received: / /  
Date Extracted: 12/19/96  
Date Analyzed: 01/07/97

Spike File: SP161F2S  
ICal: PF51276  
ConCal: P970071

Sample Size: 1.000 L  
Dry Weight: n/a  
GC Column: DB-5

Dilution Factor: n/a  
Blank File: P970074  
Analyst: DL

% Moisture: n/a  
% Lipid: n/a  
% Solids: n/a

| Analytes     | Conc. (pg/L) | DL | Ratio | RT    | Flags |
|--------------|--------------|----|-------|-------|-------|
| 2,3,7,8-TCDD | 0.95         |    | 0.68  | 33:20 | —     |

| Internal Standard                           | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -2,3,7,8-TCDD | 1570         | 78.7       | 25%-150%  | 0.80  | 33:20 | —     |

| Surrogate Standard (Type C)                 | Conc. (pg/L) | % Recovery | QC Limits | Ratio | RT    | Flags |
|---------------------------------------------|--------------|------------|-----------|-------|-------|-------|
| <sup>37</sup> Cl <sub>4</sub> -2,3,7,8-TCDD | 144          | 71.9       | 25%-150%  |       | 33:21 | —     |

| Recovery Standard                           | Ratio | RT    | Flags |
|---------------------------------------------|-------|-------|-------|
| <sup>13</sup> C <sub>12</sub> -1,2,3,4-TCDD | 0.82  | 33:07 | —     |

Data Reviewer: RB 01/08/97

COPY

40512/13/96

|                                                                                                       |  |  |  |                                                                                                  |  |  |  |                                    |  |                                                                                    |  |
|-------------------------------------------------------------------------------------------------------|--|--|--|--------------------------------------------------------------------------------------------------|--|--|--|------------------------------------|--|------------------------------------------------------------------------------------|--|
| <b>CLIENT CHAIN OF CUSTODY</b>                                                                        |  |  |  | <b>SAMPLER'S SIGNATURE</b> <i>Michael R. Dault</i>                                               |  |  |  | <b>Quote 0400000667</b>            |  |                                                                                    |  |
| From: PSI<br>4400 140 Ave. N., Suite 100<br>Clearwater, FL 34622<br>Project: <u>552- Braden River</u> |  |  |  | Contact: Nancy Castricone<br>Phone: 813-538-2300<br>Fax: 813-538-2300<br>P.O.#: <u>552-51014</u> |  |  |  | <b>Total Number of Containers:</b> |  | <b>Analysis Wanted:</b><br><br>Drinking Water<br>Method 1613A<br>2,3,7,8-TCDD Only |  |
| (PSI08 /WM)                                                                                           |  |  |  | Data to be reported to the state of FL.                                                          |  |  |  |                                    |  |                                                                                    |  |

| STA NO.   | Date     | Time | Comp | Grab | Sample Id.# | Sample Amt.        |   |  |  |  |  | Remarks |
|-----------|----------|------|------|------|-------------|--------------------|---|--|--|--|--|---------|
| EQ. Blank | 12/11/96 | 1045 |      | ✓    | EQ Blank    | 2-1000mL - 140mL   | 3 |  |  |  |  | -30C    |
| MW-6      | 12/11/96 | 1315 |      | ✓    | MW-6        | 1-40mL<br>2-1000mL | 3 |  |  |  |  |         |
| MW-7      | 12/11/96 | 1515 |      | ✓    | MW-7        | 1-40mL<br>2-1000mL | 3 |  |  |  |  |         |
| Duplicate | 12/11/96 |      |      | ✓    | Duplicate   | 1-40mL<br>2-1000mL | 3 |  |  |  |  | ✓ Dupe  |
| MW-4      | 12/12/96 | 1045 |      | ✓    | MW-4        | 1-40mL<br>2-1000mL | 3 |  |  |  |  | -20C    |
| MW-3      | 12/11/96 | 1730 |      | ✓    | MW-3        | 1-40mL<br>2-1000mL | 3 |  |  |  |  | -30C    |
| MW-5      | 12/12/96 | 1230 |      | ✓    | MW-5        | 1-40mL<br>2-1000mL | 3 |  |  |  |  | -20C    |
|           |          |      |      |      |             |                    |   |  |  |  |  |         |
|           |          |      |      |      |             |                    |   |  |  |  |  |         |
|           |          |      |      |      |             |                    |   |  |  |  |  |         |
|           |          |      |      |      |             |                    |   |  |  |  |  |         |

|                       |           |                         |                         |                  |                   |
|-----------------------|-----------|-------------------------|-------------------------|------------------|-------------------|
| Relinquished By/Sign. | Date/Time | Received By/Sign.       | Relinquished By/Sign.   | Date/Time        | Received By/Sign. |
|                       |           | <i>Michael R. Dault</i> | <i>Michael R. Dault</i> | 12/12/96<br>1432 |                   |
| Relinquished By/Sign. | Date/Time | Received By/Sign.       | Relinquished By/Sign.   | Date/Time        | Received By/Sign. |
|                       |           |                         |                         |                  |                   |

|                                                         |                                |                                                                                                                                                                     |
|---------------------------------------------------------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Received for Laboratory By/Signature<br><i>J. Dault</i> | Date/Time<br>12/13/96<br>09:30 | Send Samples to: Triangle Laboratories, Inc.<br>Attn: Sample Custodian<br>801 Capitola Drive<br>Durham, NC 27713 USA<br>Phone: (919) 544-5729 • Fax: (919) 544-5491 |
|---------------------------------------------------------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|

# WELL PURGING AND SAMPLING DATA

|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                   |              |                             |               |
|--------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------------------------------------------|--------------|-----------------------------|---------------|
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                   |              | WELL/SAMPLE NO: <u>MW-3</u> |               |
| DATE: <u>12/11/90</u>                                                                                              |                     | PROJECT NAME: <u>Braden River</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |                                                   |              | PROJECT NO: <u>552-5014</u> |               |
| WEATHER CONDITIONS: <u>Sunny</u>                                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                   |              |                             |               |
| WELL DIAMETER (IN.)                                                                                                |                     | <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 4 <input type="checkbox"/> 6 <input type="checkbox"/> OTHER                                                                                                                                                                                                                                                                                                                                                             |             |                                                   |              |                             |               |
| SAMPLE TYPE:                                                                                                       |                     | <input checked="" type="checkbox"/> GROUNDWATER <input type="checkbox"/> WASTEWATER <input type="checkbox"/> SURFACE WATER <input type="checkbox"/> OTHER                                                                                                                                                                                                                                                                                                                                                         |             |                                                   |              |                             |               |
| WELL DEPTH (TOC)                                                                                                   |                     | <u>9.90</u> FT.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             | WATER LEVEL (TOC)                                 |              | <u>3.42</u> FT.             |               |
| LENGTH OF WATER                                                                                                    |                     | <u>6.48</u> FT.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             | CALCULATED ONE WELL VOLUME: <u>1.10</u> GAL       |              |                             |               |
| PURGING DEVICE:                                                                                                    |                     | <u>Peristaltic</u> <input checked="" type="checkbox"/> DEDICATED <input type="checkbox"/> DISPOSABLE <input type="checkbox"/> DECONTAMINATED                                                                                                                                                                                                                                                                                                                                                                      |             |                                                   |              |                             |               |
| SAMPLING DEVICE:                                                                                                   |                     | <u>Peristaltic &amp; Bailer</u> <input type="checkbox"/> DEDICATED <input type="checkbox"/> DISPOSABLE <input checked="" type="checkbox"/> DECONTAMINATED                                                                                                                                                                                                                                                                                                                                                         |             |                                                   |              |                             |               |
| EQUIP. DECON.                                                                                                      |                     | <input checked="" type="checkbox"/> TAP WATER WASH <input checked="" type="checkbox"/> ISOPROPANOL <input type="checkbox"/> ANALYTE FREE FINAL RINSE<br><input type="checkbox"/> ALCONOX WASH <input checked="" type="checkbox"/> DIST/DEION 1 RINSE <input type="checkbox"/> OTHER SOLVENT <input type="checkbox"/> DIST/DEION FINAL RINSE<br><input type="checkbox"/> LIQUINOX WASH <input type="checkbox"/> DIST/DEION 2 RINSE <input type="checkbox"/> TAP WATER FINAL RINSE <input type="checkbox"/> AIR DRY |             |                                                   |              |                             |               |
| CONTAINER PRESERVATION: <input checked="" type="checkbox"/> LAB PRESERVED <input type="checkbox"/> FIELD PRESERVED |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                   |              |                             |               |
| ANALYTICAL PARAMETERS: <u>Primary &amp; Secondary drinking water standards</u>                                     |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                   |              |                             |               |
| LABORATORY PERFORMING ANALYSIS: <u>PSI</u>                                                                         |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                   |              |                             |               |
| WATER ANALYZER MODEL:                                                                                              |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                   |              | SERIAL NO:                  |               |
| ACTUAL TIME                                                                                                        | VOLUME PURGED (GAL) | TEMP (DEG C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | SPEC. COND. | pH                                                | DISS. OXYGEN | TURBIDITY (NTUs)            | REMARKS       |
|                                                                                                                    | <u>1.10</u>         | <u>22.4</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <u>1059</u> | <u>6.7</u>                                        | <u>3.4</u>   | <u>7.02</u>                 | <u>Volume</u> |
|                                                                                                                    | <u>2.20</u>         | <u>22.4</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <u>1058</u> | <u>6.72</u>                                       | <u>3.4</u>   | <u>3.31</u>                 | <u>2</u>      |
|                                                                                                                    | <u>3.30</u>         | <u>22.5</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <u>1047</u> | <u>6.72</u>                                       | <u>2.9</u>   | <u>2.45</u>                 | <u>3</u>      |
|                                                                                                                    | <u>4.40</u>         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                   |              |                             | <u>4</u>      |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                   |              |                             |               |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                   |              |                             |               |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                   |              |                             |               |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                   |              |                             |               |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                   |              |                             |               |
| COMMENTS ON WELL RECOVERY/OTHER:                                                                                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             | SAMPLE COLLECTION TIME: <u>1730</u>               |              |                             |               |
| <u>Purge @ 1 quart/min</u><br><u>Well damage - could not</u><br><u>get bailer in well properly</u>                 |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             | DUPLICATE <input type="checkbox"/> TIME: ID#:     |              |                             |               |
|                                                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             | EQUIP. BLANK: <input type="checkbox"/> TIME: ID#: |              |                             |               |
| PREPARED BY: <u>[Signature]</u>                                                                                    |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                   |              |                             |               |

All

Samples taken at lowest flow rate w/ Peristaltic pump.

CALCULATION OF GALLONS OF WATER IN A LENGTH OF PIPE =  $[3.14 \times (\text{PIPE RADIUS IN FEET})^2 \times \text{LENGTH OF WATER} \times 7.48]$   
 A 1 FOOT LENGTH OF WATER = 0.05 GAL IN 1" DIA PIPE 0.17 GAL IN 2" DIA PIPE 0.65 GAL IN 4" DIA PIPE 1.5 GAL IN 6" DIA. PIPE

metals filtered w/ 1.0 micron filter

# WELL PURGING AND SAMPLING DATA

|                                                                                                                    |                                                        |                                                    |                                                 |                                                                 |                                     |                                                    |                    |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------|-------------------------------------------------|-----------------------------------------------------------------|-------------------------------------|----------------------------------------------------|--------------------|
|                                                                                                                    |                                                        |                                                    |                                                 |                                                                 |                                     | WELL/SAMPLE NO: <u>46-4</u>                        |                    |
| DATE: <u>12/12/96</u>                                                                                              |                                                        | PROJECT NAME: <u>Braden River</u>                  |                                                 |                                                                 |                                     | PROJECT NO: <u>552-SI014</u>                       |                    |
| WEATHER CONDITIONS: <u>Sunny</u>                                                                                   |                                                        |                                                    |                                                 |                                                                 |                                     |                                                    |                    |
| WELL DIAMETER (IN.)                                                                                                |                                                        | <input type="checkbox"/> 1                         | <input checked="" type="checkbox"/> 2           | <input type="checkbox"/> 4                                      | <input type="checkbox"/> 6          | <input type="checkbox"/> OTHER                     |                    |
| SAMPLE TYPE:                                                                                                       |                                                        | <input checked="" type="checkbox"/> GROUNDWATER    | <input type="checkbox"/> WASTEWATER             | <input type="checkbox"/> SURFACE WATER                          | <input type="checkbox"/> OTHER      |                                                    |                    |
| WELL DEPTH (TOC)                                                                                                   |                                                        | <u>12.7</u>                                        | FT.                                             | WATER LEVEL (TOC)                                               |                                     | <u>4.51</u>                                        | FT.                |
| LENGTH OF WATER                                                                                                    |                                                        | <u>8.19</u>                                        | FT.                                             | CALCULATED ONE WELL VOLUME: <u>1.39</u> GAL                     |                                     |                                                    |                    |
| PURGING DEVICE:                                                                                                    |                                                        | <u>peristaltic</u>                                 |                                                 | <input checked="" type="checkbox"/> <sup>tubing</sup> DEDICATED | <input type="checkbox"/> DISPOSABLE | <input type="checkbox"/> DECONTAMINATED            |                    |
| SAMPLING DEVICE:                                                                                                   |                                                        | <u>peristaltic + Bailer</u>                        |                                                 | <input type="checkbox"/> DEDICATED                              | <input type="checkbox"/> DISPOSABLE | <input checked="" type="checkbox"/> DECONTAMINATED |                    |
| EQUIP. DECON.                                                                                                      |                                                        | <input checked="" type="checkbox"/> TAP WATER WASH | <input checked="" type="checkbox"/> ISOPROPANOL | <input type="checkbox"/> ANALYTE FREE FINAL RINSE               |                                     |                                                    |                    |
| <input checked="" type="checkbox"/> ALCONOX WASH                                                                   | <input checked="" type="checkbox"/> DIST/DEION 1 RINSE | <input type="checkbox"/> OTHER SOLVENT             |                                                 | <input type="checkbox"/> DIST/DEION FINAL RINSE                 |                                     |                                                    |                    |
| <input type="checkbox"/> LIQUINOX WASH                                                                             | <input type="checkbox"/> DIST/DEION 2 RINSE            | <input type="checkbox"/> TAP WATER FINAL RINSE     |                                                 | <input type="checkbox"/> AIR DRY                                |                                     |                                                    |                    |
| CONTAINER PRESERVATION: <input checked="" type="checkbox"/> LAB PRESERVED <input type="checkbox"/> FIELD PRESERVED |                                                        |                                                    |                                                 |                                                                 |                                     |                                                    |                    |
| ANALYTICAL PARAMETERS: <u>Primary + Secondary drinking water standards</u>                                         |                                                        |                                                    |                                                 |                                                                 |                                     |                                                    |                    |
| LABORATORY PERFORMING ANALYSIS: <u>PSI + Triangle Labs</u>                                                         |                                                        |                                                    |                                                 |                                                                 |                                     |                                                    |                    |
| WATER ANALYZER MODEL:                                                                                              |                                                        |                                                    |                                                 |                                                                 |                                     | SERIAL NO:                                         |                    |
| ACTUAL TIME                                                                                                        | VOLUME PURGED (GAL)                                    | TEMP (DEG C)                                       | SPEC. COND.                                     | pH                                                              | DISS. OXYGEN                        | TURBIDITY (NTUs)                                   | REMARKS            |
|                                                                                                                    | <u>1.39</u>                                            | <u>24.0</u>                                        | <u>572</u>                                      | <u>6.67</u>                                                     | <u>4.9</u>                          | <u>3.50</u>                                        | <u>100% volume</u> |
|                                                                                                                    | <u>2.78</u>                                            | <u>24.0</u>                                        | <u>565</u>                                      | <u>6.63</u>                                                     | <u>2.4</u>                          | <u>2.06</u>                                        | <u>2</u>           |
|                                                                                                                    | <u>4.17</u>                                            | <u>23.8</u>                                        | <u>563</u>                                      | <u>6.62</u>                                                     | <u>2.6</u>                          | <u>1.60</u>                                        | <u>3</u>           |
|                                                                                                                    | <u>5.56</u>                                            |                                                    |                                                 |                                                                 |                                     |                                                    | <u>4</u>           |
|                                                                                                                    |                                                        |                                                    |                                                 |                                                                 |                                     |                                                    | <u>5</u>           |
|                                                                                                                    |                                                        |                                                    |                                                 |                                                                 |                                     |                                                    |                    |
|                                                                                                                    |                                                        |                                                    |                                                 |                                                                 |                                     |                                                    |                    |
|                                                                                                                    |                                                        |                                                    |                                                 |                                                                 |                                     |                                                    |                    |
|                                                                                                                    |                                                        |                                                    |                                                 |                                                                 |                                     |                                                    |                    |
| COMMENTS ON WELL RECOVERY/OTHER:                                                                                   |                                                        |                                                    |                                                 | SAMPLE COLLECTION TIME:                                         |                                     |                                                    |                    |
| <u>Purging @ 1 qt/min</u>                                                                                          |                                                        |                                                    |                                                 | DUPLICATE <input type="checkbox"/> TIME: ID#:                   |                                     |                                                    |                    |
|                                                                                                                    |                                                        |                                                    |                                                 | EQUIP. BLANK: <input type="checkbox"/> TIME: ID#:               |                                     |                                                    |                    |
|                                                                                                                    |                                                        |                                                    |                                                 | PREPARED BY: <u>Mutual D. Dell</u>                              |                                     |                                                    |                    |

CALCULATION OF GALLONS OF WATER IN A LENGTH OF PIPE =  $[3.14 \times (\text{PIPE RADIUS IN FEET})^2 \times \text{LENGTH OF WATER} \times 7.48]$   
 A 1 FOOT LENGTH OF WATER = 0.05 GAL IN 1" DIA PIPE 0.17 GAL IN 2" DIA PIPE 0.65 GAL IN 4" DIA PIPE 1.5 GAL IN 6" DIA. PIPE

# WELL PURGING AND SAMPLING DATA

|                                                                                                                                                                                     |                     |                                   |             |                                                      |              |                  |         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------------------|-------------|------------------------------------------------------|--------------|------------------|---------|
| WELL/SAMPLE NO: <u>MW-5</u>                                                                                                                                                         |                     |                                   |             |                                                      |              |                  |         |
| DATE: <u>12/12/96</u>                                                                                                                                                               |                     | PROJECT NAME: <u>Braden River</u> |             | PROJECT NO: <u>552-51014</u>                         |              |                  |         |
| WEATHER CONDITIONS: <u>Sunny</u>                                                                                                                                                    |                     |                                   |             |                                                      |              |                  |         |
| WELL DIAMETER (IN.) <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 4 <input type="checkbox"/> 6 <input type="checkbox"/> OTHER           |                     |                                   |             |                                                      |              |                  |         |
| SAMPLE TYPE: <input checked="" type="checkbox"/> GROUNDWATER <input type="checkbox"/> WASTEWATER <input type="checkbox"/> SURFACE WATER <input type="checkbox"/> OTHER              |                     |                                   |             |                                                      |              |                  |         |
| WELL DEPTH (TOC) <u>13.4</u>                                                                                                                                                        |                     | FT.                               |             | WATER LEVEL (TOC) <u>8.80</u> FT.                    |              |                  |         |
| LENGTH OF WATER <u>4.6</u>                                                                                                                                                          |                     | FT.                               |             | CALCULATED ONE WELL VOLUME: <u>.78</u> GAL           |              |                  |         |
| PURGING DEVICE: <u>Peristaltic</u> <input checked="" type="checkbox"/> <sup> tubing</sup> DEDICATED <input type="checkbox"/> DISPOSABLE <input type="checkbox"/> DECONTAMINATED     |                     |                                   |             |                                                      |              |                  |         |
| SAMPLING DEVICE: <u>Peristaltic Bailer</u> <input type="checkbox"/> DEDICATED <input type="checkbox"/> DISPOSABLE <input checked="" type="checkbox"/> DECONTAMINATED                |                     |                                   |             |                                                      |              |                  |         |
| EQUIP. DECON. <input checked="" type="checkbox"/> TAP WATER WASH <input checked="" type="checkbox"/> ISOPROPANOL <input type="checkbox"/> ANALYTE FREE FINAL RINSE                  |                     |                                   |             |                                                      |              |                  |         |
| <input checked="" type="checkbox"/> ALCONOX WASH <input type="checkbox"/> DIST/DEION 1 RINSE <input type="checkbox"/> OTHER SOLVENT <input type="checkbox"/> DIST/DEION FINAL RINSE |                     |                                   |             |                                                      |              |                  |         |
| <input type="checkbox"/> LIQUINOX WASH <input type="checkbox"/> DIST/DEION 2 RINSE <input type="checkbox"/> TAP WATER FINAL RINSE <input type="checkbox"/> AIR DRY                  |                     |                                   |             |                                                      |              |                  |         |
| CONTAINER PRESERVATION: <input checked="" type="checkbox"/> LAB PRESERVED <input type="checkbox"/> FIELD PRESERVED                                                                  |                     |                                   |             |                                                      |              |                  |         |
| ANALYTICAL PARAMETERS: <u>Primary &amp; Secondary drinking water standards</u>                                                                                                      |                     |                                   |             |                                                      |              |                  |         |
| LABORATORY PERFORMING ANALYSIS: <u>PSI + Triangle</u>                                                                                                                               |                     |                                   |             |                                                      |              |                  |         |
| WATER ANALYZER MODEL:                                                                                                                                                               |                     |                                   |             |                                                      | SERIAL NO:   |                  |         |
| ACTUAL TIME                                                                                                                                                                         | VOLUME PURGED (GAL) | TEMP (DEG C)                      | SPEC. COND. | pH                                                   | DISS. OXYGEN | TURBIDITY (NTUs) | REMARKS |
|                                                                                                                                                                                     | <u>.78</u>          | <u>24.5</u>                       | <u>693</u>  | <u>6.72</u>                                          | <u>5.6</u>   | <u>3.70</u>      |         |
|                                                                                                                                                                                     | <u>1.56</u>         | <u>24.7</u>                       | <u>689</u>  | <u>6.72</u>                                          | <u>2.6</u>   | <u>4.30</u>      |         |
|                                                                                                                                                                                     | <u>2.34</u>         | <u>24.6</u>                       | <u>689</u>  | <u>6.72</u>                                          | <u>2.6</u>   | <u>3.25</u>      |         |
|                                                                                                                                                                                     |                     |                                   |             |                                                      |              |                  |         |
|                                                                                                                                                                                     |                     |                                   |             |                                                      |              |                  |         |
|                                                                                                                                                                                     |                     |                                   |             |                                                      |              |                  |         |
|                                                                                                                                                                                     |                     |                                   |             |                                                      |              |                  |         |
|                                                                                                                                                                                     |                     |                                   |             |                                                      |              |                  |         |
|                                                                                                                                                                                     |                     |                                   |             |                                                      |              |                  |         |
|                                                                                                                                                                                     |                     |                                   |             |                                                      |              |                  |         |
| COMMENTS ON WELL RECOVERY/OTHER:<br><u>Purged @ 1 qt./min</u>                                                                                                                       |                     |                                   |             | SAMPLE COLLECTION TIME: <u>1230</u>                  |              |                  |         |
|                                                                                                                                                                                     |                     |                                   |             | DUPLICATE <input type="checkbox"/> TIME:    ID#:     |              |                  |         |
|                                                                                                                                                                                     |                     |                                   |             | EQUIP. BLANK: <input type="checkbox"/> TIME:    ID#: |              |                  |         |
|                                                                                                                                                                                     |                     |                                   |             | PREPARED BY: <u>Milard P. Dool</u>                   |              |                  |         |

CALCULATION OF GALLONS OF WATER IN A LENGTH OF PIPE =  $[3.14 \times (\text{PIPE RADIUS IN FEET})^2 \times \text{LENGTH OF WATER} \times 7.48]$   
A 1 FOOT LENGTH OF WATER = 0.05 GAL IN 1" DIA PIPE 0.17 GAL IN 2" DIA PIPE 0.65 GAL IN 4" DIA PIPE 1.5 GAL IN 6" DIA. PIPE

# WELL PURGING AND SAMPLING DATA

|                                                                                                                                                                           |                     |                                                        |             |                                                                                        |              |                  |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------------------------------------------|-------------|----------------------------------------------------------------------------------------|--------------|------------------|------------|
| DATE: 12/11/96                                                                                                                                                            |                     | PROJECT NAME: Braden River Park                        |             | WELL/SAMPLE NO: MW-6                                                                   |              |                  |            |
| PROJECT NO: 552-SIO14                                                                                                                                                     |                     |                                                        |             |                                                                                        |              |                  |            |
| WEATHER CONDITIONS: Sunny                                                                                                                                                 |                     |                                                        |             |                                                                                        |              |                  |            |
| WELL DIAMETER (IN.) <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 4 <input type="checkbox"/> 6 <input type="checkbox"/> OTHER |                     |                                                        |             |                                                                                        |              |                  |            |
| SAMPLE TYPE: <input checked="" type="checkbox"/> GROUNDWATER <input type="checkbox"/> WASTEWATER <input type="checkbox"/> SURFACE WATER <input type="checkbox"/> OTHER    |                     |                                                        |             |                                                                                        |              |                  |            |
| WELL DEPTH (TOC) 12.6                                                                                                                                                     |                     | FT.                                                    |             | WATER LEVEL (TOC) 3.00 FT.                                                             |              |                  |            |
| LENGTH OF WATER 9.6                                                                                                                                                       |                     | FT.                                                    |             | CALCULATED ONE WELL VOLUME: 1163 GAL                                                   |              |                  |            |
| PURGING DEVICE: Peristaltic <input checked="" type="checkbox"/> DEDICATED <input type="checkbox"/> DISPOSABLE <input type="checkbox"/> DECONTAMINATED                     |                     |                                                        |             |                                                                                        |              |                  |            |
| SAMPLING DEVICE: Peristaltic + Bailer <input type="checkbox"/> DEDICATED <input type="checkbox"/> DISPOSABLE <input checked="" type="checkbox"/> DECONTAMINATED           |                     |                                                        |             |                                                                                        |              |                  |            |
| EQUIP. DECON. <input checked="" type="checkbox"/> TAP WATER WASH <input checked="" type="checkbox"/> ISOPROPANOL <input type="checkbox"/> ANALYTE FREE FINAL RINSE        |                     |                                                        |             |                                                                                        |              |                  |            |
| <input checked="" type="checkbox"/> ALCONOX WASH                                                                                                                          |                     | <input checked="" type="checkbox"/> DIST/DEION 1 RINSE |             | <input type="checkbox"/> OTHER SOLVENT <input type="checkbox"/> DIST/DEION FINAL RINSE |              |                  |            |
| <input type="checkbox"/> LIQUINOX WASH                                                                                                                                    |                     | <input type="checkbox"/> DIST/DEION 2 RINSE            |             | <input type="checkbox"/> TAP WATER FINAL RINSE <input type="checkbox"/> AIR DRY        |              |                  |            |
| CONTAINER PRESERVATION: <input checked="" type="checkbox"/> LAB PRESERVED <input type="checkbox"/> FIELD PRESERVED                                                        |                     |                                                        |             |                                                                                        |              |                  |            |
| ANALYTICAL PARAMETERS: See List Primary + Secondary drinking water standard.                                                                                              |                     |                                                        |             |                                                                                        |              |                  |            |
| LABORATORY PERFORMING ANALYSIS: PSI                                                                                                                                       |                     |                                                        |             |                                                                                        |              |                  |            |
| WATER ANALYZER MODEL:                                                                                                                                                     |                     |                                                        |             |                                                                                        | SERIAL NO:   |                  |            |
| ACTUAL TIME                                                                                                                                                               | VOLUME PURGED (GAL) | TEMP (DEG C)                                           | SPEC. COND. | pH                                                                                     | DISS. OXYGEN | TURBIDITY (NTUs) | REMARKS    |
|                                                                                                                                                                           | 1.63                | 26.0                                                   | 450         | 6.67                                                                                   | 7.1          | 6.63             | 100 volume |
|                                                                                                                                                                           | 3.26                | 24.8                                                   | 445         | 6.65                                                                                   | 6.3          | 2.60             | 2          |
|                                                                                                                                                                           | 4.89                | 24.7                                                   | 437         | 6.67                                                                                   | 4.9          | 2.45             | 3          |
|                                                                                                                                                                           | 6.52                |                                                        |             |                                                                                        |              |                  | 4          |
|                                                                                                                                                                           |                     |                                                        |             |                                                                                        |              |                  |            |
|                                                                                                                                                                           |                     |                                                        |             |                                                                                        |              |                  |            |
|                                                                                                                                                                           |                     |                                                        |             |                                                                                        |              |                  |            |
|                                                                                                                                                                           |                     |                                                        |             |                                                                                        |              |                  |            |
|                                                                                                                                                                           |                     |                                                        |             |                                                                                        |              |                  |            |
| COMMENTS ON WELL RECOVERY/OTHER:<br>Pumped @ 1 liter/quarter min                                                                                                          |                     |                                                        |             | SAMPLE COLLECTION TIME: 1315                                                           |              |                  |            |
|                                                                                                                                                                           |                     |                                                        |             | DUPLICATE <input type="checkbox"/> TIME: ID#:                                          |              |                  |            |
|                                                                                                                                                                           |                     |                                                        |             | EQUIP. BLANK: <input checked="" type="checkbox"/> TIME: 1045 ID#: EQ Blank             |              |                  |            |
|                                                                                                                                                                           |                     |                                                        |             | PREPARED BY: Michael T. Smith                                                          |              |                  |            |

CALCULATION OF GALLONS OF WATER IN A LENGTH OF PIPE =  $[3.14 \times (\text{PIPE RADIUS IN FEET})^2 \times \text{LENGTH OF WATER} \times 7.48]$   
A 1 FOOT LENGTH OF WATER = 0.05 GAL IN 1" DIA PIPE 0.17 GAL IN 2" DIA PIPE 0.65 GAL IN 4" DIA PIPE 1.5 GAL IN 6" DIA PIPE

# WELL PURGING AND SAMPLING DATA

|                                                                            |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                                                                                  |              |                              |         |
|----------------------------------------------------------------------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------------------------------------------------------------------|--------------|------------------------------|---------|
|                                                                            |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                                                                                  |              | WELL/SAMPLE NO: <u>MW-7</u>  |         |
| DATE: <u>12/11/96</u>                                                      |                     | PROJECT NAME: <u>Braden River</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |                                                                                  |              | PROJECT NO: <u>552-51014</u> |         |
| WEATHER CONDITIONS: <u>Sunny</u>                                           |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                                                                                  |              |                              |         |
| WELL DIAMETER (IN.)                                                        |                     | <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 4 <input type="checkbox"/> 6 <input type="checkbox"/> OTHER                                                                                                                                                                                                                                                                                                                                                                        |             |                                                                                  |              |                              |         |
| SAMPLE TYPE:                                                               |                     | <input checked="" type="checkbox"/> GROUNDWATER <input type="checkbox"/> WASTEWATER <input type="checkbox"/> SURFACE WATER <input type="checkbox"/> OTHER                                                                                                                                                                                                                                                                                                                                                                    |             |                                                                                  |              |                              |         |
| WELL DEPTH (TOC)                                                           |                     | <u>12.9</u> FT.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | WATER LEVEL (TOC)                                                                |              | <u>5.68</u> FT.              |         |
| LENGTH OF WATER                                                            |                     | <u>7.22</u> FT.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | CALCULATED ONE WELL VOLUME: <u>1.22</u> GAL                                      |              |                              |         |
| PURGING DEVICE:                                                            |                     | <u>Peristaltic</u> <input checked="" type="checkbox"/> <sup>tubing</sup> DEDICATED <input type="checkbox"/> DISPOSABLE <input type="checkbox"/> DECONTAMINATED                                                                                                                                                                                                                                                                                                                                                               |             |                                                                                  |              |                              |         |
| SAMPLING DEVICE:                                                           |                     | <u>Peristaltic + Bailor</u> <input type="checkbox"/> DEDICATED <input type="checkbox"/> DISPOSABLE <input checked="" type="checkbox"/> DECONTAMINATED                                                                                                                                                                                                                                                                                                                                                                        |             |                                                                                  |              |                              |         |
| EQUIP. DECON.                                                              |                     | <input checked="" type="checkbox"/> TAP WATER WASH <input checked="" type="checkbox"/> ISOPROPANOL <input type="checkbox"/> ANALYTE FREE FINAL RINSE<br><input checked="" type="checkbox"/> ALCONOX WASH <input checked="" type="checkbox"/> DIST/DEION 1 RINSE <input type="checkbox"/> OTHER SOLVENT <input type="checkbox"/> DIST/DEION FINAL RINSE<br><input type="checkbox"/> LIQUINOX WASH <input type="checkbox"/> DIST/DEION 2 RINSE <input type="checkbox"/> TAP WATER FINAL RINSE <input type="checkbox"/> AIR DRY |             |                                                                                  |              |                              |         |
| CONTAINER PRESERVATION:                                                    |                     | <input checked="" type="checkbox"/> LAB PRESERVED <input type="checkbox"/> FIELD PRESERVED                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                                                  |              |                              |         |
| ANALYTICAL PARAMETERS: <u>Primary + Secondary Drinking water standards</u> |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                                                                                  |              |                              |         |
| LABORATORY PERFORMING ANALYSIS: <u>PSI + Triangle</u>                      |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                                                                                  |              |                              |         |
| WATER ANALYZER MODEL:                                                      |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                                                                                  |              | SERIAL NO:                   |         |
| ACTUAL TIME                                                                | VOLUME PURGED (GAL) | TEMP (DEG C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SPEC. COND. | pH                                                                               | DISS. OXYGEN | TURBIDITY (NTUs)             | REMARKS |
|                                                                            | <u>1.22</u>         | <u>24.1</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <u>849</u>  | <u>6.60</u>                                                                      | <u>3.4</u>   | <u>8.22</u>                  |         |
|                                                                            | <u>2.44</u>         | <u>24.3</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <u>827</u>  | <u>6.65</u>                                                                      | <u>2.1</u>   | <u>23.2</u>                  |         |
|                                                                            | <u>3.66</u>         | <u>24.1</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <u>815</u>  | <u>6.68</u>                                                                      | <u>2.6</u>   | <u>13.65</u>                 |         |
|                                                                            | <u>4.88</u>         | <u>24.1</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <u>804</u>  | <u>6.67</u>                                                                      | <u>2.3</u>   | <u>9.87</u>                  |         |
|                                                                            |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                                                                                  |              |                              |         |
|                                                                            |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                                                                                  |              |                              |         |
|                                                                            |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                                                                                  |              |                              |         |
|                                                                            |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                                                                                  |              |                              |         |
|                                                                            |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             |                                                                                  |              |                              |         |
| COMMENTS ON WELL RECOVERY/OTHER:                                           |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | SAMPLE COLLECTION TIME:                                                          |              |                              |         |
| <u>Pump @ 1.0 quart/min</u><br><u>550</u><br><u>3.22</u>                   |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | DUPLICATE <input checked="" type="checkbox"/> TIME: <u>1515</u> ID#: <u>Dupe</u> |              |                              |         |
|                                                                            |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | EQUIP. BLANK: <input type="checkbox"/> TIME: ID#:                                |              |                              |         |
|                                                                            |                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |             | PREPARED BY: <u>Michael D. Del</u>                                               |              |                              |         |

CALCULATION OF GALLONS OF WATER IN A LENGTH OF PIPE =  $[3.14 \times (\text{PIPE RADIUS IN FEET})^2 \times \text{LENGTH OF WATER} \times 7.48]$   
 A 1 FOOT LENGTH OF WATER = 0.05 GAL IN 1" DIA PIPE 0.17 GAL IN 2" DIA PIPE 0.65 GAL IN 4" DIA PIPE 1.5 GAL IN 6" DIA. PIPE

D.E.P.  
MAY 23 1996  
MAY 23 1996  
SOUTHWEST DISTRICT  
TAMPA

MODIFIED GROUNDWATER  
MONITORING PLAN  
BRADEN RIVER PARK  
MANATEE COUNTY, FLORIDA  
PSI PROJECT NO. 552-51014



May 21, 1996

Manatee County Government  
Project Management Department  
4422-A - 66th Street West  
Bradenton, Florida 34210

Attention: Mr. Tom E. Yarger  
Project Manager

Re: Modified Groundwater Monitoring Plan  
Braden River Park Facility  
PSI Project No. 552-51014

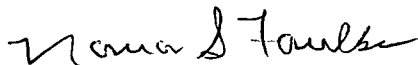
Dear Mr. Yarger:

Professional Service Industries, Inc. (PSI) has prepared a Modified Groundwater Monitoring Plan for the above referenced facility. Two copies of the report are enclosed.

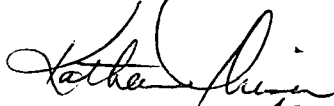
We look forward to continuing working with you and your staff on this important project. If you have any questions, please do not hesitate to contact us.

Respectfully submitted,

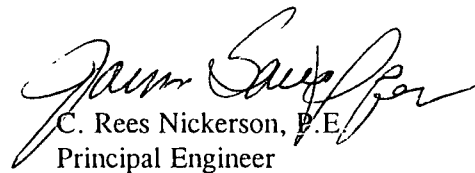
PROFESSIONAL SERVICE INDUSTRIES, INC.



Nana G. Faulkner, P.G.  
Department Manager, Environmental Services



Keith L. Butts, E.I.  
Branch Manager



C. Rees Nickerson, P.E.  
Principal Engineer

NGF/CRN/KLB:tms

Copies submitted: (2)

- (1) Copy to: Manatee County Parks & Recreation  
Attention: Mr. Danny Hopkins  
Manatee County Environmental  
Management Department  
Attention: Mr. Douglas Means  
FDEP, Southwest District  
Attention: Ms. Allison Amram ✓  
PSI, Sarasota Office  
Attention: Mr. Keith Butts

*Information To Build On*

**MODIFIED GROUNDWATER  
MONITORING PLAN  
BRADEN RIVER PARK  
MANATEE COUNTY, FLORIDA**

**PREPARED FOR  
MANATEE COUNTY GOVERNMENT  
PROJECT MANAGEMENT DEPARTMENT  
4422-A - 66TH STREET WEST  
BRADENTON, FLORIDA 34210**

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

**MAY 21, 1996**

**PSI PROJECT NO. 552-5I014**



## TABLE OF CONTENTS

|                                                 | PAGE |
|-------------------------------------------------|------|
| 1.0 INTRODUCTION .....                          | 1    |
| 1.1 General .....                               | 1    |
| 1.2 Objective .....                             | 1    |
| 1.3 Project Background .....                    | 1    |
| 2.0 PREVIOUS TEST RESULTS .....                 | 2    |
| 3.0 RECOMMENDED MODIFIED GROUNDWATER PLAN ..... | 4    |
| 4.0 REPORTING .....                             | 5    |
| APPENDICES                                      |      |
| FIGURE                                          |      |
| CORRESPONDENCE                                  |      |
| WELL LISTINGS                                   |      |



## 1.0 INTRODUCTION

### 1.1 General

The Modified Groundwater Monitoring Plan for the Braden River Park facility contained herein presents the proposed changes to the existing groundwater monitoring plan and was developed based upon the results from the various sampling episodes since October 1994.

### 1.2 Objective

The objective of the Modified Groundwater Monitoring Plan is to develop a plan which will test the groundwater quality at the Braden River Park facility (formerly known as State Road 70 Landfill). The information collected will be evaluated for observable trends in parameter levels, comparison of results to applicable standards, and potential impact to groundwater.

### 1.3 Project Background

The Braden River Park facility, formerly known as State Road 70 Landfill, is a former landfill located in Manatee County. According to the file information provided to PSI by Manatee County, the landfill may have been used as a municipal solid waste landfill from 1955 until 1968. From 1968 until 1984, the waste stream consisted of construction demolition debris. Subsequent to 1984, the west-central portion of the site was used to stockpile road and construction material by the Manatee County Road Department.

A groundwater monitoring program has been performed by PSI since October 1994 for a variety of chemical parameters.

On October 13 and 14, 1994, nine temporary monitor wells were sampled for analysis by EPA Methods 624 (volatile organics), 625 (semi-volatile organics), 420.1 (phenols), 608 (pesticides and PCBs), and 335.2 (cyanide). In addition, samples were analyzed for 10 priority pollutant metals using various EPA Methods. Elevated levels of phenol, chlorobenzene and methylene chloride were detected. Detectable concentrations of various metals were discovered in several of the wells, the most significant of which was determined to be total lead.

As requested by Manatee County, PSI conducted two additional sampling events to confirm the results of the October 13 and October 14, 1994 sampling events. On November 9, 1994, and again on November 14, 1994, seven temporary groundwater monitoring wells were sampled for purgeable halocarbons by EPA Method 601. No detectable concentrations of methylene chloride were found in any of the wells tested. However, levels of chlorobenzene and 1,4 dichlorobenzene were detected, but not in



excess of the Maximum Contaminant Levels (MCLs) as defined in Chapter 62-550.310 Florida Administrative Code (FAC).

A groundwater sampling report was generated by PSI on October 21, 1994, which contained a proposed groundwater monitoring plan. This proposed plan consisted of three consecutive months of sampling, followed by one year of quarterly sampling events. The proposed analyses included testing for those parameters identified by EPA Methods 601 (purgeable halocarbons), 420.1 (phenols), and 239.2 (lead).

On February 21, 1995, three temporary monitor wells were converted to permanent monitor wells, and three new permanent monitor wells were installed at the Braden River Park site. All six wells were subsequently sampled for purgeable halocarbons by EPA Method 601, for total phenols by EPA Method 420.1, and for total lead by EPA Method 239.2.

After the February 1995 sampling event, the groundwater monitoring plan was placed on hold due to scheduling, administrative and financial concerns.

Groundwater sampling activities were resumed in June 1995. Analysis for pesticides and PCBs by EPA Method 608 was added to the existing group of tests. Due to heavy construction activities during the months of March, April, May and June of 1995, several of the monitor wells were damaged or buried. As a result, monitor well MW-2 was in need of repair, and installation of two new wells, MW-4 and MW-7, was needed. The well repair and new well installation occurred as part of the June 1995 activities.

In a letter from the Florida Department of Environmental Protection (FDEP), dated August 18, 1995, and addressed to Mr. Len Bramble of Manatee County Public Services Department, it was requested that the two new wells, in addition to the existing four monitor wells, be tested for Primary and Secondary drinking water standards as listed in Chapter 62-550.310 and .320, FAC.

A proposal to include services related to the new groundwater monitoring plan was generated by PSI on November 24, 1995. Authorization to proceed with the new groundwater monitoring plan, Work Assignment #39, was received by PSI on February 28, 1996. Sampling of the wells took place on March 6, 1996.

## 2.0 PREVIOUS TEST RESULTS

A summary of compounds detected in groundwater samples collected from the Braden River Park facility from previous sampling events (February 19, 1996 and March 6, 1996), is presented in Table No. 1. The complete analytical forms have been included in previous reports.



| PARAMETER                                                | MW-2  | MW-3   | MW-4   | MW-5   | MW-6   | MW-7   | MCL/<br>GC | Sample<br>Date |
|----------------------------------------------------------|-------|--------|--------|--------|--------|--------|------------|----------------|
| Total Aluminum (mg/l)                                    | <0.20 | <0.20  | 1.7    | 0.53   | 0.73   | 2.8    | 0.2        | 03/06/96       |
| Total Cadmium (mg/l)                                     | 0.002 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | 5          | 03/06/96       |
| Total Copper (mg/l)                                      | 0.11  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | 1          | 03/06/96       |
| Total Iron (mg/l)                                        | 42    | 12     | 26     | 24     | 24     | 42     | 0.3        | 03/06/96       |
| Total Lead (mg/l)                                        | 0.249 | 0.001  | 0.015  | 0.003  | 0.01   | 0.003  | 0.015      | 03/06/96       |
| Dissolved Lead (ug/l)                                    | 3     | <1     | <1     | <1     | <1     | <1     | 15         | 02/19/96       |
| Total Manganese (mg/l)                                   | 0.22  | 0.30   | 0.34   | 0.41   | 0.40   | 0.34   | 0.05       | 03/06/96       |
| Total Sodium (mg/l)                                      | 31.9  | 30.9   | 12.6   | 32.2   | 12.6   | 16.2   | 160        | 03/06/96       |
| Total Zinc (mg/l)                                        | 0.46  | <0.05  | <0.05  | <0.05  | <0.05  | <0.05  | 5          | 03/06/96       |
| Chloride (mg/l)                                          | 60    | 32     | 30     | 54     | 25     | 32     | 250        | 03/06/96       |
| Color (CPU)                                              | 90    | 50     | 50     | 15     | 10     | 70     | 15         | 03/06/96       |
| Fluoride (mg/l)                                          | 0.9   | 0.6    | <0.2   | <0.2   | <0.2   | 0.8    | 2          | 03/06/96       |
| MBAS (mg/l)                                              | 0.28  | 0.34   | 0.08   | 0.17   | 0.16   | 0.28   | 0.5        | 03/06/96       |
| Odor (TON)                                               | 2     | 5      | 3      | 3      | 2      | 5      | 3          | 03/06/96       |
| pH                                                       | 6.8   | 6.7    | 6.6    | 6.8    | 6.6    | 6.7    | 6.5-8.5    | 03/06/96       |
| Sulfate (mg/l)                                           | 4     | 13     | 31     | 27     | 2      | <5     | 250        | 03/06/96       |
| TDS (MG/L)                                               | 264   | 622    | 524    | 820    | 234    | 864    | 500        | 03/06/96       |
| Total Coliform (CFU/<br>100 mls)                         | 400   | 900    | <10    | <100   | <100   | <100   | 1          | 03/06/96       |
| Chlorobenzene (ug/l)                                     | 7.2   | 4.8    | 0.65   | <0.5   | 0.52   | 4.6    | 100        | 03/06/96       |
| Chlorobenzene (ug/l)<br>(Purgeable<br>halocarbons)       | 13    | 5      | <1     | <1     | <1     | 3      | 100        | 02/19/96       |
| 1,4 Dichlorobenzene<br>(ug/l)                            | 0.72  | 0.82   | <0.5   | <0.5   | <0.5   | 1.8    | 75         | 03/06/96       |
| 1,4 Dichlorobenzene<br>(ug/l) (Purgeable<br>halocarbons) | 1     | <1     | <1     | <1     | <1     | <1     | 75         | 02/19/96       |
| Phenols (ug/l) by EPA<br>604                             | <5    | <5     | <5     | 2      | <5     | 1      | 10         | 02/19/96       |
| p,p'-DDE (ug/l)                                          | <0.5  | <0.5   | 0.5    | <0.5   | <0.5   | <0.5   | 0.1        | 02/19/96       |



| PARAMETER                              | MW-2 | MW-3 | MW-4 | MW-5 | MW-6  | MW-7 | MCL/<br>GC | Sample<br>Date |
|----------------------------------------|------|------|------|------|-------|------|------------|----------------|
| p,p'-DDD (ug/l)                        | <0.5 | <0.5 | 6.3  | <0.5 | <0.5  | <0.5 | 0.1        | 02/19/96       |
| Total Xylenes                          | <0.5 | <0.5 | <0.5 | <0.5 | 13.98 | <0.5 | 10         | 03/06/96       |
| bis (2-ethylhexyl)<br>Phthalate (ug/l) | 2.4  | 4.8  | 7.4  | 4.4  | <2.0  | 9.2  | 6          | 03/06/96       |
| Gross Alpha (pCi/l)                    | 3.9  | 4.1  | 30   | 2.7  | 6.6   | 6.1  | 15         | 03/06/96       |
| Radium-226 & 228<br>(pCi/l)            | 2.5  | 4.5  | 7.2  | 6.2  | 1.0   | 2.6  | 5          | 03/06/96       |

MCL = Maximum Contaminant Concentration, Chapter 62-550, FAC  
 GC = Guidance Concentration, Chapter 62-520, FAC.  
 ug/l = Micrograms per Liter  
 mg/l = Milligrams per Liter  
 CPU = Cobalt Platinum Units  
 TON = Threshold Odor Number  
 CFU = Colony Forming Units  
 MBAS = Methylene Blue Active Substance (Foaming Agent)  
 TDS = Total Dissolved Solids  
 pCi/l = Picocuries per Liter

### 3.0 RECOMMENDED MODIFIED GROUNDWATER PLAN

Based upon the results from the previous sampling events and trends, the following parameters are recommended for the six existing monitor wells for the Modified Groundwater Monitoring Plan for a period of one year on a quarterly basis:

| PARAMETER                    | METHODOLOGY                 |
|------------------------------|-----------------------------|
| pH                           | EPA Method 150.1            |
| Total Dissolved Solids       | EPA Method 160.1            |
| Total Coliform               | SM 9222B                    |
| bis (2-Ethylhexyl) Phthalate | EPA Method 625              |
| Gross Alpha                  | EPA Method 900.0            |
| Radium - 226 and 228         | EPA Methods 903.1 and 904.0 |
| p,p'- DDT                    | EPA Method 608              |



| PARAMETER             | METHODOLOGY    |
|-----------------------|----------------|
| p,p'- DDE             | EPA Method 608 |
| p,p'- DDD             | EPA Method 608 |
|                       |                |
| pH                    | Field Method   |
| Dissolved Oxygen      | Field Method   |
| Turbidity             | Field Method   |
| Specific Conductivity | Field Method   |
| Temperature           | Field Method   |

#### 4.0 REPORTING

A report of the results of proposed groundwater monitoring will be prepared quarterly with three copies provided to Manatee County. An additional copy will be forwarded concurrently to the FDEP, Southwest District, in Tampa, Florida. The report will be in a letter format and consist of the following:

- Cover letter
- Acronym key
- One page description of sampling methodologies
- Table of key parameters with ARARs (Applicable or Relevant and Appropriate Requirements) and field measurements
- One map of monitor well locations
- Analytical results sheets

The final report, at the completion of the fourth quarter, will include all of the items listed above. The evaluation will analyze any observable trends in parameter levels, comparison of results to applicable standards, and thus, potential impact to groundwater.



**FIGURE**





STATE HIGHWAY  
PATROL STATION

BUILDING

CONCRETE  
BUILDING

51st. STREET EAST

PARKING

JOHN DEERE  
FACILITY

SOCCER  
FIELDS

BASEBALL  
FIELDS (TYP.)

GAP CREEK

MW-2

MW-7

MW-5

MW-4

MW-3

EAST POND

BRADEN  
RIVER

ISLANDS

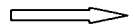
### LEGEND



EXISTING GROUNDWATER WELLS

10.0

GROUNDWATER ELEVATION  
CONTOUR LINE



APPARENT DIRECTION OF  
GROUNDWATER FLOW

GROUNDWATER ELEVATION CONTOUR MAP  
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:    | DATE: 10/25/95 | DWG.: FIGURE 2       |

## CORRESPONDENCE





# Department of Environmental Protection

Lawton Chiles  
Governor

Southwest District  
3804 Coconut Palm Drive  
Tampa, Florida 33619

Virginia B. Wetherell  
Secretary

April 17, 1996

Mr. Tom Yarger  
Manatee County Public  
Works Department  
P.O. Box 25010  
Bradenton, Florida 34206

Subject: Groundwater Monitoring at Braden River Park  
(formerly State Route 70 Landfill)  
Manatee County

Dear Mr. Yarger:

The Florida Department of Environmental Protection (FDEP) has reviewed the following reports submitted by PSI:

| <u>Report Title</u>                         | <u>Report Date</u> |
|---------------------------------------------|--------------------|
| • Phenol Quantification                     | March 27, 1996     |
| • Primary and Secondary Groundwater Testing | March 22, 1996     |
| • Groundwater Monitoring Plan               | March 11, 1996     |

Comments on these reports are grouped by report.

## Phenol Quantification and Groundwater Monitoring Plan

These two reports contain the same information from the February 19, 1996 sampling event.

Please describe the metals sampling. How was the well purged? Was field turbidity measured? What size filter was used?

The compound p,p'-DDD was detected at 6.3 ug/l, and p,p'-DDE at 0.5 ug/l. The guidance concentration for these carcinogens is 0.1 ug/l. F.A.C. 62-520.400(1)(b) states that groundwater shall be free from man-induced discharges of carcinogens. Please provide a list of groundwater users within 1/2 mile radius (well construction, if available, well location, well owner). Does the groundwater discharge to the adjacent surface water bodies north and east of the site?

## Primary and Secondary Groundwater Testing

Aluminum (a secondary standard) and dioxins (primary standard) results were not submitted with this report. Please send the results of these analyses at your earliest convenience.

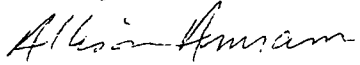
The landfill should implement the quarterly groundwater sampling as proposed by PSI on August 28, 1995. Monitoring wells MW-2, MW-3, MW-4, MW-5, MW-6 and MW-7 shall be sampled for the Primary and Secondary Drinking Water Standards as listed in F.A.C. Rule 62-550.310 and .320. Field measurements for turbidity, dissolved oxygen, pH, conductivity and depth to groundwater shall be made. Groundwater elevations shall be reported for all wells for each sampling event. The FDEP will expect the results of the next quarterly sampling by July 15,

Mr. Tom Yarger  
April 17, 1996  
Page 2

**1996. Subsequent events shall be reported by October 15, 1996 and January 15, 1997. After one year of quarterly monitoring, an evaluation of the groundwater monitoring shall be submitted to the FDEP. This evaluation shall be submitted by February 15, 1997.**

Please respond to these two issues within 30 days. If you have any questions, please contact me at 813/744-6100, ext. 336.

Sincerely,



Allison Amram, P.G.  
Solid Waste Section

cc: John R. Marquardt, P.E., PSI, 4400 140th Avenue North, Suite 100, Clearwater, FL 34622  
Nana Faulkner, P.G., PSI, 4400 140th Avenue North, Suite 100, Clearwater, FL 34622  
Mark McCagg, PSI, 430 Interstate Court, Sarasota, FL 34240  
Danny Hopkins, Manatee Co. Parks & Recreation, 5502 33rd Ave Dr. West, Bradenton 34209  
Douglas Means, Manatee Co. Environmental Management Dept., P.O. 1000, Bradenton 34206  
Steve Morgan, FDEP  
Bob Butera, P.E., FDEP



Lawton Chiles  
Governor

# Florida Department of Environmental Protection

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Virginia B. Wetherell  
Secretary

September 19, 1994

Dear Drinking Water Lab:

To follow up on my July 29, 1994 letter, I am providing the following additional information regarding recent changes to the drinking water rules.

You may recall that the Department of Environmental Regulation and the Department of Natural Resources merged into the Department of Environmental Protection. Because of that merger, the state has renumbered those "17-" series chapters of the Florida Administrative Code pertaining to drinking water. The new series is now "62-".

A number of changes to Chapter 62-550 and 62-560, F.A.C., were recently adopted by the Environmental Regulation Commission. They are effective September 7, 1994. Following is a summary of the changes that affect the laboratories:

1. Dioxin has been moved from the Unregulated Group II list to the Regulated Pesticide and PCB list (Rule 62-550.310(1)(c), F.A.C.). You are required to use Method 1613 to analyze for it.
2. A statewide waiver by rule to the requirement to monitor for dioxin has been added to Rule 62-560.546(2), F.A.C. Only public water systems using surface water, or systems whose source is declared "under the direct influence of surface water," or ground water wells located within 1.6 kilometers (1.0 miles) of a potential source of dioxin are required to monitor for the contaminant.
3. A statewide waiver by rule to the requirement to monitor for butachlor has been added to Rule 62-560.546(3), F.A.C. There have been no known uses of the chemical in Florida.
4. A statewide waiver by rule to the requirement to monitor for asbestos has been added to Rule 62-560.546(1), F.A.C. Only water systems that have distribution pipes or components containing asbestos are required to monitor for it.
5. For ease of reference, the lists of the inorganic, volatile organic, pesticide and PCBs, unregulated, and secondary contaminants have been moved to tables at the end of Chapter 62-550, F.A.C. Chemical Abstract System numbers and Federal Contaminant ID numbers have been added to the tables in Chapter 62-550, F.A.C. Method detection limits have been deleted.
6. Turbidity has been dropped as a ground water primary standard from Rule 62-550.310(3), F.A.C. Turbidity is still a standard for surface water systems.
7. The acid extractables and the base neutral extractables have been moved from the Unregulated Group II list to a newly created Unregulated Group III list. Water systems are only required to monitor one time for the contaminants on the Unregulated Group III list. New systems will be required to test for them as part of the initial clearance process. Those systems that have already monitored will receive credit. The changes are contained in Rules 62-550.410 and 415, F.A.C.

Public  
Water  
Systems

Printed on recycled paper.

8. Confirmation samples must be collected whenever a sample exceeds the maximum contaminant level for nitrate, nitrite, or total nitrate and nitrite, or whenever an unregulated contaminant is detected. Systems may take confirmation samples for any other sample if they so desire except the microbiologicals. Confirmation samples must be taken at the same sampling point as the original sample, and the samples must be collected no later than 14 days after the original had been collected. We realize this will be difficult. You will need to work closely with the water systems when you determine that a confirmation sample is required. Reference Rule 62-550.500(6), F.A.C.
9. We have deleted confusing language from the compositing rule, Rule 62-550(3), F.A.C. It now states simply that you may composite no more than two samples when analyzing for the volatile organic group and no more than five samples when analyzing for the other groups with the exception of the microbiologicals, the secondary group, and THMs. You may composite no more than two samples of raw water for new wells for which the water system is seeking clearance. We are stressing compositing to the small water systems as a method of cutting costs.

If you have any questions on these revisions, please call me at 904-487-1762. If you require copies of the revised rules, please contact Molly Turner at the same number. Attached is a copy of the new reporting format for your use.

Sincerely,

*Van R. Hoofnagle*

Van Hoofnagle, P.E.  
Administrator  
Drinking Water Section

VRH/ML/ml  
Attachments

## WELL LISTINGS



Table 1

## WELL INVENTORY FOR STATE ROAD 70 LANDFILL

| <u>No.</u> | <u>Section<br/>Location</u> | <u>Name<br/>Address</u>                              | <u>Use</u> | <u>Total<br/>Depth</u> | <u>Casing<br/>Depth</u> | <u>Casing<br/>Diameter</u> |
|------------|-----------------------------|------------------------------------------------------|------------|------------------------|-------------------------|----------------------------|
| 1          | S3, T35S, R18E*             | Dove Bros.<br>Corner at Forrest Rd.<br>& Forrest Run | Irrigation | 180'                   | 38'                     | 4"                         |
| 2          | S3, T35S, R18E              | Pursley Development<br>10860 Forrest Run Dr.         | Irrigation | 180'                   | 38'                     | 4"                         |
| 3          | S3, T35S, R18E              | Tom Breeze<br>10808 Forrest Run Dr.                  | Irrigation | 180'                   | 40'                     | 4"                         |
| 4          | S3, T35S, R18E              | Charles Brendel<br>6004 32nd Ave. E.                 | Irrigation | 110'                   | 42'                     | 4"                         |
| 5          | S3, T35S, R18E              | Norman Korswald<br>4105 62nd St. E.                  | Irrigation | 100'                   | 31'                     | 4"                         |
| 6          | S3, T35S, R18E              | A. Pursley<br>10621 Forrest Run                      | Irrigation | 182'                   | 42'                     | 4"                         |
| 7          | S3, T35S, R18E              | A. Pursley<br>9611 Oak Run                           | Irrigation | 90'                    | 35'                     | 4"                         |
| 8          | S3, T35S, R18E              | J. V. Dunden<br>5712 28th Ave. Dr. E.                | Domestic   | 52'                    | 31'                     | 3"                         |
| 9          | S3, T35S, R18E              | Jack Worsley<br>5127 43rd Ave. E.                    | Domestic   | 70'                    | 30'                     | 3"                         |
| 10         | S3, T35S, R18E              | Frank Giles<br>2706 51st St. E.                      | Domestic   | 100'                   | 47'                     | 3"                         |

\*Section 25, Township 34 South, Range 18 East

Source: Manatee County Health Department Well Records 1965 to May 1983

Table 1 (cont'd)

## WELL INVENTORY FOR STATE ROAD 70 LANDFILL

| <u>No.</u> | <u>Section<br/>Location</u> | <u>Name<br/>Address</u>              | <u>Use</u> | <u>Total<br/>Depth</u> | <u>Casing<br/>Depth</u> | <u>Casing<br/>Diameter</u> |
|------------|-----------------------------|--------------------------------------|------------|------------------------|-------------------------|----------------------------|
| 11         | S3, T35S, R18E              | Cisco Allen<br>2611 51st St. E.      | Domestic   | 150'                   | 43'                     | 3"                         |
| 12         | S3, T35S, R18E              | Adrian Hart<br>Lynsdale              | Domestic   | 60'                    | 42'                     | 3"                         |
| 13         | S3, T35S, R18E              | Margarite Hayes<br>Gibbie Lane       | Domestic   | 104'                   | 30'                     | 3"                         |
| 14         | S3, T35S, R18E              | G. E. Johnson<br>Morgan Johnson Rd.  | Irrigation | 415'                   | 52 1/2'                 | 4"                         |
| 15         | S3, T35S, R18E              | Shelley Newton<br>Leigh Ave.         | Domestic   | 85'                    | 30'                     | 3"                         |
| 16         | S3, T35S, R18E              | H. M. Lee<br>Lynsdale Sub.           | Domestic   | 100'                   | 34'                     | 3"                         |
| 17         | S3, T35S, R18E              | Erol Manter<br>5804 28th Ave. Dr. E. | General    | 85'                    | 37'                     | 3"                         |
| 18         | S3, T35S, R18E              | Ed Craig<br>5207 34th Ave. E.        | General    | 75'                    | 30'                     | 4"                         |
| 19         | S3, T35S, R18E              | A. M. Perney<br>3403 33rd St. Ct. E. | Domestic   | 90'                    | 41'                     | 3"                         |
| 20         | S3, T35S, R18E              | R. Hopkins<br>7205 36th Ave. E.      | Domestic   | 162'                   | 38'                     | 3"                         |
| 21         | S3, T35S, R18E              | Ricky Slaughter<br>3708 51st St. E.  | Domestic   | 103'                   | 35'                     | 4"                         |

Table 1 (cont'd)

## WELL INVENTORY FOR STATE ROAD 70 LANDFILL

| <u>No.</u> | <u>Section<br/>Location</u> | <u>Name<br/>Address</u>                                | <u>Use</u> | <u>Total<br/>Depth</u> | <u>Casing<br/>Depth</u> | <u>Casing<br/>Diameter</u> |
|------------|-----------------------------|--------------------------------------------------------|------------|------------------------|-------------------------|----------------------------|
| 22         | S3, T35S, R18E              | Pursley Development<br>4304 62nd St. E.                | Irrigation | 100'                   | 33'                     | 4"                         |
| 23         | S3, T35S, R18E              | Dick Braham<br>5924 38th Ave. E.                       | Irrigation | 102'                   | 33'                     | 4"                         |
| 24         | S3, T35S, R18E              | Bob Garrott, Jr.<br>Bud Ave. off<br>Morgan Johnson Rd. | Home       | 65'                    | 40'                     | 3"                         |
| 25         | S3, T35S, R18E              | Lester Keen<br>Morgan Johnson Rd.                      | Home       | 50'                    | 30'                     | 3"                         |
| 26         | S4, T35S, R18E              | Richard Brown<br>4112 26th Ave. E.                     | Irrigation | 50'                    | 30'                     | 4"                         |
| 27         | S4, T35S, R18E              | Mr. Burke<br>2626 50th Blvd. E.                        | Domestic   | 195'                   | 47'                     | 3"                         |
| 28         | S4, T35S, R18E              | D. Cooper<br>3515 51st St. E.                          | Domestic   | 130'                   | 42'                     | 3"                         |
| 29         | S4, T35S, R18E              | Dynamic Construc'n Co.<br>4912 26th Ave. E.            | Domestic   | 179'                   | 71'                     | 3"                         |
| 30         | S4, T35S, R18E              | Charles Gillum<br>4707 34th Ave. E.                    | Domestic   | 100'                   | 37'                     | 3"                         |
| 31         | S4, T35S, R18E              | Harry Pierce<br>2611 48th St. W.                       | Irrigation | 77'                    | 31'                     | 3"                         |
| 32         | S4, T35S, R18E              | H. M. Lee<br>4808 26th Ave. E.                         | Domestic   | 175'                   | 63'                     | 3"                         |

Table 1 (cont'd)

## WELL INVENTORY FOR STATE ROAD 70 LANDFILL

| <u>No.</u> | <u>Section<br/>Location</u> | <u>Name<br/>Address</u>                            | <u>Use</u> | <u>Total<br/>Depth</u> | <u>Casing<br/>Depth</u> | <u>Casing<br/>Diameter</u> |
|------------|-----------------------------|----------------------------------------------------|------------|------------------------|-------------------------|----------------------------|
| 33         | S4, T35S, R18E              | Dale Raulerson<br>42nd St. E.                      | Domestic   | 300'                   | 33'                     | 3"                         |
| 34         | S4, T35S, R18E              | James Raulerson<br>2910 42nd St. E.                | Domestic   | 122'                   | 32'                     | 3"                         |
| 35         | S4, T35S, R18E              | D. Sirmons<br>3304 45th St. E.                     | Domestic   | 102'                   | 45'                     | 3"                         |
| 36         | S4, T35S, R18E              | James B. Albritton<br>34th St. E.<br>(Elwood Park) | Domestic   | 100'                   | 30'                     | 3"                         |
| 37         | S4, T35S, R18E              | Cameron Sullivan<br>5017 30th Ave. E.              | Domestic   | 165'                   | 38'                     | 3"                         |
| 38         | S4, T35S, R18E              | L. E. Graft<br>1005 19th St. E.                    | Irrigation | 95'                    | 33'                     | 3"                         |
| 39         | S4, T35S, R18E              | Carl E. Baker<br>3707 45th St. E.                  | Domestic   | 118'                   | 43'                     | 3"                         |
| 40         | S4, T35S, R18E              | Mathew Waters<br>45th St. E.                       | -          | 148'                   | 36'                     | 4"                         |
| 41         | S4, T35S, R18E              | Wade Self<br>4020 20th St. E.                      | Domestic   | 140'                   | 40'                     | 3"                         |
| 42         | S4, T35S, R18E              | Ray Williams<br>2907 51st St. E.                   | Domestic   | 125'                   | 35'                     | -                          |
| 43         | S4, T35S, R18E              | Ronald Fortner<br>5005 34th Ave. E.                | Kennel     | 156'                   | 124'                    | 4"                         |

Table 1 (cont'd)

## WELL INVENTORY FOR STATE ROAD 70 LANDFILL

| <u>No.</u> | <u>Section<br/>Location</u> | <u>Name<br/>Address</u>                               | <u>Use</u> | <u>Total<br/>Depth</u> | <u>Casing<br/>Depth</u> | <u>Casing<br/>Diameter</u> |
|------------|-----------------------------|-------------------------------------------------------|------------|------------------------|-------------------------|----------------------------|
| 44         | S4, T35S, R18E              | A. P. Knowles Roofing<br>4403 34th St. E.             | Domestic   | 110'                   | 37'                     | 3"                         |
| 45         | S4, T35S, R18E              | Danny Farmer<br>Elwood Park Rd.                       | Domestic   | 110'                   | 37'                     | 3"                         |
| 46         | S4, T35S, R18E              | Frank Riddich<br>4802 30th Ave. E.                    | -          | 120'                   | -                       | -                          |
| 47         | S4, T35S, R18E              | Fred Prulm<br>Rt. 3, Box 253<br>Bradenton             | Irrigation | -<br>640'              | 49'<br>110'             | 6"<br>4"                   |
| 48         | S4, T35S, R18E              | W. A. Ecker<br>3014 39th St. E.                       | Home       | 100'                   | 31'                     | 3"                         |
| 49         | S4, T35S, R18E              | Jasper Gafford<br>4116 26th Ave. E.                   | -          | 100'                   | 49'                     | 3"                         |
| 50         | S8, T35S, R18E              | B. H. Cattle Co.<br>30th St. E.<br>South of 38th Ave. | Dairy      | 230'                   | 65'                     | 6"                         |
| 51         | S8, T35S, R18E              | Marvin Bretheuer<br>5019 37th St. E.                  | -          | 120'                   | 32'                     | 4"                         |
| 52         | S8, T35S, R18E              | Joseph Crovell<br>Lots 23 & 24<br>Fairland Sub.       | -          | -                      | -                       | -                          |
| 53         | S8, T35S, R18E              | Claffin Garst<br>Rt. 3, Box 217<br>Bradenton          | Irrigation | 125'                   | 42'                     | 4"                         |

Manatee County  
File Number 8 38

Table 1 (cont'd)

## WELL INVENTORY FOR STATE ROAD 70 LANDFILL

| <u>No.</u> | <u>Section<br/>Location</u> | <u>Name<br/>Address</u>                     | <u>Use</u> | <u>Total<br/>Depth</u> | <u>Casing<br/>Depth</u> | <u>Casing<br/>Diameter</u> |
|------------|-----------------------------|---------------------------------------------|------------|------------------------|-------------------------|----------------------------|
| 54         | S8, T35S, R18E              | Bert Sieffert<br>5120 28th St.              | Home       | 62'                    | 31'                     | 3"                         |
| 55         | S8, T35S, R18E              | South Co. Youth Center<br>3515 53rd Ave. E. | Irrigation | -                      | -                       | 4"                         |
| 56         | S8, T35S, R18E              | Garst<br>Oneco                              | Irrigation | 1154'                  | 124'                    | 10"                        |
| 57         | S8, T35S, R18E              | Riley Winans<br>4619 37th St. E.            | Stock      | 96'                    | 37'                     | 3"                         |
| 58         | S8, T35S, R18E              | James Bear, Jr.<br>4413 37th St. E.         | -          | 104'                   | 37'                     | 3"                         |
| 59         | S8, T35S, R18E              | H. H. Moody<br>37th St. E.                  | Irrigation | 60'                    | 32'                     | 3"                         |
| 60         | S8, T35S, R18E              | James Sellers<br>3020 51st Ave. E.          | Domestic   | 100'                   | 30'                     | 4"                         |
| 61         | S8, T35S, R18E              | R. W. Flanders<br>5308 44th St. E.          | Irrigation | 134'                   | 47'                     | 4"                         |
| 62         | S8, T35S, R18E              | Ned Sellers<br>4827 37th St. E.             | Livestock  | 100'                   | 36'                     | 4"                         |
| 63         | S8, T35S, R18E              | Ned Sellers<br>4827 37th St. E.             | Livestock  | 100'                   | 40'                     | 4"                         |
| 64         | S9, T35S, R18E              | Lee Spinolla<br>6312 44th Ave. E.           | Domestic   | 110'                   | 43'                     | -                          |

Manatee County  
File Number 84-058

Table 1 (cont'd)

## WELL INVENTORY FOR STATE ROAD 70 LANDFILL

| <u>No.</u> | <u>Section<br/>Location</u> | <u>Name<br/>Address</u>                                  | <u>Use</u> | <u>Total<br/>Depth</u> | <u>Casing<br/>Depth</u> | <u>Casing<br/>Diameter</u> |
|------------|-----------------------------|----------------------------------------------------------|------------|------------------------|-------------------------|----------------------------|
| 65         | S9, T35S, R18E              | Clafflin Garst, Jr.<br>Elwood Park Rd.                   | Irrigation | 125'                   | 58'                     | 4"                         |
| 66         | S9, T35S, R18E              | Clafflin Garst, Jr.<br>51st St. E.<br>Elwood Park        | Irrigation | 210'                   | 64'                     | 4"                         |
| 67         | S9, T35S, R18E              | K. Tincher<br>5315 47th St. E.                           | Home       | 175'                   | 60'                     | 3"                         |
| 68         | S9, T35S, R18E              | Ellen Hesler<br>Rt. 3 Box 2968                           | Garden     | 80'                    | 30'                     | 3"                         |
| 69         | S9, T35S, R18E              | Fred Gray<br>4631 Oneco Rd.                              | Home       | 160'                   | 60'                     | 3"                         |
| 70         | S10, T35S, R18E             | Horse Shoe Cove Resort<br>State Rd. 70 &<br>Braden River | Irrigation | 375'                   | 50'                     | 4"                         |
| 71         | S10, T35S, R18E             | Horse Shoe Cove Resort<br>State Rd. 70 &<br>Braden River | Irrigation | 375'                   | 50'                     | 4"                         |
| 72         | S10, T35S, R18E             | Horse Shoe Cove Resort<br>State Rd. 70 &<br>Braden River | Irrigation | 360'                   | 52'                     | 4"                         |
| 73         | S10, T35S, R18E             | Horse Shoe Cove Resort<br>State Rd. 70 &<br>Braden River | Irrigation | 375'                   | 50'                     | 4"                         |

Table 1 (cont'd)

## WELL INVENTORY FOR STATE ROAD 70 LANDFILL

| <u>No.</u> | <u>Section<br/>Location</u> | <u>Name<br/>Address</u>                                      | <u>Use</u> | <u>Total<br/>Depth</u> | <u>Casing<br/>Depth</u> | <u>Casing<br/>Diameter</u> |
|------------|-----------------------------|--------------------------------------------------------------|------------|------------------------|-------------------------|----------------------------|
| 74         | S10, T35S, R18E             | Horse Shoe Cove Resort<br>State Rd. 70 &<br>Braden River     | Irrigation | 405'                   | 50'                     | 4"                         |
| 75         | S10, T35S, R18E             | Horse Shoe Cove Resort<br>State Rd. 70 &<br>Braden River     | Irrigation | 195'                   | 40'                     | 4"                         |
| 76         | S10, T35S, R18E             | James Felts<br>6206 47th Ave. E.                             | Domestic   | 120'                   | 40'                     | 4"                         |
| 77         | S10, T35S, R18E             | W. W. Townsend<br>Dude Ranch Acres                           | -          | 135'                   | 52'                     | 3"                         |
| 78         | S10, T35S, R18E             | Wm. Trampeter<br>Lot 6A, Unit 1<br>Dude Ranch Acres          | -          | 110'                   | 42'                     | 3"                         |
| 79         | S10, T35S, R18E             | Manasota Developing<br>617 45th Ave. E.<br>Dude Ranch Acres  | House      | 125'                   | 42'                     | 3"                         |
| 80         | S10, T35S, R18E             | Gulf Coast Exp. Station<br>Morgan Johnson Rd.                | Sanitary   | 185'                   | 63'                     | 4"                         |
| 81         | S10, T35S, R18E             | Manasota Developing<br>6117 48th Ave. E.<br>Dude Ranch Acres | House      | 120'                   | 42'                     | 3"                         |
| 82         | S10, T35S, R18E             | Manasota Developing<br>Sandars Rd.                           | House      | 110'                   | 37'                     | 3"                         |

Table 1 (cont'd)

## WELL INVENTORY FOR STATE ROAD 70 LANDFILL

| <u>No.</u> | <u>Section<br/>Location</u> | <u>Name<br/>Address</u>                             | <u>Use</u> | <u>Total<br/>Depth</u> | <u>Casing<br/>Depth</u> | <u>Casing<br/>Diameter</u> |
|------------|-----------------------------|-----------------------------------------------------|------------|------------------------|-------------------------|----------------------------|
| 83         | S10, T35S, R18E             | Manasota Developing<br>Lot 13<br>Dude Ranch Acres   | House      | 120'                   | 42'                     | 3"                         |
| 84         | S10, T35S, R18E             | Al Swinson<br>45th Ave. E.                          | -          | 120'                   | 38'                     | 3"                         |
| 85         | S10, T35S, R18E             | Manasota Developing<br>Dude Ranch Acres             | House      | 110'                   | 42'                     | 3"                         |
| 86         | S10, T35S, R18E             | Gulf Coast Exp. Station<br>Morgan Johnson Rd.       | Sanitary   | 185'                   | 63'                     | 4"                         |
| 87         | S11, T35S, R18E             | Florida Power & Light<br>7112 44th Ave. E.          | Domestic   | 198'                   | 63'                     | -                          |
| 88         | S11, T35S, R18E             | Jim Fath<br>6512 48th Ave. Dr. E.                   | Domestic   | 190'                   | 63'                     | 3"                         |
| 89         | S11, T35S, R18E             | Steve Nelson<br>6420 44th Ave. E.                   | General    | 105'                   | 43'                     | 3"                         |
| 90         | S11, T35S, R18E             | Graham P. Olsen<br>33rd Ave. E.<br>Dude Ranch Acres | Residence  | 115'                   | 42'                     | 3"                         |
| 91         | S11, T35S, R18E             | George Kurilla<br>6205 47th Ave. E.                 | Residence  | 120'                   | 40'                     | 3"                         |
| 92         | S11, T35S, R18E             | Woodie Townsend<br>Dude Ranch Acres                 | -          | 135'                   | 56'                     | 3"                         |

Manatee Co  
File Number 04-058

Table 1 (cont'd)

## WELL INVENTORY FOR STATE ROAD 70 LANDFILL

| <u>No.</u> | <u>Section<br/>Location</u> | <u>Name<br/>Address</u>                                 | <u>Use</u>      | <u>Total<br/>Depth</u> | <u>Casing<br/>Depth</u> | <u>Casing<br/>Diameter</u> |
|------------|-----------------------------|---------------------------------------------------------|-----------------|------------------------|-------------------------|----------------------------|
| 93         | S11, T35S, R18E             | Curtis Dunning<br>7207 41st St. E.                      | Household       | 147'                   | 60'                     | 3"                         |
| 94         | S11, T35S, R18E             | Mr. Medlam<br>6811 48th Ave. Dr. E.                     | Household       | 110'                   | 37'                     | 3"                         |
| 95         | S11, T35S, R18E             | Ben Eason<br>6432 47th Ave. E.                          | -               | 170'                   | 42'                     | 4"                         |
| 96         | S11, T35S, R18E             | B. A. Nickel<br>6206 45th Ave. E.                       | -               | 112'                   | 42'                     | 4"                         |
| 97         | S11, T35S, R18E             | George Gregory<br>1704 48th Ave. W.                     | Household       | 67'                    | 33'                     | 3"                         |
| 98         | S11, T35S, R18E             | Agriculture Research<br>& Education<br>5007 60th St. E. | Irrigation      | -                      | 86'                     | 10"                        |
| 99         | S11, T35S, R18E             | Gayland Sinkler<br>6418 48th Ave.                       | -               | 165'                   | 64'                     | 3"                         |
| 100        | S15, T35S, R18E             | Gary Panton<br>10607 31st Ave. E.                       | Domestic        | 260'                   | 42'                     | 4"                         |
| 101        | S15, T35S, R18E             | C. F. Fortwendel<br>10608 31st Ave. E.                  | Domestic        | 270'                   | 49'                     | 4"                         |
| 102        | S16, T35S, R18E             | Manatee Fruit Co.<br>P.O. Box 128, Palmetto             | -<br>Irrigation | -<br>780'              | 40'<br>317'             | 8"<br>6"                   |
| 103        | S16, T35S, R18E             | Manatee Fruit Co.<br>P.O. Box 128, Palmetto             | Irrigation      | 119'                   | 31'                     | 3"                         |

Manatee County  
File Number 84-058

Table 1 (cont'd)

## WELL INVENTORY FOR STATE ROAD 70 LANDFILL

| <u>No.</u> | <u>Section<br/>Location</u> | <u>Name<br/>Address</u>                     | <u>Use</u>      | <u>Total<br/>Depth</u> | <u>Casing<br/>Depth</u> | <u>Casing<br/>Diameter</u> |
|------------|-----------------------------|---------------------------------------------|-----------------|------------------------|-------------------------|----------------------------|
| 104        | S16, T35S, R18E             | Manatee Fruit Co.<br>P.O. Box 128, Palmetto | -<br>Irrigation | -<br>780'              | 58'<br>165'             | 8"<br>6"                   |
| 105        | S16, T35S, R18E             | Robert R. Howard<br>4436 Drake Blvd.        | Irrigation      | 85'                    | 31'                     | 3"                         |
| 106        | S16, T35S, R18E             | Manatee Fruit Co.<br>P.O. Box 128, Palmetto | Irrigation      | 780'                   | 109'                    | 8"                         |
| 107        | S16, T35S, R18E             | Manatee Fruit Co.<br>P.O. Box 128, Palmetto | Irrigation      | 782'                   | 90'                     | 8"                         |
| 108        | S16, T35S, R18E             | A. R. Powell<br>33rd St. E.                 | Farm            | 96'                    | 31'                     | 4"                         |
| 109        | S16, T35S, R18E             | Walter Dixon<br>39th St. E. Gateway E.      | Residence       | 98'                    | 38'                     | 3"                         |
| 110        | S16, T35S, R18E             | Gerry Lee King<br>4711 53rd Ave. E.         | Residence       | 215'                   | 81'                     | 4"                         |
| 111        | S16, T35S, R18E             | William C. Kahorater<br>Gateway E.          | Irrigation      | 104'                   | 45'                     | 3"                         |
| 112        | S16, T35S, R18E             | C. Valentine Jilson<br>4315 56th Ave. E.    | Irrigation      | 170'                   | 35'                     | 3"                         |
| 113        | S16, T35S, R18E             | John Girard<br>5636 43rd St.<br>Gateway E.  | Irrigation      | 95'                    | 50'                     | 3"                         |
| 114        | S16, T35S, R18E             | W. L. Davidson<br>4420 Drake Blvd.          | -               | 90'                    | 46'                     | 3"                         |

Manatee County  
File Number 8. 38

Table 1 (cont'd)

## WELL INVENTORY FOR STATE ROAD 70 LANDFILL

| <u>No.</u> | <u>Section<br/>Location</u> | <u>Name<br/>Address</u>                            | <u>Use</u> | <u>Total<br/>Depth</u> | <u>Casing<br/>Depth</u> | <u>Casing<br/>Diameter</u> |
|------------|-----------------------------|----------------------------------------------------|------------|------------------------|-------------------------|----------------------------|
| 115        | S16, T35S, R18E             | Elmer Beeke<br>4210 53rd Ave.                      | Irrigation | 80'                    | 58'                     | 3"                         |
| 116        | S16, T35S, R18E             | Pearly Stockwell<br>5318 15th Ct. E.               | House      | 125'                   | 35'                     | 3"                         |
| 117        | S16, T35S, R18E             | Curt Hoffman<br>4427 Drake Ave.                    | Yard       | 84'                    | 30'                     | 3"                         |
| 118        | S16, T35S, R18E             | Mr. Dargia<br>4428 55th Ave. E.                    | Yard       | 107'                   | 30'                     | 3"                         |
| 119        | S16, T35S, R18E             | Wally Watkins<br>4416 55th Ave. Dr. E.             | -          | 100'                   | 46'                     | 3"                         |
| 120        | S16, T35S, R18E             | Twin Cities Development<br>5506 Murry Dr. (Hwy 70) | Irrigation | 150'                   | 52'                     | 3"                         |
| 121        | S17, T35S, R18E             | 1'st Communities<br>3700 53rd Ave. E.              | Irrigation | 241'                   | 32'                     | 4"                         |
| 122        | S17, T35S, R18E             | 1'st Communities<br>3700 53rd Ave. E.              | Irrigation | 68'                    | 40'                     | 4"                         |
| 123        | S17, T35S, R18E             | Gale Green<br>39th St.                             | Livestock  | 100'                   | 31'                     | 4"                         |
| 124        | S17, T35S, R18E             | Ken Dale Contracting<br>Saunders Rd.               | -          | 115'                   | 38'                     | 3"                         |
| 125        | S17, T35S, R18E             | Mrs. E. Marsh<br>3505 58th Ave. E.                 | House      | 130'                   | 32'                     | -                          |

Table 1 (cont'd)

## WELL INVENTORY FOR STATE ROAD 70 LANDFILL

| <u>No.</u> | <u>Section<br/>Location</u> | <u>Name<br/>Address</u>            | <u>Use</u> | <u>Total<br/>Depth</u> | <u>Casing<br/>Depth</u> | <u>Casing<br/>Diameter</u> |
|------------|-----------------------------|------------------------------------|------------|------------------------|-------------------------|----------------------------|
| 126        | S17, T35S, R18E             | Roy Baden<br>Clark Rd., 61st St.   | House      | 137'                   | 41'                     | 3"                         |
| 127        | S17, T35S, R18E             | Jo Sheppard<br>53rd Ave. E., Oneco | House      | 120'                   | 30'                     | 3"                         |
| 128        | S17, T35S, R18E             | John Bolners<br>59th Ave. Dr. E.   | -          | 136'                   | 30'                     | 3"                         |
| 129        | S17, T35S, R18E             | Lee Davenport<br>5423 36th St. E.  | Domestic   | 140'                   | 49'                     | 3"                         |
| 130        | S17, T35S, R18E             | John Desears<br>59th Ave. Dr. E.   | Domestic   | 128'                   | 29'                     | 3"                         |
|            | S14, T35S, R18E             | No wells on record                 |            |                        |                         |                            |

Manatee County  
File Number 84-058