SITE: ITT-Thompson
BREAK: 1.11
OTHER: Vol. 1

Friday
December 14, 1990

Reference No.: 1
HRS Documentation Package
Site Name: ITT-Thompson International, Inc.
FLD043047653

Federal Register

## Part II

# Environmental Protection Agency

40 CFR Part 300
Hazard Ranking System; Final Rule

Reference No.: 2
HRS Documentation Package
Site Name: ITT-Thompson International, Inc.
FLD043047653

United States Environmental Protection Agency | Office of Emergency and Remedial Response Washington, DC 20460 | Publication 9345.1-21 EPA/540/R-96/028 PB96-963509 June 1996

Superfund

EPA

# Superfund Chemical Data Matrix

U . S . EPA REGION IV

# SDMS

## Unscannable Material Target Sheet

DocID: 1046512 Site ID: FLD 430476 53

Site Name: ITT Thompson Industries

**Nature of Material:**

| | | | |
|---|---|---|---|
| Map: | ✓ | Computer Disks: | |
| Photos: | | CD-ROM: | |
| Blueprints: | | Oversized Report: | |
| Slides: | | Log Book: | |

Other (describe): Topographic Maps

Amount of material:

*Please contact the appropriate Records Center to view the material.*

# PROJECT NOTE

| | |
|---|---|
| **Date:** August 28, 2001<br>**Time:** 1726 | **Project Number:** G9007E011122<br>**Project Name:** ITT-Thompson |

**Company:** Tetra Tech EM Inc. Superfund Technical Assessment and Response Team (START)
**Name:** Sara J. Henry
**Title:** Environmental Engineer

**Signature:**

**Subject:** Determining Latitude/Longitude Using the Topo-Aid™

## PROJECT NOTE SUMMARY

To determine the coordinates of a site utilizing the Topo-Aid™ and a 7.5-minute topographic map, perform the following actions for both latitude and longitude:

1. Using a straight-edge, draw a perpendicular line from the site to the edge of the map. This will be your site point.

2. Align the outer lines of the Topo-Aid™ with two known points on the edge of the topographic map. The known point on the right outer line of the Topo-Aid™ will be your starting point. Count the lines of the Topo-Aid™ as five-second intervals, from right to left. Remember that there are 60 seconds in 1 minute, and 60 minutes in 1°. Therefore, when you reach 60 seconds, add 1 minute to the starting point, and resume counting the seconds at 0. Continue counting until you reach the site point.

**USGS Quad Map name:** Madison, Florida

**Latitude starting point:** 30 ° 27 ' 30 "
**Longitude starting point:** 83 ° 22 ' 30 "

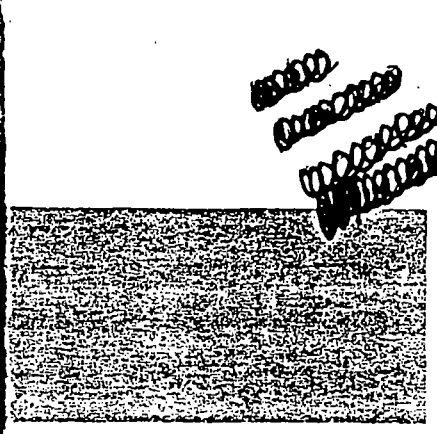
**Site Latitude:** 30 ° 28 ' 18 "
**Site Longitude:** 83 ° 24 ' 22 "

## RESPONSE REQUIRED

(✓) None ( ) Phone call ( ) Memo ( ) Letter ( ) Report

cc: File (✓) Project Manager (✓) Principal Investigator ( ) Other (specify)

Reference No.: 5
HRS Documentation Package
Site Name: ITT-Thompson International, Inc.
FLD043047653



ecology and environment, inc.
International Specialists in the Environment

Job Number HV2

ITT THOMPSON SITE
MADISON FL
FIELD INVESTIGATION
JUNE 1997

7/2/97 WED ITT THOMPSON

0720 HAYES & PRECISION ON-SITE

0730 K. THALMAN (G&M) ON-SITE & K. STARLING ON-SITE

0800 J. DIAZ ON-SITE

NOTE: SHIRLEY YATES (EAST HAINE ST. WHITE HOUSE @ EAST END OF STREET)-(SOUTH SIDE OF STREET - ADJACENT NEXT TO GREEN HOUSE ON STREET) SAID SHE WORKED NIGHT SHIFT @ ITT THOMPSON FACILITY & CHEMICALS ~~WERE~~ DUMPED INTO POND → SHE MENTIONED ONE FISH KILL FOLLOWING A DUMPING INTO THE POND. DRUMS WERE STAGED ON SW CORNER OF FACILITY. SHE GREW UP AROUND POND & LEARNED TO FISH IN IT → SHE SAID PEOPLE DO EAT FISH CAUGHT IN POND → HAYES GAVE S. YATES J. DIAZ (FDEP) PH # (904) 921-9990 & SAID WE WOULD HAVE 850 ANALYTICAL RESULTS IN 6-8 ~~WEEKS~~.

0805 PAUL ~~ATTEMPTING~~ TO FLUSH LINE → GOT UP TO 80 PSI & LINE WOULD NOT CLEAR (SANDED UP) BURST LINE RUNNING THROUGH PERISTALTIC PUMP "~~WHERE~~" WILL NOT CLEAR

WILL PUSH DOWN TO TRY & COLLECT FLORIDAN SAMPLE.

GRADUAL

0850 65' REFUSAL - PULL UP 3' WAIT FOR WATER NO WATER IN RODS

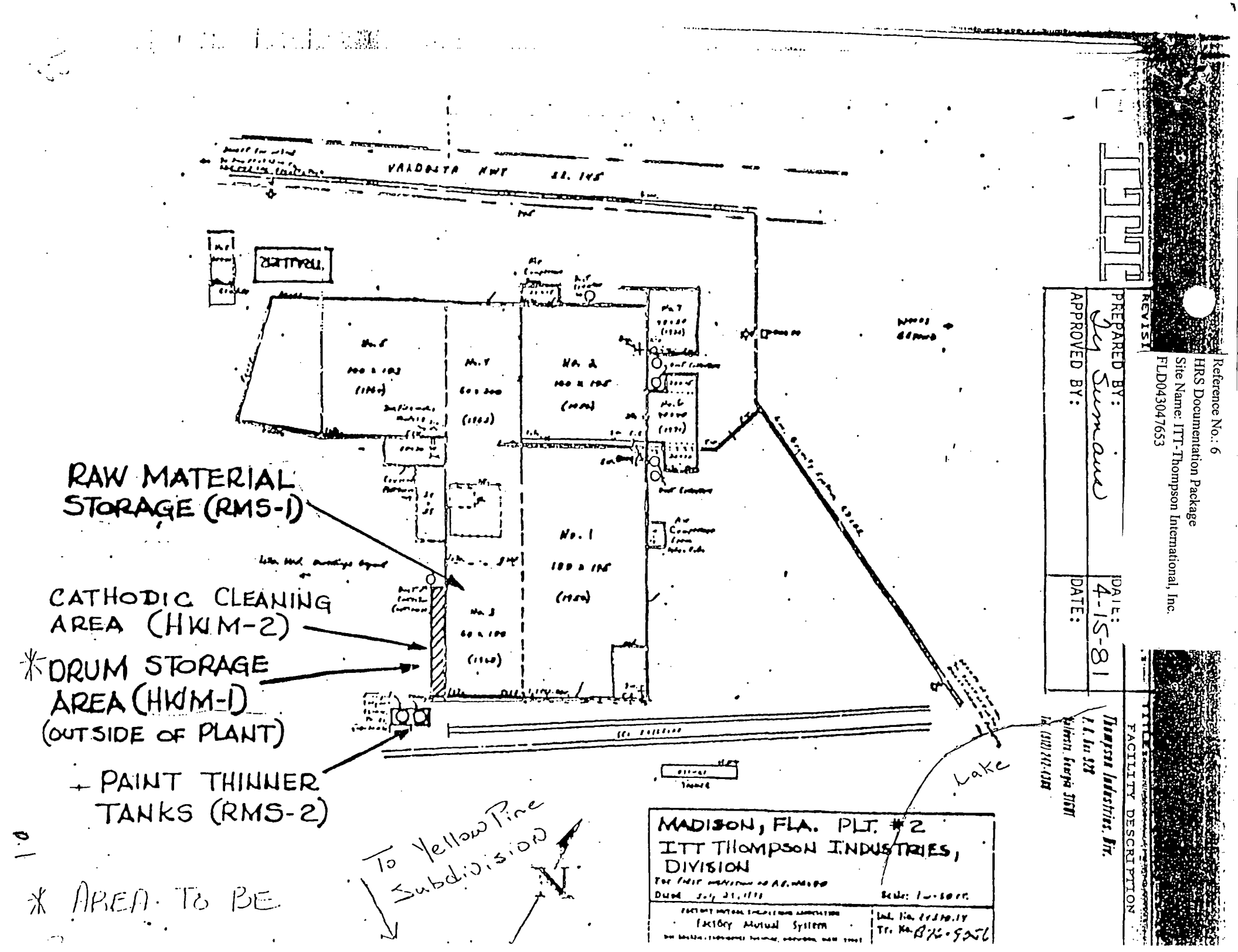
1015 NO WATER IN RODS, HAYES & J. DIAZ DECIDE TO GROUT HOLE, NO SAMPLE COLLECTED

NOTE 0815 COLLECT ITVP-RB (RINSATE)

10:50 COLLECT ITSD-RB "

11:09 VP-4 GROUTED TO SURFACE & PATCHED ~20 GALLONS GROUT TYPE I PORTLAND NEAT CEMENT & 5% BENTONITE

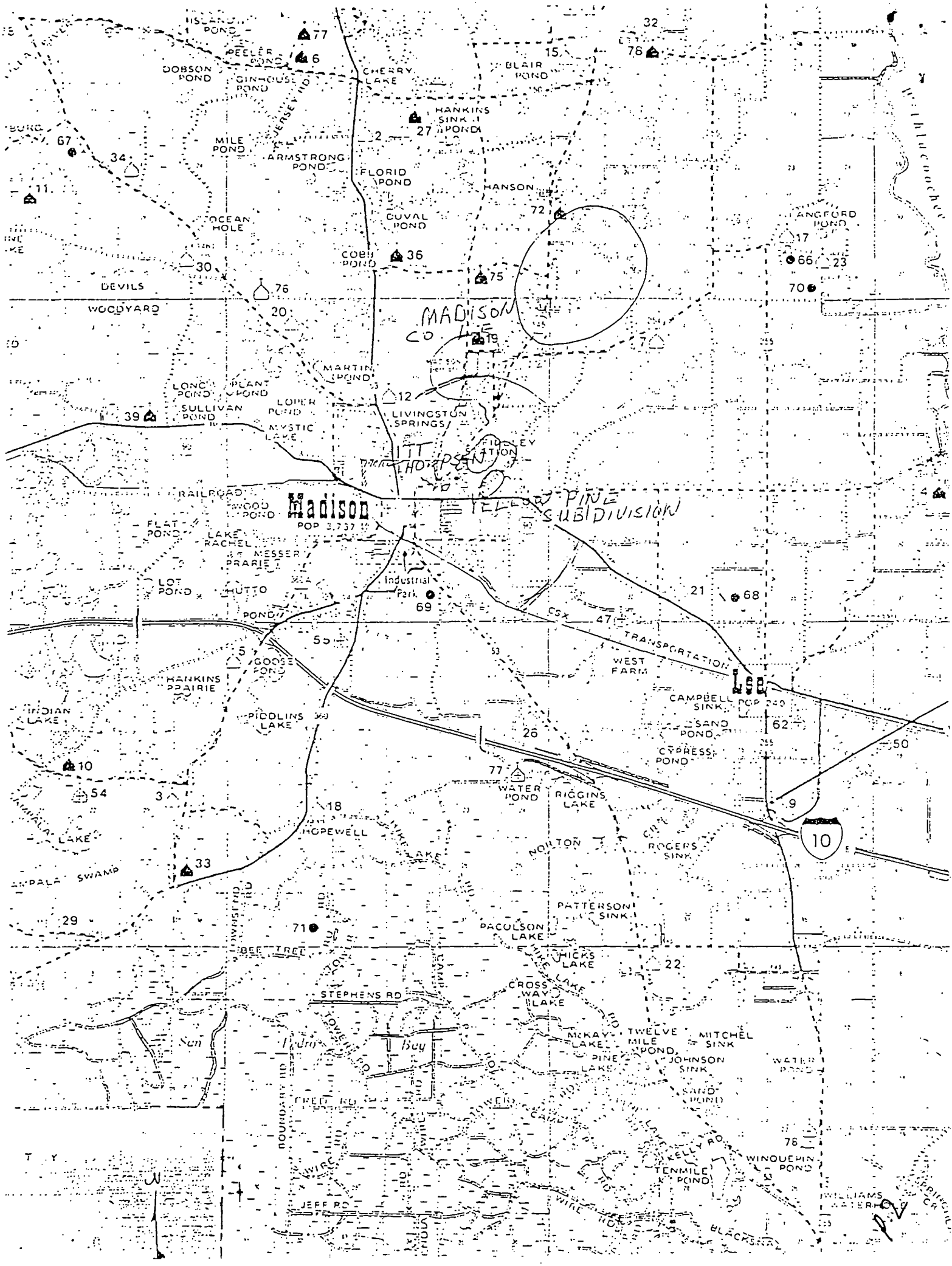
K.R. HAYES 7/2/97



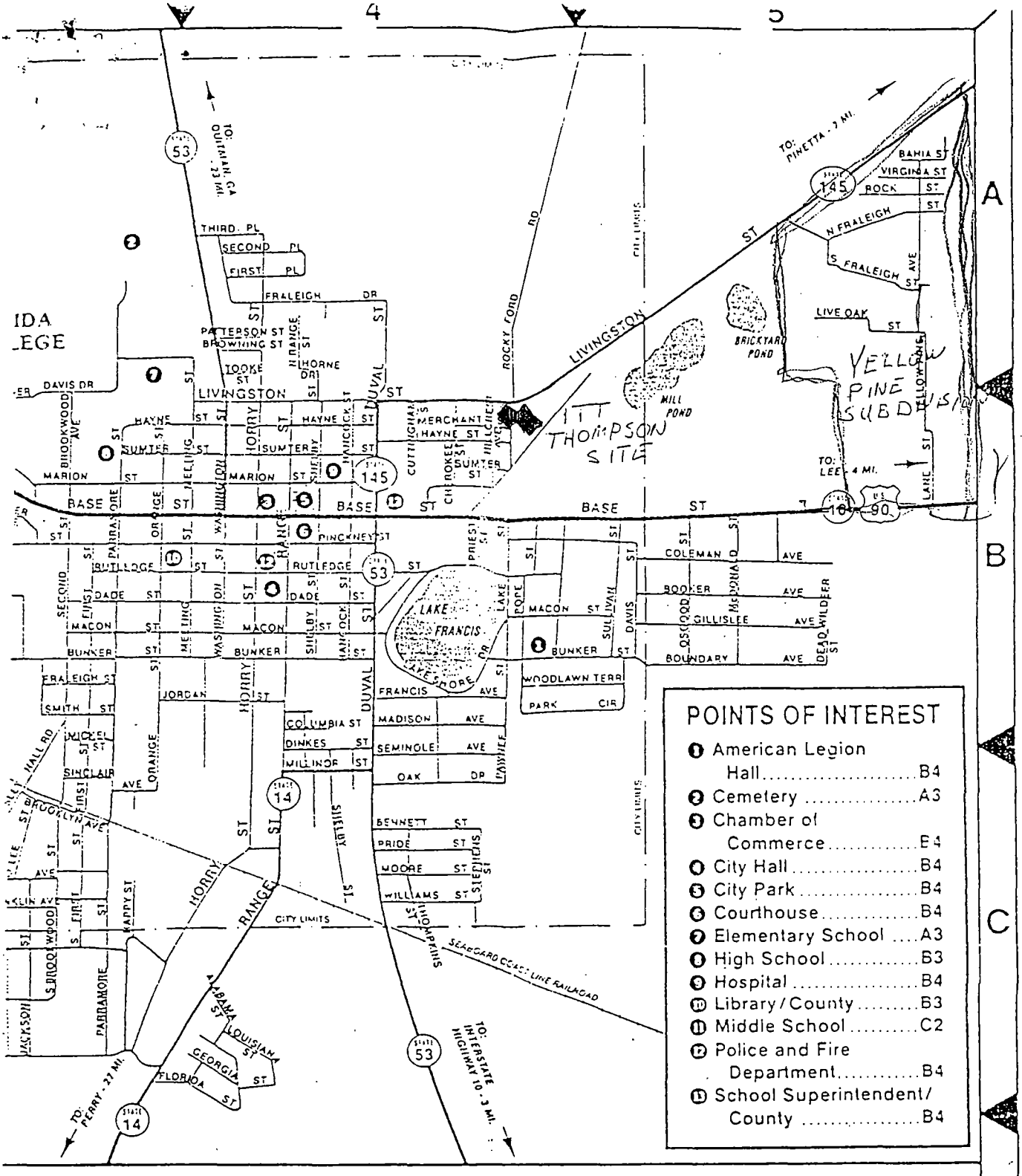

Reference No.: 6
HRS Documentation Package
Site Name: ITT-Thompson International, Inc.
FLD043047653

p.1

* AREA TO BE



ISLAND POND
PEELER POND
DOBSON POND
GINHOUSE POND
CHERRY LAKE
BLAIR POND
HANKINS SINK POND
MILE POND
ARMSTRONG POND
FLORID POND
HANSON
OCEAN HOLE
DUVAL POND
COBB POND
DEVILS
WOODYARD
MADISON CO LE
MARTIN POND
LONG POND
PLANT POND
SULLIVAN POND
LOPER POND
MYSTIC LAKE
LIVINGSTON SPRINGS
FIDDLEY STATION
ITT THOMPSON
RAILROAD
WOOD POND
Madison
POP 3,737
YELLOW PINE SUBDIVISION
FLAT POND
LAKE RACHEL
MESSER PRARIE
LOT POND
HUTTO POND
Industrial Park
CSX TRANSPORTATION
WEST FARM
Lee
CAMPBELL SINK
POP 240
SAND POND
CYPRESS POND
GOOSE POND
HANKINS PRAIRIE
INDIAN LAKE
PIDDLINS LAKE
WATER POND
RIGGINS LAKE
HOPEWELL
NORTON
ROGERS SINK
SWAMP
PATTERSON SINK
PACOLSON LAKE
BEE TREE
HICKS LAKE
CROSS WAY LAKE
STEPHENS RD
McKAY LAKE
TWELVE MILE POND
MITCHEL SINK
PINE LAKE
JOHNSON SINK
WATER POND
SAND POND
FRED RD
KELLY RD
WINQUEPIN POND
TENMILE POND
JEFF RD
WILLIAMS WATERHOLE
BLACKSNAKE
10




PEACHTREE
DR ..... B1,2
PINE ST ..... C1

SYCAMORE
ST ..... C2

WESLEY ST ..... C1

MADISON

ALABAMA ST ..... C4
ARNOLD ST ..... C2

BAHIA ST ..... A5
BASE ST ..... B3-5

DEAD
WILDEER ST ..... B5
DINKES ST ..... B4
DUVAL ST ..... A-C4

EARL ST ..... B2

FIRST PL ..... A4
FIRST ST ..... B,C3
FIRST ST S ..... C3
FLORIDA ST ..... C4
FRALEIGH DR ..... A4
FRALEIGH ST ..... B3
FRALEIGH
ST N ..... A5
FRALEIGH

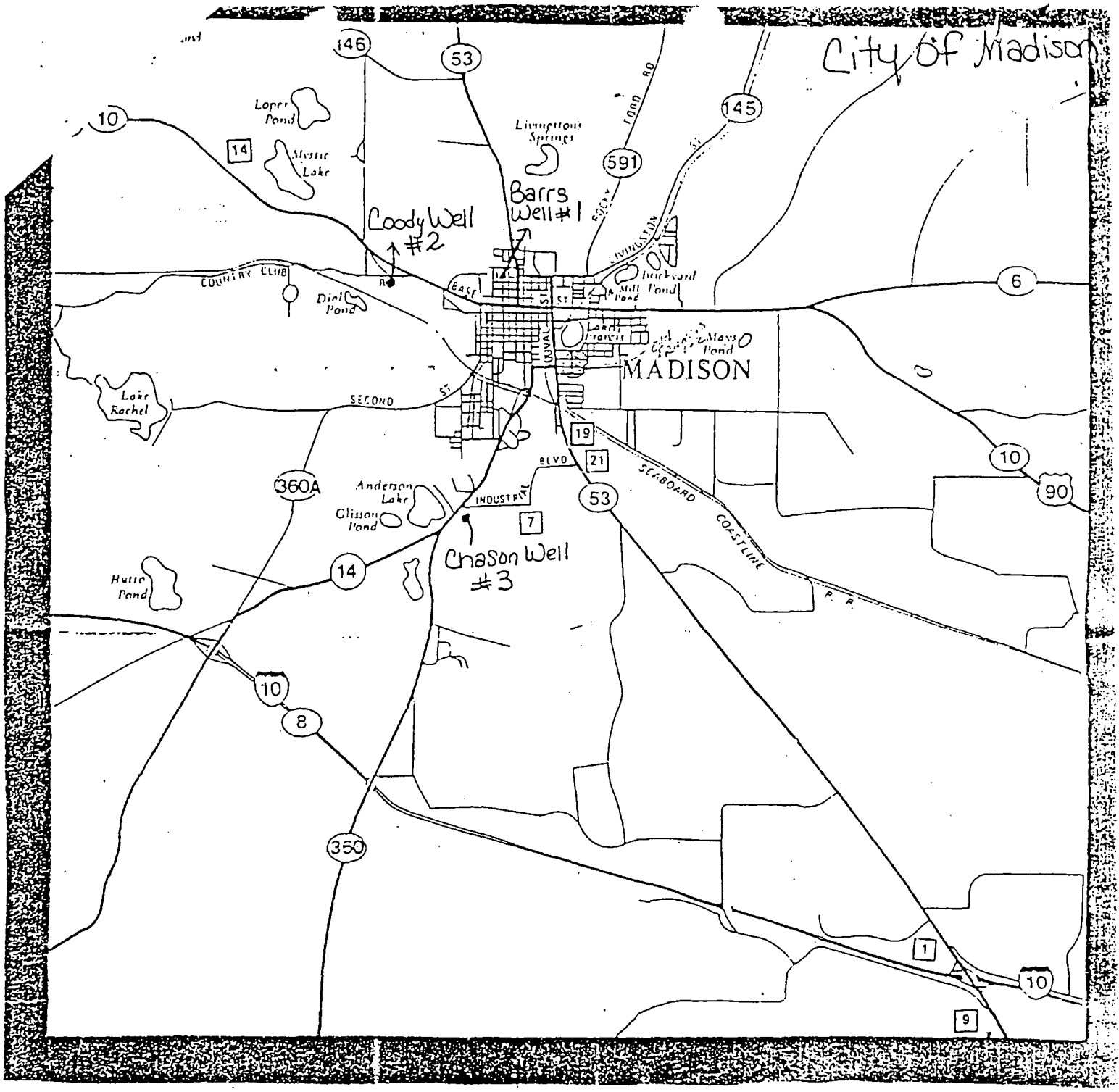
LAMOYNE ST ..... B2
LANE ST ..... B5
LEE ST ..... C3
LIVE OAK ST ..... A5
LIVINGSTON
ST ..... A5,B4
LOUISIANA ST ..... C4

MACON ST ..... B3-5
MADISON AVE ..... B4
MALL ST ..... C2
MARION ST ..... B3,4
McDONALD
ST ..... B5
MEETING
ST ..... A,B4

RANGE ST N ..... A4
ROCK ST ..... A5
ROCKY
FORD RD ..... A4
RUTLEDGE
ST ..... B3,4

SECOND PL ..... A4
SECOND ST ..... B,C3
SEMINOLE
AVE ..... C4
SHELBY ST ..... A-C4
SINCLAIR AVE ..... C3
SMITH ST ..... B3
STEPHENS
ST ..... C4

304 South Ra
Madison, Flo
CITY OF MADI
FLORIDA
AV
• City
• One
• Eas
Flor
For infor
SALES & S


City Of Madison
Barrs Well #1
Coody Well #2
Chason Well #3
MADISON
Loper Pond
Mystic Lake
Livingston's Springs
Dial Pond
Lake Rachel
Anderson Lake
Glisson Pond
Hutto Pond
Mays Pond
Mill Pond
Brickyard Pond
COUNTRY CLUB
SECOND ST
INDUSTRIAL BLVD
SEABOARD COASTLINE R.R.
146
53
145
591
10
14
6
19
21
7
360A
90
8
350
1
9

p.4

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February 18, 1999

Elisabet M. Ellis, Assistant Regional Counsel
Environmental Accountability Division
U.S. Environmental Protection Agency - Region 4
61 Forsyth Street
Atlanta, GA 30303

Re: ITT Thompson Industries Superfund site
Madison, Madison County, Florida
Section 104(e) Request for Information
Response of McKechnie Vehicle Components (USA), Inc.

Dear Ms. Ellis:

Attached is our letter providing a response, on behalf of our client, McKechnie Vehicle Components (USA), Inc., to the Agency's 104(e) Request for Information concerning the Madison Superfund site. Upon examining the enclosed information, you will note that very little of it relates to the activities of Trim-Tech/Thompson Industries, Inc., predecessor to MVC. This is true because the operations conducted at the site by Thompson were very different from those conducted in earlier years by ITT, involving a much simpler and more limited series of products and processes. Our investigation revealed, however, that Thompson had acquired certain ITT files at the time it purchased the assets of the ITT Thompson Metals Division and that these documents had been acquired by MVC when it acquired Thompson. While these documents may not be strictly responsive to your information request, we have reviewed them and are producing any which might be of interest to you.

I apologize for the volume of material included as attachments to our client's response. We felt that it was preferable to take an inclusive approach and let the Agency decide what was really of interest.

As you can see from the enclosed information, Thompson did not conduct significant polluting activities at the Madison site. There is evidence, however, that there was significant potential for contamination during the period of operations of predecessors at the site. We conclude that, since Thompson acquired the business by asset purchase from ITT, Thompson - and, therefore, MVC, as successor to Thompson - is not liable for contamination resulting from the operations of its predecessor(s).

This conclusion is based upon the facts that (i) Thompson acquired the business by asset purchase; (ii) Thompson management was an entirely different group of individuals from ITT's management; and (iii) the business conducted at the site by Thompson was markedly different from that conducted by its predecessor, both with respect to products and processes.

If I may be of further assistance, please do not hesitate to call upon me.

Let me thank you for your cooperation and understanding in this matter.

Very truly yours,

Jack D. Shumate

JDS/rae

Document: 57888005/0004/206507/4fcb01!.DOC

# Butzel Long

A PROFESSIONAL CORPORATION

ATTORNEYS AND COUNSELORS

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February 18, 1999

Elisabet M. Ellis, Assistant Regional Counsel
Environmental Accountability Division
U.S. Environmental Protection Agency - Region 4
61 Forsyth Street
Atlanta, GA 30303

Re: ITT Thompson Industries Superfund site
Madison, Madison County, Florida
Section 104(e) Request for Information
Response of McKechnie Vehicle Components (USA), Inc.

Dear Ms. Ellis:

Butzel Long, as counsel for McKechnie Vehicle Components (USA), Inc., ("MVC") submits the following information and the attached documents in response to the Agency's Request for Information, received October 27, 1998.

We believe that, due to the particular circumstances involving MVC with respect to this site, the following introductory statement will be of value in understanding our answers to the particular questions in your Section 104(e) request.

## Introductory Explanation

The Madison plant was operated for many years by several different companies. We believe that manufacturing at this location dates back at least to the 1950's. We also believe that this plant manufactured automobile parts from some time in the 1950's to 1991.

At some time prior to 1973, ITT Corporation acquired the business which included a lease of the Madison plant and ownership of the operations conducted at that plant. The business thereafter was operated under the name of ITT-Thompson (in effect, the Thompson Division of ITT.) Our investigation has revealed that during the time that ITT operated the business, there were numerous changes in the business, including changes in products, processes, and chemicals employed and/or generated by those processes.

In early 1989, seven investors organized a new company, Trim-Tech/Thompson International, Inc., a Delaware corporation, to acquire the assets of what was officially known at that time as the ITT Thompson Metals Division. The purchase was effected March 29, 1989 by an Agreement for the Purchase and Sale of Certain Operating Assets of ITT Thompson Metals Division. This agreement was concluded between ITT Corporation, as seller, and Trim-Tech/Thompson International, Inc., as purchaser. One of the assets acquired by Trim-Tech/Thompson International, Inc. ("Thompson") was the lease on the Madison plant.

Thompson occupied the Madison plant and conducted certain operations (more fully described below) at that location until the lease expired on December 31, 1990. At that time, operations ceased at the site and Thompson vacated the Madison plant in early 1991.

Between 1989 and 1991, a great deal of equipment was shipped from the Madison plant to facilities in Holly Springs, Mississippi and Newberry, South Carolina. During that period, at least certain of the corporate offices were maintained in Valdosta, Georgia.

When the Madison plant was vacated, existing files and records which were not destroyed were moved to some other location(s). We are not certain what records may have gone to Holly Springs, which may have gone to Newberry, and which to Valdosta.

At some point prior to 1996, Thompson became a wholly owned subsidiary of DLO Investments, Inc. In 1996, all of the stock of DLO was sold and the company's name was changed to MVC.

Upon receipt of the 104(e) request from the Agency, our client made a thorough search for any records relating to the Madison plant. After a lengthy search, MVC assembled 23 boxes of documents. Ms. Denise Shaw, a Legal Assistant for Butzel Long, spent 3 days reviewing those 23 boxes of documents to identify those which might be relevant in any way to the Agency's information request. As a result of that initial review, 3 boxes of copies of MVC file documents were forwarded to the Birmingham, Michigan, offices of Butzel Long where Ms. Shaw and Jack Shumate, an attorney at Butzel Long and environmental counsel for MVC, undertook a more detailed review.

A substantial portion of the documents which have been found were obviously those left at the facility by ITT upon its sale of the assets of the Thompson Metals Division and related to conditions and events prior to the March, 1989, asset purchase by Thompson. Since we interpret the 104(e) request to seek all relevant information and documents in the possession of MVC (rather than just a request for information concerning the 1989-1991 period) we are providing that information and those documents in this request.

In an attempt to gain further information and clarify certain questions resulting from our review of the file documents, we have attempted to locate former employees who were knowledgeable about the operation. Unfortunately, thus far the only former employee whom we have been able to locate is Mr. James Rowe. Mr. Rowe has been an invaluable source of information, having served as plant manager for ITT at the Madison facility from 1973 to 1984, having been one of the investors who organized Thompson in 1989 to acquire the assets of the Thompson Metals Division and served as vice president of Thompson from 1989 until the plant was vacated in 1991. Mr. Rowe, however, was not physically located at the Madison plant after 1984 and did not have detailed information in response to some of our questions.

Other key employees left Thompson either in 1991, when the Madison plant was vacated, or subsequently. We do not presently have information concerning the whereabouts of some of these former employees and we are still attempting to contact the former Environmental Coordinator for the Madison plant.

MVC, with the assistance of its environmental counsel, have thus conducted an extensive, time-consuming investigation to obtain information concerning the Madison plant. It must be borne in mind, however, that MVC did not acquire its interest in Thompson until after the Madison plant had been vacated; thus, MVC personnel have limited knowledge of that plant or its operations and have not had the opportunity to physically inspect the property. MVC's response to the Agency's Request for Information is necessarily limited, therefore, to information obtained from documents and from interviews with one former employee.

Based upon this investigation, the following answers to the Agency's questions are submitted on behalf of MVC.

Responses to Agency Questions

1. Q: Identify the person(s) answering these questions on behalf of Respondent.

A: These answers are submitted on behalf of MVC by its environmental counsel:

Jack D. Shumate, Esq.
Butzel Long
32270 Telegraph Road, Suite 200
Birmingham, MI 48025-2457
Telephone: (248) 258-1405
Facsimile: (248) 258-1439
Email Address: shumate@butzel.com

2. Q: For each and every Question contained herein, identify all persons consulted in the preparation of the answer.

A: Mr. Bruce Graben
Chief Financial Officer
McKechnie Investments, Inc.
2201 Regency Road, Suite 701
Lexington, KY 40503
Telephone: (606) 276-5821
Facsimile: (616) 278-1186

Mr. Mark Bennett
Division Director
McKechnie Vehicle Components
801 John C. Watts Drive
Nicholasville, KY 40356
Telephone: (606) 277-8892
Facsimile: (606) 277-8896

Sandy Madison
Assistant to Mr. Mark Bennett
McKechnie Vehicle Components
801 John C. Watts Drive
Nicholasville, KY 40356
Telephone: (606) 277-8891
Facsimile: (606) 277-8896

Mr. James Rowe
7990 A1A South, Unit 305
St. Augustine, FL 32086
Telephone: (904) 461-0008

Ms. Denise M. Shaw, Legal Assistant
Butzel Long
32270 Telegraph Road, Suite 200
Birmingham, MI 48025-2457
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Facsimile: (248) 258-1439
Email Address: didier@butzel.com

Paul S. Lewandowski, Esq.
Former Associate of Butzel Long
Presently employed in the Legal Department, Owens Corning International, Toledo, Ohio.

3. Q: For each and every Question contained herein, identify all documents consulted, examined, or referred to in the preparation of the answer or that contain information responsive to the Question and provide true and accurate copies of all such documents.

A: As noted above, MVC conducted a company-wide search, under the direction of Messrs. Graben and Bennett and Ms. Madison, for all documents related in any way to the Madison plant. Twenty-three boxes of documents were assembled and reviewed. The vast majority of these documents were not responsive to this request, containing miscellaneous corporate records. We are not submitting copies of those records because they are simply too voluminous and would be of no value to the Agency. The records are available, however, and arrangements can be made to examine them by contacting either Ms. Madison, Ms. Shaw or the undersigned.

Of the three boxes of records which were identified for more detailed review, all that contained information which might possibly be relevant to the Agency's Request for Information are included as attachments to this response. Many of them are referenced, specifically, in answers to the following questions.

Some of those documents which were subjected to more detailed review were determined not to be relevant to this Request for Information and are not being submitted. Examples are those documents concerning the Consent Order with the State of Florida relating to the investigation and remediation of the Madison County Landfill and privileged communications between ITT and its counsel relating to that matter. Those documents, except for privileged communications with counsel, are available for review at the office of Butzel Long in Birmingham, Michigan, and arrangements to review them can be made by contacting either Ms. Shaw or the undersigned. We will not make available those documents

which constitute privileged communication between ITT and its counsel without first consulting ITT.

4. Q: Describe your client's (Thompson), operations at the Madison, Florida plant including length of time at the facility, products generated, and general production processes. Describe the relationship between Thompson and Madison Industries during that time and provide the names of the individuals acting on behalf of Madison Industries and Thompson during that time.

A: Thompson operated the Madison plant from the date of its asset purchase from ITT, March 29, 1989, until the expiration of the lease on the plant, December 31, 1990. At that time, operations ceased and Thompson vacated the site in early 1991.

Thompson's operations at the Madison plant were limited to stamping and buffing of automobile wheel covers and attaching automobile manufacturers' emblems to the wheel covers. Production processes included stamping the wheel cover, except in those cases where a completed wheel cover was produced elsewhere and shipped to Madison for polishing only, buffing the wheel covers using an animal fat buffing compound on a cloth buffing wheel, and attaching manufacturers' emblems to wheel covers using adhesives specified by the manufacturer.

The relationship between Thompson and Madison Industries was limited to matters involving the lease of the site. Madison Industries was the property owner-lessor and Thompson was the lessee as of March 29, 1989.

The only knowledge we have concerning individuals involved in any way with the operations of Madison Industries is provided from information in the lease file. The lease is signed by Patrick Cantey as president of Madison Industries. We find in the lease file an unsigned draft lease containing a jurat for Pat Cantey, Jr. and J.B. Davis, Jr., as president and secretary, respectively, of Madison Industries, Inc. We also find correspondence concerning the lease to Mr. Pat Cantey at Cantey Motor Co., 211 W. Base Street, Madison, Florida 32340.

Finally, we find in the file a letter concerning the lease of the property signed by Mr. David A. Bisset, manager, manufacturing engineering, ITT Thompson Industries Division, P.O. Box 928, Valdosta, Georgia 31601.

5. Q: Describe why and how Thompson no longer operated at the Madison, Florida plant and ITT became the sole operator. Include a description of personnel changes or processing changes that might have occurred as a result.

A: This question seems to imply that ITT became the operator of the Madison plant after Thompson ceased operations at the site. This is incorrect. As noted above, ITT operated the facility from some time prior to 1973 until March 29, 1989. At that time, Thompson acquired the business as a result of an asset purchase from ITT and operated the plant until early 1991.

Thompson ceased to operate the plant because the lease had expired and it was deemed more efficient to consolidate operations at other facilities than to renew the Madison lease. There had been significant changes in the business over the course of the operating life of the Madison plant. The changes impacted the usefulness of the Madison facility.

Originally, the Madison plant had produced a number of items of trim for automobiles, including side moldings, grills, auto wheels, and wheel covers and ornamentation. This information was supplied by James Rowe in one or more telephone interviews with Paul Lewandowski in the fall of 1998 and confirmed in a telephone interview with Jack Shumate on February 5, 1999. Mr. Rowe further indicated that manufacture of this variety of products had necessitated use of a number of different processes, including metal stamping, machining, cleaning, degreasing (at one time using chlorinated solvent degreasers), chrome plating, painting, and buffing.

Mr. Rowe said that through the years, a number of these operations were either shut down at the Madison plant or moved to other facilities; thus, the use of trichloroethylene (TCE) had been phased out prior to the time that Mr. Rowe became plant manager in 1973. The TCE for degreasing

purposes was replaced by a non-chlorinated solvent supplied by the Houghton Company, but Mr. Rowe did not recall exactly what it was.

The chrome plating operation was discontinued in 1974 and the painting operation was discontinued at this site in late 1988 or early 1989 - at any rate, prior to the time that Thompson acquired the assets on March 29, 1989.

Mr. Rowe further indicated that by the time Thompson acquired the business in 1989, the demand for production from the Madison plant was limited to automobile wheel covers, the volume of business at the plant was substantially reduced, and the increasing move of the auto industry from chrome plated or stainless steel wheel covers and trim to plastic components had further changed the nature of the business.

When Thompson acquired the business, it significantly rebuilt the wheel cover portion of the business, but it was a very different type of business because of the continuing trend to the use of the plastic wheel ornamentation. In addition, Mr. Rowe said that a transaction was completed whereby the business of producing everything except wheel covers was traded to a competitor of Thompson's and, in return, Thompson acquired that company's wheel cover business. It was not clear from the telephone interviews with Mr. Rowe whether that major change in the business occurred near the end of the period of ITT operation or whether it occurred soon after Thompson acquired the assets in 1989.

The net result of all these changes in the business was that Madison simply ceased to be the right place to do business when the lease expired at the end of 1990. Indeed, as previously noted, throughout 1989 and 1990, Thompson was shipping presses and other major machinery out of the Madison plant to Holly Springs and Newberry. The documents, including memoranda and purchase orders for removal and transportation of equipment, are attached as Exhibit 1.

6. Q: Describe any operators who worked at the plant before Thompson or after Thompson and their activities at the facility. For each operator, indicate the waste stream generated and how it was handled.

A: We are a bit confused by this question because it is not clear how the Agency has used the term "operator" and that term is not defined. It is not clear whether the term "operator" refers to specific employees who operated machinery or processes or whether it refers to companies which may have leased the plant and been "operators" in the sense of CERCLA/ RCRA liability. We will attempt to address the question in both senses.

We have not been able to locate a list of employee job assignments, so we cannot identify individual employees who were operators of specific equipment or processes. We can tell you that James Rowe was the plant manager, as an employee of ITT, from 1973 to 1984. In 1984, Mr. Rowe suffered some health problems and was forced to go on a disability leave. He never returned to duty with ITT. In 1989 Mr. Rowe was one of the organizers of Thompson and served as a vice president of Thompson. In that capacity, he had authority over operations at the Madison plant from March 29, 1989 until it was vacated in early 1991. During that time, however, Mr. Rowe was not physically located at the plant.

Mr. Rowe advises that during the period when Thompson operated the plant, from March 29, 1989, until it was shut down, the plant manager was an individual named Al Gage. Mr. Gage transferred to the Holly Springs plant when Madison was shut down and subsequently left the company. His whereabouts are not presently known. During the time that Thompson operated the plant, Al Murphy was the plant engineer. Mr. Rowe indicated that he understands that Mr. Murphy is now retired, but his whereabouts are unknown.

Based upon the records which we reviewed, it appeared that, for the last several years that ITT operated the plant and during the period that Thompson operated it, Edwin B. Barefoot was the person most involved in environmental matters, including waste disposal. Mr. Rowe confirmed that Mr. Barefoot was the environmental coordinator for the plant. We have attempted to contact Mr. Barefoot by telephone but have been unsuccessful thus far. Mr. Barefoot's address and telephone number are:

Edwin B. Barefoot
1446 Foxcroft LP
Columbus, GA 31904
Telephone: (706) 323-5174

As noted above, ITT was the operator of the plant prior to Thompson. We do not have information concerning the operations at this site after Thompson vacated in early 1991.

7. Q: Provide a complete list, including quantities, of all chemicals and chemical compounds used, stored, treated during Thompson's tenure at the site. Provide a description of all chemical processes used at the site. Include a detailed description of any processes that may have or did generate hazardous wastes or hazardous substances and what those wastes and substances were.

A: The only processes employed by Thompson during its operation of the site were stamping and polishing of automobile wheel covers and gluing manufacturer's emblems onto the wheel covers. Mr. Rowe advised that, increasingly, during this 1989-1991 period, the wheel covers were plastic and that, by the end of that time, very few metal wheel covers were being processed. The plastic wheel covers were produced at other plants, so very little production was left at Madison.

Mr. Rowe reported that the only substance used in the stamping operation was a drawing compound. He recalls that it was supplied by Houghton, but does not remember anything further about the material.

The main operation at the plant during Thompson's tenure was polishing wheel covers. This was done using a buffing wheel. The buffing compound, which was applied to the cloth wheels, was animal fat with a small amount of sand as an abrasive; occasionally, a small amount of aluminum oxide would also be added to the sand and animal fat mixture. There was no buffing compound waste generated, as such. The cloth covers on the buffing wheels would wear away as a cloth dust on the floor. Mr. Rowe assumes that some residue of the animal fat buffing mixture would have adhered to the cloth dust. The dust was swept up and disposed with general domestic trash in the dumpster.

Mr. Rowe indicates that adhesive was used to attach manufacturer emblems to wheel covers. Suppliers which had their emblems glued onto the wheel covers during the 1989-1991 period included Ford, General Motors, Chrysler, and Volkswagen. Mr. Rowe said that the manufacturer would supply the emblems and specify the particular adhesive which was to be used. He said that there was no waste generated from the gluing process.

Mr. Rowe said that the plant generated no hazardous waste during the period that it was operated by Thompson.

We interpret this question to request MVC to provide any information and documents which it has concerning chemical processes used, and waste generated, at the site prior to the time that Thompson acquired the assets. Since certain records from the period of operation by ITT were left at the site and included in those file documents in MVC's possession, we will also provide what information our investigation has provided responsive to this question for the period in which ITT operated the plant.

Located in the records was an extensive library of MSDSs. Unfortunately, the MSDSs were filed alphabetically, without an indication of the period of time the substance was used or the process in which it was employed. Obviously, therefore, the MSDSs may be of limited use; nevertheless, we have included all MSDSs located from the files of the Madison plant as Exhibit 2 to this response.

We also discovered in the files waste shipping manifests for the period 1982 through 1991. This would represent the last 7.25 years of ITT operation and the period of Thompson operation.

Ms. Shaw has tabulated the quantities reported on the various shipping manifests and has prepared a summary of quantities of various types of materials shipped during each year. For the year 1989, she has provided separate totals for the January to March period, during which ITT was the plant operator, and the April to December period, when Thompson was the operator. Ms. Shaw's summary is attached as Exhibit 3. Copies of the waste shipping manifests are attached as Exhibit 4.

As you can see from a review of Ms. Shaw's summary, the total volume of waste manifested from the Madison plant during the years 1985 through 1988 was significantly higher than that manifested from the plant during the period of operation by Thompson. This is consistent with Mr. Rowe's explanation of the operations during the period that Thompson operated the plant. It is possible that the volume of material shipped from the plant by Thompson in the April to December, 1989, period may well have included large quantities of waste left at the plant from the ITT period of operation. This possibility is particularly supported by the observations of various plant inspections (discussed below) noting the practice of accumulating large quantities of unlabeled drums of waste at the plant during the period of ITT operation.

We do not know the source of the waste naphtha manifested from the plant during the Thompson period. It is hoped that Mr. Barefoot may be able to shed some light on this if and when we are able to contact him.

Mr. Rowe has described processes that generated hazardous waste at the plant during the period 1973-1984 and, in one case, prior to his arrival in 1973. The latter process was degreasing using TCE. Mr. Rowe indicated that the use of TCE as a degreaser had been discontinued prior to the time that he became plant manager in 1973. He advised that during his period as plant manager parts were degreased using a non-chlorinated substance supplied by Houghton, but he could not recall any further details of that substance.

Mr. Rowe indicated that the plant engaged in chrome plating until 1974, at which time that process was discontinued and the plating equipment was removed. He does not recall the details of the removal or disposal of the plating equipment.

After 1974, Mr. Rowe indicated that the plant engaged in stamping and machining of stainless steel wheel covers, but that chrome plating was done at a different facility and the wheel covers shipped to Madison for buffing. He indicated that wheel covers, possibly moldings, and other parts were painted at the facility during his period as plant manager, but that the painting operation had been shut down prior to Thompson's

acquisition of the asset in 1989. He believes that the painting operation was discontinued at Madison in late 1988 or early 1989. Mr. Barefoot may be able to confirm this if we are able to contact him.

Mr. Rowe advised that, prior to 1973, TCE had been used to clean the paint masks, but during his period as plant manager they were cleaned with lacquer thinner. He was unable to provide any further detail concerning the lacquer thinner.

MVC is attempting to locate yearly production information and bills of materials from which it might be possible, through the use of a mass balance calculation, to project the approximate amounts of specific materials used, and wastes generated, for at least some years in the 1980's and 1990. To date, it has not been able to do this and one must recognize that it is an extremely ambitious undertaking, the success of which cannot be guaranteed. At this point, we simply have no basis for estimating total quantities of substances used at the site and we have located no records providing us with that information.

8. Q: During the course of Thompson's operations at the facility in Madison, were there any advertisement brochures generated or supply lists or product lists created? Please provide copies of both or any documents that might fit these general purposes.

A: To our knowledge there were none, nor have we located any such documents, in either draft or final form, in the files. It must be borne in mind that Thompson was selling to a very limited market - automobile manufacturers - and Mr. Rowe advises that much of Thompson's success in rebuilding the business and increasing sales resulted from the personal contacts of Thompson's corporate managers with individuals in the auto industry responsible for purchasing such parts.

9. Q: Provide a detailed description of the waste streams at the Madison plant including what chemicals were treated or disposed of, where and how the chemicals were treated or disposed of, and where the waste streams went inside the plant and outside the plant. Include a description of how different wastes were handled and who might have handled them.

Describe the care you exercised with respect to the hazardous materials at the site.

A: Our investigation disclosed no plant layouts, process descriptions, or piping diagrams; consequently, the only information our investigation has been able to locate to date is that provided by Mr. Rowe in his telephone interviews with Messrs. Lewandowski and Shumate and brief summaries of operations in plant inspection reports which are attached as exhibits.

As previously noted, Mr. Rowe reported that the only process waste generated by Thompson at the plant was cloth material worn off of the buffing wheels, possibly with some of the animal fat buffing compound adhering to the cloth dust. Also as noted above, Mr. Rowe advised that this was swept up and co-disposed with domestic trash in the dumpster.

Mr. Rowe reported that during the period when ITT operated the plant TCE waste streams had been recycled in an on-site still. The recovered solvent was reused. Mr. Rowe did not know how the still bottoms were disposed. He had the TCE stills removed in 1974 after he became plant manager. He does not recall the details of the disposal of the stills.

During Mr. Rowe's period as ITT's plant manager, from 1973 to 1984, the non-chlorinated solvent which was used at the plant was stored in above ground tanks outside the building. The solvent was piped into the building and used solvent was piped back out into a waste solvent tank adjacent to the clean solvent storage tanks. The tanks were located outside the building, adjacent to the southwest corner of the building, and between the building and the small pond and marsh area southwest of the plant. The tanks were located within a containment structure. Mr. Rowe indicated that the solvent supplier removed the used solvent. His understanding was that the supplier recycled it. He believes that the supplier was a company named McQueen and thinks that it was located in Atlanta. He is not certain of the name and location, however. The tanks were removed and sold for scrap after Thompson took over the plant. Mr. Rowe said that the tanks were clean and that there was no need to dispose of tank bottoms when they were removed.

Some more information concerning plant processes and waste streams at the plant may be provided by Contamination Assessment Reports prepared for ITT by Bryson Industrial Services in 1987. Copies of those reports are attached as Exhibit 5.

We also attach the other inspection reports located in our investigation. These may also provide some information concerning processes, waste streams, and waste management. These include a December, 1984 inspection report by Wapora, Inc., which is attached as Exhibit 6; report of a January, 1984 inspection by the Florida Department of Environmental Regulation (DER) (which is attached to a Notice of Violation), attached as Exhibit 7; report of a July, 1984 DER inspection report, which is attached as Exhibit 8; and copy of an October 1985 DER inspection report, which is attached as Exhibit 9.

10. Q: Provide a list of employees and managers who worked at the Madison plant during any of Thompson's time there. Identify all persons, including respondent's employees, who have knowledge, information or documents about the generation, use, purchase, treatment, storage, disposal or other handling of materials at, or transportation of materials to the site.

A: As noted above, James Rowe was the Thompson vice president to whom the Madison plant manager reported. Mr. Rowe has been interviewed by telephone, provided extensive information, and that information is reported in this response.

Al Gage was the plant manager. His present whereabouts are unknown.

Al Murphy was the plant engineer. His present whereabouts are unknown.

Edwin B. Barefoot was the plant environmental coordinator. His address and telephone number are reported above. We have attempted to contact Mr. Barefoot by telephone but have not been successful thus far. We intend to continue to try to contact him and will file a supplemental response should we be successful in interviewing Mr. Barefoot and obtain any additional information.

11. Q: Describe the physical characteristics of the site, including but not limited to, the following:
    a. groundwater wells, including drilling logs.
    b. past and present stormwater drainage system, sanitary sewer system, including septic tank(s) and subsurface disposal field(s).

A: The only soil or water samples discovered in our investigation were those reported in the Bryson reports (Exhibit 5).

As noted above, our investigation did not locate any detailed plant layouts and piping diagrams, but the Bryson reports (Exhibit 5) and the Wapora report (Exhibit 6) provide limited information concerning site drainage. In particular, the Wapora report, at page 4, has a brief discussion of site stormwater drainage patterns. It noted that there were two discharges of wastewater to the adjacent pond (which it described as a sink hole lake) which were identified during its inspection. One was described as an intermitten stormwater discharge in the vicinity of the loading dock.

The Madison plant discharged to the Madison city sewer system. Apparently, liquid waste materials were disposed to the sanitary sewer. This conclusion is drawn from the statement on page 4 of the Wapora report that caustic wastewater was being considered for discharge to the Madison STP, provided that the facility could handle the hydraulic load. Also in that paragraph there is the suggestion that rinsewater discharge might be controlled by disposal to the sanitary sewer. When interviewed, Mr. Rowe did not recall exactly what was discharged to the sanitary sewer or what alternate means may have been employed for disposal of waste liquids. Our investigation produced no evidence of site septic tank(s) or subsurface disposal field(s) and Mr. Rowe indicated that there were no underground installations in use at the facility during the periods about which he had knowledge, 1973-1984 and 1989-1991.

12. Q: Provide all existing technical or analytical information about the site, including but not limited to, data and documents related to soil, water (ground and surface), geology, geohydrology, or air quality on and about the site.

A: Our investigation yielded very little information on these subjects. It was limited to the information contained in the Bryson reports (Exhibit 5.)

We understand that there was extensive investigation by DER in the vicinity of the near-by Madison County Landfill prior to ITT's entering into a Consent Order concerning that landfill. We presume that reports of those studies are available from DER and presumably would provide information concerning regional geology and hydrogeology. We found no evidence of any attempt having been made to correlate the geology or hydrogeology of the site to any information developed in any of those studies.

We did find a file containing miscellaneous air quality information concerning the site. We believe this is of little value to the Agency's present investigation, but we are attaching it as Exhibit 10 for the purpose of full disclosure.

13. Q: Describe all leaks, spills or releases or threats of releases of any kind into the environment of any hazardous materials that have occurred or may occur at or from the site, including but not limited to:

a. When such releases occurred or may occur.
b. How the releases occurred or may occur.
c. What hazardous materials were released or may be released.
d. What amount of each such hazardous material was so released.
e. Where such releases occurred or may occur.
f. Any and all activities undertaken in response to each such release or threatened release.
g. Any and all investigations of the circumstances, nature, extent, or location of each such release or threatened release including the results of any soil, water (ground or surface), or air testing that was undertaken.
h. All persons with information relating to subparts a-g of this question.

A: a. We have very little information to document that any releases actually did occur and when such releases may have occurred.

Essentially, our information is limited to anecdotal evidence provided by Mr. Rowe and certain observations in the Wapora report (Exhibit 6) and the report of the 1985 DER inspection (Exhibit 9.).

Mr. Rowe told Mr. Shumate in a telephone interview that, when he first arrived at the plant as ITT's manager in 1973, one could stand at the edge of the pond adjacent to the plant on a clear, sunny day and see to the bottom of the pond. Mr. Rowe reported that on such occasions one could clearly see drums on the bottom of the pond. Mr. Rowe said that he did not know how, when, or by whom the drums were placed in the pond and he did not know what the drums contained, if anything. We note that the Bryson reports (Exhibit 5) tend to indicate that there was no significant contamination of the pond water at the time of the field investigations upon which those reports are based.

Mr. Rowe reported that during his time as plant manager there were spills from process equipment from time to time. He said that originally the spills were cleaned up by soaking up the spilled materials with oil dry, sweeping it up, and (he thinks) disposing it in the dumpster. He said that the use of the absorbent material to clean up spills was discontinued because the crew was careless in throwing the oil dry material around, with the result that it got into the machinery. When the use of oil dry material was discontinued, Mr. Rowe said, the plant went to a mop and bucket method of cleaning up spills. He did not know or recall how the material recovered in the buckets was disposed.

The Wapora report, at page 3, notes observations suggesting that there had been leaks of material into the containment diked area around the outside solvent storage tanks and that liquids had seeped through the dike joints. The report suggested that these seeps would have reached the adjacent pond. There is no indication when such leaks and subsequent seepage may have occurred, but it must have been prior to the Wapora inspection visit on December 11, 1984.

possession, custody or control, then identify the persons from whom such information or documents may be obtained.

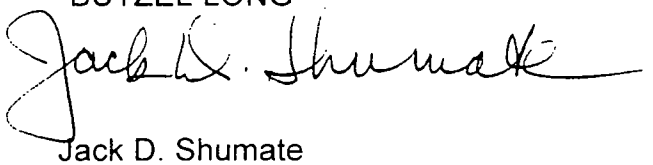
A: We are not aware of any such persons or documents.

Certain facets of the investigation are ongoing. In the event that MVC or Butzel Long, on behalf of MVC, locates further information responsive to this request, we will file a supplemental response on behalf of our client.

If you have any questions concerning the foregoing or the attached exhibits or if I may be of further assistance, please feel free to contact me.

Very truly yours,

BUTZEL LONG



Jack D. Shumate
Counsel to McKechnie Vehicle Components (USA), Inc.

JDS/rae

Enclosures

Reference No.: 8
HRS Documentation Package
Site Name: ITT-Thompson International, Inc.
FLD043047653

REPORT

Privileged and Confidential

NORTH FLORIDA
JUL 14 1997
BUREAU OF WASTE CLEANUP
JUL 23 1997 - JACKSONVILLE
TECHNICAL REVIEW SECTION

# DIRECT-PUSH INVESTIGATION FOR INTERIM REMEDIAL ALTERNATIVE ASSESSMENT

# FORMER ITT/THOMPSON FACILITY MADISON, FLORIDA

Prepared for
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3000 University Drive
Auburn Hills, Michigan 48326
July 1997

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# 1.0 INTRODUCTION

This report summarizes the findings of the field activities outlined in the recommendations section of the Contamination Assessment Report (CAR) Addendum II dated October 1996 for the former ITTA/Thompson facility located in Madison, Florida (Figure 1). The CAR Addendum II was prepared by Woodward-Clyde Consultants/ITT Automotive (ITTA) and submitted to the Florida Department of Environmental Protection (FDEP),

The field work was conducted by Woodward-Clyde on April 28, 1997 through May 3, 1997. Direct-push and mobile laboratory analyses was performed by Transglobal Environmental Geochemistry (TEG), Inc. based in Atlanta, Georgia. Confirmatory soil and ground water sample analyses were performed by Savannah Laboratories and Environmental Services, Inc. (SLES), Tallahassee, Florida. Microbacterial analyses was performed by Microbac Laboratories, Inc. in Venice, Florida.

This report presents the hydrologic, geologic, soil, and ground water analytical data collected in April and May 1997. This most recent data focuses on the source areas located at the site. Figure 2 is a site map which identifies the location of all the soil borings, piezometers, and monitoring wells installed to date. Soil borings installed during this round of sampling include borings SB-14 through SB-29.

# 2.0 FIELD APPROACH

## 2.1 GOALS OF FIELD EFFORT

In the Proposed Approach submitted to ITTA on September 23, 1996, Woodward-Clyde proposed to conduct a discrete volatile organic compound (VOC) distribution study consisting of a 5-day direct-push discrete-interval assessment of VOCs in ground water and vadose zone soil using gas chromatography (GC) analyses. The results of the analyses of soil and ground water samples from various depths and locations across the site were to be utilized to:

- Assess the spatial distribution of dissolved-phase VOC contamination
- Identify location and distribution of sources of ground water contamination
- Identify location and distribution of source non-aqueous phase liquids (NAPLs) (if present)
- Assess the relationship between VOC distribution and lithostratigraphy
- Obtain physical and chemical information on selected soil and ground water samples useful for remedial design

## 2.2 EQUIPMENT AND PERSONNEL

In order to retrieve and analyze the samples required to conduct the VOC distribution study, Woodward-Clyde employed the services of TEG to perform direct push sampling of ground water and soil and on-site analytical services. TEG and Woodward-Clyde mobilized to the former ITTA/Thompson facility in Madison, Florida on Monday, April 28, 1997. TEG provided a MEGAPROBE$^{tm}$ Direct Push rig with a two-man crew, accessory equipment, and materials for the purpose of retrieving ground water and soil samples. TEG also provided a self-contained mobile laboratory with two independent GC systems and a two-man laboratory staff, one of which departed the project site after the first day of set-up and GC calibration. Woodward-Clyde staff included a full-time on-site hydrogeologist who provided direction and oversight to the TEG crew. Woodward-Clyde also provided staff based in our Tallahassee, Florida office to compile and analyze the data

generated by the mobile GC laboratory. Operations commenced on the same day as mobilization, and continued for a total of 6 days, ending on Saturday, May 3, 1997.

## 2.3 SOIL AND WATER SAMPLE COLLECTION

Soil samples for GC analysis and for lithologic description were collected from both the vadose and phreatic zones of the sediments beneath the project site. Samples were retrieved by the split-spoon method, using a clear, cylindrical liner within the split-spoon. The split-spoon was advanced to the top of the desired sampling interval by the hydraulic ram action of the MEGAPROBE$^{tm}$ rig. At the specified depth, the piston in the split-spoon was released with an extension tool lowered through the drill rod, and the split-spoon was advanced another 2 feet in depth. The soil samples were retained within the split-spoon liner by a plastic core-catcher.

Soil samples were immediately delivered to the Woodward-Clyde hydrogeologist and were screened for volatile organic compounds (VOCs) with a calibrated Foxboro Organic Vapor Analyzer (OVA), model number OVA-128. OVA readings were conducted in both the unfiltered mode and the filtered (methane only) mode. Approximate VOC concentrations were obtained by subtracting the filtered value from the unfiltered value. Lithologic descriptions were also completed at this time. Selected soil samples that registered positive VOC concentrations were delivered to the mobile laboratory for analyses.

In order to collect the ground water samples, the direct-push screen assembly was advanced in the closed configuration by the hydraulic ram action of the MEGAPROBE$^{tm}$ rig. When the bottom of the specified sampling interval was reached, the extension tool was lowered through the drill rod and the metal screen was released. The drill rod was then pulled back a distance of 2 feet, exposing the screen to the native formation. The extension tool was used to verify that the screen had been exposed, and the screen was physically extended, if necessary.

In order to determine the depth of the water table for collection of LNAPL samples, if present, at locations that had not been sampled with the split-spoon, attempts were made to collect ground water samples at relatively close vertical intervals. If the chosen sampling depth was above the water table, the tool was withdrawn, and the process was repeated at a

deeper interval. On some sampling attempts at deeper depths, when clay was encountered, no water was produced from the sampling interval. In this situation, the probe was withdrawn 2 feet at a time until water was produced. This strategy ensured that the sampling device would recover any dense non-aqueous phase liquids (DNAPLs), if present, at the bottom of a water-bearing lithologic unit. Once it was verified that the screen was properly exposed, ¼-inch new Teflon™ tubing was lowered to the total depth of the probe. The tubing was attached to a peristaltic pump, which was then used to purge the sampling device and to collect a water sample. For each sampling point at which water was recovered, three sample containers were filled for GC analysis and were immediately delivered to the mobile GC laboratory for analyses by USEPA Methods 8010 and 8020.

A total of eighty-one samples were collected from 16 boring locations. Of these samples, water samples were retrieved and analyzed by USEPA Methods 8010 and 8020 from 56 different 2-foot intervals. Soil samples were collected and analyzed from 13 intervals. Lithologic descriptions alone were completed for 12 sample intervals, while lithologic information was retrieved from 20 of the intervals that were sampled and analyzed for Methods 8010 and 8020. Additionally, 26 sampling attempts failed to produce water from the selected intervals, and two attempts (one for lithology and one for water sampling) failed to produce a sample due to equipment difficulties. Duplicate samples were collected from four intervals (three water, one soil) for quality assurance purposes. These samples were analyzed by SLES in Tallahassee, Florida using USEPA Methods 8010 and 8020, as well as for pH, iron, hardness, alkalinity, dissolved oxygen, nitrogen, phosphorous, and BOD/COD. Samples were also collected and submitted to Microbac Laboratories in Venice, Florida for analysis of content of iron bacteria, pseudomonas bacteria, and for plate counts of heterotrophic and anaerobic bacteria.

## 2.4 SAMPLE LOCATIONS AND DEPTHS OF SAMPLING INTERVALS

The locations of the 16 borings (SB-14 through SB-29) are depicted in Figure 2. Fourteen of these locations are within the paved area on the southwest side of the main warehouse structure and two borings were located inside the warehouse. These borings required the use of a concrete-cutting core saw to access the soil beneath the building.

Each boring represents from 1 to 19 samples collected at depths ranging from just below land surface (bls) to 70 feet bls, as outlined in Table 1. Depths for sample collection were selected based on field decisions regarding lithologic observations, VOC concentrations (as measured by the field OVA), and laboratory results, which were compiled nightly and utilized to direct the depth and location of subsequent samples.

## 2.5 BOREHOLE GROUTING

Grouting was performed to minimize the potential for vertical migration of fluids through the borehole. Following the collection of the final sample from a borehole, the drilling crew utilized a GEOPROBE™ pressure grouting system to grout the borehole from bottom to land surface. The drill rod was first lowered to the bottom of the hole with no tool on the end of the drill rod. A grout mixture consisting of neat portland cement mixed with up to 6 percent bentonite was prepared in the grouting machine, and the system was then connected to the top of the drill rod with a high pressure hose and drill rod adapter fitting. Grout was then pumped into the drill rod to fill the borehole from the bottom up. Pumping of grout continued until fresh grout was observed at land surface, and the hole was "topped off" every time a joint of drill rod was removed from the rod string. Following the removal of the last joint of drill rod from the borehole, the grout was topped off once more, and allowed to cure overnight. On the following day, a final plug of grout was pumped into the holes from land surface to account for shrinkage and settling of the grout. None of the holes exhibited signs of significant loss of grout to the formation. In one borehole (SB-14), the grout settled approximately 4 feet overnight; in all of the other boreholes the settling was on the order of 1 to 2 feet.

## 2.6 DECONTAMINATION

TEG personnel decontaminated the entire MEGAPROBE ™ rig and drilling equipment between each borehole. Decontamination was accomplished according to Woodward-Clyde's FDEP-approved Comprehensive Quality Assurance Plan (Comp QAP) by the use of a steam cleaner/pressure washer, scrub brushes, Alconox detergent, isopropanol, and deionized water. In addition, each tool (split-spoon or water sampling screen) was decontaminated each time it was used. Decontamination of the rig and drill rods was performed within a 12-foot by 12-foot fluid retention pad, constructed by TEG from

lumber and plastic sheeting. The sampling tools were cleaned in buckets at the boring location. All decontamination water was tested in the on-site laboratory and allowed to evaporate from the retention pad and/or infiltrate in the grassy area west of MW-5 after all drilling had been completed.

## 2.7 DEVIATIONS FROM PROPOSED SCOPE

In the proposed scope of work dated September 23, 1996, it was anticipated that approximately 20 samples per day, from up to 14 borehole locations could be collected and analyzed (Contamination Assessment Report Addendum II, October 1996, Figure 13). While the number of borehole locations actually sampled exceeded this estimate, the number of samples collected, analyzed, or described totaled 81. An additional sample was obtained from the inside of a previously unknown underground storage tank located on the west side of the building near SB-21.

# 3.0
# DATA PRESENTATION

## 3.1 GROUND WATER ANALYTICAL RESULTS

During the direct-push investigations at the former ITTA site Madison, Florida, 54 ground water samples were collected from 16 boreholes and analyzed for volatile organic compounds (VOCs) by TEG's mobile laboratory. An additional three samples collected at select locations were analyzed by SLES in for confirmation of the VOC analysis and additional ground water quality parameters. The primary chlorinated compounds detected were vinyl chloride (VC), cis-1,2-dichloroethene (cis-DCE), and trichloroethene (TCE). Other chlorinated compounds detected at lower levels included 1,1-dichloroethene (DCE), trans-1,2-dichloroethene (trans-DCE), 1,1-dichloroethane (DCA), chloroform, carbon tetrachloride, and 1,4-dichlorobenzene. Of the benzene, toluene, ethylbenzene, and total xylenes (BTEX) group, toluene was the primary detected compound, with benzene being the least detected BTEX compound. Tables 2 and 3 summarize detections in ground water from the direct-push activities by TEG's mobile laboratory and SLES, respectively. Raw analytical results from each of the respective laboratories are presented in Appendices A and B.

Additionally, three samples from select locations were collected and sent to Microbac Laboratories. Inc. in Venice, Florida for microbial analyses to be used for Remedial Alternative selection purposes. The results of these analyses are presented in Table 4. Raw analytical data from Microbac Laboratories is presented in Appendix C.

A water sample was collected from the underground storage tank (UST) located to the west of the building was analyzed for VOCs by TEG's mobile laboratory. The results of this analysis are presented in Table 2 and identified as "UST".

## 3.2 SOIL ANALYTICAL RESULTS

In an effort to delineate possible source areas at the former ITTA site in Madison, Florida, 20 soil samples were collected from 12 of the boreholes and analyzed for VOCs by TEG's mobile laboratory. One additional split-spoon sample collected from a select location was sent to SLES in Tallahassee, Florida for confirmation of the VOC analysis. The primary chlorinated compounds detected were vinyl chloride (VC), cis-1,2-dichloroethene (cis-DCE), and trichloroethene (TCE). The secondary chlorinated compounds detected included 1,1-dichloroethne (DCE), trans-1,2-dichloroethene (trans-DCE), chloroform, methylene chloride, bromodichloromethane, 1,1,2-trichlorethane, tetrachloroethene (PCE), chlorobenzene, 1,1,2,2-tetrachloroethane. and 1,2-dichlorobenzene. The majority of the secondary compounds were found in SB-29. Toluene, ethylbenzene, and total xylene concentrations were found to occur in very close proximity to one another at levels significantly greater than benzene. Table 5 summarizes detections in soil by TEG during the direct-push activities. The analytical results provided by SLES are included in Table 3. Raw analytical results from for the respective laboratories are provided in Appendices A and B.

# 4.0 CONCLUSIONS

## 4.1 HYDROLOGICAL DATA

Lithologic data and chemical analyses of ground water samples support the hydrogeologic framework model of the site as presented in the October 1996 Contamination Assessment Report (CAR) Addendum II site report. In this model, the site is shown to have two shallow, sandy, water-bearing zones separated by a southward dipping clay unit present in the southern half of the site (Figure 3). North of this clay layer, ground water elevations are significantly lower in the "B" water-bearing zone than in the uppermost "A" water bearing zone. The "B" zone in the northern and eastern portions of the site is relatively uncontaminated based on numerous ground water samples collected in this area where the A/B confining clay is not present.

Although the clay is effective in "perching" the water table a few feet above the underlying "B" zone, the overall confining characteristics of the clay in the western area of the site is unknown as well as the exact pathway for movement of contamination into the "B" zone.

## 4.2 ANALYTICAL DATA

The location of the most significant source areas have been identified based on numerous soil and ground water samples analyzed throughout the facility for site compounds of concern, (i.e., BTEX and chlorinated compounds). No significant source areas were found beneath the existing building, north of the building, or east of the building. Although most of the site has been sampled, data from the ground water samples do not indicate any other source areas are present. Two small impacted soil source areas have been identified between the west loading dock and the former aboveground storage tank diked area.

## 4.3 SOURCE AREAS - BTEX

### BTEX Occurrence in Soils

Benzene, toluene, ethylbenzene, and xylene were identified in soil samples located in two areas. One area is located just north of the former aboveground storage tank area near soil borings SB-15 and SB-24. The second area, located about 100 feet north, includes the area in and adjacent to SB-14 and SB-21.

### BTEX Occurrence in Ground Water

BTEX is present throughout the "A" zone, south of MW-5A in the western area of the site. Highest levels occur near the soil source areas discussed above.

Except for SB-15, total BTEX concentrations are generally less than 1,000 µg/L below a depth of 10 feet (ft). In SB-15, located in the southwest corner of the site, BTEX concentrations between 6 and 50 feet range from approximately 85,270 to 13,320 µg/L at a depth of 50 feet.

BTEX concentrations in ground water in the southwestern area decrease significantly in an easterly, northeasterly, and northerly direction. BTEX concentrations also decrease sharply in a westerly and southerly direction also when compared to ground water from MW's 4A and 7A.

## 4.4 SOURCE AREAS - CHLORINATED COMPOUNDS

### Chlorinated Compounds - Soil

Of all the soil samples obtained from this site, only one boring appears to have penetrated a shallow soil source area containing chlorinated organic solvents. SB-21, located adjacent to a recently identified underground storage tank, at a depth of 3 feet, contained chlorinated compounds including trichloroethylene (TCE) at 6,490 milligrams per kilogram (mg/kg) and cis 1,2 dichloroethylene (DCE) at 17.4 mg/kg, respectively.

A sample of the liquid inside of the tank showed low levels of cis-DCE, at 56.4 µg/L. The tank is suspected to be a source of shallow soil/ground water contamination. Soil and ground water data do not support the belief that chlorinated solvents were indiscriminately dumped on the ground at this site. Chlorinated compounds have not been detected in soil below 8 feet in this study or any of the previous studies conducted on-site.

*Chlorinated Compounds - Ground Water*

Low levels of chlorinated compounds are present in the ground water throughout the southern half of the site. Highest concentrations in shallow ground water occur in the vicinity of MW-5A and SB-14, SB-20, SB-21, and SB-28. These concentrations and distribution pattern are consistent with a single source area present near the UST.

Chlorinated compound concentrations generally increase with depth in the southern half of the site. The highest levels occur in the vicinity of SB-15 at 50 feet, the deepest depth sampled at this location.

Chlorinated compounds also are found eastward from SB-14, at SB-17 (3,623 µg/L at 50-ft depth); however, concentrations are near detection limits at 50 feet in SB-16 located further east of SB-17. This data indicates some movement of chlorinated compounds with depth along the top of the clayey material overlying the Floridan aquifer at the site.

Chlorinated compounds do not appear to be migrating, at any depth, towards the east, northeast, or north in the "A" or "B" water-bearing zones.

# 5.0 RECOMMENDATIONS

It is recommended that these identified vadose zone source areas be remediated by soil vacuum extraction (SVE). The initial remedial goal would be to remove VOCs from vadose zone soils such that the potential for migration to ground water is eliminated or reduced.

This report suggests that the extent of subsurface source of VOCs in the vadose zone soils is limited the western side of the property in two primary areas of approximately equal extent. One source area is predominantly contains petroleum VOCs, while the other area is a mixture of petroleum VOCs and chlorinated VOCs.

Vacuum extraction is likely to be the most feasible, cost-effective, and regulator-approvable approach. Soil vacuum (or "vapor") extraction is a proven technology for the removal of VOCs from the subsurface vadose zone. The basic design parameters are applied vacuum and pneumatic recovery rate. Many pilot tests and case studies have been performed during the development of this technology. It is now commonly applied without pilot testing for small systems like the one conceptualized for the site.

The conceptual design for recovery of residual VOCs in the vadose zone consists of:

- Installation of two horizontal vapor extraction wells at the two soil source areas identified in this report. Each vapor extraction well would be approximately 4 to 6 feet deep (or to a depth representing the average depth just above the high water table). Additional wells could be installed at alternate locations if indicated based on performance of the initial effort.

- A soil vapor extraction unit will be procured from a manufacturer regularly engaged in the design and fabrication of similar units.

- Recovered vapors will be treated on-site with a thermal oxidizer.

The vapor extraction system performance will be monitored to assess it's effectivness. Modifications to the system will be made as required to meet remedial goals.

# TABLE 1

## SUMMARY OF LITHOLOGIC DATA
## FROM VERTICAL PROFILE SAMPLING

**April 28 through May 3, 1997**
**Former ITT/Thompson Facility**
**Madison, Florida**

| BORING LOCATION | SB-14 | SB-15 | SB-16 | SB-17 | SB-18 | SB-19 | SB-20 | SB-21 | SB-22 | SB-23 | SB-24 | SB-25 | SB-26 | SB-27 | SB-28 | SB-29 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SAMPLE INTERVAL | LITHOLOGIC DATA | | | | | | | | | | | | | | | |
| 0 - 2 | WL | L | | | | | | | | | | | | | | |
| 2 - 4 | L | L | | | DRY | | | | | SL | SL | | | | | |
| 3 - 5 | | | | | | SL | SL | SL | | | | | | | | |
| 4 - 6 | L | WL | DRY | | DRY | | | | | SL | SL | W | | | | |
| 5 - 7 | | | | | | W | W | W | | | | | | | W | |
| 6 - 8 | WL | L | DRY | DRY | DRY | | | | W | SL | SL | | W | W | | W |
| 8 - 9 | | SL | | | | | | | | | | | | | | |
| 8 - 10 | WL | WL | DRY | W | DRY | | | | LS | W | W | W | | | | |
| 9 - 11 | | W | | W | | | | | | | | | | | | |
| 10 - 12 | L | FAR.(L) | DRY | DRY | DRY | DRY | W | W | | | | | | | | |
| 11 - 13.5 | | DRY | | | | | | | | | | | | | | |
| 12 - 14 | | L | DRY | | | | | | | | | | W | | | |
| 13 - 15 | | | | | | | | | | | | W | | | | |
| 14 - 16 | | L | DRY | | DRY | | | | | | | | | | | |
| 16 - 18 | W | LS | DRY | | | | | | | | | | | | | |
| 17 - 19 | | | | DRY | | | | | | | | | | | | |
| 18 - 20 | | L | DRY | DRY | W | | | | | | | | | | | |
| 20 - 22 | | WL | | | | | | | | | | | | | | |
| 22 - 24 | | LS | W | | W | | | | | | | | | | | |
| 24 - 26 | | L | | | | | | | | | | | | | | |
| 25 - 27 | | W | | | | | | | | | | | W | | | |
| 26 - 28 | | L | | | | W | | | | | | | | | | |
| 28 - 30 | W | WL | W | | W | | W | | | | | W | | | | |
| 30 - 32 | | | | | | | | | | | | | | | | |
| 32 - 34 | | | | | | | | | | | | | | | | |
| 34 - 36 | | | | W | | | | | | | | | | | | |

# TABLE 2

## SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS (VOCs) IN GROUND WATER FROM VERTICAL PROFILE SAMPLING AS REPORTED BY TEG'S MOBILE LABORATORY

April 28 through May 3, 1997

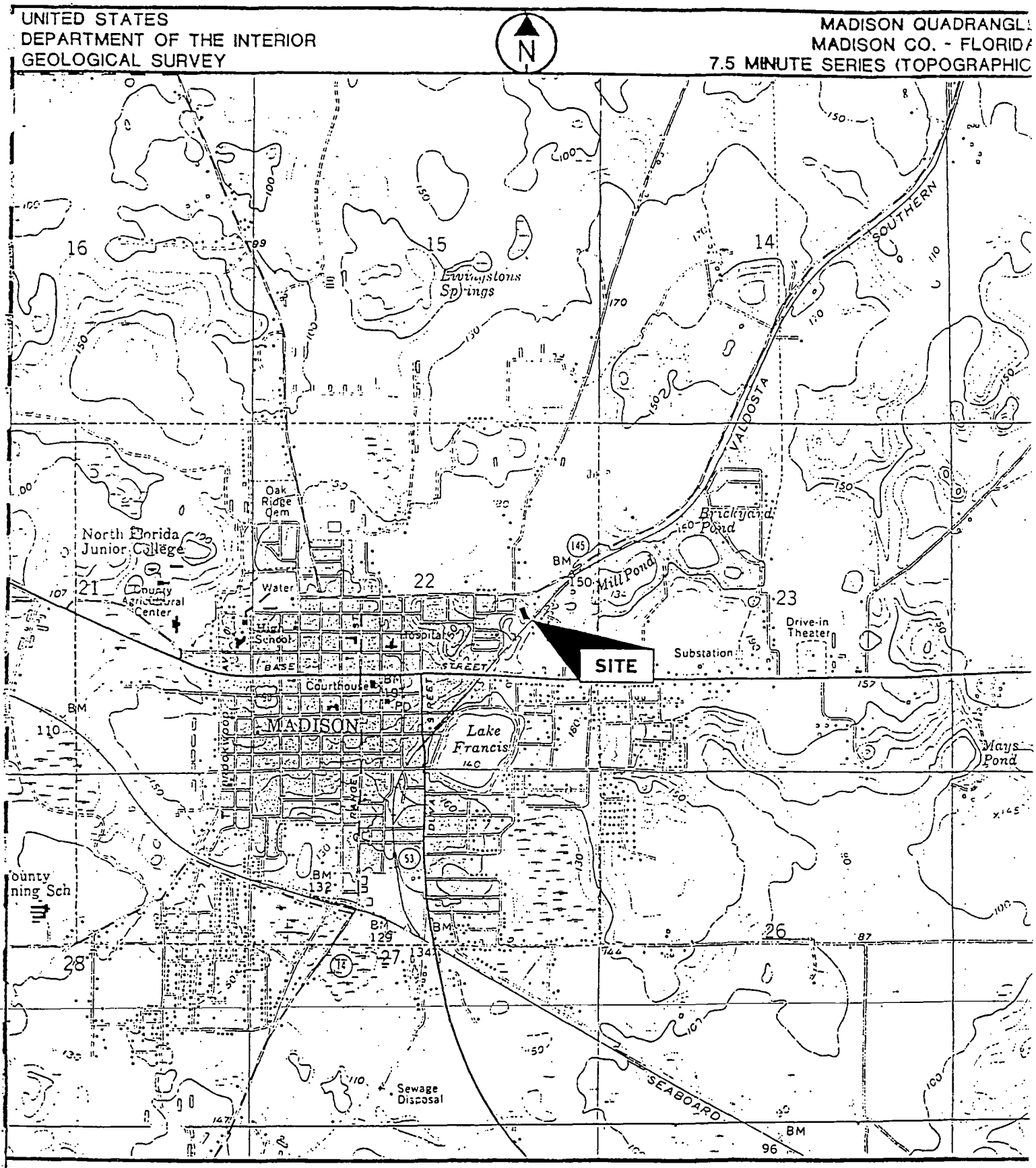
Former ITTA/Thompson Facility

Madison, Florida

### CONCENTRATIONS OF DETECTED COMPOUNDS

| MPLE LOCATION | SB-14 | | | | | | | | | SB-15 | | | | | | | | SB-16 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEPTH (FT BLS) | 2 | 6 | 10 | 18 | 30 | 40 | 50 | 60 | 70 | 6 | 10 | 11 | 22 | 27 | 30 | 40 | 50 | 24 | 30 | 40 | 50 |
| METER | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) |
| **Chlorinated VOCs** | | | | | | | | | | | | | | | | | | | | | |
| loride | ND | 176 | 2330 | 1570 | 15700 | 676 | 11500 | 18700 | 11000 | ND | ND | ND | ND | ND | 291 | 2320 | ND | 12 | 89 | 11 | 15 |
| loroethene | ND | ND | 19.2 | ND | ND | 50 | 64 | ND | 72 | ND | ND | ND | ND | ND | 15 | ND | 208 | ND | ND | 17 | ND |
| 2-dichloroethene | ND | ND | 9 | ND | 62 | 18 | 182 | 44 | 107 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| loroethane | ND | 25 | 17.4 | ND | 41 | 31 | 40 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| -dichloroethene | 3.2 | 1050 | 45300 | 2340 | 5670 | 11100 | 22400 | 6280 | 20600 | ND | ND | ND | ND | ND | 3910 | ND | 1400 | 114 | ND | 231 | ND |
| orm | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 54 | ND |
| tetrachloride | ND | ND | ND | ND | ND | ND | ND | ND | 356 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| oethene (TCE) | 4.9 | 16 | ND | 69 | ND | 13000 | 351 | 37 | 58 | ND | ND | ND | ND | 286 | 712 | 9560 | 5250 | ND | ND | 130 | ND |
| L VOCs | 8 | 1267 | 47676 | 3979 | 21473 | 24875 | 34537 | 25061 | 32193 | ND | ND | ND | ND | 286 | 4928 | 11880 | 6858 | 126 | 89 | 443 | 15 |
| **BTEX** | | | | | | | | | | | | | | | | | | | | | |
| e | ND | ND | 41 | ND | ND | ND | ND | ND | ND | ND | 272 | 208 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| | 7.4 | 146 | 895 | 54 | 120 | 706 | 604 | 340 | ND | 49700 | 33 | 1190 | 48 | 4120 | 1880 | 288 | 4260 | ND | ND | ND | ND |
| enzene | 16 | 768 | 68.3 | 21 | 84 | 146 | 39 | 20 | 18 | 8070 | 12 | 454 | ND | 1530 | 753 | 96.3 | 1870 | ND | ND | ND | ND |
| ylenes | 112 | 1840 | 258 | 83 | 233 | 869 | 212 | 97 | 146 | 27500 | 161 | 15200 | 50 | 4960 | 3150 | 405 | 7190 | ND | ND | ND | ND |
| L VOCs | 135 | 2754 | 1262 | 158 | 437 | 1721 | 855 | 457 | 164 | 85270 | 478 | 17052 | 98 | 10610 | 5783 | 789 | 13320 | ND | ND | ND | ND |

NOTES: ND indicates analyte not detected at or above the Practical Quantitation Limit (PQL)

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MADISON, FLORIDA

Woodward-Clyde Consultants
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| SCALE: | DRAWN BY: KH | DATE: 10/5/95 |
|---|---|---|
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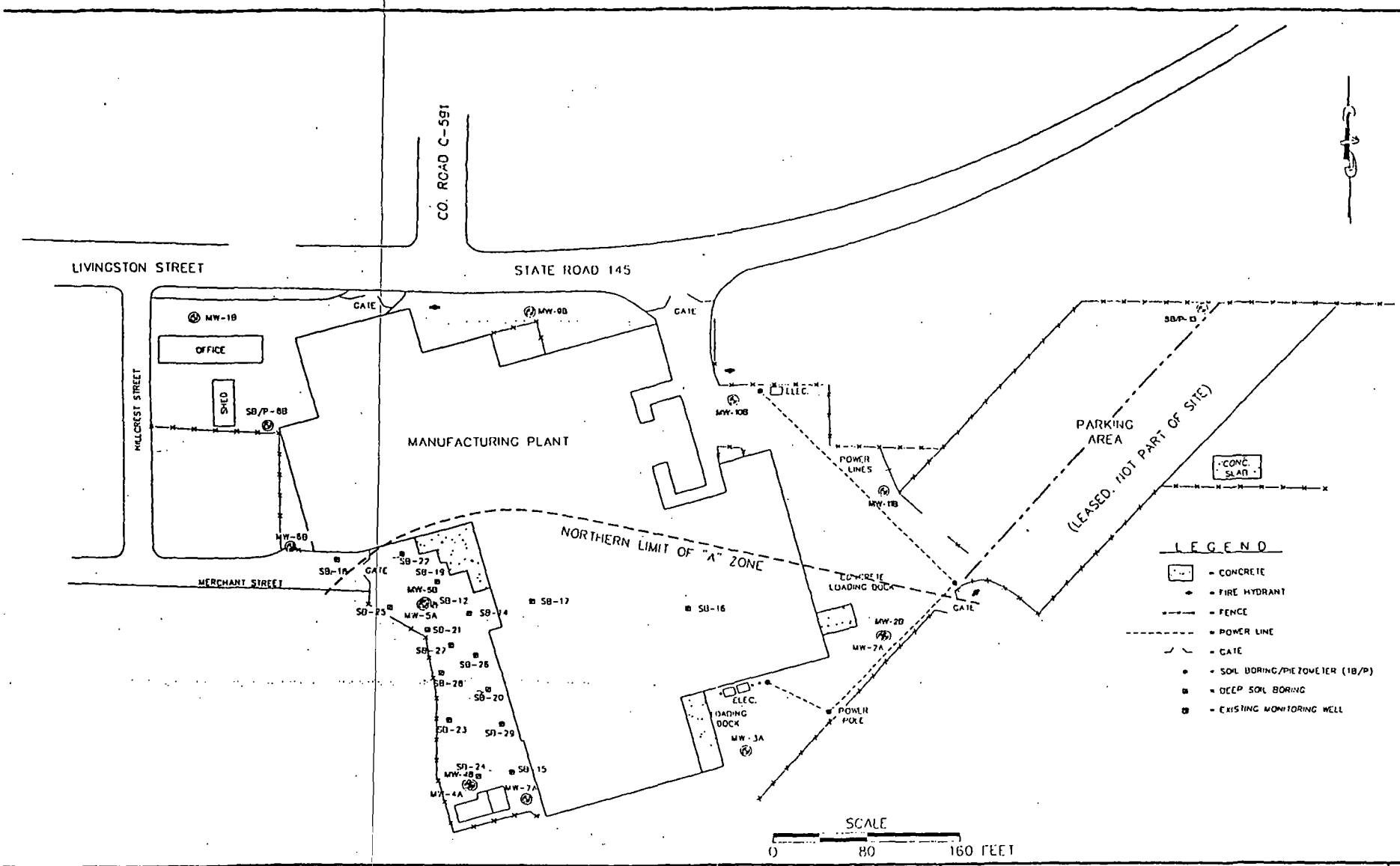
K:\ACAD\DWGS\95\95F841\BORDER

FACILITY LOCATION MAP

PROJ N
95F8

FIG NO
1




| DESCRIPTION OF REVISION | BY | DATE |
|---|---|---|
| | | |

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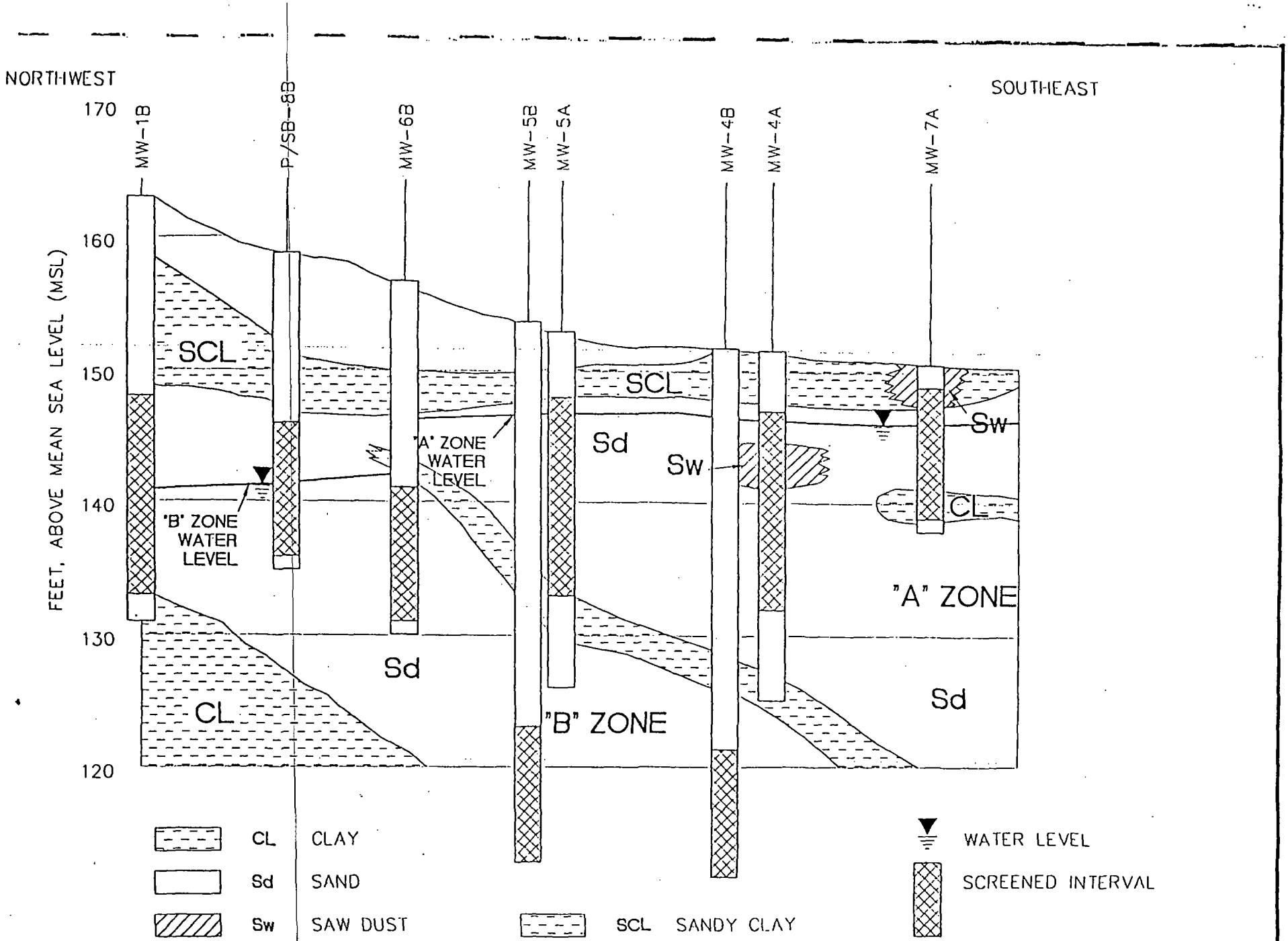
|---|---|---|
| 1" = 80' | CHECKED BY: IK | DATE: 9/23/96 |

K:\ACAD\[illegible]\95\95F841\FIG2

SITE MAP SHOWING LOCATIONS OF SOIL BORINGS, PIEZOMETERS, AND MONITORING WELLS
SEPTEMBER, 1996

PROJECT NUMBER
95F841

FIGURE NUMBER
2

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|---|---|---|
| 1" = 10' | CHECKED BY: TK | DATE: 10/5/95 |

HYDROGEOLOGIC CROSS SECTION,
WESTERN EDGE OF PROPERTY

PROJECT NUMBER
95F841

FIGURE NUMBER
3

95F841 A-1

# DATA REPORT

FILE

VOLATILE HALOGENATED & AROMATIC HYDROCARBON ANALYSIS OF SOIL (EPA METHOD 8010/8020)
WOODWARD-CLYDE 3676 HARTSFIELD RD. TALLAHASSEE, FL 32303
FORMER ITT/THOMPSON FACILITY MADISON, FL CLIENT PROJECT #: 95F841

EG PROJECT # 1-97241-LT

TA REPORTED IN MICROGRAMS PER KILOGRAM (PPB)

| DATE COLLECTED | 5/2/97 | 5/2/97 | 5/2/97 | ..... | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE ANALYZED | 5/2/97 | 5/2/97 | 5/2/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 |
| SAMPLE ID | SB-24S 2' | SB-24S 4' | SB-24S 6' | METHOD BLANK | SB-25 6' S | SB-26 5' S | SB-27 2' S | SB-27 4' S | SB-28 2' S | SB-29 2' S | SB-29 4' S |
| IYL CHLORIDE | ND | ND | ND | ND | 13 | ND | ND | ND | 835 | ND | ND |
| -DICHLOROETHENE | ND | ND | ND | ND | 49 | ND | ND | ND | ND | ND | ND |
| THYLENE CHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND | 184.0 | 150.0 |
| ANS-1,2-DICHLOROETHENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | 94.5 | ND |
| -DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| S-1,2-DICHLOROETHENE | 207 | 181 | ND | ND | ND | 555 | 216 | ND | 35800 | ND | 502.5 |
| ILOROFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND | 42.5 | 61.0 |
| ,1-TRICHLOROETHANE (TCA) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| RBON TETRACHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| -DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| RICHLOROETHENE (TCE) | 55.0 | 106 | ND | ND | 18.0 | ND | ND | ND | ND | 178.5 | 1396.5 |
| -DICHLOROPROPANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| ROMODICHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | 207.5 | 1236.5 |
| S-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| RANS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-TRICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | 116.5 | 561.5 |
| ETRACHLOROETHENE (PCE) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| IBROMOCHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| HLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | 26.0 | 39.5 |
| 1,1,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| ROMOFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | 1809.0 | 3516.5 |
| ,3-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| ,4-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| ,2-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| ENZENE | 447 | 192 | ND | ND | ND | 79 | ND | ND | ND | 54.5 | 113.0 |
| OLUENE | 154000 d | 11800 d | 356 | ND | 94.9 | 436 | ND | ND | 8450 | 149.5 | 5800 d |
| THYLBENZENE | 29700 d | 85200 d | 2130 | ND | ND | ND | ND | ND | ND | 2473.5 | 9200 d |
| OTAL XYLENES | 95200 d | 380200 d | 3450 | ND | 47.6 | 1300 | ND | ND | 9120 | 622.5 | 4300 d |
| Surrogate Recovery (%) | 66.0 | 82.7 | MI | 115.0 | 115.0 | MI | MI | MI | 102.0 | 132.2 | 128.7 |
| Data Qualifiers | D | D | D | | | D | | D | D | D | D |
| Practical Quantitation Limit (PQL) | 50.0 | 100 | 100 | 10.0 | 10.0 | 50.0 | 100 | 50.0 | 50.0 | 50.0 | 50.0 |

"ND" INDICATES ANALYTE NOT DETECTED AT OR ABOVE LISTED PQL
DATA QUALIFIERS LEGEND APPEARS ON QA/QC DATA REPORT PAGE

ANALYSIS PERFORMED IN TEG'S CERTIFIED MOBILE LABORATORY
ANALYSIS PERFORMED BY: ROBERT BARTHOLOMEW
DATA REVIEWED BY: JONATHAN R. MILLER, RHSP

2405 C KENNESAW N. IND. PKWY. KENNESAW GA 30144 770-919-0805 FAX 770-919-0806

# DATA REPORT

VOLATILE HALOGENATED & AROMATIC HYDROCARBON ANALYSIS OF WATER (EPA METHOD 8010/8020)
WOODWARD-CLYDE 3676 HARTSFIELD RD. TALLAHASSEE, FL 32303
FORMER ITT/THOMPSON FACILITY MADISON, FL CLIENT PROJECT #: 95F841

TEG PROJECT # 1-97241-LT

DATA REPORTED IN MICROGRAMS PER LITER (PPB)

| DATE COLLECTED | ----- | 4/29/97 | 4/29/97 | 4/29/97 | 4/29/97 | 4/29/97 | 4/29/97 | 4/29/97 | 4/29/97 |
|---|---|---|---|---|---|---|---|---|---|
| DATE ANALYZED | 4/29/97 | 4/29/97 | 4/29/97 | 4/29/97 | 4/29/97 | 4/29/97 | 4/29/97 | 4/29/97 | 4/30/97 |
| SAMPLE ID | METHOD BLANK | SB-15 6' | SB-15 10' | SB-15 11' | SB-15 22' | SB-15 27' | SB-15 30' | SB-15 40' | SB-15 50' |
| VINYL CHLORIDE | ND | ND | ND | ND | ND | ND | 291 | 2320 d | ND |
| 1,1-DICHLOROETHENE | ND | ND | ND | ND | ND | ND | 15 | ND | 208 |
| METHYLENE CHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRANS-1,2-DICHLOROETHENE | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CIS-1,2-DICHLOROETHENE | ND | ND | ND | ND | ND | ND | 3910 | ND | 1400 |
| CHLOROFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1-TRICHLOROETHANE (TCA) | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CARBON TETRACHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRICHLOROETHENE (TCE) | ND | ND | ND | ND | ND | 266 | 712 | 9560 d | 5250 |
| 1,2-DICHLOROPROPANE | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMODICHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CIS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRANS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-TRICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TETRACHLOROETHENE (PCE) | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| DIBROMOCHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMOFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BENZENE | ND | ND | 272 | 208 | ND | ND | ND | ND | ND |
| TOLUENE | ND | 49700 d | 33 | 1190 d | 48 | 4120 d | 1880 | 288 | 4260 d |
| ETHYLBENZENE | ND | 8070 d | 12 | 454 | ND | 1530 | 753 | 96.3 | 1870 d |
| TOTAL XYLENES | ND | 26500 d | 161 | 15200 d | 50 | 4960 d | 3150 | 405 | 7190 d |
| Surrogate Recovery (%) | 76.2 | 86.5 | 74.0 | 72.5 | 69.6 | 91.0 | 78.9 | MI | 96.5 |
| Data Qualifiers | | D | D | D | D | D | D | D | D |
| Practical Quantitation Limit (PQL) | 1.0 | 500 | 10 | 10 | 20 | 20 | 10 | 10 | 10 |

"ND" INDICATES ANALYTE NOT DETECTED AT OR ABOVE LISTED PQL
DATA QUALIFIERS LEGEND APPEARS ON QA/QC DATA REPORT PAGE

ANALYSIS PERFORMED IN TEG'S CERTIFIED MOBILE LABORATORY
ANALYSIS PERFORMED BY: ROBERT BARTHOLEMEW
DATA REVIEWED BY: JONATHAN R. MILLER, RHSP


3430-C KENNESAW N. IND. PKWY. KENNESAW, GA 30144 770-919-0805 FAX 770 919-0806

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# DATA REPORT

VOLATILE HALOGENATED & AROMATIC HYDROCARBON ANALYSIS OF WATER (EPA METHOD 8010/8020)
WOODWARD-CLYDE 3676 HARTSFIELD RD. TALLAHASSEE, FL 32303
FORMER ITT/THOMPSON FACILITY MADISON, FL CLIENT PROJECT #: 95F841

TEG PROJECT # 1-97241-LT

DATA REPORTED IN MICROGRAMS PER LITER (PPB)

| DATE COLLECTED | ----- | 4/30/97 | 4/30/97 | 4/30/97 | 4/30/97 | 4/30/97 | 4/30/97 | 4/30/97 |
|---|---|---|---|---|---|---|---|---|
| DATE ANALYZED | 4/30/97 | 4/30/97 | 4/30/97 | 4/30/97 | 4/30/97 | 4/30/97 | 4/30/97 | 4/30/97 |
| SAMPLE ID | METHOD BLANK | SB-14 60'DUP | SB-14 70' | SB-16 24' | SB-16 30' | SB-16 40' | SB-16 50 | EQUIP. BLANK |
| NYL CHLORIDE | ND | 20600 | 11000 d | 11 | 89 | 11 | 15 | ND |
| 1-DICHLOROETHENE | ND | 340 | 72 | ND | ND | 17 | ND | ND |
| ETHYLENE CHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND |
| RANS-1,2-DICHLOROETHENE | ND | ND | 107 | ND | ND | ND | ND | ND |
| ,1-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND |
| IS-1,2-DICHLOROETHENE | ND | 24100 | 20600 d | 114 | ND | 231 | ND | ND |
| HLOROFORM | ND | ND | ND | ND | ND | 54 | ND | ND |
| ,1,1-TRICHLOROETHANE (TCA) | ND | ND | ND | ND | ND | ND | ND | ND |
| ARBON TETRACHLORIDE | ND | ND | 356 | ND | ND | ND | ND | ND |
| ,2-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND |
| RICHLOROETHENE (TCE) | ND | ND | 58 | ND | ND | 130 | ND | ND |
| ,2-DICHLOROPROPANE | ND | ND | ND | ND | ND | ND | ND | ND |
| ROMODICHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND |
| IS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND |
| RANS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND |
| ,1,2-TRICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND |
| ETRACHLOROETHENE (PCE) | ND | ND | ND | ND | ND | ND | ND | ND |
| IBROMOCHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND |
| HLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND |
| ,1,1,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMOFORM | ND | ND | ND | ND | ND | ND | ND | ND |
| ,1,2,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND |
| ,3-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND |
| ,4-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND |
| ,2-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND |
| ENZENE | ND | ND | ND | ND | ND | ND | ND | ND |
| OLUENE | ND | 460 | ND | ND | ND | ND | ND | ND |
| THYLBENZENE | ND | ND | 18 | ND | ND | ND | ND | ND |
| OTAL XYLENES | ND | ND | 146 | ND | ND | ND | ND | ND |
| Surrogate Recovery (%) | 93.7 | MI | 94.5 | 75.6 | MI | 98.7 | MI | 85.7 |
| Data Qualifiers | | D | D | D | D | D | D | |
| Practical Quantitation Limit (PQL) | 1.0 | 200 | 10 | 10 | 10 | 10 | 10 | 1.0 |

"ND" INDICATES ANALYTE NOT DETECTED AT OR ABOVE LISTED PQL
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ANALYSIS PERFORMED IN TEG'S CERTIFIED MOBILE LABORATORY
ANALYSIS PERFORMED BY: ROBERT BARTHOLEMEW
DATA REVIEWED BY: JONATHAN R. MILLER, RHSP



3600-C KENNESAW N. IND. PKWY KENNESAW, GA 30144 770-919-0805 FAX 770-919-0806

# DATA REPORT

VOLATILE HALOGENATED & AROMATIC HYDROCARBON ANALYSIS OF WATER (EPA METHOD 8010/8020)
WOODWARD-CLYDE 3676 HARTSFIELD RD. TALLAHASSEE, FL 32303
FORMER ITT/THOMPSON FACILITY MADISON, FL CLIENT PROJECT #: 95F841

TEG PROJECT # 1-97241-LT

DATA REPORTED IN MICROGRAMS PER LITER (PPB)

| DATE COLLECTED | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 |
|---|---|---|---|---|---|---|
| DATE ANALYZED | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 |
| SAMPLE ID | SB-19 42' | SB-27 8' | SB-28 7' | SB-29 8' | DRUM 1 | DRUM 2 |
| /INYL CHLORIDE | ND | ND | 21400 d | ND | ND | ND |
| ,1-DICHLOROETHENE | ND | ND | 212 | ND | 15.9 | ND |
| METHYLENE CHLORIDE | ND | ND | ND | ND | ND | ND |
| 'RANS-1,2-DICHLOROETHENE | ND | ND | ND | ND | ND | ND |
| ,1-DICHLOROETHANE | ND | ND | ND | ND | ND | ND |
| :IS-1,2-DICHLOROETHENE | ND | 4620 | 1120000 d | 81.5 d | 4.6 | ND |
| :HLOROFORM | ND | ND | 32500 d | ND | ND | ND |
| ,1,1-TRICHLOROETHANE (TCA) | ND | ND | ND | ND | ND | ND |
| :ARBON TETRACHLORIDE | ND | ND | ND | ND | ND | ND |
| ,2-DICHLOROETHANE | ND | ND | ND | ND | ND | ND |
| 'RICHLOROETHENE (TCE) | ND | 376 | ND | ND | ND | ND |
| ,2-DICHLOROPROPANE | ND | ND | ND | ND | ND | ND |
| :ROMODICHLOROMETHANE | ND | ND | ND | ND | ND | ND |
| :IS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND |
| 'RANS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND |
| ,1,2-TRICHLOROETHANE | ND | ND | ND | ND | ND | ND |
| ETRACHLOROETHENE (PCE) | ND | ND | ND | ND | ND | ND |
| IBROMOCHLOROMETHANE | ND | ND | ND | ND | ND | ND |
| :HLOROBENZENE | ND | ND | ND | ND | ND | ND |
| ,1,1,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND |
| ROMOFORM | ND | ND | ND | ND | ND | ND |
| ,1,2,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND |
| ,3-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND |
| ,4-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND |
| 2-DICHLOROBENZENE | ND | ND | ND | ND | 4.9 | ND |
| ENZENE | ND | ND | 6900 d | 95.5 d | ND | ND |
| OLUENE | ND | 94 | 13800 d | 88.5 d | 13.1 | ND |
| THYLBENZENE | ND | 118 | 38300 d | 77.5 d | ND | ND |
| OTAL XYLENES | ND | 272 | 3700 d | 73.5 d | 5.5 | 4.3 |
| urrogate Recovery (%) | 120.0 | MI | 108.0 | 73.7 | 86.0 | MI |
| ata Qualifiers | D | D | D | D | | |
| ractical Quantitation Limit (PQL) | 10 | 50 | 50 | 50 | 1.0 | 1.0 |

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ANALYSIS PERFORMED BY: ROBERT BARTHOLEMEW
DATA REVIEWED BY: JONATHAN R. MILLER, RHSP


3600-C KENNESAW N. IND. PKWY. KENNESAW, GA 30144 770-919-0805 FAX 770-919-0806

A-4

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# DATA REPORT

VOLATILE HALOGENATED & AROMATIC HYDROCARBON ANALYSIS OF WATER (EPA METHOD 8010/8020)
WOODWARD-CLYDE 3676 HARTSFIELD RD. TALLAHASSEE, FL 32303
FORMER ITT/THOMPSON FACILITY MADISON, FL CLIENT PROJECT #: 95F841

TEG PROJECT # 1-97241-LT

DATA REPORTED IN MICROGRAMS PER LITER (PPB)

| DATE COLLECTED | .... | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE ANALYZED | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 |
| SAMPLE ID | METHOD BLANK | SB-25 10' | SB-25 15' | SB-25 30' | SB-25 40' | SB-25 47' | SB-26 8' | SB-26 15' | SB-26 27' | EP.BLANK -26 | SB-26 45' | SB19 26' |
| VINYL CHLORIDE | ND | ND | 55.8 | 101 | ND | 7.3 | ND | 269 | 430 | ND | 1920 | 44 |
| 1,1-DICHLOROETHENE | ND | ND | ND | ND | ND | ND | ND | 103 | 77 | ND | ND | ND |
| METHYLENE CHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRANS-1,2-DICHLOROETHENE | ND | ND | ND | ND | ND | ND | ND | 170 | 38 | ND | ND | ND |
| 1,1-DICHLOROETHANE | ND | ND | 1.1 | ND | 3.3 | ND | 6.5 | ND | 98 | ND | ND | ND |
| CIS-1,2-DICHLOROETHENE | ND | ND | 11.0 | 287 d | 289 d | 101 | 106 | 424 | ND | ND | 19300 | 2130 |
| CHLOROFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1-TRICHLOROETHANE (TCA) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CARBON TETRACHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRICHLOROETHENE (TCE) | ND | 10 | ND | 4.0 | 1.8 | 381 | 5.1 | 12200 d | 8020 d | ND | 3100 | 73 |
| 1,2-DICHLOROPROPANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMODICHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CIS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRANS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-TRICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TETRACHLOROETHENE (PCE) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| DIBROMOCHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMOFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 39 |
| TOLUENE | ND | ND | ND | ND | ND | ND | 324 | ND | ND | ND | ND | 378 |
| ETHYLBENZENE | ND | ND | ND | ND | ND | ND | 497 | 867 | 40 | ND | ND | 27 |
| TOTAL XYLENES | ND | ND | ND | ND | 1.2 | ND | 2380 d | 3460 | 311 | ND | 280 | 182 |
| Surrogate Recovery (%) | 101.0 | MI | 118.0 | MI | 128 | MI | 77.5 | 106.0 | 120 | 124 4 | MI | 96.5 |
| Data Qualifiers | | D | | | | D | D | D | D | | D | D |
| Practical Quantitation Limit (PQL) | 1.0 | 10 | 1.0 | 1.0 | 1.0 | 5.0 | 5.0 | 100 | 25 | 1.0 | 200 | 20 |

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ANALYSIS PERFORMED BY: ROBERT BARTHOLEMEW
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# DATA REPORT

VOLATILE HALOGENATED & AROMATIC HYDROCARBON ANALYSIS OF SOIL (EPA METHOD 8010/8020)
WOODWARD-CLYDE 3676 HARTSFIELD RD. TALLAHASSEE, FL 32303
FORMER ITT/THOMPSON FACILITY MADISON, FL CLIENT PROJECT #: 95F841

TEG PROJECT # 1-97241-LT

DATA REPORTED IN MICROGRAMS PER KILOGRAM (PPB)

| DATE COLLECTED | 5/2/97 | 5/2/97 | 5/2/97 | ..... | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE ANALYZED | 5/2/97 | 5/2/97 | 5/2/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 |
| SAMPLE ID | SB-24S 2' | SB-24S 4' | SB-24S 6' | METHOD BLANK | SB-25 6' S | SB-26 5' S | SB-27 2' S | SB-27 4' S | SB-28 2' S | SB-29 2' S | SB-29 4' S |
| VINYL CHLORIDE | ND | ND | ND | ND | 13 | ND | ND | ND | 835 | ND | ND |
| 1,1-DICHLOROETHENE | ND | ND | ND | ND | 49 | ND | ND | ND | ND | ND | ND |
| METHYLENE CHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND | 184.0 | 150.0 |
| TRANS-1,2-DICHLOROETHENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | 94.5 | ND |
| 1,1-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CIS-1,2-DICHLOROETHENE | 207 | 181 | ND | ND | ND | 555 | 216 | ND | 35800 | ND | 502.5 |
| CHLOROFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND | 42.5 | 61.0 |
| 1,1,1-TRICHLOROETHANE (TCA) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CARBON TETRACHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRICHLOROETHENE (TCE) | 55.0 | 106 | ND | ND | 18.0 | ND | ND | ND | ND | 178.5 | 1396.5 |
| 1,2-DICHLOROPROPANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMODICHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | 207.5 | 1236.5 |
| CIS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRANS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-TRICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | 116.5 | 561.5 |
| TETRACHLOROETHENE (PCE) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| DIBROMOCHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | 26.0 | 39.5 |
| 1,1,1,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMOFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | 1809.0 | 3516.5 |
| 1,3-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BENZENE | 447 | 192 | ND | ND | ND | 79 | ND | ND | ND | 54.5 | 113.0 |
| TOLUENE | 154000 d | 11800 d | 356 | ND | 94.9 | 436 | ND | ND | 8450 | 149.5 | 5800 d |
| ETHYLBENZENE | 29700 d | 85200 d | 2130 | ND | ND | ND | ND | ND | ND | 2473.5 | 9200 d |
| TOTAL XYLENES | 95200 d | 380200 d | 3450 | ND | 47.6 | 1300 | ND | ND | 9120 | 622.5 | 4300 d |
| Surrogate Recovery (%) | 66.0 | 82.7 | MI | 115.0 | 115.0 | MI | MI | MI | 102.0 | 132.2 | 128.7 |
| Data Qualifiers | D | D | D | | | D | | D | D | D | D |
| Practical Quantitation Limit (PQL) | 50.0 | 100 | 100 | 10.0 | 10.0 | 50.0 | 100 | 50.0 | 50.0 | 50.0 | 50.0 |

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ANALYSIS PERFORMED BY: ROBERT BARTHOLOMEW
DATA REVIEWED BY: JONATHAN R. MILLER, RHSP


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# DATA REPORT

VOLATILE HALOGENATED & AROMATIC HYDROCARBON ANALYSIS OF SOIL (EPA METHOD 8010/8020)
WOODWARD-CLYDE 3676 HARTSFIELD RD. TALLAHASSEE, FL 32303
FORMER ITT/THOMPSON FACILITY MADISON, FL CLIENT PROJECT #: 95F841

TEG PROJECT # 1-97241-LT

DATA REPORTED IN MICROGRAMS PER KILOGRAM (PPB)

| DATE COLLECTED | ----- | 4/29/97 | 4/29/97 | 4/29/97 | ..... | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE ANALYZED | 4/29/97 | 4/29/97 | 4/29/97 | 4/29/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 |
| SAMPLE ID | METHOD BLANK | SB-15S 8' | SB-15S 16' | SB-15S 22' | METHOD BLANK | SB-19S 3' | SB-20S 3' | SB-21S 3' | SB-22S 8' | SB-23S 2' | SB-23S 4' | SB-23S 6' |
| VINYL CHLORIDE | ND | ND | ND | ND | ND | 293 | ND | ND | ND | 525 | 1610 | ND |
| 1,1-DICHLOROETHENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| METHYLENE CHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRANS-1,2-DICHLOROETHENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CIS-1,2-DICHLOROETHENE | ND | ND | ND | ND | ND | 25.2 | ND | 17400 | 297 | 157 | 201 | 207 |
| CHLOROFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1-TRICHLOROETHANE (TCA) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CARBON TETRACHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRICHLOROETHENE (TCE) | ND | ND | ND | ND | ND | ND | ND | 6490000 d | 274 | 135 | 196 | 55.0 |
| 1,2-DICHLOROPROPANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMODICHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CIS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRANS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-TRICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TETRACHLOROETHENE (PCE) | ND | ND | ND | ND | ND | 70.0 | ND | ND | ND | ND | ND | ND |
| DIBROMOCHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMOFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-DICHLOROBENZENE | ND | ND | ND | ND | ND | 219 | ND | ND | ND | ND | ND | ND |
| BENZENE | ND | ND | ND | ND | ND | 11.0 | 12.4 | ND | ND | ND | ND | ND |
| TOLUENE | ND | 342000 | ND | ND | ND | 61.5 | 20.0 | 509000 | 59.5 | 943 | 151 | ND |
| ETHYLBENZENE | ND | 305500 | ND | ND | ND | ND | 17.6 | 78200 | ND | 157 | ND | ND |
| TOTAL XYLENES | ND | 1003000 | ND | ND | ND | 86.6 | 55.0 | 387000 | 56.0 | 1200 | 371 | ND |
| Surrogate Recovery (%) | 58.8 | MI | 117.6 | MI | 140.0 | 82.7 | 80.0 | MI | 130.0 | 88.8 | 84.4 | 70.0 |
| Data Qualifiers | | D | D | D | | | | D | D | D | D | D |
| Practical Quantitation Limit (PQL) | 10.0 | 2500 | 50.0 | 50.0 | 10.0 | 10.0 | 10.0 | 5000 | 50.0 | 50.0 | 100 | 50.0 |

"ND" INDICATES ANALYTE NOT DETECTED AT OR ABOVE LISTED PQL
DATA QUALIFIERS LEGEND APPEARS ON QA/QC DATA REPORT PAGE

ANALYSIS PERFORMED IN TEG'S CERTIFIED MOBILE LABORATORY
ANALYSIS PERFORMED BY: ROBERT BARTHOLOMEW
DATA REVIEWED BY: JONATHAN R. MILLER, RHSP


3300-C KENNESAW N. 18TH. PKWY. KENNESAW, GA 30144 770-919-0805 FAX 770-919-0806

# DATA REPORT

VOLATILE HALOGENATED & AROMATIC HYDROCARBON ANALYSIS OF WATER (EPA METHOD 8010/8020)
WOODWARD-CLYDE 3676 HARTSFIELD RD. TALLAHASSEE, FL 32303
FORMER ITT/THOMPSON FACILITY MADISON, FL CLIENT PROJECT #: 95F841

TEG PROJECT # 1-97241-LT

DATA REPORTED IN MICROGRAMS PER LITER (PPB)

| DATE COLLECTED | ----- | 5/1/97 | 5/1/97 | 5/1/97 | 5/1/97 | 5/1/97 | 5/1/97 | 5/1/97 | 5/1/97 | 5/1/97 | 5/1/97 | 5/1/97 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE ANALYZED | 5/1/97 | 5/1/97 | 5/1/97 | 5/1/97 | 5/1/97 | 5/1/97 | 5/1/97 | 5/1/97 | 5/1/97 | 5/1/97 | 5/1/97 | 5/1/97 |
| | METHOD | SB-17 | SB-17 | SB-17 | SB-17 | SB-17 | SB-17 | SB-18 | SB-18 | SB-18 | SB-18 | SB-18 |
| SAMPLE ID | BLANK | 10' | 11' | 36' | 40' | 50' | 10' DUP | 20' | 24' | 30' | 40' | 50' |
| VINYL CHLORIDE | ND | ND | ND | 163 | 436 | 2500 d | ND | ND | 15 | 1.38 | ND | 5.0 |
| 1,1-DICHLOROETHENE | ND | ND | ND | ND | 79 | ND | ND | ND | ND | ND | ND | ND |
| METHYLENE CHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRANS-1,2-DICHLOROETHENE | ND | 47 | 56 | 15 | 22 | 23 | 50 | ND | ND | ND | ND | ND |
| 1,1-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CIS-1,2-DICHLOROETHENE | ND | ND | 14 | 76 | 4280 d | 1100 d | ND | ND | ND | ND | ND | ND |
| CHLOROFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1-TRICHLOROETHANE (TCA) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CARBON TETRACHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRICHLOROETHENE (TCE) | ND | ND | ND | ND | 2180 d | ND | ND | ND | ND | ND | ND | ND |
| 1,2-DICHLOROPROPANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMODICHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CIS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRANS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-TRICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TETRACHLOROETHENE (PCE) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| DIBROMOCHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMOFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BENZENE | ND | ND | ND | ND | ND | 23 | ND | ND | ND | ND | ND | ND |
| TOLUENE | ND | ND | 21 | 73 | 1540 d | 89 | ND | ND | ND | ND | ND | ND |
| ETHYLBENZENE | ND | ND | ND | 11 | 60 | ND | ND | ND | ND | ND | ND | ND |
| TOTAL XYLENES | ND | ND | 11 | 28 | 192 d | 14 | ND | ND | ND | ND | ND | ND |
| Surrogate Recovery (%) | 111.0 | MI | MI | MI | 105 | 125 | MI | MI | 118.0 | MI | 114 | MI |
| Data Qualifiers | | D | D | D | D | D | D | D | D | | | |
| Practical Quantitation Limit (PQL) | 1.0 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 1.0 | 1.0 | 1.0 |

"ND" INDICATES ANALYTE NOT DETECTED AT OR ABOVE LISTED PQL
DATA QUALIFIERS LEGEND APPEARS ON QA/QC DATA REPORT PAGE

ANALYSIS PERFORMED IN TEG'S CERTIFIED MOBILE LABORATORY
ANALYSIS PERFORMED BY: ROBERT BARTHOLEMEW
DATA REVIEWED BY: JONATHAN R. MILLER, RHSP


1500-C KENNESAW N. IND. PKWY KENNESAW, GA 30144 770-919-0805 FAX 770-919-0806

# DATA REPORT

VOLATILE HALOGENATED & AROMATIC HYDROCARBON ANALYSIS OF WATER (EPA METHOD 8010/8020)
WOODWARD-CLYDE 3676 HARTSFIELD RD. TALLAHASSEE, FL 32303
FORMER ITT/THOMPSON FACILITY MADISON, FL CLIENT PROJECT #: 95F841

TEG PROJECT # 1-97241-LT

DATA REPORTED IN MICROGRAMS PER LITER (PPB)

| DATE COLLECTED | 5/1/97 | .... | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE ANALYZED | 5/1/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 |
| SAMPLE ID | STAND PIPE | METHOD BLANK | SB-19 7' | SB-20 7' | SB-20 12' | SB-21 7' | SB-21 12' | SB-21 50' | SB-22 8' | SB-23 10' | SB-24 10' |
| VINYL CHLORIDE | ND | ND | 4780 d | 3860 d | 60800 d | 7000 d | 23400 d | 341 | ND | ND | 244 |
| 1,1-DICHLOROETHENE | 3.5 | ND | ND | ND | ND | ND | ND | 117 | ND | ND | ND |
| METHYLENE CHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRANS-1,2-DICHLOROETHENE | 3.6 | ND | ND | 43 | 1350 d | 69 | 347 | ND | ND | ND | ND |
| 1,1-DICHLOROETHANE | ND | ND | 268 | 53 | 28.7 | ND | ND | ND | ND | ND | ND |
| CIS-1,2-DICHLOROETHENE | 56.4 | ND | 1830 d | 156 | 98300 d | 1180 | 17400 d | 4290 | 27 | 37 | 16 |
| CHLOROFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1-TRICHLOROETHANE (TCA) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CARBON TETRACHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRICHLOROETHENE (TCE) | ND | ND | ND | ND | ND | 326 | 158 | 10500 d | 65 | 50 | 21 |
| 1,2-DICHLOROPROPANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMODICHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CIS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRANS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-TRICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TETRACHLOROETHENE (PCE) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| DIBROMOCHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMOFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-DICHLOROBENZENE | ND | ND | ND | ND | 13 | ND | ND | ND | ND | ND | ND |
| 1,2-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BENZENE | ND | ND | 243 | 11 | ND | ND | ND | ND | ND | ND | 501 |
| TOLUENE | ND | ND | 3580 d | 669 | ND | 9415 d | 32340 d | 591 | 27 | ND | 120 |
| ETHYLBENZENE | ND | ND | 474 | 150 | 313 | 690 | 1010 | ND | ND | ND | ND |
| TOTAL XYLENES | ND | ND | 1800 | 421 | 1270 | 5930 d | 10600 d | 271 | 95 | 15 | 217 |
| Surrogate Recovery (%) | 101.8 | 119.0 | 107.0 | 93.0 | 99.0 | 101.0 | 76.5 | 129.0 | 91.5 | 125.0 | 99.8 |
| Data Qualifiers | | | D | D | D | D | D | D | D | D | D |
| Practical Quantitation Limit (PQL) | 1.0 | 1.0 | 10 | 10 | 10 | 10 | 10 | 50 | 20 | 10 | 10 |

"ND" INDICATES ANALYTE NOT DETECTED AT OR ABOVE LISTED PQL
DATA QUALIFIERS LEGEND APPEARS ON QA/QC DATA REPORT PAGE

ANALYSIS PERFORMED IN TEG'S CERTIFIED MOBILE LABORATORY
ANALYSIS PERFORMED BY: ROBERT BARTHOLEMEW
DATA REVIEWED BY: JONATHAN R. MILLER, RHSP



3500-C KENNESAW N. IND. PKWY. KENNESAW, GA 30144 770-919-0805 FAX 770-919-0806

# DATA REPORT

VOLATILE HALOGENATED & AROMATIC HYDROCARBON ANALYSIS OF WATER (EPA METHOD 8010/8020)
WOODWARD-CLYDE 3676 HARTSFIELD RD. TALLAHASSEE, FL 32303
FORMER ITT/THOMPSON FACILITY MADISON, FL CLIENT PROJECT #: 95F841

TEG PROJECT # 1-97241-LT

DATA REPORTED IN MICROGRAMS PER LITER (PPB)

| DATE COLLECTED | ----- | 4/28/97 | 4/28/97 | 4/28/97 | 4/28/97 | 4/28/97 | 4/28/97 | 4/28/97 | ..... | 4/28/97 | 4/28/97 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE ANALYZED | 4/28/97 | 4/28/97 | 4/28/97 | 4/28/97 | 4/28/97 | 4/28/97 | 4/28/97 | 4/28/97 | 4/29/97 | 4/29/97 | 4/29/97 |
| SAMPLE ID | METHOD BLANK | SB-14 2' | SB-14 2' DUP | SB-14 6' | SB-14 10' | SB-14 18' | SB-14 30' | SB-14 40' | METHOD BLANK | SB-14 50' | SB-14 60' |
| VINYL CHLORIDE | ND | ND | ND | 176 | 2330 d | 1570 d | 15700 d | 676 | ND | 11500 d | 18700 d |
| 1,1-DICHLOROETHENE | ND | ND | ND | ND | 19.2 | ND | ND | 50 | ND | 64 | ND |
| METHYLENE CHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRANS-1,2-DICHLOROETHENE | ND | ND | ND | ND | 9.0 | ND | 62 | 18 | ND | 182 | 44 |
| 1,1-DICHLOROETHANE | ND | ND | ND | 25 | 17.4 | ND | 41 | 31 | ND | 40 | ND |
| CIS-1,2-DICHLOROETHENE | ND | 3.2 | 3.5 | 1050 | 45300 d | 2340 d | 5670 d | 11100 d | ND | 22400 d | 6280 d |
| CHLOROFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1-TRICHLOROETHANE (TCA) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CARBON TETRACHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRICHLOROETHENE (TCE) | ND | 4.9 | 4.0 | 16 | ND | 69 | ND | 13000 d | ND | 351 | 37 |
| 1,2-DICHLOROPROPANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMODICHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CIS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRANS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-TRICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TETRACHLOROETHENE (PCE) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| DIBROMOCHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMOFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BENZENE | ND | ND | ND | ND | 41.0 | ND | ND | ND | ND | ND | ND |
| TOLUENE | ND | 7.4 | 7.5 | 146 | 895 d | 54 | 120 | 706 | ND | 604 | 340 |
| ETHYLBENZENE | ND | 16.0 | 14.6 | 768 | 68.3 | 21 | 84 | 146 | ND | 39 | 20 |
| TOTAL XYLENES | ND | 112 | 96.4 | 1840 | 258 | 83 | 233 | 869 | ND | 212 | 97 |
| Surrogate Recovery (%) | 104.2 | 97.5 | 106.9 | 74.4 | 96.2 | 89.7 | 64.7 | 89.3 | 76.2 | 88.3 | 67.6 |
| Data Qualifiers | | | | D | | D | D | D | | D | D |
| Practical Quantitation Limit (PQL) | 1.0 | 1.0 | 1.0 | 10 | 1.0 | 10 | 10 | 10 | 1.0 | 20 | 20 |

"ND" INDICATES ANALYTE NOT DETECTED AT OR ABOVE LISTED PQL
DATA QUALIFIERS LEGEND APPEARS ON QA/QC DATA REPORT PAGE

ANALYSIS PERFORMED IN TEG'S CERTIFIED MOBILE LABORATORY
ANALYSIS PERFORMED BY: ROBERT BARTHOLEMEW
DATA REVIEWED BY: JONATHAN R. MILLER, RHSP


3500-C KENNESAW N. IND. PKWY KENNESAW, GA 30144 770-919-0805 FAX 770-919-0806

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teg

# DATA REPORT

VOLATILE HALOGENATED & AROMATIC HYDROCARBON ANALYSIS OF SOIL (EPA METHOD 8010/8020)
WOODWARD-CLYDE 3676 HARTSFIELD RD. TALLAHASSEE, FL 32303
FORMER ITT/THOMPSON FACILITY MADISON, FL CLIENT PROJECT #: 95F841

TEG PROJECT # 1-97241-LT

DATA REPORTED IN MICROGRAMS PER KILOGRAM (PPB)

| DATE COLLECTED | ----- | 4/29/97 | 4/29/97 | 4/29/97 | ..... | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE ANALYZED | 4/29/97 | 4/29/97 | 4/29/97 | 4/29/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 |
| SAMPLE ID | METHOD BLANK | SB-15S 8' | SB-15S 16' | SB-15S 22' | METHOD BLANK | SB-19S 3' | SB-20S 3' | SB-21S 3' | SB-22S 8' | SB-23S 2' | SB-23S 4' | SB-23S 6' |
| VINYL CHLORIDE | ND | ND | ND | ND | ND | 293 | ND | ND | ND | 525 | 1610 | ND |
| 1,1-DICHLOROETHENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| METHYLENE CHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRANS-1,2-DICHLOROETHENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CIS-1,2-DICHLOROETHENE | ND | ND | ND | ND | ND | 25.2 | ND | 17400 | 297 | 157 | 201 | 207 |
| CHLOROFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1-TRICHLOROETHANE (TCA) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CARBON TETRACHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRICHLOROETHENE (TCE) | ND | ND | ND | ND | ND | ND | ND | 6490000 d | 274 | 135 | 196 | 55.0 |
| 1,2-DICHLOROPROPANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMODICHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CIS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRANS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-TRICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TETRACHLOROETHENE (PCE) | ND | ND | ND | ND | ND | 70.0 | ND | ND | ND | ND | ND | ND |
| DIBROMOCHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMOFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-DICHLOROBENZENE | ND | ND | ND | ND | ND | 219 | ND | ND | ND | ND | ND | ND |
| BENZENE | ND | ND | ND | ND | ND | 11.0 | 12.4 | ND | ND | ND | ND | ND |
| TOLUENE | ND | 342000 | ND | ND | ND | 61.5 | 20.0 | 509000 | 59.5 | 943 | 151 | ND |
| ETHYLBENZENE | ND | 305500 | ND | ND | ND | ND | 17.6 | 78200 | ND | 157 | ND | ND |
| TOTAL XYLENES | ND | 1008000 | ND | ND | ND | 86.6 | 55.0 | 387000 | 56.0 | 1200 | 371 | ND |
| Surrogate Recovery (%) | 68 6 | MI | 117.6 | MI | 140.0 | 82.7 | 80.0 | MI | 130.0 | 88.8 | 84.4 | 70.0 |
| Data Qualifiers | | D | D | D | | | | D | D | D | D | D |
| Practical Quantitation Limit (PQL) | 10.0 | 2500 | 50.0 | 50.0 | 10.0 | 10.0 | 10.0 | 5000 | 50.0 | 50.0 | 100 | 50.0 |

"ND" INDICATES ANALYTE NOT DETECTED AT OR ABOVE LISTED PQL
DATA QUALIFIERS LEGEND APPEARS ON QA/QC DATA REPORT PAGE

ANALYSIS PERFORMED IN TEG'S CERTIFIED MOBILE LABORATORY
ANALYSIS PERFORMED BY: ROBERT BARTHOLOMEW
DATA REVIEWED BY: JONATHAN R. MILLER, RHSP 5/6/97



3600-C KENNESAW N. IND. PKWY KENNESAW, GA 30144 770-919-0805 FAX 770-919-0806

# QA/QC DATA REPORT

VOLATILE HALOGENATED & AROMATIC HYDROCARBON ANALYSIS OF WATER (EPA METHOD 8010/8020)
WOODWARD-CLYDE 3676 HARTSFIELD RD. TALLAHASSEE, FL 32303
FORMER ITT/THOMPSON FACILITY MADISON, FL CLIENT PROJECT #: 95F841

TEG PROJECT # 1-97241-LT

DATE ANALYZED:5/01/97

| | LABORATORY CONTROL SPIKE | | | LABORATORY CONTROL SPIKE DUPLICATE | | | RPD |
|---|---|---|---|---|---|---|---|
| | SPIKED CONC. (ug/L) | MEASURE CONC. (ug/L) | PERCENT RECOVERY | SPIKED CONC. (ug/L) | MEASURE CONC. (ug/L) | PERCENT RECOVERY | |
| METHYLENE CHLORIDE | 20.0 | 15.2 | 76.0% | 20.0 | 13.1 | 65.5% | 14.8% |
| 1,1-DICHLOROETHANE | 20.0 | 24.0 | 120.0% | 20.0 | 23.2 | 116.0% | 3.4% |
| CIS 1,2-DICHLOROETHENE | 20.0 | 23.2 | 116.0% | 20.0 | 18.1 | 90.5% | 24.7% |
| 1,1,1-TRICHLOROETHANE (TCA) | 20.0 | 20.6 | 103.0% | 20.0 | 19.2 | 96.0% | 7.0% |
| 1,2 DICHLOROETHANE | 20.0 | 24.5 | 122.5% | 20.0 | 19.0 | 95.0% | 25.3% |
| TRICHLOROETHENE (TCE) | 20.0 | 21.5 | 107.5% | 20.0 | 18.6 | 93.0% | 14.5% |
| TETRACHLOROETHENE (PCE) | 20.0 | 20.7 | 103.5% | 20.0 | 20.7 | 103.5% | 0.0% |
| 1,2-DICHLOROBENZENE | 20.0 | 22.7 | 113.5% | 20.0 | 21.0 | 105.0% | 7.8% |

ANALYSIS PERFORMED IN TEG'S CERTIFIED MOBILE LABORATORY
ANALYSIS PERFORMED BY: ROBERT BARTHOLEMEW
DATA REVIEWED BY: JONATHAN R. MILLER, RHSP

DATA QUALIFIERS

MI = MATRIX INTERFERENCE
DO = SURROGATE SPIKE DILUTED OUT
D = ALL SAMPLE VALUES OBTAINED BY DILUTION, PQL IS ADJUSTED ACCORDINGLY
d = INDIVIDUAL VALUE OBTAINED BY DILUTION
E = ESTIMATED CONCENTRATION(S)

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3500-C KENNESAW N. IND. PKWY KENNESAW, GA 30144 770-919-0805 FAX 770-919-0806

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teg

# QA/QC DATA REPORT

VOLATILE HALOGENATED & AROMATIC HYDROCARBON ANALYSIS OF WATER (EPA METHOD 8010/8020)
WOODWARD-CLYDE 3676 HARTSFIELD RD. TALLAHASSEE, FL 32303
FORMER ITT/THOMPSON FACILITY MADISON, FL CLIENT PROJECT #: 95F841

TEG PROJECT # 1-97241-LT

DATE ANALYZED:5/01/97

| | LABORATORY CONTROL SPIKE | | | LABORATORY CONTROL SPIKE DUPLICATE | | | RPD |
|---|---|---|---|---|---|---|---|
| | SPIKED CONC. (ug/L) | MEASURE CONC. (ug/L) | PERCENT RECOVERY | SPIKED CONC. (ug/L) | MEASURE CONC. (ug/L) | PERCENT RECOVERY | |
| METHYLENE CHLORIDE | 20.0 | 18.2 | 91.0% | 20.0 | 17.6 | 88.0% | 3.3% |
| 1,1-DICHLOROETHANE | 20.0 | 23.5 | 117.5% | 20.0 | 22.0 | 110.0% | 6.6% |
| CIS 1,2-DICHLOROETHENE | 20.0 | 19.9 | 99.5% | 20.0 | 18.5 | 92.5% | 7.3% |
| 1,1,1-TRICHLOROETHANE (TCA) | 20.0 | 20.8 | 104.0% | 20.0 | 17.8 | 89.0% | 15.5% |
| 1,2 DICHLOROETHANE | 20.0 | 20.6 | 103.0% | 20.0 | 17.9 | 89.5% | 14.0% |
| TRICHLOROETHENE (TCE) | 20.0 | 19.6 | 98.0% | 20.0 | 19.8 | 99.0% | 1.0% |
| TETRACHLOROETHENE (PCE) | 20.0 | 27.2 | 136.0% | 20.0 | 23.8 | 119.0% | 13.3% |
| 1,2-DICHLOROBENZENE | 20.0 | 22.4 | 112.0% | 20.0 | 23.0 | 115.0% | 2.6% |

ANALYSIS PERFORMED IN TEG'S CERTIFIED MOBILE LABORATORY
ANALYSIS PERFORMED BY: ROBERT BARTHOLEMEW
DATA REVIEWED BY: JONATHAN R. MILLER, RHSP

DATA QUALIFIERS

MI = MATRIX INTERFERENCE
DO = SURROGATE SPIKE DILUTED OUT
D = ALL SAMPLE VALUES OBTAINED BY DILUTION, PQL IS ADJUSTED ACCORDINGLY
d = INDIVIDUAL VALUE OBTAINED BY DILUTION
E = ESTIMATED CONCENTRATION(S)


3600-C KENNESAW N. IND. PKWY KENNESAW, GA 30144 770-919-0805 FAX 770-919-0806

SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

FILE
95F841

RECEIVED
WCC TALLAHASSEE
MAY 22 1997
Log No. _____

LOG NO: T7-21190
Received: 03 MAY 97
Reported: 16 MAY 97

Mr. Will Harms
Woodward-Clyde Consultants
3676 Hartsfield Road
Tallahassee, FL 32303-1119

CC: Cliff Harrison

Project: ITT-Thompson/95F841
Sampled By: Client
Code: 141970520

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE SAMPLED |
|---|---|---|
| 21190-1 | SB-21-7 | 05-02-97 |
| 21190-2 | SB-21-50 | 05-02-97 |
| 21190-3 | SB-22-8 | 05-02-97 |

| PARAMETER | 21190-1 | 21190-2 | 21190-3 |
|---|---|---|---|
| Volatile Organics (8010 and 8020) | | | |
| Bromodichloromethane, ug/l | <500 | <5000 | <1.0 |
| Bromoform, ug/l | <2500 | <25000 | <5.0 |
| Bromomethane, ug/l | <500 | <5000 | <1.0 |
| Carbon tetrachloride, ug/l | <500 | <5000 | <1.0 |
| Chlorobenzene, ug/l | <500 | <5000 | <1.0 |
| Chloroethane, ug/l | <500 | <5000 | <1.0 |
| 2-Chloroethylvinyl ether, ug/l | <5000 | <50000 | <10 |
| Chloroform, ug/l | <500 | <5000 | <1.0 |
| Chloromethane, ug/l | <500 | <5000 | <1.0 |
| Dibromochloromethane, ug/l | <500 | <5000 | <1.0 |
| 1,2-Dichlorobenzene, ug/l | <500 | <5000 | <1.0 |
| 1,3-Dichlorobenzene, ug/l | <500 | <5000 | <1.0 |
| 1,4-Dichlorobenzene, ug/l | <500 | <5000 | <1.0 |
| Dichlorodifluoromethane, ug/l | <500 | <5000 | <1.0 |
| 1,1-Dichloroethane, ug/l | <500 | <5000 | 2.3 |
| 1,2-Dichloroethane, ug/l | <500 | <5000 | <1.0 |
| 1,1-Dichloroethene, ug/l | <500 | <5000 | <1.0 |
| cis-1,2-Dichloroethylene, ug/l | 3800 | 7200 | <1.0 |
| trans-1,2-Dichloroethylene, ug/l | <500 | <5000 | <1.0 |
| 1,2-Dichloropropane, ug/l | <500 | <5000 | <1.0 |
| cis-1,3-Dichloropropene, ug/l | <500 | <5000 | <1.0 |
| trans-1,3-Dichloropropene, ug/l | <500 | <5000 | <1.0 |
| Methylene chloride (Dichloromethane), ug/l | <2500 | <25000 | <5.0 |

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| 21190-1 | SB-21-7 | 05-02-97 |
| 21190-2 | SB-21-50 | 05-02-97 |
| 21190-3 | SB-22-8 | 05-02-97 |

| PARAMETER | 21190-1 | 21190-2 | 21190-3 |
|---|---|---|---|
| 1,1,2,2-Tetrachloroethane, ug/l | <500 | <5000 | <1.0 |
| Tetrachloroethene, ug/l | <500 | <5000 | <1.0 |
| 1,1,1-Trichloroethane, ug/l | <500 | <5000 | <1.0 |
| 1,1,2-Trichloroethane, ug/l | <500 | <5000 | <1.0 |
| Trichloroethylene, ug/l | <500 | 110000 | 2.1 |
| Trichlorofluoromethane, ug/l | <500 | <5000 | <1.0 |
| Vinyl chloride, ug/l | 21000 | <5000 | <1.0 |
| Surrogate - Bromochloromethane | 101 % | 101 % | 111 % |
| Benzene, ug/l | <500 | <5000 | <1.0 |
| Toluene, ug/l | 16000 | <5000 | <1.0 |
| Ethylbenzene, ug/l | 1500 | <5000 | 2.2 |
| Total Xylenes, ug/l | 6700 | <10000 | <2.0 |
| Methyl tert-butyl ether (MTBE), ug/l | <5000 | <50000 | <10 |
| Surrogate - a,a,a-Trifluorotoluene | 107 % | 114 % | 112 % |
| Dilution factor | 500 | 5000 | 1.0 |
| Date Analyzed | 05.13.97 | 05.14.97 | 05.13.97 |
| Batch ID | 0506A | 0506A | 0506A |
| ICP Metals (6010) | | | |
| Iron, mg/l | 71 | 6.4 | 10 |
| Dilution factor | 1.0 | 1.0 | 1.0 |
| Prep or Extraction Date | 05.08.97 | 05.08.97 | 05.08.97 |
| Date Analyzed | 05.09.97 | 05.09.97 | 05.09.97 |
| Batch ID | 0508I | 0508I | 0508I |

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| 21190-2 | SB-21-50 | 05-02-97 |
| 21190-3 | SB-22-8 | 05-02-97 |

| PARAMETER | 21190-1 | 21190-2 | 21190-3 |
|---|---|---|---|
| Hardness as CaCO3 (SM2340B) | | | |
| Hardness as CaCO3, mg/l | 420 | 30 | 340 |
| Dilution factor | 1.0 | 1.0 | 1.0 |
| Prep or Extraction Date | 05.08.97 | 05.08.97 | 05.08.97 |
| Date Analyzed | 05.09.97 | 05.09.97 | 05.09.97 |
| Batch ID | 0508I | 0508I | 0508I |
| Alkalinity (310.1) | | | |
| Alkalinity (to pH 4.5) as CaCO3, mg/l | 290 | 200 | 320 |
| Dilution Factor | 1.0 | 1.0 | 1.0 |
| Date Analyzed | 05.06.97 | 05.06.97 | 05.06.97 |
| Batch ID | 0506A | 0506A | 0506A |
| Biochemical Oxygen Demand (5-Day/405.1) | | | |
| Biochemical Oxygen Demand (5 Day) (405.1), mg/l | 73 | <6.0*F11 | <12*F11 |
| Dilution factor | 1.0 | 1.0 | 1.0 |
| Date Analyzed | 05.03.97 | 05.03.97 | 05.03.97 |
| Batch ID | 0503B | 0503B | 0503B |
| Chemical Oxygen Demand (SM5220C) | | | |
| Chemical Oxygen Demand, mg/l | 280 | <20 | 25 |
| Dilution factor | 1.0 | 1.0 | 1.0 |
| Date Analyzed | 05.09.97 | 05.09.97 | 05.09.97 |
| Batch ID | 0509C | 0509C | 0509C |
| Total Nitrogen | | | |
| Total Nitrogen (TKN + NO3/NO2), mg/l | 16 | 32 | 1.77 |

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|---|---|---|
| 21190-1 | SB-21-7 | 05-02-97 |
| 21190-2 | SB-21-50 | 05-02-97 |
| 21190-3 | SB-22-8 | 05-02-97 |

| PARAMETER | 21190-1 | 21190-2 | 21190-3 |
|---|---|---|---|
| pH (150.1) | | | |
| pH, units | 6.4 | 5.5 | 6.8 |
| Dilution factor | 1.0 | 1.0 | 1.0 |
| Date Analyzed | 05.03.97 | 05.03.97 | 05.03.97 |
| Batch ID | 0503H | 0503H | 0503H |
| Phosphorus, Total (365.4) | | | |
| Phosphorus, Total (365.4), mg/l | 2.9 | 9.2 | 0.12 |
| Dilution factor | 1.0 | 10 | 1.0 |
| Date Analyzed | 05.08.97 | 05.08.97 | 05.08.97 |
| Batch ID | 0508J | 0508J | 0508J |
| Dissolved Oxygen | | | |
| Dissolved Oxygen, mg/l | 0.25 | 3.0 | 2.6 |
| Dilution factor | 1.0 | 1.0 | 1.0 |
| Date Analyzed | 05.03.97 | 05.03.97 | 05.03.97 |
| Batch ID | 0503O | 0503O | 0503O |

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REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE SAMPLED |
|---|---|---|
| 21190-4 | SB-2S-3 | 05-02-97 |

| PARAMETER | 21190-4 | | |
|---|---|---|---|
| Purgeable Halocarbons (8010) | | | |
| Bromodichloromethane, ug/kg dw | <6.3 | | |
| Bromoform, ug/kg dw | <32 | | |
| Bromomethane, ug/kg dw | <6.3 | | |
| Carbon tetrachloride, ug/kg dw | <6.3 | | |
| Chlorobenzene, ug/kg dw | <6.3 | | |
| Chloroethane, ug/kg dw | <6.3 | | |
| 2-Chloroethylvinyl ether, ug/kg dw | <63 | | |
| Chloroform, ug/kg dw | <6.3 | | |
| Chloromethane, ug/kg dw | <6.3 | | |
| Dibromochloromethane, ug/kg dw | <6.3 | | |
| 1,2-Dichlorobenzene, ug/kg dw | <6.3 | | |
| 1,3-Dichlorobenzene, ug/kg dw | <6.3 | | |
| 1,4-Dichlorobenzene, ug/kg dw | <6.3 | | |
| Dichlorodifluoromethane, ug/kg dw | <6.3 | | |
| 1,1-Dichloroethane, ug/kg dw | <6.3 | | |
| 1,2-Dichloroethane, ug/kg dw | <6.3 | | |
| 1,1-Dichloroethene, ug/kg dw | <6.3 | | |
| cis-1,2-Dichloroethylene, ug/kg dw | <6.3 | | |
| trans-1,2-Dichloroethylene, ug/kg dw | <6.3 | | |
| 1,2-Dichloropropane, ug/kg dw | <6.3 | | |
| cis-1,3-Dichloropropene, ug/kg dw | <6.3 | | |
| trans-1,3-Dichloropropene, ug/kg dw | <6.3 | | |
| Methylene chloride (Dichloromethane), ug/kg dw | <13 | | |
| 1,1,2,2-Tetrachloroethane, ug/kg dw | <6.3 | | |
| Tetrachloroethene, ug/kg dw | <6.3 | | |

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| LOG NO | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE SAMPLED |
|---|---|---|
| 21190-4 | SB-2S-3 | 05-02-97 |

| PARAMETER | 21190-4 |
|---|---|
| 1,1,1-Trichloroethane, ug/kg dw | <6.3 |
| 1,1,2-Trichloroethane, ug/kg dw | <6.3 |
| Trichloroethylene, ug/kg dw | <6.3 |
| Trichlorofluoromethane, ug/kg dw | <6.3 |
| Vinyl chloride, ug/kg dw | <6.3 |
| Surrogate - Bromochloromethane | 165 %*F53 |
| Date Analyzed | 05.12.97 |
| Dilution factor | 1.0 |
| Batch ID | 0512A |
| Purgeable Aromatics (8020) | |
| Benzene, ug/kg dw | <6.3 |
| Chlorobenzene, ug/kg dw | <6.3 |
| 1,2-Dichlorobenzene, ug/kg dw | <6.3 |
| 1,3-Dichlorobenzene, ug/kg dw | <6.3 |
| 1,4-Dichlorobenzene, ug/kg dw | <6.3 |
| Ethylbenzene, ug/kg dw | <6.3 |
| Toluene, ug/kg dw | 28 |
| Xylenes, ug/kg dw | 9.0 |
| Total Volatile Organic Aromatics, ug/kg dw | 37 |
| Methyl Tert Butyl Ether (MTBE), ug/kg dw | <63 |
| Surrogate - a,a,a-Trifluorotoluene | 153 % |
| Date Analyzed | 05.12.97 |
| Dilution factor | 1.0 |
| Batch ID | 0512A |

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REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |
|---|---|
| 21190-5 | Method Blank |
| 21190-6 | Accuracy (% Recovery) |
| 21190-7 | Precision (% RPD) |
| 21190-8 | Detection Limit |

| PARAMETER | 21190-5 | 21190-6 | 21190-7 | 21190-8 |
|---|---|---|---|---|
| Volatile Organics (8010 and 8020) | | | | |
| Bromodichloromethane, ug/l | <1.0 | --- | --- | 1.0 |
| Bromoform, ug/l | <5.0 | --- | --- | 5.0 |
| Bromomethane, ug/l | <1.0 | --- | --- | 1.0 |
| Carbon tetrachloride, ug/l | <1.0 | --- | --- | 1.0 |
| Chlorobenzene, ug/l | <1.0 | 94 % | 8.5 % | 1.0 |
| Chloroethane, ug/l | <1.0 | --- | --- | 1.0 |
| 2-Chloroethylvinyl ether, ug/l | <10 | --- | --- | 10 |
| Chloroform, ug/l | <1.0 | --- | --- | 1.0 |
| Chloromethane, ug/l | <1.0 | --- | --- | 1.0 |
| Dibromochloromethane, ug/l | <1.0 | --- | --- | 1.0 |
| 1,2-Dichlorobenzene, ug/l | <1.0 | --- | --- | 1.0 |
| 1,3-Dichlorobenzene, ug/l | <1.0 | --- | --- | 1.0 |
| 1,4-Dichlorobenzene, ug/l | <1.0 | --- | --- | 1.0 |
| Dichlorodifluoromethane, ug/l | <1.0 | --- | --- | 1.0 |
| 1,1-Dichloroethane, ug/l | <1.0 | --- | --- | 1.0 |
| 1,2-Dichloroethane, ug/l | <1.0 | --- | --- | 1.0 |
| 1,1-Dichloroethene, ug/l | <1.0 | 94 % | 8.2 % | 1.0 |
| cis-1,2-Dichloroethylene, ug/l | <1.0 | --- | --- | 1.0 |
| trans-1,2-Dichloroethylene, ug/l | <1.0 | --- | --- | 1.0 |
| 1,2-Dichloropropane, ug/l | <1.0 | --- | --- | 1.0 |
| cis-1,3-Dichloropropene, ug/l | <1.0 | --- | --- | 1.0 |
| trans-1,3-Dichloropropene, ug/l | <1.0 | --- | --- | 1.0 |

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REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |
|---|---|
| 21190-5 | Method Blank |
| 21190-6 | Accuracy (% Recovery) |
| 21190-7 | Precision (% RPD) |
| 21190-8 | Detection Limit |

| PARAMETER | 21190-5 | 21190-6 | 21190-7 | 21190-8 |
|---|---|---|---|---|
| Methylene chloride (Dichloromethane), ug/l | <5.0 | --- | --- | 5.0 |
| 1,1,2,2-Tetrachloroethane, ug/l | <1.0 | --- | --- | 1.0 |
| Tetrachloroethene, ug/l | <1.0 | --- | --- | 1.0 |
| 1,1,1-Trichloroethane, ug/l | <1.0 | --- | --- | 1.0 |
| 1,1,2-Trichloroethane, ug/l | <1.0 | --- | --- | 1.0 |
| Trichloroethylene, ug/l | <1.0 | 106 % | 8.5 % | 1.0 |
| Trichlorofluoromethane, ug/l | <1.0 | --- | --- | 1.0 |
| Vinyl chloride, ug/l | <1.0 | --- | --- | 1.0 |
| Surrogate - Bromochloromethane | 124 % | 103 % | --- | --- |
| Benzene, ug/l | <1.0 | 94 % | 4.2 % | 1.0 |
| Toluene, ug/l | <1.0 | 97 % | 2.1 % | 1.0 |
| Ethylbenzene, ug/l | <1.0 | --- | --- | 1.0 |
| Total Xylenes, ug/l | <2.0 | --- | --- | 2.0 |
| Methyl tert-butyl ether (MTBE), ug/l | <10 | --- | --- | 10 |
| Surrogate - a,a,a-Trifluorotoluene | 116 % | 107 % | --- | --- |
| Dilution factor | 1.0 | 1.0 | --- | --- |
| Date Analyzed | 05.13.97 | 05.08.97 | --- | --- |
| Batch ID | 0506A | 0506A | --- | --- |
| ICP Metals (6010) | | | | |
| Iron, mg/l | <0.050 | 102 % | 0.98 % | 0.050 |
| Dilution factor | 1.0 | 1.0 | --- | --- |
| Prep or Extraction Date | 05.08.97 | 05.08.97 | --- | --- |
| Date Analyzed | 05.09.97 | 05.09.97 | --- | --- |
| Batch ID | 0508I | 0508I | --- | --- |

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|---|---|
| 21190-5 | Method Blank |
| 21190-6 | Accuracy (% Recovery) |
| 21190-7 | Precision (% RPD) |
| 21190-8 | Detection Limit |

| PARAMETER | 21190-5 | 21190-6 | 21190-7 | 21190-8 |
|---|---|---|---|---|
| Hardness as CaCO3 (SM2340B) | | | | |
| Hardness as CaCO3, mg/l | <3.3 | 95 % | 6.3 % | 3.3 |
| Dilution factor | 1.0 | 1.0 | --- | --- |
| Prep or Extraction Date | 05.08.97 | 05.08.97 | --- | --- |
| Date Analyzed | 05.09.97 | 05.09.97 | --- | --- |
| Batch ID | 0508I | 0508I | --- | --- |
| Alkalinity (310.1) | | | | |
| Alkalinity (to pH 4.5) as CaCO3, mg/l | <1.0 | 90 % | 0 % | 1.0 |
| Dilution Factor | 1.0 | 1.0 | --- | --- |
| Date Analyzed | 05.06.97 | 05.06.97 | --- | --- |
| Batch ID | 0506A | 0506A | --- | --- |
| Biochemical Oxygen Demand (5-Day/405.1) | | | | |
| Biochemical Oxygen Demand (5 Day) (405.1), mg/l | <2.0 | 96 % | 1.0 % | 2.0 |
| Dilution factor | 1.0 | 1.0 | --- | --- |
| Date Analyzed | 05.03.97 | 05.03.97 | --- | --- |
| Batch ID | 0503B | 0503B | --- | --- |
| Chemical Oxygen Demand (SM5220C) | | | | |
| Chemical Oxygen Demand, mg/l | <20 | 90 % | 4.5 % | 20 |
| Dilution factor | 1.0 | 1.0 | --- | --- |
| Date Analyzed | 05.09.97 | 05.09.97 | --- | --- |
| Batch ID | 0509C | 0509C | --- | --- |

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T7-21190
Received: 03 MAY 97
Reported: 16 MAY 97

Mr. Will Harms
Woodward-Clyde Consultants
3676 Hartsfield Road
Tallahassee, FL 32303-1119

CC: Cliff Harrison

Project: ITT-Thompson/95F841
Sampled By: Client
Code: 142370520

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |
|---|---|
| 21190-5 | Method Blank |
| 21190-6 | Accuracy (% Recovery) |
| 21190-7 | Precision (% RPD) |
| 21190-8 | Detection Limit |

| PARAMETER | 21190-5 | 21190-6 | 21190-7 | 21190-8 |
|---|---|---|---|---|
| Phosphorus, Total (365.4) | | | | |
| Phosphorus, Total (365.4), mg/l | <0.10 | 86 % | 1.2 % | 0.10 |
| Dilution Factor | 1.0 | 1.0 | --- | --- |
| Date Analyzed | 05.08.97 | 05.08.97 | --- | --- |
| Batch ID | 0508J | 0508J | --- | --- |

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CC: Cliff Harrison

Project: ITT-Thompson/95F841
Sampled By: Client
Code: 141970520

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |
|---|---|
| 21190-9 | Method Blank |
| 21190-10 | Accuracy (% Recovery) |
| 21190-11 | Precision (% RPD) |
| 21190-12 | Detection Limit |

| PARAMETER | 21190-9 | 21190-10 | 21190-11 | 21190-12 |
|---|---|---|---|---|
| Purgeable Halocarbons (8010) | | | | |
| Bromodichloromethane, ug/kg dw | <5.0 | --- | --- | 5.0 |
| Bromoform, ug/kg dw | <25 | --- | --- | 25 |
| Bromomethane, ug/kg dw | <5.0 | --- | --- | 5.0 |
| Carbon tetrachloride, ug/kg dw | <5.0 | --- | --- | 5.0 |
| Chlorobenzene, ug/kg dw | <5.0 | 102 % | 6.9 % | 5.0 |
| Chloroethane, ug/kg dw | <5.0 | --- | --- | 5.0 |
| 2-Chloroethylvinyl ether, ug/kg dw | <50 | --- | --- | 50 |
| Chloroform, ug/kg dw | <5.0 | --- | --- | 5.0 |
| Chloromethane, ug/kg dw | <5.0 | --- | --- | 5.0 |
| Dibromochloromethane, ug/kg dw | <5.0 | --- | --- | 5.0 |
| 1,2-Dichlorobenzene, ug/kg dw | <5.0 | --- | --- | 5.0 |
| 1,3-Dichlorobenzene, ug/kg dw | <5.0 | --- | --- | 5.0 |
| 1,4-Dichlorobenzene, ug/kg dw | <5.0 | --- | --- | 5.0 |
| Dichlorodifluoromethane, ug/kg dw | <5.0 | --- | --- | 5.0 |
| 1,1-Dichloroethane, ug/kg dw | <5.0 | --- | --- | 5.0 |
| 1,2-Dichloroethane, ug/kg dw | <5.0 | --- | --- | 5.0 |
| 1,1-Dichloroethene, ug/kg dw | <5.0 | 125 % | 8.0 % | 5.0 |
| cis-1,2-Dichloroethylene, ug/kg dw | <5.0 | --- | --- | 5.0 |
| trans-1,2-Dichloroethylene, ug/kg dw | <5.0 | --- | --- | 5.0 |
| 1,2-Dichloropropane, ug/kg dw | <5.0 | --- | --- | 5.0 |
| cis-1,3-Dichloropropene, ug/kg dw | <5.0 | --- | --- | 5.0 |
| trans-1,3-Dichloropropene, ug/kg dw | <5.0 | --- | --- | 5.0 |

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& ENVIRONMENTAL SERVICES, INC.

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LOG NO: T7-21190
Received: 03 MAY 97
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3676 Hartsfield Road
Tallahassee, FL 32303-1119

CC: Cliff Harrison

Project: ITT-Thompson/95F841
Sampled By: Client
Code: 141970520

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |
|---|---|
| 21190-9 | Method Blank |
| 21190-10 | Accuracy (% Recovery) |
| 21190-11 | Precision (% RPD) |
| 21190-12 | Detection Limit |

| PARAMETER | 21190-9 | 21190-10 | 21190-11 | 21190-12 |
|---|---|---|---|---|
| Methylene chloride (Dichloromethane), ug/kg dw | <10 | --- | --- | 10 |
| 1,1,2,2-Tetrachloroethane, ug/kg dw | <5.0 | --- | --- | 5.0 |
| Tetrachloroethene, ug/kg dw | <5.0 | --- | --- | 5.0 |
| 1,1,1-Trichloroethane, ug/kg dw | <5.0 | --- | --- | 5.0 |
| 1,1,2-Trichloroethane, ug/kg dw | <5.0 | --- | --- | 5.0 |
| Trichloroethylene, ug/kg dw | <5.0 | 122 % | 8.2 % | 5.0 |
| Trichlorofluoromethane, ug/kg dw | <5.0 | --- | --- | 5.0 |
| Vinyl chloride, ug/kg dw | <5.0 | --- | --- | 5.0 |
| Surrogate - Bromochloromethane | 90 % | 104 % | --- | --- |
| Date Analyzed | 05.12.97 | 05.12.97 | --- | --- |
| Dilution factor | 1.0 | 1.0 | --- | --- |
| Batch ID | 0512A | 0512A | --- | --- |

Serial Number: [illegible]

# SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.


☐ 5102 LaRoche Avenue, Savannah, GA 31404 Phone: (912) 354-7858 Fax: (912) 352-0165
☒ 2846 Industrial Plaza Drive, Tallahassee, FL 32301 Phone: (904) 878-3994 Fax: (904) 878-9504
☐ 414 SW 12th Avenue, Deerfield Beach, FL 33442 Phone: (305) 421-7400 Fax: (305) 421-2584
☐ 900 Lakeside Drive, Mobile, AL 36693 Phone: (205) 666-6633 Fax: (205) 666-6696
☐ 6712 Benjamin Road, Suite 100, Tampa, FL 33634 Phone: (813) 885-7427 Fax: (813) 885-7049
☐ 100 Alpha Drive, Suite 110, Destrehan, LA 70047 Phone: (504) 764-1100 Fax: (504) 725-1163


## NALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

| | | |
|---|---|---|
| JECT REFERENCE: TT / Thompson | PROJECT NO.: 95F841 | P.O. NUMBER: |
| JECT LOC. (e): FL | SAMPLER(s) NAME: H Cliff Harrison | PHONE: 904 5743197 |
| | | FAX: |
| NT NAME: Woodward-Clyde | CLIENT PROJECT MANAGER: Will Harms | |
| NT ADDRESS (CITY, STATE, ZIP): Tallahassee, FL | | |

PAGE 1 OF 1

☐ STANDARD REPORT DELIVERY
☐ EXPEDITED REPORT DELIVERY (surcharge)
Date Due: _____

MATRIX TYPE: AQUEOUS (WATER) / SOLID OR SEMISOLID / AIR / NONAQUEOUS LIQUID (oil, solvent, etc)

REQUIRED ANALYSES: 8010/8020; PH, Alk, BOD; Fe, Hardness; TP, Nitrogen, Phosphorus; COD; DO

NUMBER OF CONTAINERS SUBMITTED

| SAMPLE DATE | SAMPLE TIME | SL NO. | SAMPLE IDENTIFICATION | AQUEOUS (WATER) | SOLID OR SEMISOLID | AIR | NONAQUEOUS LIQUID | 8010/8020 | PH, Alk, BOD | Fe, Hardness | TP, Nitrogen, Phosphorus | COD | DO | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MAY 97 | 0850 | | SB-20S-3 | | X | | | 3 | | | | | | | | | | |
| MAY 97 | 1030 | | SB-21-7 | X | | | | 3 | 1 | 1 | 1 | 1 | 1 | | | | | |
| MAY 97 | 1142 | | SB-21-50 | X | | | | 3 | 1 | 1 | 1 | 1 | 1 | | | | | |
| 1 | 1339 | | SB-22-8 | X | | | | 3 | 1 | 1 | 1 | 1 | 1 | | | | | |

| RELINQUISHED BY: (SIGNATURE) | DATE | TIME | RELINQUISHED BY: (SIGNATURE) | DATE | TIME | RELINQUISHED BY: (SIGNATURE) | DATE | TIME |
|---|---|---|---|---|---|---|---|---|
| [signature] | 4-24-97 | 1101 | [signature] WCC | | | | | |
| **RECEIVED BY: (SIGNATURE)** | **DATE** | **TIME** | **RECEIVED BY: (SIGNATURE)** | **DATE** | **TIME** | **RECEIVED BY: (SIGNATURE)** | **DATE** | **TIME** |
| H Cliff Harrison | 25 APR 97 | 0810 | | | | | | |

LABORATORY USE ONLY

| RECEIVED FOR LABORATORY BY: (SIGNATURE) | DATE | TIME | CUSTODY INTACT | CUSTODY SEAL NO. | SL LOG NO. | LABORATORY REMARKS: |
|---|---|---|---|---|---|---|
| [signature] | 5/3/97 | 0820 | | | [illegible] | |

SAVANNAH LABORATORY COPY

Microbac Laboratories, Inc.
South Atlantic Division
115 Corporation Way, Unit A Oakwood Business Park Venice, Florida 34292
941/484-6508 • Fax: 941/484-7388
Air • Fuel • Water • Food • Wastes

May 12, 1997

Woodward - Clyde Consulting
3676 Hartsfield Rd.
Tallahassee, FL 32303

RECEIVED
WCC TALLAHASSEE
MAY 15 1997

Log No. _____

## Certificate of Analysis

| Sample # | Test Performed | Method | Result | Units |
|---|---|---|---|---|
| SB-21-50 | Heterotrophic Plate Count | SMEWW 9215 | 2 | per ml |
| | Anaerobic Plate Count | SMEWW 9215 C Anaer. Inc. | 3 | per ml |
| | Pseudomonas | SMEWW 9213 E | <100 | per ml |
| | Iron Bacteria | SMEWW 9240 D | <100 | per ml |
| SB-22-8 | Heterotrophic Plate Count | SMEWW 9215 | 14 | per ml |
| | Anaerobic Plate Count | SMEWW 9215 C Anaer. Inc. | 11 | per ml |
| | Pseudomonas | SMEWW 9213 E | <100 | per ml |
| | Iron Bacteria | SMEWW 9240 D | <100 | per ml |
| SB-21-7 | Heterotrophic Plate Count | SMEWW 9215 | 28 | per ml |
| | Anaerobic Plate Count | SMEWW 9215 C Anaer. Inc. | 16 | per ml |
| | Pseudomonas | SMEWW 9213 E | <100 | per ml |
| | Iron Bacteria | SMEWW 9240 D | <100 | per ml |

Ray A. Stocker III
Laboratory Director

WOODWARD.W

The data and other information contained on this, and other accompanying documents, represent only the sample(s) analyzed and is rendered upon the condition that it is not reproduced wholly or in part for advertising or other purposes without written approval from the laboratory.

# TABLE 2

## (Continued)

## SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS (VOCs) IN GROUND WATER FROM VERTICAL PROFILE SAMPLING AS REPORTED BY TEG'S MOBILE LABORATORY

April 28 through May 3, 1997

Former ITTA/Thompson Facility

Madison, Florida

## CONCENTRATIONS OF DETECTED COMPOUNDS

| AMPLE LOCATION | SB-17 | | | | | SB-18 | | | | | SB-19 | | | SB-20 | | SB-21 | | | SB-22 | SB-23 | SB-24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEPTH (FT BLS) | 10 | 11 | 36 | 40 | 50 | 20 | 24 | 30 | 40 | 50 | 7 | 26 | 42 | 7 | 12 | 7 | 12 | 50 | 8 | 10 | 10 |
| | | | | | | | | | | | | | | | | | | | | | |
| AETER | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) |
| **Chlorinated VOCs** | | | | | | | | | | | | | | | | | | | | | |
| loride | ND | ND | 163 | 436 | 2500 | ND | 15 | 1.38 | ND | 5 | 4780 | 44 | ND | 3860 | 60800 | 7000 | 23400 | 341 | ND | ND | 244 |
| hloroethene | ND | ND | ND | 79 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 117 | ND | ND | ND |
| ,2-dichloroethene | 47 | 56 | 15 | 22 | 23 | ND | ND | ND | ND | ND | ND | ND | ND | 43 | 1350 | 69 | 347 | ND | ND | ND | ND |
| hloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 268 | ND | ND | 53 | 28.7 | ND | ND | ND | ND | ND | ND |
| -dichloroethene | ND | 14 | 76 | 4280 | 1100 | ND | ND | ND | ND | ND | 1830 | 2130 | ND | 156 | 98300 | 1180 | 17400 | 4290 | 27 | 37 | 16 |
| oethene (TCE) | ND | ND | ND | 2180 | ND | ND | ND | ND | ND | ND | ND | 73 | ND | ND | ND | 326 | 158 | 10500 | 65 | 59 | 21 |
| hlorobenzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 13 | ND | ND | ND | ND | ND | ND |
| L VOCs | 47 | 70 | 254 | 6997 | 3623 | ND | 15 | 1 | ND | 5 | 6878 | 2247 | ND | 4112 | 160492 | 8575 | 41305 | 15248 | 92 | 87 | 281 |
| **BTEX** | | | | | | | | | | | | | | | | | | | | | |
| e | ND | ND | ND | ND | 23 | ND | ND | ND | ND | ND | 243 | 39 | ND | 11 | ND | ND | ND | ND | ND | ND | 501 |
| : - | ND | 21 | 73 | 1540 | 89 | ND | ND | ND | ND | ND | 3580 | 378 | ND | 669 | ND | 9415 | 32340 | 591 | 27 | ND | 120 |
| nzene | ND | ND | 11 | 60 | ND | ND | ND | ND | ND | ND | 474 | 27 | ND | 150 | 313 | 690 | 1010 | ND | ND | ND | ND |
| lenes | ND | 11 | 28 | 192 | 14 | ND | ND | ND | ND | ND | 1800 | 182 | ND | 421 | 1270 | 5930 | 10600 | 271 | 95 | 15 | 217 |
| L VOCs | ND | 32 | 112 | 1792 | 126 | ND | ND | ND | ND | ND | 6097 | 626 | ND | 1251 | 1583 | 16035 | 43950 | 862 | 122 | 15 | 838 |

NOTES: ND indicates analyte not detected at or above the Practical Quantitation Limit (PQL)

# TABLE 2

(Continued)

## SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS (VOCs) IN GROUND WATER FROM VERTICAL PROFILE SAMPLING AS REPORTED BY TEG'S MOBILE LABORATORY

April 28 through May 3, 1997
Former ITTA/Thompson Facility
Madison, Florida

### CONCENTRATIONS OF DETECTED COMPOUNDS

| SAMPLE LOCATION | SB-25 | | | | | SB-26 | | | | SB-27 | SB-28 | SB-29 | UST |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEPTH (FT BLS) | 10 | 15 | 30 | 40 | 47 | 8 | 15 | 27 | 45 | 8 | 7 | 8 | -- |
| PARAMETER | (ug/L) | (ug/L) | (ug/L) | (ug/L) | (ug/L) | (ug/L) | (ug/L) | (ug/L) | (ug/L) | (ug/L) | (ug/L) | (ug/L) | (ug/L) |
| Chlorinated VOCs | | | | | | | | | | | | | |
| vinyl chloride | ND | 55.8 | 101 | ND | 7.3 | ND | 269 | 430 | 1920 | ND | 21400 | ND | ND |
| 1,1-dichloroethene | ND | ND | ND | ND | ND | ND | 103 | 77 | ND | ND | 212 | ND | 3.5 |
| trans-1,2-dichloroethene | ND | ND | ND | ND | ND | ND | 170 | 38 | ND | ND | ND | ND | 3.6 |
| 1,1-dichloroethane | ND | 1.1 | ND | 3.3 | ND | 6.5 | ND | 98 | ND | ND | ND | ND | ND |
| cis-1,2-dichloroethene | ND | 11 | 287 | 289 | 101 | 106 | 424 | ND | 19300 | 4620 | 1120000 | 81.5 | 56.4 |
| chloroform | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 32500 | ND | ND |
| trichloroethene (TCE) | 10 | ND | 4 | 1.8 | 381 | 5.1 | 12200 | 8020 | 3100 | 376 | ND | ND | ND |
| TOTAL VOCs | 10 | 68 | 392 | 294 | 489 | 118 | 13166 | 8663 | 24320 | 4996 | 1174112 | 82 | 64 |
| BTEX | | | | | | | | | | | | | |
| benzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 6900 | 95.5 | ND |
| toluene | ND | ND | ND | ND | ND | 324 | ND | ND | ND | 94 | 13800 | 88.5 | ND |
| ethylbenzene | ND | ND | ND | ND | ND | 497 | 867 | 40 | ND | 118 | 38300 | 77.5 | ND |
| total xylenes | ND | ND | ND | 1.2 | ND | 2380 | 3460 | 311 | 280 | 272 | 3700 | 73.5 | ND |
| TOTAL VOCs | ND | ND | ND | 1 | ND | 3201 | 4327 | 351 | 280 | 484 | 62700 | 335 | ND |

NOTES: ND indicates analyte not detected at or above the Practical Quantitation Limit (PQL)

# TABLE 3

## SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS (VOCs) CONFIRMATORY SAMPLING IN GROUND WATER & SOIL GROUND WATER QUALITY ANALYSIS AS REPORTED BY SAVANNAH LABORATORIES

April 28 through May 3, 1997
Former ITTA/Thompson Facility
Madison, Florida

### CONCENTRATIONS OF DETECTED COMPOUNDS EPA Methods 8010 and 8020

| SAMPLE LOCATION | SB-20 | SB-21 | | SB-22 |
|---|---|---|---|---|
| DEPTH (FT BLS) | 3 | 7 | 50 | 8 |
| SAMPLE TYPE | SOIL | GROUND WATER | GROUND WATER | GROUND WATER |
| PARAMETER | (µg/Kg) | (µg/L) | (µg/L) | (µg/L) |
| **Chlorinated VOCs** | | | | |
| vinyl chloride | ND | 21000 | ND | ND |
| 1,1-dichloroethene | ND | ND | ND | ND |
| trans-1,2-dichloroethene | ND | ND | ND | ND |
| 1,1-dichloroethane | ND | ND | ND | 2.3 |
| cis-1,2-dichloroethene | ND | 3800 | 7200 | ND |
| chloroform | ND | ND | ND | ND |
| trichloroethene (TCE) | ND | ND | 110000 | 2.1 |
| TOTAL VOCs | ND | 24800 | 117200 | 4 |
| **BTEX** | | | | |
| benzene | ND | ND | ND | ND |
| toluene | 28 | 16000 | ND | ND |
| ethylbenzene | ND | 1500 | ND | 2.2 |
| total xylenes | 9 | 6700 | ND | ND |
| TOTAL VOCs | 37 | 24200 | ND | 2 |
| **Ground Water Quality** | | | | |
| PARAMETER | | (mg/L) | (mg/L) | (mg/L) |
| hardness, as $CaCO_3$ | NA | 420 | 30 | 340 |
| alkalinity, as $CaCO_3$ | NA | 290 | 200 | 320 |
| biochemical oxygen demand ($BCOD_5$) | NA | 73 | <6 | <12 |
| chemical oxygen demand (COD) | NA | 280 | <20 | 25 |
| total nitrogen | NA | 16 | 32 | 1.77 |
| pH, in standard units | NA | 6.4* | 5.5* | 6.8* |
| total phosphorous | NA | 2.9 | 9.2 | 0.12 |
| dissolved oxygen | NA | 0.25 | 3 | 2.6 |

NOTES:

ND indicates analyte not detected at or above the Practical Quantitation Limit (PQL)

NA indicates sample was not analyzed for that parameter

* indicates that values are presented in standard pH units

# TABLE 4

## SUMMARY OF BACTERIOLOGICAL ANALYSES OF GROUND WATER

April 28 through May 3, 1997
Former ITTA/Thompson Facility
Madison, Florida

| SAMPLE LOCATION | SB-21 | | SB-22 |
|---|---|---|---|
| DEPTH (FT BLS) | 7 | 50 | 8 |
| PARAMETER | (bacteria count/ml) | (bacteria count/ml) | (bacteria count/ml) |
| Chlorinated VOCs | | | |
| heterotrophic plate count | 28 | 2 | 14 |
| anaerobic plate count | 16 | 3 | 11 |
| psuedomonas | <100 | <100 | <100 |
| iron bacteria | <100 | <100 | <100 |

# TABLE 5

## SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS (VOCs) IN SOIL FROM VERTICAL PROFILE SAMPLING

April 28 through May 3, 1997
Former ITT/Thompson Facility
Madison, Florida

### CONCENTRATIONS OF DETECTED COMPOUNDS

| MPLE LOCATION | SB-15 | | | SB-19 | SB-20 | SB-21 | SB-22 | SB-23 | | | SB-24 | | | SB-25 | SB-26 | SB-27 | | SB-28 | SB-29 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EPTH (FT BLS) | 8 | 16 | 22 | 3 | 3 | 3 | 8 | 2 | 4 | 6 | 2 | 4 | 6 | 6 | 5 | 2 | 4 | 2 | 2 | 4 |
| | | | | | | | | | | | | | | | | | | | | |
| ETER | (µg/Kg) | (µg/Kg) | (µg/Kg) | (µg/Kg) | (µg/Kg) | (µg/Kg) | (µg/Kg) | (µg/Kg) | (µg/Kg) | (µg/Kg) | (µg/Kg) | (µg/Kg) | (µg/Kg) | (µg/Kg) | (µg/Kg) | (µg/Kg) | (µg/Kg) | (µg/Kg) | (µg/Kg) | (µg/Kg) |
| **Chlorinated VOCs** | | | | | | | | | | | | | | | | | | | | |
| oride | ND | ND | ND | 293 | ND | ND | ND | 525 | 1610 | ND | ND | ND | ND | 13 | ND | ND | ND | 835 | ND | ND |
| loroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 49 | ND | ND | ND | ND | ND | ND |
| e chloride | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 184 | 150 |
| -dichloroethene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 94.5 | ND |
| lichloroethene | ND | ND | ND | 25.2 | ND | 17400 | 297 | 157 | 201 | 207 | 207 | 181 | ND | ND | 555 | 216 | ND | 35800 | ND | 502.5 |
| m | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 42.5 | 61 |
| ethene (TCE) | ND | ND | ND | ND | ND | 6490000 | 274 | 135 | 196 | 55 | 55 | 106 | ND | 18 | ND | ND | ND | ND | 178.5 | 1396.5 |
| chloromethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 207.5 | 1256.5 |
| chloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 116.5 | 561.5 |
| roethene (PCE) | ND | ND | ND | 70 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| nzene | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 26 | 39.5 |
| tetrachloroethane | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 1809 | 3516.5 |
| lorobenzene | ND | ND | ND | 219 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| VOCs | ND | ND | ND | 607 | ND | 6507400 | 571 | 817 | 2007 | 262 | 262 | 287 | ND | 80 | 555 | 216 | ND | 36635 | 2659 | 7464 |
| **BTEX** | | | | | | | | | | | | | | | | | | | | |
| | ND | ND | ND | 11 | 12.4 | ND | ND | ND | ND | ND | 447 | 192 | ND | ND | 79 | ND | ND | ND | 54.5 | 113 |
| | 342000 | ND | ND | 61.5 | 20 | 509000 | 59.5 | 943 | 151 | ND | 154000 | 11800 | 356 | 94.9 | 436 | ND | ND | 8450 | 149.5 | 5800 |
| zene | 305500 | ND | ND | ND | 17.6 | 78200 | ND | 157 | ND | ND | 29700 | 85200 | 2130 | ND | ND | ND | ND | ND | 2473.5 | 9200 |
| enes | 1008000 | ND | ND | 86.6 | 55 | 387000 | 56 | 1200 | 371 | ND | 95200 | 380200 | 3450 | 47.6 | 1300 | ND | ND | 9120 | 622.5 | 4300 |
| VOCs | 1655500 | ND | ND | 159 | 105 | 974200 | 116 | 2300 | 522 | ND | 279347 | 477392 | 5936 | 143 | 1815 | ND | ND | 17570 | 3300 | 19413 |

NOTES:

ND indicates analyte not detected at or above the Practical Quantitation Limit (PQL)

FT BLS = Feet below land surface

# TABLE 6

## SUMMARY OF NON-DETECTS USED IN GROUND WATER MODELING

April 28 through May 3, 1997
Former ITTA/Thompson Facility
Madison, Florida

| MONITORING WELL | MW-2A | MW-3A | MW-7A | MW-1B | MW-6B | MW-9B | MW-10B |
|---|---|---|---|---|---|---|---|
| DEPTH (FT BLS) | 11 | 10 | 7 | 22.5 | 20 | 31 | 20 |
| | | | | | | | |
| FIGURE NUMBER | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) |
| Detection Limits | | | | | | | |
| 5A | NU | 1 | 1 | 1 | 1 | 1 | 1 |
| 5B | NU | 1 | 1 | 1 | 1 | 1 | 1 |
| 6A | NU | 1 | 1 | 1 | 1 | 1 | 1 |
| 6B | NU | 1 | 1 | 1 | 1 | 1 | 1 |
| 9A | 5 | 1 | NU | NU | NU | NU | NU |
| 9B | 5 | 1 | NU | NU | NU | NU | NU |
| 10A | 5 | 1 | NU | NU | NU | NU | NU |
| 10B | 5 | 1 | NU | NU | NU | NU | NU |

NOTES: Half values for the limits presented in this table were used for modeling purposes.
NU indicates value was not used for this figure.

Reference No.: 9
HRS Documentation Package
Site Name: ITT-Thompson International, Inc.
FLD043047653

# Transmittal

O'BRIEN & GERE
ENGINEERS, INC.

To: Randa Chichakli
EPA Region 4
Waste Management Division
61 Forsyth Street
Atlanta, Georgia 30303

Date: June 29, 2000

File: 3356/22992

Re: Final Technical Memorandum

We are sending you:

_X_ herewith_under separate cover: _drawings_descriptive literature_letters

If material received is not as listed, please notify us at once.

| Quan. | Identifying Number | Title | Action |
|---|---|---|---|
| 4 | | Final Technical Memorandum Shallow and Intermediate Zone Ground Water Assessment and Source Characterization Combined ESI/RI and FS Former Thompson Industries Site Madison Florida | Y |
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*Action letter code: **R**-reviewed **N**-reviewed and noted **I**-for your information **S**-resubmit **J**-rejected **Y**-for your approval

**Remarks:**

cc: See attached

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

Stephen T. Cook, P.G.

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FINAL TECHNICAL MEMORANDUM

# Shallow and Intermediate Zone Ground Water Assessment and Source Characterization Combined ESI/RI and FS

## Former Thompson Industries Site
## Madison Florida

Prepared for:

**ITT Industries, Inc.**
**White Plains, NY**

Submitted to:

**EPA Region IV**
**Atlanta, GA**

**June 2000**

O'BRIEN & GERE
ENGINEERS, INC.

O'BRIEN & GERE
ENGINEERS, INC.

June 30, 2000

Ms. Randa Chichakli
Remedial Project Manager
EPA - Region 4
Waste Management Division
61 Forsyth Street
Atlanta, Georgia 30303

Re: Former Thompson Industries Site
Madison, Florida EPA Site Identification Number A4E7
Final Technical Memorandum for Shallow and Intermediate Zone Ground Water Assessment of Combined ESI/RI/FS

Dear Ms. Chichakli:

In accordance with the requirements of the Administrative Order of Consent (AOC), ITT Industries, Inc. (IIN) is submitting this Final Technical Memorandum (TM) for the Shallow and Intermediate Zone Ground Water Assessment. This TM presents the results of the Phase III ground water screening and source characterization activities completed in May 2000. Work elements for Phase III of ground water assessment activities were outlined in the Technical Memorandum Addendum Letter for Shallow and Intermediate Zone Ground Water Assessment of Combined ESI/RI/FS dated January 11, 2000. Revisions to this plan were provided (based on an EPA comment letter dated January 16, 2000 and a telephone conference call on January 26, 2000) to EPA on February 11, 2000. It was also agreed during a project review meeting in Atlanta on April 13, 2000 that upper Floridan monitoring wells would be used to further delineate ground water quality in Target Flow Zone 3. During the January 26, 2000 conference call, EPA requested that IIN prepare and submit a source characterization scope of work. This scope of work was submitted to EPA on March 10, 2000 and focused on an area located west of Buildings 3, 4 and 9 of the Former Thompson Industries Site. This work was performed concurrently with the shallow and intermediate zone ground water assessment.

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... and offices in major U.S. cities

This Technical Memorandum contains a discussion of the following:

1. Geology
2. Hydrogeology
3. Source Characterization Activities
4. Shallow and Intermediate Ground Water Assessment
5. Conceptual Site Model Update and
6. Recommendations
7. References

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

Paul R. Seavy, Jr., P.E.
Vice President

Attachment

c: Mr. Dave Jenkins, EPA
Mr. Roger Carlton, EPA
Mr. Jim McCarthy, FDEP
Ms. Teresa Olmsted, ITT Industries, Inc.
Mr. Gary Hunter, Hopping Green Sams & Smith
Ms. Lynne France, CDM

FINAL TECHNICAL MEMORANDUM

# Shallow and Intermediate Zone Ground Water Assessment and Source Characterization Combined ESI/RI and FS

## Former Thompson Industries Site
## Madison Florida

Prepared for:

**ITT Industries, Inc.**
**White Plains, NY**

Submitted to:

**EPA Region IV**
**Atlanta, GA**

**June 2000**

O'BRIEN & GERE
ENGINEERS, INC.

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## 1.0 INTRODUCTION

This Final Technical Memorandum (TM) presents the findings of the source characterization and direct push technology (DPT) ground water screening program. These activities were conducted as part of the Shallow and Intermediate Zone Ground Water Assessment Task (Task 11) for the Combined Expanded Site Investigation/Remedial Investigation and Feasibility Study (ESI/RI and FS) for the Former Thompson Industries Site (Site). The Site is located at 800 NE Livingston Street, in Madison, Florida (Figure 1). ITT Industries, Inc. (IIN) conducted this investigation in conjunction with O'Brien & Gere Engineers, Inc. (O'Brien & Gere) in accordance with the Combined ESI/RI and FS Final Work Plan (O'Brien & Gere 1999a).

Based on the review of previous Woodward-Clyde lithologic data and the completion of continuous sampled soil borings OBGEC1 and OBGEC3 in September 1999, three different Target Flow Zones (TFZs) were selected. These three zones were selected to represent hydrogeologic conditions in shallow ground water at the Site: a surficial flow zone, Target Flow Zone one (TFZ1); an intermediate flow zone, Target Flow Zone two (TFZ2); and a lower flow zone, Target Flow Zone three (TFZ3).

The purpose of the DPT screening portion of Task 11 was to monitor the distribution of the horizontal and vertical extent of elevated dissolved volatile organic compounds (VOCs) in ground water within the shallow and intermediate depth unconsolidated deposits, and evaluate vertical hydraulic gradients. To date, nineteen DPT locations (OBGDP1 - OBGDP19) have been completed. A direct-push drill rig was used to advance the DPT borings into the Target Flow Zones. The lithology from the DPT locations was recorded utilizing a Cone Penetrometer. Ground water from these borings was sampled using a three-foot stainless steel discrete sampler that was designed to be used in conjunction with

the direct push rods. The ground water screening samples were collected immediately using a stainless steel bailer with no prior purging.

Additionally, twenty Rotosonic soil borings were completed in conjunction with eighteen multi-level piezometer installations (OBGMLP1 – OBGMLP11, and OBGMLP31 – OBGMLP37). These borings were advanced into the Target Flow Zones using a Rotosonic drill rig (inside the buildings a vibratory drill rig utilizing Envirocore® technology was implemented). Both the Rotosonic and Envirocore® technologies allow for continuous lithologic profiling to be conducted. When depth was reached, a multi-level piezometer was installed through which ground water samples were collected. Prior to collection of ground water screening samples, the shallow piezometers were purged using low-flow techniques designed to minimize turbidity and the deep piezometer was hand-bailed with a disposable, dedicated Teflon or stainless steel bailer. The piezometers also allow for the collection of ground water elevation information.

Based upon review of the ground water screening data, the horizontal and vertical extent of dissolved VOCs in the upper surficial unconsolidated deposits have been delineated by the DPT program. However, in TFZ3, little definitive information about fate or transport could be collected due to the geologic nature of this transitional epikarst zone. The term epikarst is referring to highly weathered limestone, which has been reduced to a combination of limestone rubble, sands and clays. Consequently, it was recommended in a March 10, 2000 meeting with EPA, that upper Floridan monitoring wells be utilized to monitor the horizontal distribution of constituents in this zone, as well as vertical movement of the constituents present in the upper surficial unconsolidated sediments.

This Final TM has been organized into the following six sections:

- Section 1 (Introduction)
- Section 2 (Geology)
- Section 3 (Hydrogeology)
- Section 4 (Source Characterization Procedures and Methodology)
- Section 5 (Conceptual Model Update)
- Section 6 (Conclusions and Recommendations)
- Section 7 (References)

## 2.0 GEOLOGY

### 2.1 Geomorphology

In a general sense, the geomorphology of Florida consists of the Northern Highlands, the Central Highlands and the Coastal Lowlands (White, Vernon and Puri in Puri and Vernon 1964). Florida's land surface is relatively flat and has very low relief. The surface features of Florida are the result of the complex interaction of depositional and erosional processes. In those areas of the State where carbonate rocks and shell-bearing sediments are subjected to dissolution, the geomorphic features may be modified by development of karst features. Many of the highland areas in the peninsula to the central panhandle exhibit variably developed karst features (Scott *et al.* 1991). The extent of the modification ranges from minor sagging due to the slow dissolution of carbonate or shell bearing sediments to the development of large depression features that later silt up and become filled with overlying sediments through time (Scott *et al.* 1991). The development of the karst features and basins has a direct impact on the recharge in the region (Scott *et al.* 1991).

### 2.2 Site Location - Regional Geology

The Site is located at 800 NE Livingston Street, in the City of Madison, the County seat and largest city in Madison County, Florida. Madison County is situated in the northeastern portion of the Florida panhandle and is bordered to the north by the State of Georgia. The city is located within the Tallahassee Hills subunit of the Northern Highlands as defined by Puri and Vernon (1964). Weathering has played a key role in shaping the topography of the Tallahassee Hills geomorphic division in Madison County. In general, a veneer of undifferentiated sands caps the high areas. A mixture of reddish and yellowish-orange, clayey, quartz sands and sandy clays belonging to the Miccosukee Formation underlie these sediments (Hoenstine *et al.* 1990). Madison County has

numerous small lakes and ponds representative of karst features that occur as a result of the dissolution of the underlying limestone and subsequent subsidence of overlying sediments. These karst features are numerous in the central and northern part of the County.

## 2.3 Stratigraphy

Madison County lies in a transitional geological area situated between the thick, lower Tertiary (Paleogene age) and Cretaceous carbonate sediments characteristic of the Florida peninsula, and the age-equivalent, siliciclastic sediments of western Florida. Thick limestone deposits of the Oligocene and Eocene Epochs, which in turn are covered by younger limestones, dolomites, sands, and clays, underlie the area. Sediments generally range from Paleozoic to Holocene in age; however, the sediments pertinent to this effort are primarily Oligocene to Holocene (Hoenstine *et al.* 1990).

The undifferentiated sands and clays or surficial sediments deposited during the Pleistocene Epoch form much of the land surface in the south and southeastern parts of Madison County. These sediments, which include soils, developed on top of and overlie the Miccosukee Formation in most of Madison County. They consist predominantly of fine to medium quartz sands, silts, and clays. Additionally, significant accumulations of organic material are present in the low-lying areas. Holocene sediments are generally only present in the river valleys and represent re-worked quartz sands derived from the older Miccosukee and Hawthorn Group sediments. Thickness of these sediments ranges from a thin veneer in the northwestern part to more than 70 feet thick in the southwestern part of the County (Hoenstine, *et al.* 1990).

The Miccosukee Formation (Pliocene age) is prominent throughout the County and generally consists of heterogeneous siliciclastic sediments. The sediments are fine to coarse-grained, poorly to moderately sorted, and poorly to moderately

indurated. These sediments are very distinctive in color, ranging from red to reddish-orange to gray. Specifically, the sediments are typically iron-stained, reddish-orange sands to gray clays and sands with mottling and fine laminae occurring throughout. Stratigraphically, the Miccosukee Formation is an aggregate of lenticular, cross-bedded sands with trace to some clay and lenticular clay beds that can be individually traced for only short distances. Frequently, sequences of these sediments illustrate rapid depositional changes, including channel cut and fill features of a pro-deltaic environment. The Miccosukee sediments form the surface and subsurface soils throughout most of the County where they occur at elevations ranging from 155 to 77 feet above msl. The sediments can vary considerably in thickness and have been measured up to 90 feet thick. The Miccosukee Formation overlies the Hawthorn Group and is in turn overlain by undifferentiated Pleistocene and Holocene sediments of the Quarternery System (Hoenstine *et al.* 1990).

The Hawthorn Group (Miocene age) is an extremely heterogeneous unit. The sediments generally consist of clay, carbonate (primarily dolomite), and quartzitic-phosphatic sand and clay. The Hawthorn Group sediments are present throughout most of Madison County; however, Scott (1988) recognized only the Torreya Formation of the Hawthorn Group within the County. Hawthorn sediments in the County are variable, but in general consist of pale olive to moderate yellow, sandy, phosphatic clays and sands. Phosphate grains are a common constituent of the Hawthorn Group and aid in its identification. In the County, the sediments comprising the Group typically range between 10 to 40 feet in thickness, but they have been recorded in excess of 140 feet thick. The irregular thickness and occasional absence of the Hawthorn Group may be attributable to karst activity. Generally, Hawthorn Group elevations range between near surface occurrences to 35 feet above msl. In Madison County, the Hawthorn Group can serve as a confining bed overlying the St. Marks Formation or the Suwannee Limestone and is, in turn, overlain by sediments belonging to the Miccosukee Formation (Hoenstine *et al.* 1990).

The St. Marks Formation (Miocene age) sediments are discontinuous due to nondeposition and/or erosion in Madison County. Where present, the Formation has been recorded at elevations ranging from 69 to 49 feet above msl. The sediments that form the St. Marks Formation are white to very pale orange, recrystallized limestone, with sand and silt and clay. They are poorly to well indurated with low to medium porosity, and they contain molds and casts of various species of foraminifera and mollusks. The St. Marks Formation overlies the Suwannee Limestone and is, in turn, overlain by sediments belonging to the Hawthorn Group (Hoenstine *et al.* 1990).

The Suwannee Limestone (Oligocene age) is continuous throughout most of Madison County and is generally found at depths around 90-110 feet below land surface (bls) average 50 feet above msl, and has been recorded at elevations between 35 feet above msl (mean sea level) to as deep as 109 feet below msl. The limestone is of marine origin and consists of partially recrystallized limestone (calcarenite). It is pale orange, finely crystalline, moderately indurated, with moderate to good porosity, and is fossiliferous. The Suwannee Limestone overlies the Ocala Group, and is in turn overlain by the Hawthorn Group or St. Marks Formation (Hoenstine *et al.* 1990).

## 2.4 Former Thompson Industries Site - Site Specific Geology

The Site geology includes observations on the characteristics of the sand, silt, and clay units underlying the Site and interpretative comparisons which relate the sedimentary units at the Site to regionally recognized geologic Formations and topography (Figure 2). Geologic cross-sections were completed along the transects A-A` (SW-NE), B-B` (NW-SE), and C-C` (N-S) shown on Figure 2. These cross-sections, Figures 3, 4, and 5, respectively, were developed using lithologic information obtained from materials collected from the boreholes

constructed during the drilling activities conducted at the Site, with focus on the most recent Rotosonic borings. Soil boring logs are included as Appendix A.

Primarily, lithologic information obtained during the installation of fourteen multi-level piezometers, two monitoring well clusters, and four Envirocore® DPT borings locations conducted by O'Brien & Gere Engineers at the Site, were used to define the Site geology. The lithologic information was supported using previous Site lithologic data obtained from direct-push, cone penetrometer, and Rotosonic borings. Boring logs were reviewed and contacts with the clay and limestone units of interest were located at elevations above msl. Using msl as a universal datum line allows a more accurate analysis of the structure and thicknesses of the sands and clays and facilitates the measurement of the general location and morphology of the underlying limestone. The stratigraphic units at this Site include the undifferentiated Pleistocene-Holocene sediments, the Miccosukee Formation, the Hawthorn Group (Torreya Formation), and the Suwannee Limestone.

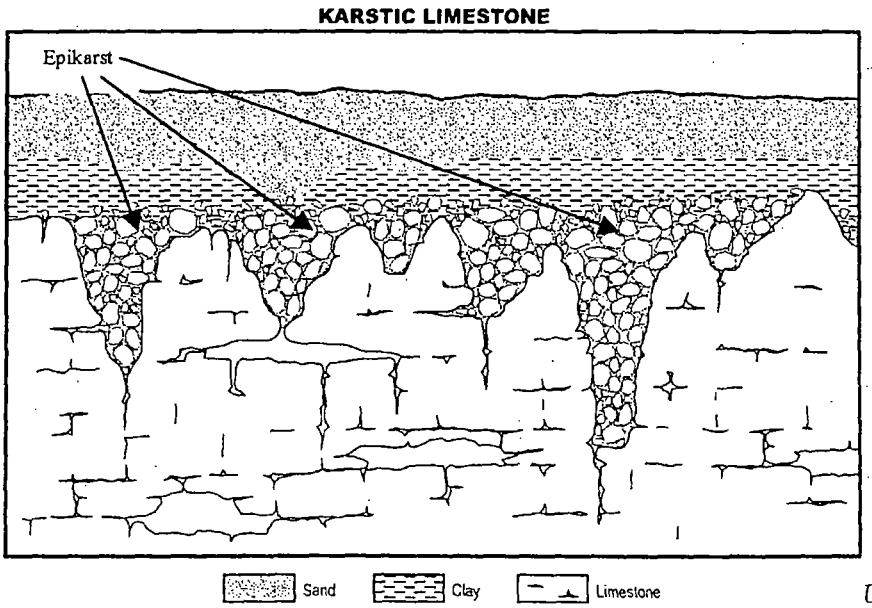
The shallow geology of the Site area consists of the undifferentiated Pleistocene-Holocene sediments. These undifferentiated sands were recognized in borings from land surface to generally around 5 or 15 feet bls, and ranged in thickness from anywhere between 0 to 30 feet. These Pleistocene-Holocene sediments consist of well to moderately sorted, sub-angular/sub-rounded, medium to very fine quartz sand, with some to no silt or clay present. The sand appears to be massive with little or no layering resulting from grain size variation.

The Pliocene age Miccosukee Formation, as recognized in the cross-sectional borings over the entire Site, ranged in thickness from 25 to 85 feet. It appears thickest in the vicinity of the MLP locations OBGMLP32 and OBGMLP33. In general, cross-section A-A` (Figure 3) shows a relatively consistent thickness of the Miccosukee Formation, while cross-sections B-B` and C-C` (Figures 4 and 5), show the Miccosukee to be thickest to the north and thinning toward the south

along each section. The Miccosukee Formation sediments consist of fine to coarse grained, quartz sands, sub-angular to sub-rounded, moderately sorted, and sporadically indurated. The cross-bedded sediments are mottled with trace to some thin clay laminae/beds disseminated throughout the sandy layers. The predominant colors range from gray to reddish-orange, with some iron staining present. These sands are continuous laterally though no single defining depositional feature can be discerned. Near the base of the Miccosukee Formation, a well-sorted sand (up to 10 feet thick) overlies a fairly distinct break to a phosphatic clay or a clay and sand with phosphate nodules indicating transition to the underlying Hawthorn Group.

Underlying the Miccosukee Formation is the Hawthorn Group, containing several layers composed of highly impervious clays, with occasional sand. The Hawthorn Group was identified in all of the borings performed at the Site area except at OBGMLP32, which may be the result of a paleo-karst feature (possibly a paleo-sinkhole as discussed in subsequent text). The Hawthorn Group at the Site occurs anywhere from 25 to 89 feet bls and extends to between 62.5 and 144 feet bls at the Site (Figure 6). It appears thickest at OBGMW16d (66 feet) and OBGDP21 (93 feet), and thinnest at OBGMLP30 (17.5 feet) and OBGMLP33 (24 feet). The Hawthorn sediments at the Site are variable, ranging from phosphatic clays with sands, to dolomitic clay, to dense clay with phosphate nodules. In general, these sediments consist of pale olive to moderate yellow, sandy, phosphatic clays and sands. Phosphate nodules and grains were common throughout and aided in describing the Hawthorn Group distribution.

Underlying the Hawthorn Group at most locations is weathered limestone (epikarst). This epikarst zone has been weathered into limestone spires and rubble and is prevalent throughout the Site. It exists on Site as a partially recrystallized (calcarenite), moderately indurated weathered limestone rubble with trace to some fossils present in a matrix of limestone sand and clay.




*Inset A: Schematic Depiction of Karst Development*

This epikarst contains fine to coarse-grained limey sands and clays, is very light, pale orange-brown-yellow/off-white to white. The amount of weathering decreases with depth. This zone could be correlated to either the upper portion of either the St. Marks Formation or Suwannee Limestone, but due to the discontinuity of the St. Marks Formation, it was very difficult to distinguish the two. The contact between the limestone unit and overlying Hawthorn sediments is highly variable. This epikarst transition zone was detected in all boreholes at the Site above 150 feet bls at various depths ranging from 68 to 145 feet bls, with the exception of OBGMLP32, where neither the limestone nor the Hawthorn Group sediments were encountered up to 150 feet bls. The lithology at this particular location is representative/suggestive of a paleo-karst feature. Due to the location of the borehole abutting the Unnamed Natural Pond, it is probable that the borehole was advanced into Miccosukee Formation and undifferentiated sediments that occur as fill within a paleo-sink. Some sandier limestone units were encountered in other boreholes, which may suggest the presence of the St. Marks Formation, but for our purposes and hydrologically this distinction is not

relevant. For the purposes of this report, the limestone Formation, where encountered, will be referred to as the Suwannee Limestone.

# 3.0 HYDROGEOLOGY

The State of Florida lies principally on the Florida Platform (Scott *et al.* 1991). The platform is comprised of a thick sequence of primarily carbonate rocks capped by a thin, siliciclastic sediment-rich sequence. The Floridan aquifer system developed in the Cenozoic sediments ranging from late Paleocene (55 million years ago, mya) to late Pleistocene (<100,000 years ago) in age. The deposition of these sediments was strongly influenced by fluctuations of sea level and subsequent subaerial exposure. Cenozoic carbonate sediment accumulation ranges from nearly two thousand feet thick in northern Florida to more than five thousand feet in the southern part of the State. The Neogene (24 mya to 1.6 mya) and Quaternary (1.6 mya to the present) sediments form the intermediate aquifer system and/or confining unit and the surficial aquifer system (Scott *et al.* 1991).

## 3.1 Hydrostratigraphy

### 3.1.1 Surficial aquifer system

The surficial aquifer consists mainly of sand, but gravel, sandy limestone, and limestone are also important constituents (Miller 1986). The surficial aquifer contains the water table, and the water within it is under mainly unconfined conditions (Scott *et al.* 1991). Regionally, the surficial aquifer may be in direct hydraulic contact with the underlying Floridan aquifer or separated from it by confining beds (Miller 1986). Rainfall easily infiltrates the permeable surficial materials, and after percolating down to the water table, moves either laterally to points where it discharges to surface water bodies or is able to move vertically downward recharging either the Floridan or local intermediate aquifers (Miller 1986).

### 3.1. 2 Intermediate aquifer system/confining unit

The intermediate aquifer system/confining unit can be defined as "all rocks that lie between and collectively retard the exchange of water between the overlying surficial aquifer system and the underlying Floridan aquifer system" (Scott *et al.* 1991). These "rocks" in general consist of fine-grained siliciclastic deposits interlayered with clay and/or carbonate strata, often containing limestone and dolomite of much lower hydraulic conductivity in the lower reaches (Miller 1986).

The Formations belonging to the intermediate confining unit in the eastern panhandle include primarily the Hawthorn Group sediments (Scott *et al.* 1991). In general, the intermediate confining unit occurs widespread in the State providing an effective aquitard for the Floridan aquifer system (Scott *et al.* 1991). The upper confining unit may be breached locally by sinkholes and other karstic features and openings that serve to connect the Floridan aquifer system to the surface and surface water bodies (Miller 1986). Here depending upon ground water head differentials, the two aquifers may be in direct communication with one another. However, most of the paleo features have been infilled with overlying sediments and there is no longer any instantaneous connection. For the most part, these paleo features now only allow a leakage component between the two aquifers to occur.

In thick, clay rich areas, water in the surficial aquifer moves laterally discharging to surface water bodies (Miller 1986). Where thick clays are found in the Hawthorn Group, they are usually very effective confining beds (Miller 1986). Vertical transmissivities, as established from core analysis and aquifer tests, range from $1.5 \times 10^{-2}$ ft$^2$/d (Hayes 1979) to $7.8 \times 10^{-7}$ ft$^2$/d (Miller and others 1978). Where sandy beds of the Hawthorn occur, they may comprise a local aquifer, where transmissivity values for the sand range as high as about 13,000 ft$^2$/d (Ryder 1982), and yield up to 750 gal/min (Boggess 1974).

### 3.1. 3 Floridan aquifer system

Within the State of Florida, the Floridan aquifer system is composed of all or parts of the Cedar Keys Formation, Oldsmar Formation, Avon Park Formation, Ocala Limestone, Suwannee Limestone, St. Marks Formation and, possibly, the basal carbonates of the Hawthorn Group in limited areas of the State (Scott *et al.* 1991). The top of the Floridan aquifer system ranges in elevation from 1400 feet National Geodetic Vertical Datum msl (NGVD) in the western-most panhandle to -1100 feet NGVD in the Okeechobee Basin of southern Florida (Scott et al. 1991). Sediments generally consist of variably weathered vuggy or muddy carbonate limestone (grainstone to wackestone) with scattered sand grains, occasionally appearing fossiliferous, and/or with interbedded porous dolostone (Scott *et al.* 1991).

## 3.2 Madison County - Local Hydrogeology

Three distinct aquifer systems have been identified in Madison County: the Floridan aquifer system, an intermediate system/confining unit, and a surficial (water table) system. In the Tallahassee Hills, the surficial system consists of upper portions of the Miccosukee Formation (Pliocene) and more recent siliciclastic sediments. The thickness of the surficial aquifer generally ranges from 10 to 40 feet. The topography of the Tallahassee Hills has been shaped by weathering and karst activity and is characterized by high hills surrounding closed basins. These are a result of dissolution of the underlying limestone and subsequent subsidence of the overlying sediments. Natural drainage is into these closed basins, and where the basins are lower than the surficial or intermediate aquifer water elevations or possess a sealed bottom, the result is the formation of numerous isolated surface water bodies. Discharge from the surficial aquifer system has both downward and lateral components. The downward movement component is a source of recharge to the underlying intermediate and Floridan

aquifer systems in this area; however, the surficial aquifer can discharge laterally into the topographically lower river valleys and lowlands (Hoenstine *et al.* 1990).

An intermediate aquifer system/confining unit is also present within the Tallahassee Hills. It is variable and discontinuous both laterally and vertically. It is identified in lower portions of the Miccosukee Formation and sands and carbonates of the Hawthorn Group; however, locally clays within the Miccosukee Formation and primarily the Hawthorn Group also act as confining units. Where present, the intermediate system, which can be artesian, is recharged from the overlying surficial system where confining beds separating the two are discontinuous or leaky. Where confining beds are breached or permeable, discharge from the intermediate aquifer system is vertically downward into the Floridan aquifer system (Hoenstine *et al.* 1990). The intermediate aquifer system may also discharge to surface water bodies, if the surface water body penetrates the water elevation of the aquifer and they are hydraulically connected.

Where the sands and carbonates of the Hawthorn Group are absent, and only the low permeability clayey units of the Hawthorn Group underlie sediments that comprise the surficial aquifer, the Formation represents the intermediate confining layer. The thickness of this clay layer typically ranges from 10 to 40 feet. However, in numerous locations within Madison, County, dissolution of the underlying limestone has occurred, resulting in anomalous thicknesses of the clays, as well as the overlying surficial sands, and Miccosukee Formation sediments (Hoenstine *et al.* 1990).

The Floridan aquifer system is the principal potable ground water source for much of the State of Florida. The top of the Floridan aquifer system corresponds to the top of either the Suwannee Limestone or the St. Marks Formation, where present. The base of potable water in this area, occurs much deeper within the Avon Park Formation, and is estimated to be present at approximately 1,250 feet below land surface based on chloride concentrations of less than 500 milligrams per liter

(Klein 1975). The Floridan aquifer system is, in places, confined under artesian pressure by the relatively impermeable beds of the Hawthorn Group. In other areas it exists unconfined, i.e. in river valley lowlands and where karst activity has breached the confining beds (Hoenstine *et al.* 1990).

## 3.3 Former Thompson Industries Site - Site Specific Hydrogeology

The surficial flow zone, Target Flow Zone One (TFZ1) generally extends from the water table to the upper portions of the lower permeability Pliocene age Miccosukee sediments. However, a neither definitive nor continuous hydrogeologic or lithologic contact between TFZ1 and Target Flow Zone Two (TFZ2) was observed or traced laterally over the Site. The two zones appear to be separated by elevation and occasional location specific lithologic conditions. They may, in fact, belong to different parts of the same flow zone (upper and lower surficial). Water level differences between these two zones most likely exist due to hydraulic conductivity differences between them. The sediments forming TFZ1 appear to belong to the undifferentiated Pleistocene-Holocene age sediments and upper parts of the Miccosukee Formation. Ground water present in this flow zone is unconfined.

Lithologic data was collected from the multi-level piezometer borings, as well as two characterization borings (OBGCB1 and OBGCB2). Additional, geotechnical and analytical data was collected in conjunction with the characterization soil borings, which further assisted in characterizing sediment properties of this flow zone. As measured in the piezometers installed in TFZ1, the water table exists as a subdued replica of the land surface topography. Ground water is present close to the land surface anywhere from approximately 4 to 15 feet bls (between 132 and 145 feet msl). Ground water flow within the surficial flow zone is generally east to east-northeast discharging to Mill Pond (Figure 7).

Target Flow Zone 2 (TFZ2) is variable in elevation and thickness. It is difficult to estimate the thickness of this zone due to the heterogeneous nature of the Miccosukee Formation sediments and associated inherent interconnectedness with the overlying TFZ1 (this is a direct result of TFZ1 and TFZ2 both being located within Miccosukee sediments). However, location-specific differences in lithology and potentiometric surfaces may cause this system to be distinguished from the upper surficial flow zone (TFZ1). There are occasional clay lenses that may cause locally confined or semi-perched conditions to occur. In these specific cases, it can be argued that the two flow zones may be completely separate; however, no true defining extent of TFZ2 was identified. For the most part TFZ2 is contiguous with TFZ1. Water elevation differences between TFZ1 and TFZ2 are most likely due to hydraulic conductivity differences within/between the two zones.

TFZ2 is situated above or just at the top of the underlying clay of the Hawthorn Group, within the more permeable sands of the lower portion of the Miccosukee Formation. In general, TFZ2 can be interpreted in certain places on-Site to occur just above the top of the Hawthorn Group. Depending upon location, the water table or piezometric surface within this zone exists no more than 6 to 20 feet below land surface (between 132 and 140 feet above msl). Ground water flow within the zone appears to be generally east to east-northeast discharging to Mill Pond, with some moderately localized, predominantly vertical influence exerted by the paleo-karst feature recognized at OBGMLP32 near Unnamed Natural Pond (Figure 8). In TFZ2, ground water appears to be slightly depressed at OBGMLP32. This infilled feature appears to produce a localized site-specific influence on ground water flow, for the most part in the vertical direction between TFZ2 and TFZ3.

Target Flow Zone 3 (TFZ3) is located within the basal carbonates of the Hawthorn Group sediments and/or just into the weathered limestone or epikarst underlying the Hawthorn Group. These sediments consist of variably weathered

limestone rubble, often containing sand and clay mixtures with soil moisture ranging from wet to dry. The depth to this zone ranges between 68 feet to greater than 150 feet below land surface. The water table or piezometric surface corresponding to TFZ3 ranges in depth from 79 to 103 feet below land surface, but remains uniform with respect to mean sea level (between 59 and 61 feet above msl). Ground water flow within this zone also appears to be generally east to east-northeast, with the only variation occurring at piezometers installed at OBGMLP32 (Figure 9). At this location, the water table surface in TFZ3 was measured at 40 feet bls (130 feet msl). The head differential depicts a mounding of water in the third flow zone illustrating the potential for communication between the upper two flow zones and TFZ3. For reference purposes the three flow zone elevations are generally as follows:

| | |
|---|---|
| TFZ1 | > 120 msl |
| TFZ2 | 90 – 120 msl |
| TFZ3 | < 60 msl |

Differences in ground water elevations were recorded on June 6, 2000 (Appendix B; Figure 10 and 11). Ground water elevations in TFZ2 are moderately lower than those in TFZ1. On average, differences range between 0 to 7 feet, with the location of greatest head difference between TFZ1 and TFZ2 occurring at OBGMLP32 (14.32 feet). This reflects a depression in the water table/piezometric surface of TFZ2. Across most of the Site, ground water elevations in TFZ3 are considerably lower than those in TFZ2. On average, the head difference ranges between 73 and 80 feet, with the location of least head difference between TFZ2 and TFZ3 (20 feet) at OBGMLP32. This reflects a mounding effect in the water table within TFZ3. This head relationship between the three flow zones indicates a downward vertical component to the primary horizontal gradient. This potential can only become functional in places where the flow zones are hydraulically connected. The absence of Hawthorn Formation sediments and Suwannee Limestone down to 150 feet coupled with depressed water table conditions

measurements taken at OBGMLP32, suggests that there may be ground water interaction occurring at this location. The degree of this interaction is unknown at this time.

## 4.0 SOURCE CHARACTERIZATION PROCEDURES AND METHODOLOGY

### 4.1 Procedures and Methodology

Soil boring, field screening, and sampling procedures are presented in the Field Sampling Plan, Appendix A of the Combined Expanded Site Investigation/Remediation Investigation and Feasibility Study, Former Thompson Industries Site, Madison, Florida dated July 1999. These were the basis for O'Brien and Gere Engineers' Scope of Work in the Source Characterization Study of the Former Thompson Industries Site in Madison, Florida dated March, 2000.

From April to June 2000, a source characterization field investigation was conducted at the Site. This effort was to (1) further assess the potential source of trichloroethene (TCE), cis-1,2-dichloroethene (DCE isomers), vinyl chloride (VC), and benzene, toluene, ethylbenzene, xylene (BTEX) components; and (2) further evaluate the extent of the volatile organic compounds (VOCs) in the upper flow zones. As part of the effort to accomplish these objectives, two soil borings and seven multi-level piezometers were strategically installed utilizing Rotosonic drilling and vibratory direct-push techniques. The piezometers were also used for preliminary ground water screening and elevation measurements, and were constructed using ¾- to 1-inch diameter schedule 40 PVC with five or ten-foot long 0.010 machine circumslot well screens.

Boart Longyear utilized Rotosonic drilling techniques to complete two soil characterization borings OBGCB2 and OBGCB1 (on April 11 and 12), respectively, and four of the seven multi-level piezometer borings (OBGMLP31, OBGMLP32, OBGMLP33, and OBGMLP34). OBGCB1 and OBGCB2 were lithologically logged continuously to a depth of forty feet. Soil was sampled at five-foot intervals to a depth of 40 feet below ground surface (bgs) in the two soil characterization borings for lab analysis (VOCs, 8260B and TOC, 9060) and geotechnical analysis. These two borings were located in the potential source area directly adjacent to the monitoring wells

installed by Woodward-Clyde Consultants, Inc. (WCMW4A/B and WCMW5A/B). The purpose of these borings was to collect detailed and continuous information on the nature and characteristics of the soil and evaluate concentrations of any residual volatile and/or semi-volatile constituents.

Rotosonic drilling technology was chosen to complete the borings to minimize the potential for movement of VOC constituents between shallow and intermediate depths. The Rotosonic drilling method employs a multi-cased drilling system that also utilizes a high frequency mechanical vibration to allow lithologically continuous core/soil samples to be extracted. The system advances an outer casing into the ground as it samples each successive soil interval with an inner 4" core rod. The Rotosonic system uses an override casing (10", 8", or 6") that is seated with bentonite into a confining layer through which the inner sampling core barrel can be advanced. A larger outer casing can then be advanced over the first casing, if a second confining unit is encountered, where it can be seated, allowing the inner casings to continue being advanced further down the bore hole with minimal risk of cross-contaminating successive lithologic layers.

Access to the remaining three of the seven multi-level piezometer locations was restricted because the piezometers were located inside buildings at the Site. Both mobility and size constraints limited access for the use of the Rotosonic drilling technique at these locations; therefore, an alternative technology to accomplish this task was chosen. For multi-level piezometer borings OBGMLP35, OBGMLP36, and OBGMLP37 inside the building, Precision Sampling Inc. utilized a vibratory direct-push Envirocore® technology drill rig. This technology employed a system conceptually similar to the Rotosonic technique described above. The major differences were that the system was smaller without as much power, and the actual direct-push rods/casing did not rotate to assist in advancement or retraction of the downhole tools. They were, however, able to utilize an outer casing limiting the risk of cross-contamination between successive lithologic layers. Two of the three deepest boreholes (OBGMLP35-TFZ3, and OBGMLP36-TFZ3) inside the building were unable to be completed by Precision

Sampling, Inc., as depth limitations of the technology had been reached. It was decided to complete these deep piezometer locations with Rotosonic techniques outside the building just to the west of the initial locations.

All seven multi-level piezometers were installed around the perimeter of the potential source area. Soil was not sampled from any of these borings in accordance with the work plan, as no indications of potential DNAPL/separate phase liquid were encountered. The relative proximity of the MLPs to the initial characterization borings (OBGCB1 and OBGCB2) also minimized the need for collecting additional soil analytical data.

## 4.2 Soil Field-Screening Results

Soil samples recovered using the Rotosonic drilling technique were screened in the field for the possible presence of source material. As described in the work plan, methods for field screening included the following techniques, applied in the following order as needed:

- Examine soil in the sample interval looking for separate phase liquids, staining, or discoloration. Visual examination was completed in the sample core, sample bag, Mason jar, and/or Ziploc® bag.
- Record headspace readings using Microtip® HL 2000 Photo Ionization Detector (PID) and a MicroFID® Flame Ionization Detector (FID).
- Add de-ionized/distilled water to Mason jar/Ziploc® bag and conduct a shaking test to look for any visible phase separation.
- Centrifuge the sample, if potentially warranted, to corroborate/refute any possible visible phase separation.
- Add hydrophobic dye (Sudan IV) and shake the Mason jar/Ziploc® bag to observe any reactions present. An immiscible solvent or petroleum

derivative should/would react with the dye turning a dark plum-purple color.

- Centrifuging the sample was often incorporated again at this step, if warranted, to corroborate/refute any possible visible phase separation.
- Place Mason jar/Ziploc® bag/centrifuge vial under ultraviolet light at any step during screening process to observe any fluorescence that might indicate the possible presence of a separate phase material.

The field screening techniques were employed continuously at lithologic contacts or a minimum of every five feet during the installation of the two characterization borings (OBGCB1 and OBGCB2). The screening procedure was also utilized during the installation of the perimeter multi-level piezometers (MLPs) prior to advancing the boring to the next sampling interval (five or ten feet). Field screening activities were conducted during all of the MLP installations with no positive DNAPL detections being observed (Appendix C). The only reaction that was observed was in soil characterization boring OBGCB2 located next to WCMW4A/B. There appeared to be a separate phase Sudan IV dye response at 10.75 feet, 11.0 feet, 20.5 feet, 21.5 feet, and 28.0 feet bgs. Associated with these Sudan IV dye reactions was a strong odor of petroleum, as well as a light multi-colored rainbow sheen visible on top of the de-ionized water added to the Mason jar (characteristic of a petroleum compound). Although petroleum odors were noted sporadically at several locations, neither this reaction nor any other field screening reaction/detection was clearly seen again at the other source characterization boring, or any other MLP location. The reaction at OBGCB2 was indicative of encountering BTEX components at that location, primarily in the upper saturated intervals.

### 4.3 Soil Geotechnical Testing

The objective of the geotechnical testing was to estimate various physical and hydrologic properties of the soil that could affect fluid movement through it.

These parameters help to understand what factors may govern the vertical and horizontal extent of the dissolved VOCs in both the shallow, and where applicable, the intermediate ground water zones. The boring and sampling activities were conducted in accordance with the EPA approved Health and Safety Plan, Attachment B of the Combined Expanded Site Investigation/Remedial Investigation and Feasibility Study, Former Thompson Industries Site, Madison, Florida, dated July 1999.

Selection of the sampling intervals for geotechnical analysis was based upon changes in lithology observed during the drilling of the two source soil characterization borings, OBGCB1 and OBGCB2. Where lithology changes occurred, differences in soil-tension or matric-potential can exist creating a capillary barrier that prevents/re-directs the migration of a separate phase liquid and can potentially cause accumulation. Along these contacts the geotechnical information provides valuable data in the discussion of potential locations or migration pathways for water and dissolved constituents. Geotechnical samples were taken where lithologic changes appeared evident. Samples were retained from just above and below lithologic contacts, and at a minimum they were taken from a representative portion of every five feet for analysis. The geotechnical samples were packed into a Ziploc® bag, placed in a cooler on ice, and sent under chain of custody procedure to Universal Engineering Services, Rockledge, Florida, for geotechnical testing for grain size, porosity, permeability (vertical hydraulic conductivities), bulk density, and moisture content (Table 1 and Appendix D). These parameters represent estimates, as the samples must be re-packed to be run in a laboratory setting. They apply primarily to TFZ1 with the last sample in each borehole corresponding with the transition to the top of the intermediate confining unit.

Geotechnical data indicates that fairly variable permeabilities exist within the upper flow zone (Table 1). From 0-7 feet bls hydraulic conductivity values at both characterization borings range from 30 feet per day to 0.2 feet per day. These

numbers decrease with depth. Boring OBGCB1, in the northwest part of the potential source area, shows a fairly impervious zone from 10 to 30 feet bls. From 35 to 37 feet bls there is a more permeable zone relative to regions above and below ranging from 0.005 feet per day to 0.1 feet per day. While at the bottom of the borehole (37.5 to 40 feet bls) permeabilities decrease again to relatively impermeable levels. Boring OBGCB2, in the southeast part of the potential source area, shows a similar impervious zone from 10 to 18 feet bls. Similarly from 18.5 to 21 feet bls there is a more permeable zone relative to regions above and below with hydraulic conductivity values from 0.04 feet per day to 1.4 feet per day. However, in the lower half of the borehole (21.5 to 40 feet bls) lower hydraulic conductivity values were measured. This serves to illustrate how variable the water bearing zones and retarding clay layers of the upper two flow zones can be at the Site.

Porosities ranged from 27.6% to 57.5% at OBGCB1 and from 26.3% to 44.8% at OBGCB2, with the highest porosity at the bottom of each boring. Bulk density ranged from 70.3 to 119.7 lbs/ft$^3$ at OBGCB1 and from 91.3 to 121.8 lbs/ft$^3$ at OBGCB2, with the lowest bulk density also occurring at the bottom of each boring. The highest percentage of clay occurred at 24 feet bls at OBGCB1 and at 40 feet bls at OBGCB2 (26.8% and 40.0%, respectively). These parameters help illustrate that highly variable conditions exist throughout the upper two flow zones within the Miccosukee Formation and upper contact of the Hawthorn Group sediments.

## 4.4 Soil Analytical Testing

The objective of the soil analytical testing was to estimate various chemical constituents in the soil and further characterize the nature and extent of the potential source area. Soil sampling was conducted at two characterization borings (OBGCB1 and OBGCB2). The soil sampling activities were conducted in accordance with the EPA approved Health and Safety Plan, Attachment B of

the Combined Expanded Site Investigation/Remedial Investigation and Feasibility Study, Former Thompson Industries Site, Madison, Florida, dated July 1999.

Selection of the sampling intervals for analytical analysis was based on changes in lithology observed during the drilling of the two characterization borings. Where lithology changes occurred, differences in soil-tension or matric-potential can exist creating a capillary barrier that retards migration of separate phase material and can cause it to accumulate. It is from these areas (the same as those from where the geotechnical samples were taken) that soil analytical samples were collected. Analytical samples were retained from just above and below lithologic contacts, and at a minimum were taken from a representative portion of every five feet for analysis. Samples were also taken at the same locations as the geotechnical samples in order to correlate the data. The soil characterization samples were collected using three Encore™ samplers and two four-ounce jars. They were transported under standard chain of custody procedures to STL Tampa East, Tampa, Florida. The samples were analyzed for EPA test methods 8260B (VOCs) and 9060 (TOC).

Analytes detected in soil samples are summarized in Table 2. Soil samples show very low VOC concentrations. These data have been validated (Task 15 in combined ESI/RI/FS Final Work Plan, July 1999) in accordance with EPA guidelines and are included in Appendix E.

## 4.5 Ground water Analytical Testing/Water Quality

As a continuation of the Shallow and Intermediate Zone Ground Water Assessment Task (Task 11) for the Combined ESI/RI and FS, Former Thompson Industries Site, Madison, Florida, multi-level piezometers were installed to evaluate ground water elevations and approximate the horizontal and vertical extent of elevated levels of volatile organic compounds (VOCs) in the shallow and intermediate ground water flow zones. Previously, 19 direct-push technology

(DPT) locations (OBGDP1-19) were screened during Phase 1 and 2 activities. These results were reported in the Interim Technical Memorandum Shallow and Intermediate Zone Ground Water Assessment, (November 15, 1999) and the Interim Technical Memorandum Shallow and Intermediate Zone Ground Water Assessment - Addendum (January 12, 2000). Upon completion of Phase 1 and 2 fieldwork, DPT screening had successfully delineated the horizontal and vertical extent of the dissolved VOCs to the west and north of the Site. However, to the east and south of the site, additional screening activities were required. As part of Phase 3 field activities, installation and development of the overburden monitoring well network in background positions to the north and west of the site was also completed. This included monitoring well clusters OBGMW14s,i; OBGMW15s,i,d; OBGMW16s,i,d; and OBGMW17s,i. The purpose of Phase 3 screening activities was to provide data to allow for the selection of locations for the remaining shallow and intermediate zone (overburden) monitoring well network to the east and south of the site and to propose locations for the upper Floridan monitoring wells locations.

From February to June 2000, field activities at the Site were conducted to facilitate delineation of VOC concentrations in the three Target Flow Zones. Additional DPT locations were selected, and multi-level piezometers (MLPs) were installed. Each MLP was completed with a piezometer screened within each Target Flow Zone (TFZ1, TFZ2, and TFZ3) as determined by the Florida professional geologist in the field. For well construction specifics see Appendices A and B. At OBGDP20 to OBGDP30, multi-level piezometers OBGMLP1 to OBGMLP11 were installed. Then to minimize future nomenclature confusion, OBGMLP12 through OBGMLP30 label designations were dropped to better relate the DPT locations with corresponding MLP locations. At locations OBGDP31 through OBGDP37, multi-level piezometers OBGMLP31 through OBGMLP37 were installed.

Ground water screening samples were collected from the multi-level piezometers and analyzed using Level II QA/QC screening protocol for VOCs (8260B). Ground water samples were collected at various depths from the multi-level piezometers having screens situated in the shallow aquifer TFZ1, TFZ2, and TFZ3. The samples were collected utilizing low-flow sampling techniques from TFZ1 and TFZ2 to reduce the potential for sample turbidity, thus minimizing erroneous sample results based on non-dissolved constituents. This technique also helps ensure a representative ground water sample was collected from the flow zone. The water elevations were too low in TFZ3 to use this method, and were instead hand-bailed with a dedicated, disposable Teflon bailer. Ground water sample tracking logs are in Appendix F. For a complete description of the low-flow methodology utilized, refer to the Field Sampling Plan, Appendix A of the Combined Expanded Site Investigation/Remediation Investigation and Feasibility Study, Former Thompson Industries Site, Madison, Florida dated July 1999. The data presented are incorporated with results of ground water sampling and analysis conducted during the previous Interim Technical Memorandum Shallow and Intermediate Zone Ground Water Assessment, Combined ESI/RI and FS, Former Thompson Industries Site, Madison, Florida.

It should be noted that the previous DPT ground water screening samples were collected from relatively discrete intervals with no prior purging taking place. This method consists of pushing the rods down to the desired interval with a precision sampler and exposing a stainless steel screen that is inside the rods (approximately 6 inches). Water is allowed to fill the sampler and is then extracted via bailer. The MLP locations, however, provide a sample over either a five or ten foot interval, corresponding to the screen length. This difference may influence ground water screening and prevent the results from being directly correlated between the two methods. Tables 3 and 4 present a summary of the ground water screening analytical results.

### 4.5.1 Ground Water Quality: Flow Zones 1 and 2 (TFZ1, TFZ2)

Upon completion of the Phase 3 ground water screening activities, the horizontal and vertical limits of dissolved VOCs in TFZ1 and TFZ2 have been delineated. Based on these and previous findings, dissolved VOC concentrations extend east toward Mill Pond, consistent with ground water flow in the shallow overburden at the Site, with the extent reaching OBGMLP1 and OBGMLP11 in TFZ1 (Figures 7 and 12), and OBGMLP1, OBGMLP10, and OBGMLP11 in TFZ2 (Figures 8 and 13). To the south, the dissolved VOCs reach OBGDP8 and OBGMLP2 in TFZ1, and in TFZ2, the constituents span OBGDP16 and OBGMLP6, and are bounded by OBGMLP3, OBGMLP4, and OBGMLP9. The following is a summary of the Phase 1, 2 and 3 ground water screening activities with respect to TFZ1 and TFZ2 (Tables 3 and 4, and Figures 12, and 13).

- DPT screening has successfully estimated the horizontal and vertical extent of the dissolved VOCs in TFZ1 and TFZ2 to the west, north, east and south of the Site. DPT locations OBGDP9, OBGDP10, and OBGDP11 demonstrate that the concentrations of dissolved VOCs do not extend laterally beyond the western edge of the area bounded by these locations and the Unnamed Natural Pond. Vertically, the VOC constituents appear to be present in varying concentrations throughout the area they span laterally. A monitoring well cluster (OBGMW14s,i) was installed at this western location as part of the TM Addendum dated January 12, 2000.

- Ground water screening performed at OBGDP1, OBGDP2, OBGDP3 and OBGDP4 indicates the lateral extent of dissolved VOCs along the northern perimeter of the site has been estimated. Three monitoring well clusters have been installed along the northern boundaries of the Site as part of the TM Addendum (OBGMW15s,i,d; OBGMW16s,i,d; and OBGMW17s,i,d). Laboratory results from monitoring wells (OBGMW16s,i, and OBGMW17s,i) constructed in these

areas will corroborate the defined northern limits of the dissolved VOCs in TFZ1 and TFZ2.

- The DPT screening performed during Phase 3 at OBGDP14, OBGDP15, OBGDP16, OBGDP19, and OBGMLP3, OBGMLP9, and OBGMLP10 has provided an estimate of the horizontal and vertical extent of dissolved VOCs to the south of the site in the surficial flow zones (TFZ1 and TFZ2). No VOC concentrations were detected at these locations except acetone in OBGMLP3 (TFZ1) at 15 ug/L.

- The DPT screening conducted during Phase 3 has provided an estimate of the horizontal and vertical extent of dissolved VOCs to the east of the Site. Concentrations of dissolved VOCs were not detected in samples obtained from eastern-most locations OBGMLP8 or OBGMLP10 in TFZ1. However, at OBGMLP11 (TFZ1) low concentrations of TCE were detected at 8.4 ug/L. In TFZ2, low concentrations of VOCs were detected in ground water samples from OBGMLP10 where TCE was detected at 2.0 ug/L. These locations are bounded to the east by Mill Pond, and are believed to represent the extent of VOC concentrations in the surficial flow zones (TFZ1 and TFZ2). As shown on Figures 7 and 8, ground water from these two flow zones discharges to Mill Pond, and the pond therefore, serves as the limit for VOC constituents.

### 4.5.2 Ground Water Quality: Flow Zone 3 (TFZ3)

For the TFZ3 phase of the screening program, the epikarst zone at the top of the Suwannee Limestone Formation was designated the limit of borehole depth. This zone is just underneath the overlying clay layer (Hawthorn sediments). VOC constituents have been detected throughout the Site below this clay layer. Generally, the constituents appear to be present along the primary flow direction here, as well as for all three of the flow zones, in an east-northeast direction (Figures 9 and 14). In TFZ3, VOC constituents reach from the west side of the

Site (OBGMLP34) to Mill Pond (OBGMLP30) in varying concentrations. However at this point in the development of the conceptual model, it is believed to be doubtful that there is any direct connection between Mill Pond and TFZ3. One of the TFZ3 intervals to be monitored was at monitoring well cluster OBGMW14 to the west of the site. Here, this zone was located at 100 feet bls (50 feet msl). TFZ3 was not installed due to the high elevation at which limestone was encountered. Future results from this interval will further evaluate, if the western limits of the dissolved VOCs have been adequately defined. To the north-northeast, VOC constituents were detected in samples collected from OBGMLP8. To the south, there is reasonable delineation of the VOC constituents where analytical results from ground water samples collected from OBGMLP4 and OBGMLP9 were low. The maximum detection of VOC constituents occurred in wells located around the potential source area (OBGMLP32, OBGMLP35, and OBGMLP36), and along a line extending from OBGDP8 east-northeast to OBGMLP30 including OBGDP18 and OBGDP14.

TFZ3 is variable due to the complex karst processes that have influenced its development. This yields lithological changes over relatively short distances resulting in heterogeneous fluid movement throughout. Limestone spires and depressions result in undulations of the overlying clay surface (Figure 15). For example, in one location limestone was encountered less than 90 feet bls (OBGMLP33) and less than 100 feet away was not encountered at all down to 150+ feet bls (OBGMLP32). This epikarst surface is quite variable in nature both vertically and laterally. When elevation differences of this magnitude occur, they can create areas of relatively heterogeneous flow conditions, which may account for variations in ground water quality observed in the MLPs and the DPs installed within this flow zone. This type of contaminant behavior may be attributed to the irregular and heterogeneous nature of the epikarst and contact with the overlying clay layer.

## 5.0 CONCEPTUAL MODEL UPDATE

This section provides an update to the conceptual site model (CSM) and factors affecting the transport of volatile organic compounds in the surficial water table and intermediate confining materials of the Hawthorn Group. A combination of physical, chemical, and biological processes control the movement and degradation or transformation of chemicals in the ground water. Properties such as specific gravity, vapor pressure, solubility, adsorptivity, and susceptibility to biodegradation are principle factors that determine a compound's mobility and persistence. Factors which influence the transport of contaminants in the subsurface include ground water hydraulic gradient and velocity, characteristics of the contaminants, hydrogeologic characteristics or the subsurface materials through which contaminants may travel, and the influence of seasonal changes on the hydrologic cycle.

During Phase 3 of the shallow and intermediate ground water screening activities, 18 multi-level piezometers (OBGMLP1 through OBGMLP11 and OBGMLP31 through OBGMLP37) were installed to provide ground water screening and hydraulic data for the unconsolidated deposits. Seven of these MLPs have been installed in and around the potential source area and are labeled as OBGMLP31 through OBGMLP37. At each of these locations at least three individual ¾ to 1-inch piezometers were constructed. Data used to refine the conceptual site model included the new information along with previous data collected using direct push methods (OBGDP1 through OBGDP19) and the 11 MLPs installed as part of phase two ground water screening activities at boring locations OBGDP20 through OBGDP30 (labeled OBGMLP1 through OBGMLP11). In particular, the conceptual site model includes new geological data collected at 22 Rotosonic boring locations (OBGDP20 through OBGDP30 and OBGDP31 through OBGDP37) which were used to refine Site stratigraphy. Water level information from a network of 57 piezometers and 10 monitoring wells was also evaluated to

refine vertical and horizontal ground water flow in the surficial and intermediate water bearing zones.

## 5.1 Ground Water COPC Distribution

Concentrations of VOCs were detected in ground water obtained from the screening samples collected from the array of MLPs installed as part of the shallow and intermediate ground water screening activities, as well as sampling of two Woodward-Clyde monitoring well nests WCMW4/A and 4/B and WCMW5/A and 5/B. Although several VOCs were detected above the regulatory screening criteria for ground water at the site, three primary constituents TCE, cis-1,2-DCE, and VC were evaluated for delineation of the dissolved VOCs in the shallow and intermediate ground water. These dissolved constituents are generally present in the potential source area MLPs and Woodward-Clyde monitoring wells. The highest concentration of cis-1,2-DCE and VC encountered in TFZ1 were located in ground water samples obtained from WCMW5/A. As shown on Table 5 and Figure12, cis-1,2-DCE and VC were present at concentrations of 65,000 ug/L and 27,000 ug/L, respectively. TCE appeared at the highest concentration in OBGMLP36 at 2400 ug/L in TFZ3.

Ground water gradients and lithological conditions control the movement of these constituents from these locations. As discussed in Section 3.3, ground water flow in Target Flow Zones 1, and 2 is predominately towards and discharges into Mill Pond, to the east-northeast. Flow in TFZ3 is also to the east-northeast, but does not discharge to Mill Pond. This is evidenced by the latest round of water level measurements performed on June 6, 2000. This data suggests that ground water discharges from the surficial aquifer (TFZ1 and TFZ2) into Mill Pond (Figures 7 and 8). Mill Pond provides a hydraulic boundary restricting migration of ground water beyond and appears to be the extent of VOC constituents in TFZ1 and TFZ2.

It is also important to note that vertical gradients exist between the three flow zones. Appendix B provides a summary of the hydraulic head difference existing between piezometers and monitoring wells constructed in Target Flow Zone 1 and 2 and in Target Flow Zone 2 and 3 on June 6, 2000. These head differences are also presented on Figures 10 and 11. Interpretation of this information suggests that there is a potential for vertical transport of ground water, albeit at very low flux rates, from the surficial flow zones (TFZ1 and TFZ2) to the lower flow zone (TFZ3) at OBGDP32. As discussed in Section 2.3, sediments from neither the St. Marks Formation/Suwannee Limestone nor the Hawthorn Group were ever encountered during advancement of the lithologic boring at this location. Although other areas were encountered where karst features may be present, notably OBGEC3 and OBGDP21, OBGDP32 is the only location where clays making up the Hawthorn Group were absent (Figures 4 and 6).

On June 6, 2000, the hydraulic head was calculated at 130 feet above msl in OBGMLP32 (TFZ2a). This elevation is approximately 7 to 8 feet lower than what was measured in surrounding MLPs, which were constructed at approximately the same elevation (TFZ2). This hydraulic head suggests a potential for ground water to migrate downward in this area of the Site. This downward component of flow also reflects a slight depression of the water table surface in TFZ2 and a mounding of the water table surface in TFZ3. This is evidenced by the hydraulic head in TFZ3, which was approximately 40 feet higher in the deep MLP (TFZ3), compared to ground water elevations observed in adjacent TFZ3 MLPs on June 6, 2000. This vertical head difference may provide a potential pathway for dissolved volatile constituents in TFZ1 and TFZ2 to migrate downward to TFZ3. Once these constituents reach flow zone three, they generally move horizontally in the direction of ground water flow, which is east-northeast. Flow through TFZ3 is complex, due to the heterogeneous depositional environment and karst processes, which results in atypical lithological changes over relatively short distances. These erratic lithologies are illustrated on Figures 4 and 6, where limestone is present at approximately 74 feet above msl

OBGDP31 and was not encountered at OBGDP32, which was advanced to 150 bgs approximately 100 feet west of OBGDP31. As previously discussed, these limestone pinnacles and irregularity of the epikarst zone can create areas of relatively heterogeneous flow conditions, which may account for variation in the VOC concentrations observed in the MLPs and the DPs that are installed close to one another.

# 6.0 CONCLUSIONS AND RECOMENDATIONS

## 6.1 Source Characterization

Field screening activities were conducted during the MLP installations associated with the source characterization effort, with no positive dense non-aqueous phase liquid (DNAPL) detections being observed (Appendix C). No DNAPL detections were encountered during the two source characterization borings conducted at the Site; however, a minor separate phase liquid detection was encountered at OBGCB2. This was observed to be a petroleum compound, which is a light non-aqueous phase liquid (LNAPL), and not a DNAPL. No source material was detected during any activities associated with the source characterization borings. Soil samples contained very low VOC concentrations.

Additional assessment activities proposed for this area include installation of two replacement monitoring well nests MW24s,i and MW25s,i. These monitoring wells are proposed to replace Woodward-Clyde monitoring wells WCMW4A/B and WCMW5A/B. These wells are located in the potential source area on the west side of the Site. They were installed in September 1996, and constructed with PVC casing and screens, with 15-foot screened intervals. Due to the construction of these Woodward-Clyde monitoring locations and the inherent difficulties associated with correlating the analytical data from the wells with current analytical data, installation of replacement monitoring wells at these locations is advised. Prior to installation of these replacement wells WCMW4A/B and WCMW5A/B will be abandoned/destroyed in accordance with procedures set forth in the Final Work Plan: Combined Expanded Site Investigation/Remedial Investigation and Feasibility Study, Former Thompson Industries Site, Madison, Florida (O'Brien and Gere 1999a). Rationale and locations for the proposed well nests are discussed in the following section.

## 6.2 Ground Water

Based upon information collected during direct-push and source characterization activities, the horizontal and vertical limits of the dissolved VOCs have been delineated in all cardinal directions at the site in TFZ1 and TFZ2. Dissolved VOC concentrations are estimated to extend east toward Mill Pond, bounded by OBGMLP1 and OBGMLP11 in TFZ1 (Figures 7 and 12), and OBGMLP1, OBGMLP10, and OBGMLP11 in TFZ2 (Figures 8 and 13). To the south, the dissolved VOCs reach OBGDP8 and OBGMLP2 in TFZ1, but in TFZ2 the constituents span OBGDP16 and OBGMLP6, and are bounded by OBGMLP3, OBGMLP4, and OBGMLP9.

As discussed in the introduction, the horizontal and vertical extent of VOCs in TFZ3 will be further evaluated using monitoring wells installed into the upper Floridan aquifer. This flow zone, TFZ3, is variable due to the epikarst processes that have influenced its development. Limestone spires and associated sinks/depressions result in crenulations of the overlying clay surface. To date, MLPs installed into TFZ3 have not delineated VOC constituents to the northeast, east, or west of the Site. VOCs reach from the west side of the Site (OBGMLP34) to Mill Pond (OBGMLP30) in varying concentrations. To the north-northeast, VOC constituents were detected in samples collected from OBGMLP8. The maximum detections of VOC constituents occurred in wells located around the potential source area (OBGMLP32, OBGMLP35, and OBGMLP36) and along a line extending from OBGDP8 to the east-northeast to OBGMLP30 including OBGDP18 and OBGDP14.

Based on these findings, the following ground water monitoring points are recommended in addition to the monitoring well nests OBGMW14, OBGMW15, OBGMW16 and OBGMW17 which were installed during Phase 3 site activities. Along with selected Woodward Clyde monitoring well WCMW3A, these locations are expected to satisfy long term ground water monitoring array

requirements. Detailed below are the well designations and rationale for installation (Figure 16).

- OBGMW16f is proposed to define the northern extent of VOCs in the upper Floridan. This Floridan well will be installed at the location of the existing well nest, OBGMW16s, i, d.
- OBGMW18s,i,f are proposed to monitor the eastern edge of the dissolved VOC plume. This location will also include a well to evaluate ground water quality in the upper portion of the Floridan aquifer. The need for additional Floridan will be re-evaluated pending review of the results of analytical sampling.
- OBGMW19s, i are proposed to monitor ground water conditions along the southeastern edge of the dissolved plume.
- OBGMW20s, i, f are proposed to evaluate ground water quality along the southern edge of the plume. This location will also include an upper Floridan well.
- OBGMW21s, i are proposed to provide information along the axis of the VOC distribution further downgradient of monitoring wells OBGMW22i and WCMW3/A.
- OBGMW22i is recommended to evaluate ground water quality immediately downgradient of the suspected source area, and will be nested with WCMW3/A.
- OBGMW23i is proposed to corroborate water quality downgradient of the site near the location of OBGDP8. This is a location where elevated concentrations of VOCs were encountered during the direct push sampling efforts.
- OBGMW24s, i are to be located in the potential source area and will be used to evaluate ground water quality. This well cluster will replace WCMW4A/B.

- OBGMW25s, i are to be located in the potential source area and will be used to further evaluate ground water quality. This monitoring well cluster will replace WCMW5A/B.
- OBGMW26f is proposed to provide background ground water quality for the upper Floridan aquifer. The exact location will be determined pending results from the water level and analytical information from the other upper Floridan wells. All upper Floridan wells are expected to be installed into the upper productive flow zone of the upper Floridan aquifer

As outlined in the TM Addendum letter For the Shallow and Intermediate Ground Water Assessment, the following monitoring wells were installed during the Phase 3 ground water screening efforts.

- OBGMW14s, i were installed at a background location to monitor ground water conditions west of the Site.
- OBGMW15s, i, d were installed to provide ground water quality in a background location of the Site.
- OBGMW16s, i, d were installed to monitor ground water quality along the northern limits of the Site.
- OBGMW17s, i were installed to monitor ground water quality in the northeastern portion of the Site.

It should be noted that when OBGMW14 and OBGMW17 well nests were proposed they included a TFZ3 monitoring well. These deep monitoring wells were not installed at these two locations because of the shallow depth at which limestone was encountered.

The ground water monitoring points itemized above will be scheduled for installation following EPA approval and availability of the drilling contractor. Wells will be constructed according to specifications included in the Combined Expanded Site Investigation/Remedial Investigation/Feasibility Study Final Field

Sampling Plan Appendix A Section 7 (O'Brien and Gere July 1999a). Following their installation and development, O'Brien and Gere Engineers will conduct the first round of ground water sampling in accordance with the approved work plan noted above. Once the first sampling event has been completed, hydraulic conductivity testing will be performed. This information will be used to update the conceptual site model and will be presented in the ESI/RI report.

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| Sample Location | Sample Depth (ft bls) | Date | Permeability ft/day | Permeability cm/sec | USC Classification | Gra (4 : 1t |
|---|---|---|---|---|---|---|
| OBGCB1 | 5 | 4/12/00 | 4.90E-01 | 1.73E-04 | SC | |
| OBGCB1 | 7 | 4/12/00 | 6.01E-01 | 2.12E-04 | SP-SC | |
| OBGCB1 | 10.5 | 4/12/00 | 1.00E-03 | 3.54E-07 | SC | |
| OBGCB1 | 13 | 4/12/00 | 1.05E-04 | 3.71E-08 | SC | |
| OBGCB1 | 20 | 4/12/00 | 1.71E-03 | 6.03E-07 | SC | |
| OBGCB1 | 21 | 4/12/00 | NA | NA | SP-SC | |
| OBGCB1 | 24 | 4/12/00 | 3.43E-05 | 1.21E-08 | SC | |
| OBGCB1 | 30 | 4/12/00 | 1.07E-04 | 3.78E-08 | SC | |
| OBGCB1 | 35 | 4/12/00 | 5.30E-03 | 1.87E-06 | SC | |
| OBGCB1 | 37 | 4/12/00 | 1.36E-01 | 4.79E-05 | SP-SC | |
| OBGCB1 | 37.5 | 4/12/00 | 3.18E-05 | 1.12E-08 | SC | |
| OBGCB2 | 3.5 | 4/11/00 | 3.03E+01 | 1.07E-02 | SP-SC | |
| OBGCB2 | 6 | 4/11/00 | 2.77E-01 | 9.76E-05 | SP-SC | |
| OBGCB2 | 10.75 | 4/11/00 | 2.23E-03 | 7.87E-07 | SP-SC | |
| OBGCB2 | 11 | 4/11/00 | 4.71E-04 | 1.66E-07 | SC | |
| OBGCB2 | 18.5 | 4/11/00 | 4.51E-02 | 1.59E-05 | SP-SC | |
| OBGCB2 | 21 | 4/11/00 | 1.46E+00 | 5.14E-04 | SP-SC | |
| OBGCB2 | 21.5 | 4/11/00 | 5.78E-04 | 2.04E-07 | SC | |
| OBGCB2 | 27-28 | 4/11/00 | 5.70E-05 | 2.01E-08 | SC | |
| OBGCB2 | 39.5 | 4/11/00 | 4.73E-04 | 1.67E-07 | SC | |
| OBGCB2 | 40 | 4/11/00 | 4.08E-05 | 1.44E-08 | SC | |

Notes:

1. ASTM Procedure D422; Standard method for particle size analysis of soils; values indicate percentage of par
2. ASTM Procedure D2216; Laboratory Determination of Water (Moisture) Content of Soil, and Soil Aggregate M
3. USC - Unified Soil Classification System:
   SP - Poorly-graded sands, gravelly sands, little or no fines.
   SC - Clayey sands, sand - clay mixtures.
4. Percent Moisture does not have a standard measurement unit
5. 200 sieve - Corresponds to Clay size Fraction

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| Grain Size (10 sieve) 2mm | Grain Size (40 sieve) .42mm | Grain Size (60 sieve) .25mm | Grain Size (100 sieve) .149mm | Grain Size (200 sieve) .074mm | Percent Moisture | Bulk Density (Lbs/Ft$^3$) | Porosity (%) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| - | 83.1 | 59.9 | 41.2 | 14.4 | 12.8 | - | - |
| 99.9 | 83.4 | 56.5 | 32.6 | 9 | 12.6 | - | - |
| 100.0 | 85.8 | 64.7 | 42.9 | 15.2 | 15.0 | 118 | 28 |
| 99.6 | 81.6 | 61.8 | 43.5 | 17.2 | 20.3 | 108 | 35 |
| - | 87.4 | 67.1 | 48.6 | 13.6 | 14.5 | 120 | 28 |
| 99.9 | 85.9 | 63.4 | 43.1 | 10.9 | 19.7 | 109 | 34 |
| 100.0 | 82.8 | 60.8 | 47.2 | 26.8 | 14.7 | 119 | 28 |
| 99.5 | 35.9 | 24.2 | 21.0 | 16.2 | 14.4 | 120 | 28 |
| 99.9 | 79.0 | 33.5 | 16.3 | 12.5 | 18.3 | 111 | 33 |
| 94.0 | 56.8 | 33.4 | 17.6 | 7.0 | 16.3 | 116 | 30 |
| 94.1 | 68.1 | 52.4 | 36.2 | 16.1 | 51.0 | 70 | 58 |
| | | | | | | | |
| 83.4 | 56.6 | 35.9 | 19.4 | 5.7 | 10.8 | - | - |
| 63.1 | 45.4 | 28.8 | 16.1 | 6 | 11.8 | - | - |
| 99.2 | 74 | 44.9 | 24.9 | 8.4 | 22.5 | 104 | 37 |
| 99.5 | 76.2 | 51.3 | 32.3 | 14.1 | 14.9 | 119 | 28 |
| 99.9 | 78.9 | 49.9 | 27.1 | 6.0 | 13.7 | 121 | 27 |
| 99.9 | 80.2 | 52.9 | 30.9 | 10 | 14.8 | 119 | 28 |
| 99.9 | 80.5 | 55.3 | 34.8 | 14.4 | 13.5 | 122 | 26 |
| 99.9 | 75.4 | 44.5 | 29.1 | 13.9 | 18.7 | 111 | 33 |
| 99.7 | 59.8 | 42.9 | 34.5 | 28.9 | 18.4 | 111 | 33 |
| 94.1 | 78.7 | 68.3 | 56.3 | 40.0 | 30.6 | 91 | 45 |

r than that sieve size.

| Analyte/Parameter | CAS Number | Analytical Method | Number of Samples (A) | Number of Quantitated[1] Detections (B) | Frequency of Detection (B/A) | Mean Concentration[2] | Standard Deviation | 95% Upper Confidence Limit (UCL) | Minimum Concentration | Maximum Concentration | Range of Concentrations[3] | S w C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VOCs | | | | | | | | | | | | |
| Acetone | 67641 | 8260B | 25 | 12 | 48.00% | 0.0773 | 0.09555862 | 0.11475824 | 0.021 | 0.058 | 0.037 | C |
| Benzene | 71432 | 8260B | 25 | 9 | 36.00% | 0.013844 | 0.01956868 | 0.02151477 | 0.0011 | 0.005 | 0.0039 | |
| Bromodichloromethane | 75274 | 8260B | 25 | 0 | 0.00% | — | — | — | ND | ND | ND | |
| Bromoform | 75252 | 8260B | 25 | 0 | 0.00% | — | — | — | ND | ND | ND | |
| Bromomethane | 74839 | 8260B | 25 | 0 | 0.00% | — | — | — | ND | ND | ND | |
| 2-Butanone | 78933 | 8260B | 25 | 5 | 20.00% | 0.13036 | 0.20308016 | 0.20996584 | 0.58 | 1 | 0.42 | O |
| Carbon disulfide | 75150 | 8260B | 25 | 5 | 20.00% | 0.015172 | 0.01976556 | 0.02291995 | 0.0011 | 0.029 | 0.0279 | C |
| Carbon tetrachloride | 56235 | 8260B | 25 | 0 | 0.00% | — | — | — | ND | ND | ND | |
| Chlorobenzene | 108907 | 8260B | 25 | 1 | 4.00% | 0.014084 | 0.0195284 | 0.02173898 | ND | 0.0018 | 0.0018 | C |
| Chloroethane | 75003 | 8260B | 25 | 0 | 0.00% | — | — | — | ND | ND | ND | |
| Chloroform | 67663 | 8260B | 25 | 0 | 0.00% | — | — | — | ND | ND | ND | |
| Chloromethane | 74873 | 8260B | 25 | 0 | 0.00% | — | — | — | ND | ND | ND | |
| Dibromochloromethane | 124481 | 8260B | 25 | 0 | 0.00% | — | — | — | ND | ND | ND | |
| 1,1-Dichloroethane | 75343 | 8260B | 25 | 12 | 48.00% | 0.013998 | 0.01953983 | 0.02165746 | 0.0012 | 0.0039 | 0.0027 | |
| 1,2-Dichloroethane | 107062 | 8260B | 25 | 1 | 4.00% | 0.014164 | 0.01951557 | 0.02181395 | ND | 0.0038 | 0.0038 | C |
| 1,1-Dichloroethene | 75354 | 8260B | 25 | 0 | 0.00% | — | — | — | ND | ND | ND | |
| cis-1,2-Dichloroethene | 156592 | 8260B | 25 | 18 | 72.00% | 0.195504 | 0.19630209 | 0.27245289 | 0.017 | 0.95 | 0.933 | |
| trans-1,2-Dichloroethene | 156605 | 8260B | 25 | 7 | 28.00% | 0.0139692 | 0.01955712 | 0.02163544 | 0.00088 | 0.0039 | 0.00302 | |
| 1,2-Dichloropropane | 78875 | 8260B | 25 | 0 | 0.00% | — | — | — | ND | ND | ND | |
| cis-1,3-Dichloropropene | 10061015 | 8260B | 25 | 1 | 4.00% | 0.019644 | 0.02800312 | 0.03062101 | ND | 0.14 | 0.14 | |
| trans-1,3-Dichloropropene | 10061026 | 8260B | 25 | 0 | 0.00% | — | — | — | ND | ND | ND | |
| Ethylbenzene | 100414 | 8260B | 25 | 13 | 52.00% | 0.352042 | 0.68267455 | 0.61964511 | 0.0013 | 3.3 | 3.2987 | C |
| 2-Hexanone | 73663715 | 8260B | 25 | 0 | 0.00% | — | — | — | ND | ND | ND | |
| Methylene chloride | 75092 | 8260B | 25 | 0 | 0.00% | — | — | — | ND | ND | ND | |
| 4-Methyl-2-pentanone | 108101 | 8260B | 25 | 0 | 0.00% | — | — | — | ND | ND | ND | |
| Styrene | 100425 | 8260B | 25 | 0 | 0.00% | — | — | — | ND | ND | ND | |
| 1,1,2,2-Tetrachloroethane | 79345 | 8260B | 25 | 0 | 0.00% | — | — | — | ND | ND | ND | |
| Tetrachloroethene | 127184 | 8260B | 25 | 0 | 0.00% | — | — | — | ND | ND | ND | |
| Toluene | 108883 | 8260B | 25 | 7 | 28.00% | 0.675772 | 1.74511737 | 1.35984442 | 0.0014 | 8.2 | 8.1986 | O |
| 1,1,1-Trichloroethane | 71556 | 8260B | 25 | 0 | 0.00% | — | — | — | ND | ND | ND | |
| 1,1,2-Trichloroethane | 79005 | 8260B | 25 | 0 | 0.00% | — | — | — | ND | ND | ND | |
| Trichloroethene | 79016 | 8260B | 25 | 1 | 4.00% | 0.014732 | 0.01956144 | 0.02239993 | ND | 0.018 | 0.018 | O |
| Vinyl chloride | 75014 | 8260B | 25 | 14 | 56.00% | 0.104332 | 0.12427277 | 0.15304596 | 0.0012 | 0.64 | 0.6388 | C |
| Xylenes (total) | 1330207 | 8260B | 25 | 18 | 72.00% | 1.110836 | 2.89224779 | 2.24457462 | 0.0015 | 15 | 14.9985 | O |
| General Chemistry | | | | | | | | | | | | |
| Percent solids | | | 25 | 25 | 100.00% | 69.888 | 42.9052582 | 86.7065273 | 31.2 | 91 | 59.8 | C |
| Total organic carbon (TOC) | | 9060 | 25 | 21 | 84.00% | 3902.4 | 5539.38294 | 6073.795 | 540 | 40300 | 39760 | OF |

[1] Concentration of analyte in sample exceeded the practical analytical quantitation limit (PQL).

[2] A value equal to one-half the analytical quantitation limit for a given sample result was used for calculation purposes for all "non-detect" results and other non-quantifiable results.

[3] Value equal to maximum concentration minus minimum concentration

[4] SCTLs from Florida DEP Contaminant Cleanup Target Levels, Soil, Chapter 62-777 F.A.C., May 26, 1999

[5] Values from EPA Region III Risk-Based Concentration Table, R.L. Smith, April 1999 and adopted by USEPA Region IV with HQ=0.1 applied to noncarcinogens (USEPA, 1

[6] Data validation qualifiers based on the project Quality Assurance Project Plan (QAPP) and U.S. EPA Contract Laboratory Program (CLP) Functional Guidelines (U.S. EPA USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review. EPA-540/R-94/012. Washington, D.C. and U.S. EPA. 1994. USEPA Con Laboratory Program National Functional Guidelines for Inorganic Data Review. EPA-540/R-94/013. Washington, D.C.)

[7] PQL - practical quantitation limit

[8] MDL - method detection limit

[redacted] - Detected concentration exceeded Florida SCTL and/or USEPA RBC.

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| ımber / num / ıtion | Florida SCTLs[4] | | USEPA RBCs[6] | | Sample ID: / Sample Date: | OBGCB1-5' 4/12/00 | | | | OBGCB1-7' 4/12/00 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Residential | Industrial | Residential | Industrial | | Concentration (mg/kg) | Qualifier[5] | PQL[7] | MDL[8] | Concentration (mg/kg) | Qualifier[5] | PQL[7] | MDL[8] |
| 10.5' | 780 | 5500 | 780 | 20000 | | 0.024 | J* | 0.028 | 1.4 | 0.026 | J* | 0.028 | 0.013 |
| -13' | 1.1 | 1.6 | 22 | 200 | | 0.0017 | J* | 0.0057 | 0.08 | ND | | 0.0056 | 0.00055 |
| | 1.4 | 2 | 10 | 92 | | ND | | 0.0057 | 0.1 | ND | | 0.0056 | 0.00089 |
| | 48 | 84 | 81 | 720 | | ND | | 0.0057 | 0.15 | ND | | 0.0056 | 0.0024 |
| | 2.2 | 15 | 11 | 290 | | ND | | 0.011 | 0.1 | ND | | 0.011 | 0.0016 |
| 0.75' | 3100 | 21000 | 4700 | 120000 | | ND | | 0.028 | 1.3 | ND | | 0.028 | 0.0092 |
| -7.5' | 200 | 1400 | 780 | 20000 | | ND | | 0.0057 | 0.08 | ND | | 0.0056 | 0.00053 |
| | 0.4 | 0.6 | 4.9 | 44 | | ND | | 0.0057 | 0.08 | ND | | 0.0056 | 0.00071 |
| 7.5' | 30 | 200 | 160 | 4100 | | ND | | 0.0057 | 0.08 | ND | | 0.0056 | 0.00059 |
| | 2.9 | 4 | 220 | 2000 | | ND | | 0.011 | 0.15 | ND | | 0.011 | 0.0008 |
| | 0.4 | 0.5 | 100 | 940 | | ND | | 0.0057 | 0.09 | ND | | 0.0056 | 0.00062 |
| | 1.7 | 2.3 | 49 | 440 | | ND | | 0.011 | 0.1 | ND | | 0.011 | 0.0017 |
| | 1.4 | 2.1 | 7.6 | 68 | | ND | | 0.0057 | 0.1 | ND | | 0.0056 | 0.00074 |
| 15' | 290 | 2000 | 780 | 20000 | | 0.002 | J* | 0.0057 | 0.1 | ND | | 0.0056 | 0.00067 |
| 7.5' | 0.5 | 0.7 | 7 | 63 | | ND | | 0.0057 | 0.11 | ND | | 0.0056 | 0.0011 |
| | 0.09 | 0.1 | 1.1 | 9.5 | | ND | | 0.0057 | 0.09 | ND | | 0.0056 | 0.0008 |
| .5' | 19 | 130 | 78 | 2000 | | 0.058 | | 0.0057 | 0.12 | 0.093 | | 0.0056 | 0.00053 |
| 5' | 31 | 210 | 160 | 4100 | | 0.0039 | J* | 0.0057 | 0.08 | 0.0016 | J* | 0.0056 | 0.00055 |
| | 0.6 | 1.8 | 9.4 | 84 | | ND | | 0.0057 | 0.11 | ND | | 0.0056 | 0.00067 |
| 0' | -- | -- | -- | -- | | ND | | 0.0057 | 0.09 | ND | | 0.0056 | 0.00089 |
| | -- | -- | -- | -- | | ND | | 0.0057 | 0.1 | ND | | 0.0056 | 0.00081 |
| .5' | 1100 | 3400 | 780 | 20000 | | 0.0026 | J* | 0.0057 | 0.11 | 0.0041 | J* | 0.0056 | 0.00059 |
| | 5.1 | 34 | 310 | 8200 | | ND | | 0.028 | 0.62 | ND | | 0.028 | 0.0042 |
| | 220 | 1500 | 630 | 16000 | | ND | | 0.0057 | 0.11 | ND | | 0.0056 | 0.0017 |
| | 16 | 23 | 85 | 760 | | ND | | 0.028 | 0.44 | ND | | 0.028 | 0.0044 |
| | 2700 | 2100 | 1600 | 41000 | | ND | | 0.0057 | 0.1 | ND | | 0.0056 | 0.0012 |
| | 0.7 | 1.1 | 3.2 | 29 | | ND | | 0.0057 | 0.11 | ND | | 0.0056 | 0.0011 |
| | 8.9 | 17 | 12 | 110 | | ND | | 0.0057 | 0.25 | ND | | 0.0056 | 0.0015 |
| 5' | 380 | 2600 | 1600 | 41000 | | ND | K | 0.0057 | 0.12 | ND | K | 0.022 | 0.00058 |
| | 400 | 3300 | 160 | 4100 | | ND | | 0.0057 | 0.07 | ND | | 0.0056 | 0.00071 |
| | 1.3 | 1.8 | 11 | 100 | | ND | | 0.0057 | 0.18 | ND | | 0.0056 | 0.00098 |
| 5' | 6 | 8.5 | 58 | 520 | | ND | | 0.0057 | 0.08 | ND | | 0.0056 | 0.00077 |
| | 0.03 | 0.04 | 0.34 | 3 | | 0.091 | | 0.011 | 0.09 | 0.0012 | J* | 0.011 | 0.00053 |
| 5' | 5900 | 40000 | 16000 | 410000 | | 0.0034 | J* | 0.0057 | 0.22 | 0.013 | | 0.0056 | 0.0014 |
| | | | | | | 88.1 | | 0.1 | 0.1 | 89.2 | | 0.1 | 0.1 |
| 5' | | | | | | 8850 | | 2000 | 529 | 4450 | | 2000 | 529 |

| Analyte/Parameter | OBGCB1-10.5' 4/12/00 Concentration (mg/kg) | Qualifier[6] | PQL[7] | MDL[8] | OBGCB1-13' 4/12/00 Concentration (mg/kg) | Qualifier[6] | PQL[7] | MDL[8] | OBGCB1-20' 4/12/00 Concentration (mg/kg) | Qualifier[6] | PQL[7] | MDL[8] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VOCs | | | | | | | | | | | | |
| Acetone | 0.058 | | 0.028 | 0.013 | 0.046 | | 0.029 | 0.013 | 0.029 | | 0.029 | 0.013 |
| Benzene | 0.0041 | J* | 0.0057 | 0.00056 | 0.005 | J* | 0.0059 | 0.00058 | 0.0013 | J* | 0.0057 | 0.00056 |
| Bromodichloromethane | ND | | 0.0057 | 0.0009 | ND | | 0.0059 | 0.00093 | ND | | 0.0057 | 0.0009 |
| Bromoform | ND | | 0.0057 | 0.0024 | ND | | 0.0059 | 0.0025 | ND | | 0.0057 | 0.0024 |
| Bromomethane | ND | | 0.011 | 0.0017 | ND | | 0.012 | 0.0017 | ND | | 0.011 | 0.0017 |
| 2-Butanone | ND | | 0.028 | 0.0094 | ND | | 0.029 | 0.0097 | ND | | 0.029 | 0.0094 |
| Carbon disulfide | ND | | 0.0057 | 0.00054 | ND | | 0.0059 | 0.00055 | ND | | 0.0057 | 0.00054 |
| Carbon tetrachloride | ND | | 0.0057 | 0.00072 | ND | | 0.0059 | 0.00074 | ND | | 0.0057 | 0.00072 |
| Chlorobenzene | ND | | 0.0057 | 0.0006 | ND | | 0.0059 | 0.00062 | ND | | 0.0057 | 0.00061 |
| Chloroethane | ND | | 0.011 | 0.00081 | ND | | 0.012 | 0.00084 | ND | | 0.011 | 0.00081 |
| Chloroform | ND | | 0.0057 | 0.00063 | ND | | 0.0059 | 0.00065 | ND | | 0.0057 | 0.00063 |
| Chloromethane | ND | | 0.011 | 0.0018 | ND | | 0.012 | 0.0018 | ND | | 0.011 | 0.0018 |
| Dibromochloromethane | ND | | 0.0057 | 0.00075 | ND | | 0.0059 | 0.00078 | ND | | 0.0057 | 0.00075 |
| 1,1-Dichloroethane | 0.0012 | J* | 0.0057 | 0.00068 | 0.0036 | J* | 0.0059 | 0.00084 | 0.0017 | J* | 0.0057 | 0.00068 |
| 1,2-Dichloroethane | ND | | 0.0057 | 0.0011 | ND | | 0.0059 | 0.00071 | ND | | 0.0057 | 0.0011 |
| 1,1-Dichloroethene | ND | | 0.0057 | 0.00081 | ND | | 0.0059 | 0.0011 | ND | | 0.0057 | 0.00081 |
| cis-1,2-Dichloroethene | ND | | 0.0057 | 0.00054 | 0.058 | | 0.0059 | 0.00055 | 0.17 | | 0.0056 | 0.00054 |
| trans-1,2-Dichloroethene | ND | | 0.0057 | 0.00056 | ND | | 0.0059 | 0.00058 | ND | | 0.0056 | 0.00056 |
| 1,2-Dichloropropane | ND | | 0.0057 | 0.00068 | ND | | 0.0059 | 0.00071 | ND | | 0.0056 | 0.00068 |
| cis-1,3-Dichloropropene | ND | | 0.0057 | 0.0009 | ND | | 0.0059 | 0.00093 | 0.14 | | 0.11 | 0.00054 |
| trans-1,3-Dichloropropene | ND | | 0.0057 | 0.00082 | ND | | 0.0059 | 0.00085 | ND | | 0.0056 | 0.00082 |
| Ethylbenzene | ND | | 0.0057 | 0.0006 | 0.0029 | J* | 0.0059 | 0.00062 | 0.0014 | J* | 0.0057 | 0.00061 |
| 2-Hexanone | ND | | 0.028 | 0.0043 | ND | | 0.029 | 0.0044 | ND | | 0.028 | 0.0043 |
| Methylene chloride | ND | | 0.0057 | 0.0017 | ND | | 0.0059 | 0.0018 | ND | | 0.0057 | 0.0017 |
| 4-Methyl-2-pentanone | ND | | 0.028 | 0.0045 | ND | | 0.029 | 0.0046 | ND | | 0.028 | 0.0045 |
| Styrene | ND | | 0.0057 | 0.0013 | ND | | 0.0059 | 0.0013 | ND | | 0.0057 | 0.0013 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0057 | 0.0011 | ND | | 0.0059 | 0.0012 | ND | | 0.0056 | 0.0011 |
| Tetrachloroethene | ND | | 0.0057 | 0.0015 | ND | | 0.0059 | 0.0016 | ND | | 0.0057 | 0.0015 |
| Toluene | ND | | 0.0057 | 0.00059 | ND | K | 0.0059 | 0.00061 | ND | K | 0.0057 | 0.00059 |
| 1,1,1-Trichloroethane | ND | | 0.0057 | 0.00072 | ND | | 0.0059 | 0.00074 | ND | | 0.0056 | 0.00072 |
| 1,1,2-Trichloroethane | ND | | 0.0057 | 0.00099 | ND | | 0.0059 | 0.001 | ND | | 0.0056 | 0.00099 |
| Trichloroethene | ND | | 0.0057 | 0.00079 | ND | | 0.0059 | 0.00081 | ND | | 0.0057 | 0.00079 |
| Vinyl chloride | ND | | 0.011 | 0.00054 | 0.05 | | 0.012 | 0.00055 | 0.16 | J* | 0.011 | 0.00054 |
| Xylenes (total) | ND | | 0.0057 | 0.0014 | ND | | 0.0059 | 0.0015 | 0.0032 | J* | 0.0057 | 0.0014 |
| General Chemistry | | | | | | | | | | | | |
| Percent solids | 87.8 | | 0.1 | 0.1 | 84.8 | | 0.1 | 0.1 | 87.6 | | 0.1 | 0.1 |
| Total organic carbon (TOC) | 780 | B | 2000 | 529 | 1410 | B | 2000 | 529 | 650 | B | 2000 | 529 |

[1] Concentration of analyte in sample exceeded the practical analytical quantitation limit (PQL).

[2] A value equal to one-half the analytical quantitation limit for a given sample result was used for calculation purposes for all "non-detect" results and other non-quantifiable results.

[3] Value equal to maximum concentration minus minimum concentration

[4] SCTLs from Florida DEP Contaminant Cleanup Target Levels, Soil, Chapter 62-777 F.A.C., May 26, 1999

[5] Values from EPA Region III Risk-Based Concentration Table, R.L. Smith, April 1999 and adopted by USEPA Region IV with HQ=0.1 applied to noncarcinogens (USEPA, 1995a)

[6] Data validation qualifiers based on the project Quality Assurance Project Plan (QAPP) and U.S. EPA Contract Laboratory Program (CLP) Functional Guidelines (U.S. EPA. 1994. USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review. EPA-540/R-94/012. Washington, D.C. and U.S. EPA. 1994. USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. EPA-540/R-94/013. Washington, D.C.)

[7] PQL - practical quantitation limit

[8] MDL - method detection limit

Detected concentration exceeded Florida SCTL and/or USEPA RBC.

Table 2
:ation Soil Borings OBGCB1 and OBGCB2, April 11-12, 2000
· Shallow and Intermediate Zone Ground Water Assessment
npson Industries Site, Madison, Florida
June 2000

| | OBGCB1-21' | | | OBGCB1-21.5' | | | | OBGCB1-24' | | | | OBGCB1-26' | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4/12/00 | | | 4/12/00 | | | | 4/12/00 | | | | 4/12/00 | | | |
| tion ) | Qualifier[6] | PQL[7] | MDL[8] | Concentration (mg/kg) | Qualifier[6] | PQL[7] | MDL[8] | Concentration (mg/kg) | Qualifier[6] | PQL[7] | MDL[8] | Concentration (mg/kg) | Qualifier[6] | PQL[7] | MDL[8] |
| | | 0.03 | 0.013 | 0.028 | | 0.028 | 0.013 | ND | | 0.029 | 0.013 | ND | | 0.029 | 0.013 |
| | J* | 0.0061 | 0.00057 | 0.0017 | J* | 0.0057 | 0.00055 | 0.0016 | J* | 0.0057 | 0.00056 | 0.0011 | J* | 0.0057 | 0.00056 |
| | | 0.0061 | 0.00092 | ND | | 0.0057 | 0.00089 | ND | | 0.0057 | 0.0009 | ND | UJ | 0.0057 | 0.0009 |
| | | 0.0061 | 0.0025 | ND | | 0.0057 | 0.0024 | ND | | 0.0057 | 0.0024 | ND | | 0.0057 | 0.0024 |
| | | 0.012 | 0.0017 | ND | | 0.011 | 0.0016 | ND | | 0.011 | 0.0017 | ND | | 0.011 | 0.0017 |
| | | 0.03 | 0.0096 | ND | | 0.028 | 0.0093 | ND | | 0.029 | 0.0094 | ND | | 0.029 | 0.0094 |
| | J* | 0.0061 | 0.00055 | 0.005 | J* | 0.0057 | 0.00053 | 0.0011 | J* | 0.0057 | 0.00054 | 0.0032 | J* | 0.0057 | 0.00054 |
| | | 0.0061 | 0.00074 | ND | | 0.0057 | 0.00071 | ND | | 0.0057 | 0.00072 | ND | | 0.0057 | 0.00072 |
| | | 0.0061 | 0.00062 | ND | | 0.0057 | 0.0006 | ND | | 0.0057 | 0.00061 | ND | | 0.0057 | 0.0006 |
| | | 0.012 | 0.00083 | ND | | 0.011 | 0.0008 | ND | | 0.011 | 0.00081 | ND | | 0.011 | 0.00081 |
| | | 0.0061 | 0.00064 | ND | | 0.0057 | 0.00062 | ND | | 0.0057 | 0.00063 | ND | | 0.0057 | 0.00063 |
| | | 0.012 | 0.0018 | ND | | 0.011 | 0.0018 | ND | | 0.011 | 0.0018 | ND | | 0.011 | 0.0018 |
| | | 0.0061 | 0.00077 | ND | | 0.0057 | 0.00075 | ND | | 0.0057 | 0.00075 | ND | | 0.0057 | 0.00075 |
| | J* | 0.0061 | 0.0007 | 0.0022 | J* | 0.0057 | 0.00068 | 0.0032 | J* | 0.0057 | 0.00069 | 0.0023 | J* | 0.0057 | 0.00068 |
| | | 0.0061 | 0.0011 | ND | | 0.0057 | 0.0011 | ND | | 0.0057 | 0.0011 | ND | | 0.0057 | 0.0011 |
| | | 0.0061 | 0.00083 | ND | | 0.0057 | 0.0008 | ND | | 0.0057 | 0.00081 | ND | | 0.0057 | 0.00081 |
| | | 0.12 | 0.028 | 0.35 | | 0.11 | 0.027 | 0.67 | | 0.11 | 0.027 | 0.14 | | 0.11 | 0.027 |
| | | 0.0061 | 0.00057 | 0.00088 | J* | 0.0057 | 0.00055 | 0.0025 | J* | 0.0057 | 0.00056 | 0.0018 | J* | 0.0057 | 0.00056 |
| | | 0.0061 | 0.0007 | ND | | 0.0057 | 0.00068 | ND | | 0.0057 | 0.00069 | ND | | 0.0057 | 0.00068 |
| | | 0.0061 | 0.00092 | ND | | 0.0057 | 0.00089 | ND | | 0.0057 | 0.0009 | ND | UJ | 0.0057 | 0.0009 |
| | | 0.0061 | 0.00084 | ND | | 0.0057 | 0.00082 | ND | | 0.0057 | 0.00082 | ND | | 0.0057 | 0.00082 |
| | | 0.0061 | 0.00062 | 0.0013 | J* | 0.0057 | 0.0006 | ND | | 0.0057 | 0.00061 | ND | | 0.0057 | 0.0006 |
| | | 0.03 | 0.0044 | ND | | 0.028 | 0.0043 | ND | | 0.029 | 0.0043 | ND | | 0.029 | 0.0043 |
| | | 0.0061 | 0.0018 | ND | | 0.0057 | 0.0017 | ND | | 0.0057 | 0.0017 | ND | | 0.0057 | 0.0017 |
| | | 0.03 | 0.0046 | ND | | 0.028 | 0.0044 | ND | | 0.029 | 0.0045 | ND | | 0.029 | 0.0045 |
| | | 0.0061 | 0.0013 | ND | | 0.0057 | 0.0012 | ND | | 0.0057 | 0.0013 | ND | | 0.0057 | 0.0013 |
| | | 0.0061 | 0.0011 | ND | | 0.0057 | 0.0011 | ND | | 0.0057 | 0.0011 | ND | | 0.0057 | 0.0011 |
| | | 0.0061 | 0.0015 | ND | | 0.0057 | 0.0015 | ND | | 0.0057 | 0.0015 | ND | | 0.0057 | 0.0015 |
| | K | 0.0061 | 0.00061 | ND | K | 0.0057 | 0.00059 | ND | K | 0.012 | 0.00059 | ND | K | 0.0088 | 0.00059 |
| | | 0.0061 | 0.00074 | ND | | 0.0057 | 0.00071 | ND | | 0.0057 | 0.00072 | ND | | 0.0057 | 0.00072 |
| | | 0.0061 | 0.001 | ND | | 0.0057 | 0.00099 | ND | | 0.0057 | 0.00099 | ND | | 0.0057 | 0.00099 |
| | | 0.0061 | 0.00081 | ND | | 0.0057 | 0.00078 | ND | | 0.0057 | 0.00079 | ND | | 0.0057 | 0.00079 |
| | | 0.012 | 0.00055 | 0.34 | | 0.011 | 0.00053 | 0.36 | | 0.011 | 0.00054 | 0.029 | J* | 0.011 | 0.00054 |
| | J* | 0.0061 | 0.0014 | 0.0038 | J* | 0.0057 | 0.0014 | 0.016 | | 0.0057 | 0.0014 | 0.011 | | 0.0057 | 0.0014 |
| | | 0.1 | 0.1 | 88.3 | | 0.1 | 0.1 | 87.5 | | 0.1 | 0.1 | 87.7 | | 0.1 | 0.1 |
| | B | 2000 | 529 | ND | | 2000 | 529 | 870 | B | 2000 | 529 | 760 | B | 2000 | 529 |

| Analyte/Parameter | OBGCB1-30' 4/12/00 Concentration (mg/kg) | Qualifier[6] | PQL[7] | MDL[8] | OBGCB1-35' 4/12/00 Concentration (mg/kg) | Qualifier[6] | PQL[7] | MDL[8] | OBGCB1-37' 4/12/00 Concentration (mg/kg) | Qualifier[6] | PQL[7] | MDL[8] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VOCs | | | | | | | | | | | | |
| Acetone | ND | | 0.028 | 0.013 | 0.03 | J* | 0.031 | 0.014 | 0.03 | | 0.029 | 0.013 |
| Benzene | ND | | 0.0057 | 0.00056 | ND | | 0.0063 | 0.00058 | ND | | 0.0058 | 0.00057 |
| Bromodichloromethane | ND | UJ | 0.0057 | 0.0009 | ND | | 0.0063 | 0.00094 | ND | | 0.0058 | 0.00091 |
| Bromoform | ND | | 0.0057 | 0.0024 | ND | | 0.0063 | 0.0025 | ND | | 0.0058 | 0.0024 |
| Bromomethane | ND | | 0.011 | 0.0017 | ND | | 0.013 | 0.0017 | ND | | 0.012 | 0.0017 |
| 2-Butanone | ND | | 0.028 | 0.0094 | ND | | 0.031 | 0.0097 | ND | | 0.029 | 0.0095 |
| Carbon disulfide | ND | | 0.0057 | 0.00054 | ND | | 0.0063 | 0.00056 | ND | | 0.0058 | 0.00054 |
| Carbon tetrachloride | ND | | 0.0057 | 0.00072 | ND | | 0.0063 | 0.00075 | ND | | 0.0058 | 0.00073 |
| Chlorobenzene | ND | | 0.0057 | 0.0006 | ND | | 0.0063 | 0.00063 | ND | | 0.0058 | 0.00061 |
| Chloroethane | ND | | 0.011 | 0.00081 | ND | | 0.013 | 0.00084 | ND | | 0.012 | 0.00082 |
| Chloroform | ND | | 0.0057 | 0.00063 | ND | | 0.0063 | 0.00065 | ND | | 0.0058 | 0.00063 |
| Chloromethane | ND | | 0.011 | 0.0018 | ND | | 0.013 | 0.0018 | ND | | 0.012 | 0.0018 |
| Dibromochloromethane | ND | | 0.0057 | 0.00075 | ND | | 0.0063 | 0.00078 | ND | | 0.0058 | 0.00076 |
| 1,1-Dichloroethane | 0.0027 | J* | 0.0057 | 0.00068 | 0.0039 | J* | 0.0063 | 0.00071 | ND | | 0.0058 | 0.00069 |
| 1,2-Dichloroethane | ND | | 0.0057 | 0.0011 | ND | | 0.0063 | 0.0011 | ND | | 0.0058 | 0.0011 |
| 1,1-Dichloroethene | ND | | 0.0057 | 0.00081 | ND | | 0.0063 | 0.00084 | ND | | 0.0058 | 0.00082 |
| cis-1,2-Dichloroethene | 0.18 | | 0.11 | 0.027 | 0.95 | | 0.12 | 0.028 | 0.017 | | 0.0058 | 0.00054 |
| trans-1,2-Dichloroethene | 0.0031 | J* | 0.0057 | 0.00056 | 0.002 | J* | 0.0063 | 0.00058 | ND | | 0.0058 | 0.00057 |
| 1,2-Dichloropropane | ND | | 0.0057 | 0.00068 | ND | | 0.0063 | 0.00071 | ND | | 0.0058 | 0.00069 |
| cis-1,3-Dichloropropene | ND | UJ | 0.0057 | 0.0009 | ND | | 0.0063 | 0.00094 | ND | | 0.0058 | 0.00091 |
| trans-1,3-Dichloropropene | ND | | 0.0057 | 0.00082 | ND | | 0.0063 | 0.00085 | ND | | 0.0058 | 0.00083 |
| Ethylbenzene | ND | | 0.0057 | 0.0006 | 0.0015 | J* | 0.0063 | 0.00063 | ND | | 0.0058 | 0.00061 |
| 2-Hexanone | ND | | 0.028 | 0.0043 | ND | | 0.031 | 0.0045 | ND | | 0.029 | 0.0044 |
| Methylene chloride | ND | | 0.0057 | 0.0017 | ND | | 0.0063 | 0.0018 | ND | | 0.0058 | 0.0018 |
| 4-Methyl-2-pentanone | ND | | 0.028 | 0.0045 | ND | | 0.031 | 0.0046 | ND | | 0.029 | 0.0045 |
| Styrene | ND | | 0.0057 | 0.0013 | ND | | 0.0063 | 0.0013 | ND | | 0.0058 | 0.0013 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.0057 | 0.0011 | ND | | 0.0063 | 0.0012 | ND | | 0.0058 | 0.0011 |
| Tetrachloroethene | ND | | 0.0057 | 0.0015 | ND | | 0.0063 | 0.0016 | ND | | 0.0058 | 0.0015 |
| Toluene | ND | K | 0.032 | 0.00059 | ND | K | 0.01 | 0.00062 | ND | | 0.0058 | 0.0006 |
| 1,1,1-Trichloroethane | ND | | 0.0057 | 0.00072 | ND | | 0.0063 | 0.00075 | ND | | 0.0058 | 0.00073 |
| 1,1,2-Trichloroethane | ND | | 0.0057 | 0.00099 | ND | | 0.0063 | 0.001 | ND | | 0.0058 | 0.001 |
| Trichloroethene | ND | | 0.0057 | 0.00079 | ND | | 0.0063 | 0.00082 | ND | | 0.0058 | 0.0008 |
| Vinyl chloride | ND | UJ | 0.011 | 0.00054 | 0.64 | | 0.013 | 0.00056 | 0.0036 | J* | 0.012 | 0.00054 |
| Xylenes (total) | 0.041 | | 0.0057 | 0.0014 | 0.019 | | 0.0063 | 0.0015 | ND | | 0.0058 | 0.0014 |
| General Chemistry | | | | | | | | | | | | |
| Percent solids | 87.9 | | 0.1 | 0.1 | 84.4 | | 0.1 | 0.1 | 86.6 | | 0.1 | 0.1 |
| Total organic carbon (TOC) | 540 | B | 2000 | 529 | ND | | 2000 | 529 | ND | | 2000 | 529 |

[1] Concentration of analyte in sample exceeded the practical analytical quantitation limit (PQL).

[2] A value equal to one-half the analytical quantitation limit for a given sample result was used for calculation purposes for all "non-detect" results and other non-quantifiable results.

[3] Value equal to maximum concentration minus minimum concentration

[4] SCTLs from Florida DEP Contaminant Cleanup Target Levels, Soil, Chapter 62-777 F.A.C., May 26, 1999

[5] Values from EPA Region III Risk-Based Concentration Table, R.L. Smith, April 1999 and adopted by USEPA Region IV with HQ=0.1 applied to noncarcinogens (USEPA, 1995a)

[6] Data validation qualifiers based on the project Quality Assurance Project Plan (QAPP) and U.S. EPA Contract Laboratory Program (CLP) Functional Guidelines (U.S. EPA. 1994 USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review. EPA-540/R-94/012. Washington, D.C. and U.S. EPA. 1994. USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. EPA-540/R-94/013. Washington, D.C.)

[7] PQL - practical quantitation limit

[8] MDL - method detection limit

Detected concentration exceeded Florida SCTL and/or USEPA RBC.

Table 2
ation Soil Borings OBGCB1 and OBGCB2, April 11-12, 2000
Shallow and Intermediate Zone Ground Water Assessment
ıpson Industries Site, Madison, Florida
June 2000

| | OBGCB1-37.5' | | | OBGCB2-3.5' | | | | OBGCB2-3.6' | | | | OBGCB2-6.0' | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4/12/00 | | | 04/11/00 | | | | 04/11/00 | | | | 04/11/00 | | | |
| ion | Qualifier[4] | PQL[7] | MDL[8] | Concentration (mg/kg) | Qualifier[4] | PQL[7] | MDL[8] | Concentration (mg/kg) | Qualifier[4] | PQL[7] | MDL[8] | Concentration (mg/kg) | Qualifier[4] | PQL[7] | MDL[8] |
| | J* | 0.036 | 0.017 | ND | | 0.55 | 0.57 | ND | | 0.6 | 0.68 | ND | | 0.63 | 0.66 |
| | | 0.0073 | 0.00071 | ND | | 0.11 | 0.025 | ND | | 0.12 | 0.03 | ND | | 0.13 | 0.029 |
| | | 0.0073 | 0.0011 | ND | | 0.11 | 0 04 | ND | | 0.12 | 0.048 | ND | | 0.13 | 0.046 |
| | | 0.0073 | 0.0031 | ND | | 0.11 | 0.11 | ND | | 0.12 | 0.13 | ND | | 0.13 | 0.13 |
| | | 0.015 | 0.0021 | ND | | 0.22 | 0.18 | ND | | 0.24 | 0.21 | ND | | 0.25 | 0.21 |
| | | 0.036 | 0.012 | ND | | 0.55 | 0.41 | 0 67 | | 0.6 | 0.49 | 0.75 | | 0.63 | 0.47 |
| | | 0.0073 | 0.00068 | ND | | 0.11 | 0.024 | ND | | 0.12 | 0.029 | ND | | 0.13 | 0.028 |
| | | 0.0073 | 0.00092 | ND | | 0.11 | 0.032 | ND | | 0.12 | 0.038 | ND | | 0.13 | 0.037 |
| | J* | 0.0073 | 0.00077 | ND | | 0.11 | 0.027 | ND | | 0.12 | 0.032 | ND | | 0.13 | 0.031 |
| | | 0.015 | 0.001 | ND | | 0.22 | 0.036 | ND | | 0.24 | 0.043 | ND | | 0.25 | 0.042 |
| | | 0.0073 | 0.0008 | ND | | 0.11 | 0.028 | ND | | 0.12 | 0.033 | ND | | 0.13 | 0.032 |
| | | 0.015 | 0.0023 | ND | | 0.22 | 0.078 | ND | | 0.24 | 0.093 | ND | | 0.25 | 0.09 |
| | | 0.0073 | 0.00096 | ND | | 0.11 | 0.033 | ND | | 0.12 | 0.039 | ND | | 0.13 | 0.038 |
| | J* | 0.0073 | 0.00087 | ND | | 0.11 | 0.03 | ND | | 0.12 | 0.036 | ND | | 0.13 | 0.035 |
| | J* | 0.0073 | 0.0014 | ND | K | 0.11 | 0.048 | ND | | 0.12 | 0.057 | ND | | 0.13 | 0.056 |
| | | 0.0073 | 0.001 | ND | | 0.11 | 0.036 | ND | | 0.12 | 0.043 | ND | | 0.13 | 0.042 |
| | | 0.15 | 0.035 | ND | | 0.11 | 0.024 | ND | | 0.12 | 0.029 | ND | | 0.13 | 0.028 |
| | | 0.0073 | 0.00071 | ND | | 0.11 | 0.025 | ND | | 0.12 | 0.03 | ND | | 0.13 | 0.029 |
| | | 0.0073 | 0.00087 | ND | | 0.11 | 0.03 | ND | | 0.12 | 0.036 | ND | | 0.13 | 0.035 |
| | | 0.0073 | 0.0011 | ND | | 0.11 | 0.04 | ND | | 0.12 | 0.048 | ND | | 0.13 | 0.046 |
| | | 0.0073 | 0.001 | ND | K | 0.11 | 0.036 | ND | | 0.12 | 0.043 | ND | | 0.13 | 0.042 |
| | | 0.0073 | 0.00077 | 1.3 | | 0.11 | 0.027 | 0.25 | | 0.12 | 0.032 | 1.2 | | 0.13 | 0.031 |
| | | 0.036 | 0.0055 | ND | | 0.55 | 0.19 | ND | | 0.6 | 0.23 | ND | | 0.63 | 0.22 |
| | | 0.0073 | 0.0022 | ND | | 0.11 | 0.077 | ND | | 0.12 | 0.092 | ND | | 0.13 | 0.089 |
| | | 0.036 | 0 0057 | ND | | 0.55 | 0.2 | ND | | 0 6 | 0.24 | ND | | 0.63 | 0.23 |
| | | 0.0073 | 0.0016 | ND | | 0.11 | 0.055 | ND | | 0.12 | 0.066 | ND | | 0.13 | 0.064 |
| | | 0.0073 | 0.0014 | ND | | 0.11 | 0.049 | ND | | 0.12 | 0.058 | ND | | 0.13 | 0.057 |
| | | 0.0073 | 0.0019 | ND | | 0.11 | 0.066 | ND | | 0.12 | 0.079 | ND | | 0.13 | 0.076 |
| | K | 0.0073 | 0.00076 | ND | | 0.11 | 0.026 | 0.22 | | 0.12 | 0.031 | ND | | 0.13 | 0.03 |
| | | 0.0073 | 0 00092 | ND | | 0.11 | 0.032 | ND | | 0.12 | 0.038 | ND | | 0.13 | 0.037 |
| | | 0.0073 | 0.0013 | ND | | 0.11 | 0.044 | ND | | 0.12 | 0.052 | ND | | 0.13 | 0.051 |
| | | 0.0073 | 0.001 | ND | | 0.11 | 0.035 | ND | | 0.12 | 0.042 | ND | | 0.13 | 0.04 |
| | J* | 0.015 | 0.00068 | ND | | 0.22 | 0.024 | ND | | 0.24 | 0.029 | ND | | 0.25 | 0.028 |
| | J* | 0.0073 | 0.0018 | 0.067 | J* | 0.11 | 0.062 | ND | | 0.12 | 0.074 | 0.5 | | 0.13 | 0.072 |
| | | 0.1 | 0.1 | 91 | | 0.1 | 0.1 | 83.9 | | 0.1 | 0.1 | 86.5 | | 0.1 | 0.1 |
| | B | 2000 | 529 | 15300 | | 2000 | 529 | 30600 | | 2000 | 529 | 15200 | | 2000 | 529 |

| Analyte/Parameter | OBGCB2-10.75' 04/11/00 Concentration (mg/kg) | Qualifier[2] | PQL[7] | MDL[8] | OBGCB2-11' 04/11/00 Concentration (mg/kg) | Qualifier[6] | PQL[7] | MDL[8] | OBGCB2-18.5' 04/11/00 Concentration (mg/kg) | Qualifier[6] | PQL[7] | MDL[8] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VOCs | | | | | | | | | | | | |
| Acetone | ND | | 0.86 | 0.81 | ND | | 0.029 | 0.013 | ND | | 0.037 | 0.013 |
| Benzene | ND | | 0.17 | 0.036 | 0.0014 | J* | 0.0058 | 0.00057 | ND | | 0.0074 | 0.00057 |
| Bromodichloromethane | ND | | 0.17 | 0.057 | ND | | 0.0058 | 0.00092 | ND | | 0.0074 | 0.00092 |
| Bromoform | ND | | 0.17 | 0.16 | ND | | 0.0058 | 0.0024 | ND | | 0.0074 | 0.0025 |
| Bromomethane | ND | | 0.34 | 0.26 | ND | | 0.012 | 0.0017 | ND | | 0.015 | 0.0017 |
| 2-Butanone | 1 | | 0.86 | 0.58 | ND | | 0.029 | 0.0096 | ND | | 0.037 | 0.0096 |
| Carbon disulfide | ND | | 0.17 | 0.034 | ND | | 0.0058 | 0.00055 | ND | | 0.0074 | 0.00055 |
| Carbon tetrachloride | ND | | 0.17 | 0.046 | ND | | 0.0058 | 0.00073 | ND | | 0.0074 | 0.00074 |
| Chlorobenzene | ND | | 0.17 | 0.038 | ND | | 0.0058 | 0.00062 | ND | | 0.0074 | 0.00062 |
| Chloroethane | ND | | 0.34 | 0.051 | ND | | 0.012 | 0.00082 | ND | | 0.015 | 0.00083 |
| Chloroform | ND | | 0.17 | 0.04 | ND | | 0.0058 | 0.00064 | ND | | 0.0074 | 0.00064 |
| Chloromethane | ND | | 0.34 | 0.11 | ND | | 0.012 | 0.0018 | ND | | 0.015 | 0.0018 |
| Dibromochloromethane | ND | | 0.17 | 0.047 | ND | | 0.0058 | 0.00077 | ND | | 0.0074 | 0.00077 |
| 1,1-Dichloroethane | ND | | 0.17 | 0.043 | ND | | 0.0058 | 0.00082 | ND | | 0.0074 | 0.0007 |
| 1,2-Dichloroethane | ND | | 0.17 | 0.068 | ND | | 0.0058 | 0.0007 | ND | | 0.0074 | 0.0011 |
| 1,1-Dichloroethene | ND | | 0.17 | 0.051 | ND | | 0.0058 | 0.0011 | ND | | 0.0074 | 0.00083 |
| *cis-1,2-Dichloroethene* | *ND* | | *0.17* | *0.034* | *ND* | | *0.0058* | *0.00055* | *ND* | | *0.0074* | *0.00055* |
| trans-1,2-Dichloroethene | ND | | 0.17 | 0.036 | ND | | 0.0058 | 0.00057 | ND | | 0.0074 | 0.00057 |
| 1,2-Dichloropropane | ND | | 0.17 | 0.043 | ND | | 0.0058 | 0.0007 | ND | | 0.0074 | 0.0007 |
| cis-1,3-Dichloropropene | ND | | 0.17 | 0.057 | ND | | 0.0058 | 0.00092 | ND | | 0.0074 | 0.00092 |
| trans-1,3-Dichloropropene | ND | | 0.17 | 0.051 | ND | | 0.0058 | 0.00084 | ND | | 0.0074 | 0.00084 |
| Ethylbenzene | ND | | 0.17 | 0.038 | ND | | 0.0058 | 0.00062 | ND | | 0.0074 | 0.00062 |
| 2-Hexanone | ND | | 0.86 | 0.27 | ND | | 0.029 | 0.0044 | ND | | 0.037 | 0.0044 |
| Methylene chloride | ND | | 0.17 | 0.11 | ND | | 0.0058 | 0.0018 | ND | | 0.0074 | 0.0018 |
| 4-Methyl-2-pentanone | ND | | 0.86 | 0.29 | ND | | 0.029 | 0.0045 | ND | | 0.037 | 0.0046 |
| Styrene | ND | | 0.17 | 0.078 | ND | | 0.0058 | 0.0013 | ND | | 0.0074 | 0.0013 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.17 | 0.07 | ND | | 0.0058 | 0.0011 | ND | | 0.0074 | 0.0011 |
| Tetrachloroethene | ND | | 0.17 | 0.094 | ND | | 0.0058 | 0.0015 | ND | | 0.0074 | 0.0015 |
| Toluene | ND | | 0.17 | 0.037 | ND | | 0.0058 | 0.0006 | ND | | 0.0074 | 0.00061 |
| 1,1,1-Trichloroethane | ND | | 0.17 | 0.046 | ND | | 0.0058 | 0.00073 | ND | | 0.0074 | 0.00074 |
| 1,1,2-Trichloroethane | ND | | 0.17 | 0.063 | ND | | 0.0058 | 0.001 | ND | | 0.0074 | 0.001 |
| Trichloroethene | ND | | 0.17 | 0.05 | ND | | 0.0058 | 0.0008 | ND | | 0.0074 | 0.00081 |
| Vinyl chloride | ND | | 0.34 | 0.034 | ND | | 0.012 | 0.00055 | ND | | 0.015 | 0.00055 |
| Xylenes (total) | 1.3 | | 0.17 | 0.088 | 0.0056 | J* | 0.0058 | 0.0014 | ND | | 0.0074 | 0.0014 |
| General Chemistry | | | | | | | | | | | | |
| Percent solids | 70.1 | 0 | 0.1 | 0.1 | 86.2 | 0 | 0.1 | 0.1 | 85.7 | 0 | 0.1 | 0.1 |
| Total organic carbon (TOC) | 40300 | 0 | 2000 | 529 | 3560 | 0 | 2000 | 529 | 1080 | B | 2000 | 529 |

[1] Concentration of analyte in sample exceeded the practical analytical quantitation limit (PQL).

[2] A value equal to one-half the analytical quantitation limit for a given sample result was used for calculation purposes for all "non-detect" results and other non-quantifiable results.

[3] Value equal to maximum concentration minus minimum concentration

[4] *SCTLs from Florida DEP Contaminant Cleanup Target Levels, Soil, Chapter 62-777 F.A.C., May 26, 1999*

[5] Values from EPA Region III Risk-Based Concentration Table, R.L. Smith, April 1999 and adopted by USEPA Region IV with HQ=0.1 applied to noncarcinogens (USEPA, 1995a)

[6] Data validation qualifiers based on the project Quality Assurance Project Plan (QAPP) and U.S. EPA Contract Laboratory Program (CLP) Functional Guidelines (U.S. EPA, 1994 USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review. EPA-540/R-94/012. Washington, D.C. and U.S. EPA, 1994. USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. EPA-540/R-94/013. Washington, D.C.)

[7] PQL - practical quantitation limit

[8] MDL - method detection limit

[redacted] - Detected concentration exceeded Florida SCTL and/or USEPA RBC.

Table 2
ation Soil Borings OBGCB1 And OBGCB2, April 11-12, 2000
Shallow and Intermediate Zone Ground Water Assessment
ıpson Industries Site, Madison, Florida
June 2000

| OBGCB2-20.5' | | | | OBGCB2-21.5' | | | | OBGCB2-28' | | | | OBGCB2-35' | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 04/11/00 | | | | 04/11/00 | | | | 04/11/00 | | | | 04/11/00 | | | |
| in Qualifier[5] | PQL[7] | MDL[8] | Concentration (mg/kg) | Qualifier[5] | PQL[7] | MDL[8] | Concentration (mg/kg) | Qualifier[5] | PQL[7] | MDL[8] | Concentration (mg/kg) | Qualifier[5] | PQL[7] | MDL[8] |
| | 0.58 | 0.66 | ND | | 0.65 | 0.66 | 0.033 | | 0.029 | 0.013 | 0.033 | | 0.03 | 0.013 |
| | 0.12 | 0.029 | ND | | 0.13 | 0.029 | ND | | 0.0059 | 0.00058 | ND | | 0.006 | 0.00056 |
| | 0.12 | 0.047 | ND | | 0.13 | 0.047 | ND | | 0.0059 | 0.00093 | ND | | 0.006 | 0.0009 |
| | 0.12 | 0.13 | ND | | 0.13 | 0 13 | ND | | 0.0059 | 0.0025 | ND | | 0.006 | 0.0024 |
| | 0.23 | 0.21 | ND | | 0.26 | 0.21 | ND | | 0.012 | 0.0017 | ND | | 0 012 | 0.0017 |
| | 0.58 | 0.48 | 0.74 | | 0.65 | 0.48 | ND | | 0.029 | 0.0097 | ND | | 0.03 | 0.0094 |
| | 0.12 | 0.028 | ND | | 0.13 | 0.028 | ND | | 0.0059 | 0.00055 | ND | | 0.006 | 0.00054 |
| | 0.12 | 0.037 | ND | | 0.13 | 0.037 | ND | | 0.0059 | 0.00074 | ND | | 0.006 | 0.00072 |
| | 0.12 | 0.031 | ND | | 0.13 | 0.031 | ND | | 0.0059 | 0.00062 | ND | | 0.006 | 0.0006 |
| | 0.23 | 0.042 | ND | | 0.26 | 0.042 | ND | | 0.012 | 0.00083 | ND | | 0.012 | 0.00081 |
| | 0.12 | 0.033 | ND | | 0 13 | 0.033 | ND | | 0.0059 | 0.00065 | ND | | 0.006 | 0.00063 |
| | 0.23 | 0.091 | ND | | 0.26 | 0.091 | ND | | 0.012 | 0.0018 | ND | | 0.012 | 0.0018 |
| | 0.12 | 0.038 | ND | | 0.13 | 0.038 | ND | | 0.0059 | 0.00077 | ND | | 0.006 | 0.00075 |
| | 0.12 | 0.035 | ND | | 0.13 | 0.035 | 0.0013 | J* | 0.0059 | 0.0007 | ND | | 0.006 | 0.00068 |
| | 0.12 | 0.056 | ND | | 0.13 | 0.056 | ND | | 0.0059 | 0.0011 | ND | | 0.006 | 0.0011 |
| | 0.12 | 0.042 | ND | | 0.13 | 0.042 | ND | | 0.0059 | 0.00083 | ND | | 0.006 | 0.00081 |
| | 0.12 | 0.028 | 0.31 | | 0.13 | 0.028 | 0.42 | | 0.12 | 0.028 | 0.055 | | 0 006 | 0.00054 |
| | 0.12 | 0.029 | ND | | 0.13 | 0.029 | ND | | 0.0059 | 0.00058 | ND | | 0.006 | 0 00056 |
| | 0.12 | 0.035 | ND | | 0.13 | 0.035 | ND | | 0.0059 | 0.0007 | ND | | 0.006 | 0.00068 |
| | 0.12 | 0.047 | ND | | 0.13 | 0.047 | ND | | 0.0059 | 0.00093 | ND | | 0.006 | 0.0009 |
| | 0.12 | 0.042 | ND | | 0.13 | 0.042 | ND | | 0.0059 | 0.00085 | ND | | 0.006 | 0.00082 |
| | 0.12 | 0.031 | 3.3 | | 0.13 | 0.031 | 0.0073 | | 0.0059 | 0.00062 | 0.0044 | J* | 0.006 | 0.0006 |
| | 0.58 | 0.22 | ND | | 0.65 | 0.22 | ND | | 0.029 | 0.0044 | ND | | 0.03 | 0.0043 |
| | 0.12 | 0.09 | ND | | 0.13 | 0.09 | ND | | 0.0059 | 0.0018 | ND | | 0.006 | 0.0017 |
| | 0.58 | 0.23 | ND | | 0.65 | 0.23 | ND | | 0.029 | 0.0046 | ND | | 0.03 | 0.0045 |
| | 0.12 | 0.064 | ND | | 0.13 | 0.064 | ND | | 0.0059 | 0.0013 | ND | | 0.006 | 0.0013 |
| | 0.12 | 0.057 | ND | | 0.13 | 0.057 | ND | | 0.0059 | 0.0012 | ND | | 0.006 | 0.0011 |
| | 0.12 | 0.077 | ND | | 0.13 | 0.077 | ND | | 0.0059 | 0.0015 | ND | | 0.006 | 0.0015 |
| | 0.23 | 0.061 | 8.2 | | 0.23 | 0.061 | 0.064 | | 0.0059 | 0.00061 | 0.033 | | 0.006 | 0.00059 |
| | 0.12 | 0.037 | ND | | 0.13 | 0.037 | ND | | 0.0059 | 0.00074 | ND | | 0.006 | 0.00072 |
| | 0.12 | 0.051 | ND | | 0.13 | 0.051 | ND | | 0.0059 | 0.001 | ND | | 0.006 | 0.00099 |
| | 0.12 | 0.041 | ND | | 0.13 | 0.041 | ND | | 0.0059 | 0.00081 | ND | | 0.006 | 0.00079 |
| | 0.23 | 0.028 | ND | | 0.26 | 0.028 | 0.046 | | 0.012 | 0.00055 | ND | | 0.012 | 0.00054 |
| | 0.12 | 0.072 | 15 | | 0.13 | 0.072 | 0.031 | | 0.0059 | 0.0014 | 0.018 | | 0.006 | 0.0014 |
| | 0.1 | 0.1 | 85.9 | | 0.1 | 0.1 | 85.2 | 0 | 0.1 | 0.1 | 87.9 | 0 | 0.1 | 0.1 |
| | 2000 | 529 | 3160 | | 2000 | 529 | 1050 | B | 2000 | 529 | ND | 0 | 2000 | 529 |

| Analyte/Parameter | OBGCB2-39.5' 04/11/00 Concentration (mg/kg) | Qualifier[6] | PQL[7] | MDL[8] | OBGCB2-40' 04/11/00 Concentration (mg/kg) | Qualifier[6] | PQL[7] | MDL[8] |
|---|---|---|---|---|---|---|---|---|
| VOCs | | | | | | | | |
| Acetone | ND | | 0.03 | 0.014 | ND | | 0.037 | 0.017 |
| Benzene | ND | | 0.006 | 0.00059 | ND | | 0.0073 | 0.00072 |
| Bromodichloromethane | ND | | 0.006 | 0.00095 | ND | | 0.0073 | 0.0012 |
| Bromoform | ND | | 0.006 | 0.0025 | ND | | 0.0073 | 0.0031 |
| Bromomethane | ND | | 0.012 | 0.0017 | ND | | 0.015 | 0.0021 |
| 2-Butanone | ND | | 0.03 | 0.0099 | ND | | 0.037 | 0.012 |
| Carbon disulfide | ND | UJ | 0.006 | 0.00057 | ND | | 0.0073 | 0.00069 |
| Carbon tetrachloride | ND | UJ | 0.006 | 0.00076 | ND | | 0.0073 | 0.00092 |
| Chlorobenzene | ND | | 0.006 | 0.00064 | ND | | 0.0073 | 0.00078 |
| Chloroethane | ND | | 0.012 | 0.00085 | ND | | 0.015 | 0.001 |
| Chloroform | ND | | 0.006 | 0.00066 | ND | | 0.0073 | 0.00081 |
| Chloromethane | ND | | 0.012 | 0.0019 | ND | | 0.015 | 0.0023 |
| Dibromochloromethane | ND | | 0.006 | 0.00079 | ND | | 0.0073 | 0.00097 |
| 1,1-Dichloroethane | ND | | 0.006 | 0.00072 | ND | | 0.0073 | 0.00088 |
| 1,2-Dichloroethane | ND | | 0.006 | 0.0011 | ND | | 0.0073 | 0.0014 |
| 1,1-Dichloroethene | ND | | 0.006 | 0.00085 | ND | | 0.0073 | 0.001 |
| cis-1,2-Dichloroethene | 0.057 | J | 0.12 | 0.029 | 0.75 | | 0.15 | 0.035 |
| trans-1,2-Dichloroethene | ND | | 0.006 | 0.00059 | ND | | 0.0073 | 0.00072 |
| 1,2-Dichloropropane | ND | | 0.006 | 0.00072 | ND | | 0.0073 | 0.00088 |
| cis-1,3-Dichloropropene | ND | | 0.006 | 0.00095 | ND | | 0.0073 | 0.0012 |
| trans-1,3-Dichloropropene | ND | | 0.006 | 0.00087 | ND | | 0.0073 | 0.0011 |
| Ethylbenzene | ND | | 0.006 | 0.00064 | ND | | 0.0073 | 0.00078 |
| 2-Hexanone | ND | | 0.03 | 0.0045 | ND | | 0.037 | 0.0055 |
| Methylene chloride | ND | | 0.006 | 0.0018 | ND | | 0.0073 | 0.0022 |
| 4-Methyl-2-pentanone | ND | | 0.03 | 0.0047 | ND | | 0.037 | 0.0057 |
| Styrene | ND | | 0.006 | 0.0013 | ND | | 0.0073 | 0.0016 |
| 1,1,2,2-Tetrachloroethane | ND | | 0.006 | 0.0012 | ND | | 0.0073 | 0.0014 |
| Tetrachloroethene | ND | UJ | 0.006 | 0.0016 | ND | | 0.0073 | 0.0019 |
| Toluene | 0.0014 | J* | 0.006 | 0.00063 | 0.0032 | J* | 0.0073 | 0.00076 |
| 1,1,1-Trichloroethane | ND | | 0.006 | 0.00076 | ND | | 0.0073 | 0.00092 |
| 1,1,2-Trichloroethane | ND | | 0.006 | 0.001 | ND | | 0.0073 | 0.0013 |
| Trichloroethene | ND | | 0.006 | 0.00083 | ND | | 0.0073 | 0.001 |
| Vinyl chloride | 0.0033 | J | 0.012 | 0.00057 | 0.011 | J* | 0.015 | 0.00069 |
| Xylenes (total) | ND | | 0.006 | 0.0015 | ND | | 0.0073 | 0.0018 |
| General Chemistry | | | | | | | | |
| Percent solids | 83.1 | 0 | 0.1 | 0.1 | 68.2 | 0 | 0.1 | 0.1 |
| Total organic carbon (TOC) | 890 | B | 2000 | 529 | 1660 | B | 2000 | 529 |

[1] Concentration of analyte in sample exceeded the practical analytical quantitation limit (PQL).

[2] A value equal to one-half the analytical quantitation limit for a given sample result was used for calculation purposes for all "non-detect" results and other non-quantifiable results.

[3] Value equal to maximum concentration minus minimum concentration

[4] SCTLs from Florida DEP Contaminant Cleanup Target Levels, Soil, Chapter 62-777 F.A.C., May 26, 1999

[5] Values from EPA Region III Risk-Based Concentration Table, R.L. Smith, April 1999 and adopted by USEPA Region IV with HQ=0.1 applied to noncarcinogens (USEPA, 1995a)

[6] Data validation qualifiers based on the project Quality Assurance Project Plan (QAPP) and U.S. EPA Contract Laboratory Program (CLP) Functional Guidelines (U.S. EPA. 1994 USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review. EPA-540/R-94/012. Washington, D.C. and U.S. EPA. 1994. USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. EPA-540/R-94/013. Washington, D.C.)

[7] PQL - practical quantitation limit

[8] MDL - method detection limit

- Detected concentration exceeded Florida SCTL and/or USEPA RBC.

Background

B.G.

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Sample ID: | OBGDP1 | | OBGDP1 | | OBGDP1 | | OBGDP2 | |
| | | | | | | Sample Depth[4]: | 140 | | 122 | | 84 | | 136 | |
| | | | | | | Sample Date: | 6-Oct-99 | | 6-Oct-99 | | 6-Oct-99 | | 5-Oct-99 | |
| Parameters | CAS # | Screening Level (ARARs) | | | | | | | | | | | | |
| | | Florida MCL/SMCL[1] | | Federal MCL/SMCL[2] | | | | | | | | | | |
| | | MCL | SMCL | MCL | SMCL | | | | | | | | | |
| VOCs - SW8260B (ug/L) | | | | | | | | | | | | | | |
| Acetone[3] | 67641 | - | - | - | - | | 1.9 | BJ | 2.3 | BJ | 1.8 | BJ | 2.9 | BJ |
| Benzene | 71432 | 1 | - | 5 | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Bromodichloromethane | 75254 | 100 | - | 100 | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Bromoform | 75252 | 100 | - | 100 | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Bromomethane | 74839 | - | - | - | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Butanone, 2- | 78933 | - | - | - | - | | 10 | U | 10 | U | 1.1 | J | 10 | U |
| Carbon disulfide | 75150 | - | - | - | - | | 0.15 | J | 0.23 | J | 0.23 | J | 1 | U |
| Carbon tetrachloride | 56235 | 3 | - | 5 | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Chlorobenzene | 108907 | 100 | - | 100 | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Chloroethane | 75003 | - | - | - | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Chloroform | 676663 | 100 | - | 100 | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Chloromethane | 74873 | - | - | - | - | | 1 | U | 1 | U | 0.1 | J | 0.14 | J |
| Dibromochloromethane | 124481 | 100 | - | 100 | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloroethane, 1,1- | 75343 | - | - | - | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloroethane, 1,2- | 107062 | 3 | - | 5 | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloroethene, 1,1- | 75354 | 7 | - | 7 | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloroethene, cis-1,2- | 156592 | 70 | - | 70 | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloroethene, trans-1,2- | 156605 | 100 | - | 100 | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloropropane, 1,2- | 78875 | 5 | - | 5 | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloropropene, cis-1,3- | 100061015 | - | - | - | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloropropene, trans-1,3- | 10061026 | - | - | - | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Ethylbenzene | 100414 | 700 | 30 | 700 | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Hexanone, 2- | 73663715 | - | - | - | - | | 10 | U | 10 | U | 10 | U | 10 | U |
| Methyl-2-pentanone, 4- | 108101 | - | - | - | - | | 10 | U | 10 | U | 10 | U | 10 | U |
| Methylene chloride[3] | 75092 | 5 | - | 5 | - | | 0.18 | BJ | 0.3 | BJ | 0.24 | BJ | 0.46 | BJ |
| Styrene | 100425 | 100 | - | 100 | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Tetrachloroethane, 1,1,2,2- | 79345 | - | - | - | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Tetrachloroethene | 127184 | 3 | - | 5 | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Toluene | 108883 | 1000 | 40 | 1000 | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Trichloroethane, 1,1,1- | 71556 | 200 | - | 200 | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Trichloroethane, 1,1,2- | 79005 | 5 | - | 5 | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Trichloroethene | 79016 | 3 | - | 5 | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Vinyl chloride | 75014 | 1 | - | 2 | - | | 1 | U | 1 | U | 1 | U | 1 | U |
| Xylenes, total | 1330207 | 10000 | 20 | 10000 | - | | 1 | U | 1 | U | 1 | U | 1 | U |

Notes:

1 - Florida MCL/SMCL: Maximum Contaminant Levels (MCLs) or Secondary MCLs (SMCLs) as defined in the Florida Primary and Secondary Drinking Water Standards (F.A.C. 62-550)

2 - Federal MCL/SMCL: Maximum Contaminant Levels (MCLs) or Secondary MCLs (SMCLs) as defined in the Federal Drinking Water Regulations and Health Advisories, Office of Wate

3 - All detected concentrations of acetone and methylene chloride were qualified as laboratory "blank" contaminated, and detected concentrations did not exceed 5 times the method det

bold - Analyte was detected in sample.

M - Detected concentration exceeded Florida and/or Federal MCL.

4 - sampling depth in feet mean sea level

Laboratory Qualifiers:

U - Analyte not detected.

J - Estimated result; result is less than reporting limit.

B - Associated method blank contains target analyte.

E - Estimated result; result concentration exceeds the calibration range.

D - Result was obtained from analysis of a dilution.

: 3
creening Summary
id Intermediate Ground Water Assessment
ries Site, Madison, FL
2000

| P2 | OBGDP2 | | OBGDP2 | | OBGDP3 | | OBGDP3 | | OBGDP3 | | OBGDP4 | | OBGDP4 | | OBGDP4 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 99 | 116<br>5-Oct-99 | | 88<br>5-Oct-99 | | 134<br>7-Oct-99 | | 119<br>7-Oct-99 | | 113<br>7-Oct-99 | | 133<br>5-Oct-99 | | 123<br>5-Oct-99 | | 78<br>5-Oct-99 | |
| BJ | 6.4 | BJ | 3.6 | BJ | 4.4 | BJ | 56 | BJ | 53 | BJ | 4.4 | BJ | 1.4 | BJ | 12 | B |
| U | 1 | U | 2.1 | M | 12 | M | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| U | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| U | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| U | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| J | 1.1 | J | 10 | U | 1.3 | J | 330 | U | 500 | U | 1.8 | J | 10 | U | 1.2 | J |
| J | 1.3 | | 1 | U | 1.8 | | 33 | U | 50 | U | 0.22 | J | 0.47 | J | 0.78 | J |
| U | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| U | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| U | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| J | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| J | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 0.11 | J | 0.12 | J |
| J | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| J | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| J | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| J | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| J | 1 | U | 31 | | 0.74 | J | 64 | | 43 | J | 1 | U | 0.88 | J | 1 | U |
| J | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| J | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| J | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| J | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 3.2 | | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| | 10 | U | 10 | U | 10 | U | 330 | U | 500 | U | 10 | U | 10 | U | 10 | U |
| | 10 | U | 10 | U | 10 | U | 330 | U | 500 | U | 10 | U | 10 | U | 10 | U |
| J | 0.25 | BJ | 1.3 | BJ | 0.22 | BJ | 24 | BJ M | 27 | BJ M | 0.26 | BJ | 0.33 | BJ | 0.28 | BJ |
| | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 0.42 | J | 33 | U | 50 | U | 0.29 | J | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 19 | M | 1 | U | 860 | M | 900 | M | 1 | U | 2 | | 1 | U |
| | 1 | U | 1 | U | 1 | U | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 6.6 | | 33 | U | 50 | U | 1 | U | 1 | U | 1 | U |

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tober 1996.
t; as such, detected concentrations should be considered as "non-detect" values.

| | | | | | | Sample ID: | | | OBGDP5 | | | OBGDP5 | | | OBGDP5 | | | OBGDP6 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Sample Depth[4]: | | | 136 | | | 126 | | | 108 | | | 140 | | |
| | | | | | | Sample Date: | | | 6-Oct-99 | | | 6-Oct-99 | | | 6-Oct-99 | | | 7-Oct-99 | | |
| Parameters | CAS # | Screening Level | | | | | | | | | | | | | | | | | | |
| | | Florida MCL/SMCL[1] | | Federal MCL/SMCL[2] | | | | | | | | | | | | | | | | |
| | | MCL | SMCL | MCL | SMCL | | | | | | | | | | | | | | | |
| VOCs - SW8260B (ug/L) | | | | | | | | | | | | | | | | | | | | |
| Acetone[3] | 67641 | - | - | - | - | 13 | BJ | | 8.2 | BJ | | 2.7 | BJ | | 2.5 | BJ | | | | |
| Benzene | 71432 | 1 | - | 5 | - | 10 | U | | 18 | | M | 1 | U | | 1 | U | | | | |
| Bromodichloromethane | 75254 | 100 | - | 100 | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | | | |
| Bromoform | 75252 | 100 | - | 100 | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | | | |
| Bromomethane | 74839 | - | - | - | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | | | |
| Butanone, 2- | 78933 | - | - | - | - | 100 | U | | 100 | U | | 10 | U | | 10 | U | | | | |
| Carbon disulfide | 75150 | - | - | - | - | 10 | U | | 3 | J | | 0.26 | J | | 1 | U | | | | |
| Carbon tetrachloride | 56235 | 3 | - | 5 | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | | | |
| Chlorobenzene | 108907 | 100 | - | 100 | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | | | |
| Chloroethane | 75003 | - | - | - | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | | | |
| Chloroform | 676663 | 100 | - | 100 | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | | | |
| Chloromethane | 74873 | - | - | - | - | 10 | U | | 10 | U | | 1 | U | | 0.12 | J | | 0. | | |
| Dibromochloromethane | 124481 | 100 | - | 100 | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | | | |
| Dichloroethane, 1,1- | 75343 | - | - | - | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | 0. | | |
| Dichloroethane, 1,2- | 107062 | 3 | - | 5 | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | | | |
| Dichloroethene, 1,1- | 75354 | 7 | - | 7 | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | | | |
| Dichloroethene, cis-1,2- | 156592 | 70 | - | 70 | - | 67 | | | 140 | | M | 12 | | | 0.23 | J | | 3 | | |
| Dichloroethene, trans-1,2- | 156605 | 100 | - | 100 | - | 10 | U | | 10 | U | | 0.12 | J | | 1 | U | | | | |
| Dichloropropane, 1,2- | 78875 | 5 | - | 5 | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | | | |
| Dichloropropene, cis-1,3- | 100061015 | - | - | - | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | | | |
| Dichloropropene, trans-1,3- | 10061026 | - | - | - | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | | | |
| Ethylbenzene | 100414 | 700 | 30 | 700 | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | | | |
| Hexanone, 2- | 73663715 | - | - | - | - | 100 | U | | 100 | U | | 10 | U | | 10 | U | | 1 | | |
| Methyl-2-pentanone, 4- | 108101 | - | - | - | - | 100 | U | | 100 | U | | 10 | U | | 10 | U | | 1 | | |
| Methylene chloride[3] | 75092 | 5 | - | 5 | - | 5.6 | BJ | M | 5.6 | BJ | M | 0.33 | JB | | 1 | U | | 1 | | |
| Styrene | 100425 | 100 | - | 100 | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | 1 | | |
| Tetrachloroethane, 1,1,2,2- | 79345 | - | - | - | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | 1 | | |
| Tetrachloroethene | 127184 | 3 | - | 5 | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | 1 | | |
| Toluene | 108883 | 1000 | 40 | 1000 | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | 1 | | |
| Trichloroethane, 1,1,1- | 71556 | 200 | - | 200 | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | 1 | | |
| Trichloroethane, 1,1,2- | 79005 | 5 | - | 5 | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | 1 | | |
| Trichloroethene | 79016 | 3 | - | 5 | - | 210 | | M | 56 | | M | 17 | | M | 1 | U | | 0.2 | | |
| Vinyl chloride | 75014 | 1 | - | 2 | - | 1.3 | J | M | 61 | | M | 0.56 | J | | 1 | U | | 1 | | |
| Xylenes, total | 1330207 | 10000 | 20 | 10000 | - | 10 | U | | 10 | U | | 1 | U | | 1 | U | | 1 | | |

Notes:

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2 - Federal MCL/SMCL: Maximum Contaminant Levels (MCLs) or Secondary MCLs (SMCLs) as defined in the Federal Drinking Water Regulations and Health Advisories, Office of Wate

3 - All detected concentrations of acetone and methylene chloride were qualified as laboratory "blank" contaminated, and detected concentrations did not exceed 5 times the method det

**bold** - Analyte was detected in sample.

M -Detected concentration exceeded Florida and/or Federal MCL.

4 -sampling depth in feet mean sea level

Laboratory Qualifiers:

U - Analyte not detected.

J - Estimated result; result is less than reporting limit.

B - Associated method blank contains target analyte.

E - Estimated result; result concentration exceeds the calibration range.

D - Result was obtained from analysis of a dilution.

3
reening Summary
l Intermediate Ground Water Assessment
ies Site, Madison, FL
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| '6 | OBGDP6 | | OBGDP7 | | OBGDP7 | | OBGDP7 | | OBGDP7 | | OBGDP7 | | OBGDP7 | | OBGDP7 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 114 | | 141 | | 133 | | 111 | | 91 | | 83 | | 75 | | 68 | | 53 | |
| | 7-Oct-99 | | 7-Oct-99 | | 7-Oct-99 | | 7-Oct-99 | | 7-Oct-99 | | 7-Oct-99 | | 7-Oct-99 | | 29-Nov-99 | | 29-Nov-99 | |
| | | | | | | | | | | | | | | | | | | |
| BJ | 23 | B | 5.5 | BJ | 55 | B | 2.7 | BJ | 27 | B | 18 | B | 31 | BJ | 500 | U | 2000 | U |
| U | 17 | M | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 10 | U | 10 | U | 2.6 | J | 10 | U | 1.9 | J | 1.6 | J | 10 | U | 500 | U | 2000 | U |
| J | 1 | U | 1 | U | 0.5 | J | 1 | U | 1.1 | | 0.79 | J | 1 | U | 50 | U | 200 | U |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 1 | U | 1 | | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 0.79 | J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 0.45 | J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| | 63 | D | 1 | U | 1 | U | 1 | U | 0.24 | J | 1.8 | | 630 | M | 710 | M | 2900 | M |
| J | 0.44 | J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 5 | J | 50 | U | 200 | U |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 0.19 | J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | 500 | U | 2000 | U |
| J | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | 500 | U | 2000 | U |
| J | 0.19 | BJ | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 12 | BJ M | 8.8 | BJ M | 170 | BJ M |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 0.82 | J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |
| | 36 | D M | 1 | U | 1 | U | 1 | U | 1 | U | 0.25 | J | 16 | J M | 43 | J M | 550 | J M |
| J | 20 | M | 1 | U | 1 | U | 1 | U | 1 | U | 1.5 | M | 1100 | M | 860 | M | 1100 | M |
| J | 6.3 | | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 50 | U | 200 | U |

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nit; as such, detected concentrations should be considered as "non-detect" values.

| | | | | | | Sample ID: | | OBGDP8 | | OBGDP8 | | OBGDP8 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Sample Depth[4]: | | 143 | | 124 | | 101 | | 90 |
| | | | | | | Sample Date: | | 8-Oct-99 | | 8-Oct-99 | | 8-Oct-99 | | 29-Nov-99 |
| Parameters | CAS # | Screening Level | | | | | | | | | | | | |
| | | Florida MCL/SMCL[1] | | Federal MCL/SMCL[2] | | | | | | | | | | |
| | | MCL | SMCL | MCL | SMCL | | | | | | | | | |
| VOCs - SW8260B (ug/L) | | | | | | | | | | | | | | |
| Acetone[3] | 67641 | - | - | - | - | 17 | B | 11 | B | 610 | BJ | 210 | BJ | |
| Benzene | 71432 | 1 | - | 5 | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Bromodichloromethane | 75254 | 100 | - | 100 | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Bromoform | 75252 | 100 | - | 100 | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Bromomethane | 74839 | - | - | - | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Butanone, 2- | 78933 | - | - | - | - | 10 | U | 0.95 | J | 4000 | U | 2300 | U | |
| Carbon disulfide | 75150 | - | - | - | - | 0.62 | J | 1.4 | | 400 | U | 230 | U | |
| Carbon tetrachloride | 56235 | 3 | - | 5 | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Chlorobenzene | 108907 | 100 | - | 100 | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Chloroethane | 75003 | - | - | - | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Chloroform | 676663 | 100 | - | 100 | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Chloromethane | 74873 | - | - | - | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Dibromochloromethane | 124481 | 100 | - | 100 | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Dichloroethane, 1,1- | 75343 | - | - | - | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Dichloroethane, 1,2- | 107062 | 3 | - | 5 | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Dichloroethene, 1,1- | 75354 | 7 | - | 7 | - | 1 | U | 1 | U | 59 | J M | 230 | U | |
| Dichloroethene, cis-1,2- | 156592 | 70 | - | 70 | - | 1 | U | 0.19 | J | 11000 | M | 990 | M | |
| Dichloroethene, trans-1,2- | 156605 | 100 | - | 100 | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Dichloropropane, 1,2- | 78875 | 5 | - | 5 | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Dichloropropene, cis-1,3- | 100061015 | - | - | - | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Dichloropropene, trans-1,3- | 10061026 | - | - | - | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Ethylbenzene | 100414 | 700 | 30 | 700 | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Hexanone, 2- | 73663715 | - | - | - | - | 10 | U | 10 | U | 4000 | U | 10 | U | |
| Methyl-2-pentanone, 4- | 108101 | - | - | - | - | 10 | U | 10 | U | 4000 | U | 10 | U | |
| Methylene chloride[3] | 75092 | 5 | - | 5 | - | 1 | U | 0.18 | BJ | 160 | BJ M | 100 | BJ M | |
| Styrene | 100425 | 100 | - | 100 | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Tetrachloroethane, 1,1,2,2- | 79345 | - | - | - | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Tetrachloroethene | 127184 | 3 | - | 5 | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Toluene | 108883 | 1000 | 40 | 1000 | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Trichloroethane, 1,1,1- | 71556 | 200 | - | 200 | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Trichloroethane, 1,1,2- | 79005 | 5 | - | 5 | - | 1 | U | 1 | U | 400 | U | 230 | U | |
| Trichloroethene | 79016 | 3 | - | 5 | - | 1 | U | 1 | U | 3200 | M | 4600 | M | |
| Vinyl chloride | 75014 | 1 | - | 2 | - | 1 | U | 1 | U | 3300 | M | 82 | J M | |
| Xylenes, total | 1330207 | 10000 | 20 | 10000 | - | 1 | U | 1 | U | 400 | U | 230 | U | |

Notes:

1 - Florida MCL/SMCL: Maximum Contaminant Levels (MCLs) or Secondary MCLs (SMCLs) as defined in the Florida Primary and Secondary Drinking Water Standards (F.A.C. 62-550)

2 - Federal MCL/SMCL: Maximum Contaminant Levels (MCLs) or Secondary MCLs (SMCLs) as defined in the Federal Drinking Water Regulations and Health Advisories, Office of Wat

3 - All detected concentrations of acetone and methylene chloride were qualified as laboratory "blank" contaminated, and detected concentrations did not exceed 5 times the method de

**bold** - Analyte was detected in sample.

M -Detected concentration exceeded Florida and/or Federal MCL.

4 -sampling depth in feet mean sea level

Laboratory Qualifiers:

U - Analyte not detected.

J - Estimated result; result is less than reporting limit.

B - Associated method blank contains target analyte.

E - Estimated result; result concentration exceeds the calibration range.

D - Result was obtained from analysis of a dilution.

:ening Summary
Intermediate Ground Water Assessment
:s Site, Madison, FL
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| | OBGDP9 145 8-Oct-99 | | OBGDP9 123 8-Oct-99 | | OBGDP10 133 8-Oct-99 | | OBGDP10 122 8-Oct-99 | | OBGDP11 141 9-Oct-99 | | OBGDP11 127 9-Oct-99 | | OBGDP11 108 9-Oct-99 | | OBGDP11 103 9-Oct-99 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6.5 | BJ | 11 | B | 1.5 | BJ | 3.7 | BJ | 5.3 | BJ | 4.7 | BJ | 310 | BD | 1.8 | BJ |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1.7 | J | 0.89 | J | 10 | U | 10 | U | 1.1 | J | 1 | J | 4 | J | 10 | U |
| | 0.47 | J | 0.29 | J | 0.61 | J | 0.11 | J | 0.51 | J | 0.13 | J | 0.62 | J | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 0.28 | J |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 0.2 | J | 1 | U | 1 | U | 1 | U | 0.3 | J | 0.28 | J | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U |
| | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 0.19 | BJ | 1 | U | 0.17 | BJ | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| M | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 0.16 | J | 1 | U | 1 | U | 1 | U |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U |

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October 1996.
nit; as such, detected concentrations should be considered as "non-detect" values.

| | | | | | | Sample ID: | | OBGDP12 | | OBGDP12 | | OBGDP12 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Sample Depth[4]: | | 125 | | 109 | | 101 | |
| | | | | | | Sample Date: | | 1-Dec-99 | | 1-Dec-99 | | 1-Dec-99 | |
| Parameters | CAS # | Screening Level (ARARs) | | | | | | | | | | | |
| | | Florida MCL/SMCL[1] | | Federal MCL/SMCL[2] | | | | | | | | | |
| | | MCL | SMCL | MCL | SMCL | | | | | | | | |
| VOCs - SW8260B (ug/L) | | | | | | | | | | | | | |
| Acetone[3] | 67641 | - | - | - | - | 2.9 | J | 1.6 | J | 1.3 | J | 2.5 | J |
| Benzene | 71432 | 1 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Bromodichloromethane | 75254 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Bromoform | 75252 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Bromomethane | 74839 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Butanone, 2- | 78933 | - | - | - | - | 10 | U | 10 | U | 10 | U | 10 | U |
| Carbon disulfide | 75150 | - | - | - | - | 0.15 | J | 0.17 | J | 0.24 | J | 1 | U |
| Carbon tetrachloride | 56235 | 3 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Chlorobenzene | 108907 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Chloroethane | 75003 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Chloroform | 676663 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Chloromethane | 74873 | - | - | - | - | 1 | U | 1 | U | 0.1 | J | 1 | U |
| Dibromochloromethane | 124481 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloroethane, 1,1- | 75343 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloroethane, 1,2- | 107062 | 3 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloroethene, 1,1- | 75354 | 7 | - | 7 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloroethene, cis-1,2- | 156592 | 70 | - | 70 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloroethene, trans-1,2- | 156605 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloropropane, 1,2- | 78875 | 5 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloropropene, cis-1,3- | 100061015 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloropropene, trans-1,3- | 10061026 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Ethylbenzene | 100414 | 700 | 30 | 700 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Hexanone, 2- | 73663715 | - | - | - | - | 10 | U | 10 | U | 10 | U | 10 | U |
| Methyl-2-pentanone, 4- | 108101 | - | - | - | - | 10 | U | 10 | U | 10 | U | 10 | U |
| Methylene chloride[3] | 75092 | 5 | - | 5 | - | 0.18 | BJ | 1 | U | 1 | U | 1 | U |
| Styrene | 100425 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Tetrachloroethane, 1,1,2,2- | 79345 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Tetrachloroethene | 127184 | 3 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Toluene | 108883 | 1000 | 40 | 1000 | - | 1 | U | 1 | U | 1 | U | 0.31 | J |
| Trichloroethane, 1,1,1- | 71556 | 200 | - | 200 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Trichloroethane, 1,1,2- | 79005 | 5 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Trichloroethene | 79016 | 3 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Vinyl chloride | 75014 | 1 | - | 2 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Xylenes, total | 1330207 | 10000 | 20 | 10000 | - | 1 | U | 1 | U | 1 | U | 1 | U |

Notes:

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3 - All detected concentrations of acetone and methylene chloride were qualified as laboratory "blank" contaminated, and detected concentrations did not exceed 5 times the method de

**bold** - Analyte was detected in sample.

M - Detected concentration exceeded Florida and/or Federal MCL.

4 -sampling depth in feet mean sea level

Laboratory Qualifiers:

U - Analyte not detected.

J - Estimated result; result is less than reporting limit.

B - Associated method blank contains target analyte.

E - Estimated result; result concentration exceeds the calibration range.

D - Result was obtained from analysis of a dilution.

: 3
creening Summary
id Intermediate Ground Water Assessment
ries Site, Madison, FL
2000

| '13 | OBGDP13 | | OBGDP13 | | OBGDP13 | | OBGDP14 | | OBGDP14 | | OBGDP14 | | OBGDP14 | | OBGDP14 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| )9 | 117 | | 105 | | 93 | | 138 | | 130 | | 109 | | 97 | | 79 | | 52 | |
| | 1-Dec-99 | | 1-Dec-99 | | 1-Dec-99 | | 2-Dec-99 | | 2-Dec-99 | | 2-Dec-99 | | 2-Dec-99 | | 2-Dec-99 | | 2-Dec-99 | |
| J | 3.9 | J | 20 | U | 20 | U | 3.9 | J | 2.6 | J | 1.4 | J | 20 | U | 200 | U | 500 | U |
| U | 1 | U | 2 | U | 8.6 | J M | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| U | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| U | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| U | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| J | 10 | U | 20 | U | 20 | U | 0.87 | J | 10 | U | 10 | U | 20 | U | 200 | U | 500 | U |
| J | 2.9 | | 2 | U | 2 | U | 0.13 | J | 0.43 | J | 2.5 | | 0.5 | J | 20 | U | 50 | U |
| U | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| U | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| U | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| U | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| J | 0.14 | J | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| J | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| J | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| J | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| J | 1 | U | 0.29 | J | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| J | 17 | | 32 | | 510 | M | 0.2 | J | 1 | U | 3.9 | | 36 | | 80 | M | 860 | M |
| J | 1 | U | 0.29 | J | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| J | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| J | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| J | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| J | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| J | 10 | U | 20 | U | 20 | U | 10 | U | 10 | U | 10 | U | 20 | U | 200 | U | 500 | U |
| J | 10 | U | 20 | U | 20 | U | 10 | U | 10 | U | 10 | U | 20 | U | 200 | U | 500 | U |
| J | 1 | U | 2 | U | 3.5 | BJ | 0.17 | BJ | 1 | U | 1 | U | 2 | U | 20 | U | 9.8 | BJ M |
| J | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| J | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| J | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| J | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| J | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |
| | 1.7 | | 5.7 | M | 620 | M | 0.28 | J | 1 | U | 0.73 | J | 4.4 | M | 290 | M | 1000 | M |
| | 0.36 | J | 2 | U | 8.1 | J M | 1 | U | 1 | U | 1 | U | 2.2 | M | 16 | J M | 260 | J M |
| | 1 | U | 2 | U | 2 | U | 1 | U | 1 | U | 1 | U | 2 | U | 20 | U | 50 | U |

ıe 1994.
ıctober 1996.
ıit; as such, detected concentrations should be considered as "non-detect" values.

| | | | | | | Sample ID: | | OBGDP15 | | OBGDP15 | | OBGDP16 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Sample Depth[4]: | | 135 | | 127 | | 139 | |
| | | | | | | Sample Date: | | 30-Nov-99 | | 30-Nov-99 | | 30-Nov-99 | |
| Parameters | CAS # | Screening Level (ARARs) | | | | | | | | | | | |
| | | Florida MCL/SMCL[1] | | Federal MCL/SMCL[2] | | | | | | | | | |
| | | MCL | SMCL | MCL | SMCL | | | | | | | | |
| VOCs - SW8260B (ug/L) | | | | | | | | | | | | | |
| Acetone[3] | 67641 | - | - | - | - | 1.5 | J | 3 | J | 2.3 | J | 2.8 | J |
| Benzene | 71432 | 1 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Bromodichloromethane | 75254 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Bromoform | 75252 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Bromomethane | 74839 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Butanone, 2- | 78933 | - | - | - | - | 10 | U | 10 | U | 10 | U | 10 | U |
| Carbon disulfide | 75150 | - | - | - | - | 0.14 | J | 0.22 | J | 1 | U | 4.1 | |
| Carbon tetrachloride | 56235 | 3 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Chlorobenzene | 108907 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Chloroethane | 75003 | - | - | - | - | 1 | U | 0.4 | J | 1 | U | 1 | U |
| Chloroform | 676663 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Chloromethane | 74873 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Dibromochloromethane | 124481 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloroethane, 1,1- | 75343 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloroethane, 1,2- | 107062 | 3 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloroethene, 1,1- | 75354 | 7 | - | 7 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloroethene, cis-1,2- | 156592 | 70 | - | 70 | - | 1 | U | 28 | | 8.7 | | 1 | U |
| Dichloroethene, trans-1,2- | 156605 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloropropane, 1,2- | 78875 | 5 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloropropene, cis-1,3- | 100061015 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Dichloropropene, trans-1,3- | 10061026 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Ethylbenzene | 100414 | 700 | 30 | 700 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Hexanone, 2- | 73663715 | - | - | - | - | 10 | U | 10 | U | 10 | U | 10 | U |
| Methyl-2-pentanone, 4- | 108101 | - | - | - | - | 10 | U | 10 | U | 10 | U | 10 | U |
| Methylene chloride[3] | 75092 | 5 | - | 5 | - | 1 | U | 0.41 | BJ | 0.24 | BJ | 1 | U |
| Styrene | 100425 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Tetrachloroethane, 1,1,2,2- | 79345 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Tetrachloroethene | 127184 | 3 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Toluene | 108883 | 1000 | 40 | 1000 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Trichloroethane, 1,1,1- | 71556 | 200 | - | 200 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Trichloroethane, 1,1,2- | 79005 | 5 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U |
| Trichloroethene | 79016 | 3 | - | 5 | - | 1 | U | 20 | M | 13 | M | 1 | U |
| Vinyl chloride | 75014 | 1 | - | 2 | - | 1 | U | 4.1 | M | 0.46 | J | 1 | U |
| Xylenes, total | 1330207 | 10000 | 20 | 10000 | - | 1 | U | 1 | U | 1 | U | 1 | U |

Notes:

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U - Analyte not detected.

J - Estimated result; result is less than reporting limit.

B - Associated method blank contains target analyte.

E - Estimated result; result concentration exceeds the calibration range.

D - Result was obtained from analysis of a dilution.

le 3
Screening Summary
nd Intermediate Ground Water Assessment
tries Site, Madison, FL
. 2000

| P16 | OBGDP16 | | OBGDP17 | | OBGDP17 | | OBGDP17 | | OBGDP17 | | OBGDP17 | | OBGDP18 | | OBGDP18 | | OBGDP18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -99 | 109 | | 135 | | 117 | | 102 | | 93 | | 78 | | 129 | | 109 | | 99 | |
| | 30-Nov-99 | | 4-Dec-99 | | 4-Dec-99 | | 4-Dec-99 | | 4-Dec-99 | | 4-Dec-99 | | 4-Dec-99 | | 4-Dec-99 | | 4-Dec-99 | |
| J | 20 | U | 2.8 | J | 1.4 | J | 10 | U | 1.2 | J | 3.8 | J | 2.6 | J | 400 | U | 2000 | U |
| U | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| U | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| U | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| J | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| J | 20 | U | 0.97 | J | 10 | U | 100 | U | 10 | U | 0.99 | J | 0.86 | J | 400 | U | 2000 | U |
| I | 0.91 | J | 1.2 | | 0.14 | J | 10 | U | 1 | U | 0.13 | J | 0.33 | J | 40 | U | 200 | U |
| J | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| I | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| I | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| I | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| | 2 | U | 1 | U | 0.11 | J | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| | 28 | | 0.47 | J | 5 | | 130 | M | 7.9 | | 12 | | 8.1 | | 450 | M | 2800 | M |
| | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| | 20 | U | 10 | U | 10 | U | 100 | U | 10 | U | 10 | U | 10 | U | 400 | U | 2000 | U |
| | 20 | U | 10 | U | 10 | U | 100 | U | 10 | U | 10 | U | 10 | U | 400 | U | 2000 | U |
| | 2 | U | 0.54 | BJ | 1 | U | 8.7 | M | 1 | U | 1 | U | 1 | U | 24 | BJ M | 110 | BJ M |
| | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| | 2 | U | 0.28 | J | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |
| | 2 | U | 0.98 | J | 17 | M | 90 | M | 19 | M | 8.6 | M | 0.86 | J | 74 | M | 240 | M |
| | 7.3 | M | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 5.1 | M | 270 | M | 3400 | M |
| | 2 | U | 1 | U | 1 | U | 10 | U | 1 | U | 1 | U | 1 | U | 40 | U | 200 | U |

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ber 1998.
as such, detected concentrations should be considered as "non-detect" values.

| | | | | | | Sample ID: | | OBGDP18 | | OBGDP18 | | OBGDP18 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Sample Depth[4]: | | 91 | | 83 | | 65 | | 50 |
| | | | | | | Sample Date: | | 4-Dec-99 | | 4-Dec-99 | | 4-Dec-99 | | 4-Dec-99 |
| Parameters | CAS # | Screening Level (ARARs) | | | | | | | | | | | | |
| | | Florida MCL/SMCL[1] | | Federal MCL/SMCL[2] | | | | | | | | | | |
| | | MCL | SMCL | MCL | SMCL | | | | | | | | | |
| VOCs - SW8260B (ug/L) | | | | | | | | | | | | | | |
| Acetone[3] | 67641 | - | - | - | - | 2.6 | J | 500 | U | 140 | J | 100 | J | |
| Benzene | 71432 | 1 | - | 5 | - | 1 | U | 50 | U | 50 | U | 50 | U | |
| Bromodichloromethane | 75254 | 100 | - | 100 | - | 1 | U | 50 | U | 50 | U | 50 | U | |
| Bromoform | 75252 | 100 | - | 100 | - | 1 | U | 50 | U | 50 | U | 50 | U | |
| Bromomethane | 74839 | - | - | - | - | 1 | U | 50 | U | 50 | U | 50 | U | |
| Butanone, 2- | 78933 | - | - | - | - | 10 | U | 500 | U | 500 | U | 500 | U | |
| Carbon disulfide | 75150 | - | - | - | - | 1 | U | 50 | U | 50 | U | 50 | U | |
| Carbon tetrachloride | 56235 | 3 | - | 5 | - | 1 | U | 50 | U | 50 | U | 50 | U | |
| Chlorobenzene | 108907 | 100 | - | 100 | - | 1 | U | 50 | U | 50 | U | 50 | U | |
| Chloroethane | 75003 | - | - | - | - | 1 | U | 50 | U | 50 | U | 50 | U | |
| Chloroform | 676663 | 100 | - | 100 | - | 1 | U | 50 | U | 50 | U | 50 | U | |
| Chloromethane | 74873 | - | - | - | - | 1 | U | 50 | U | 50 | U | 50 | U | |
| Dibromochloromethane | 124481 | 100 | - | 100 | - | 1 | U | 50 | U | 50 | U | 50 | U | |
| Dichloroethane, 1,1- | 75343 | - | - | - | - | 1 | U | 50 | U | 50 | U | 50 | U | |
| Dichloroethane, 1,2- | 107062 | 3 | - | 5 | - | 1 | U | 50 | U | 50 | U | 50 | U | |
| Dichloroethene, 1,1- | 75354 | 7 | - | 7 | - | 1 | U | 50 | U | 50 | U | 50 | U | |
| Dichloroethene, cis-1,2- | 156592 | 70 | - | 70 | - | 2.1 | | 750 | M | 1100 | M | 870 | M | 0. |
| Dichloroethene, trans-1,2- | 156605 | 100 | - | 100 | - | 1 | U | 50 | U | 50 | U | 50 | U | 1 |
| Dichloropropane, 1,2- | 78875 | 5 | - | 5 | - | 1 | U | 50 | U | 50 | U | 50 | U | 1 |
| Dichloropropene, cis-1,3- | 100061015 | - | - | - | - | 1 | U | 50 | U | 50 | U | 50 | U | 1 |
| Dichloropropene, trans-1,3- | 10061026 | - | - | - | - | 1 | U | 50 | U | 50 | U | 50 | U | 1 |
| Ethylbenzene | 100414 | 700 | 30 | 700 | - | 1 | U | 50 | U | 50 | U | 50 | U | 1 |
| Hexanone, 2- | 73663715 | - | - | - | - | 10 | U | 500 | U | 500 | U | 500 | U | 1( |
| Methyl-2-pentanone, 4- | 108101 | - | - | - | - | 10 | U | 500 | U | 500 | U | 500 | U | 1( |
| Methylene chloride[3] | 75092 | 5 | - | 5 | - | 1 | U | 28 | BJ M | 9.9 | BJ M | 50 | U | 1 |
| Styrene | 100425 | 100 | - | 100 | - | 1 | U | 50 | U | 50 | U | 50 | U | 1 |
| Tetrachloroethane, 1,1,2,2- | 79345 | - | - | - | - | 1 | U | 50 | U | 50 | U | 50 | U | 1 |
| Tetrachloroethene | 127184 | 3 | - | 5 | - | 1 | U | 50 | U | 50 | U | 50 | U | 1 |
| Toluene | 108883 | 1000 | 40 | 1000 | - | 1 | U | 50 | U | 50 | U | 50 | U | 1 |
| Trichloroethane, 1,1,1- | 71556 | 200 | - | 200 | - | 1 | U | 50 | U | 50 | U | 50 | U | 1 |
| Trichloroethane, 1,1,2- | 79005 | 5 | - | 5 | - | 1 | U | 50 | U | 50 | U | 50 | U | 1 |
| Trichloroethene | 79016 | 3 | - | 5 | - | 2.7 | | 87 | M | 1100 | M | 530 | M | 0.15 |
| Vinyl chloride | 75014 | 1 | - | 2 | - | 0.6 | J | 760 | M | 260 | M | 380 | M | 1 |
| Xylenes, total | 1330207 | 10000 | 20 | 10000 | - | 1 | U | 50 | U | 50 | U | 50 | U | 1 |

Notes:

1 - Florida MCL/SMCL: Maximum Contaminant Levels (MCLs) or Secondary MCLs (SMCLs) as defined in the Florida Primary and Secondary Drinking Water Standards (F.A.C. 62-550) da

2 - Federal MCL/SMCL: Maximum Contaminant Levels (MCLs) or Secondary MCLs (SMCLs) as defined in the Federal Drinking Water Regulations and Health Advisories, Office of Water

3 - All detected concentrations of acetone and methylene chloride were qualified as laboratory "blank" contaminated, and detected concentrations did not exceed 5 times the method detec

**bold** - Analyte was detected in sample.

M -Detected concentration exceeded Florida and/or Federal MCL.

4 -sampling depth in feet mean sea level

Laboratory Qualifiers:

U - Analyte not detected.

J - Estimated result; result is less than reporting limit.

B - Associated method blank contains target analyte.

E - Estimated result; result concentration exceeds the calibration range.

D - Result was obtained from analysis of a dilution.

: 3
creening Summary
ıd Intermediate Ground Water Assessment
ries Site, Madison, FL
2000

| ?19 | OBGDP19 126 6-Dec-99 | | OBGDP19 116 6-Dec-99 | |
|---|---|---|---|---|
| 99 | | | | |
| | | | | |
| J | 2 | J | 2.2 | J |
| U | 1 | U | 1 | U |
| U | 1 | U | 1 | U |
| U | 1 | U | 1 | U |
| U | 1 | U | 1 | U |
| U | 10 | U | 10 | U |
| | 0.49 | J | 1 | U |
| U | 1 | U | 1 | U |
| U | 1 | U | 1 | U |
| U | 1 | U | 1 | U |
| U | 1 | U | 1 | U |
| U | 0.12 | J | 0.17 | J |
| J | 1 | U | 1 | U |
| J | 1 | U | 1 | U |
| J | 1 | U | 1 | U |
| J | 1 | U | 1 | U |
| I | 0.42 | J | 1 | U |
| J | 1 | U | 1 | U |
| J | 1 | U | 1 | U |
| J | 1 | U | 1 | U |
| J | 1 | U | 1 | U |
| J | 1 | U | 1 | U |
| I | 10 | U | 10 | U |
| I | 10 | U | 10 | U |
| I | 0.22 | BJ | 1 | U |
| I | 1 | U | 1 | U |
| ' | 1 | U | 1 | U |
| | 1 | U | 1 | U |
| | 1 | U | 1 | U |
| | 1 | U | 1 | U |
| | 1 | U | 1 | U |
| | 1 | U | 1 | U |
| | 1 | U | 1 | U |
| | 1 | U | 1 | U |
| | 1 | U | 1 | U |

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ctober 1996.
it; as such, detected concentrations should be considered as "non-detect" values.

| | | | | | | Sample ID: | | OBGDMLP1 | | OBGDMLP1 | | OBGDMLP2 | | OBGDMLP2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Sample Depth[3]: | | 120 | | 100 | | 57 | | 120 | | 95 | |
| | | | | | | Sample Date: | | 6-Mar-00 | | 6-Mar-00 | | 6-Mar-00 | | 23-Feb-00 | | 23-Feb-00 | |
| Parameters | CAS # | Screening Level (ARARs) | | | | | | | | | | | | | | | |
| | | Florida MCL/SMCL[1] | | Federal MCL/SMCL[2] | | | | | | | | | | | | | |
| | | MCL | SMCL | MCL | SMCL | | | | | | | | | | | | |
| VOCs - SW8260B (ug/L) | | | | | | | | | | | | | | | | | |
| Acetone | 67641 | - | - | - | - | 190 | D | 49 | | 18 | | 10 | U | 10 | U | | |
| Benzene | 71432 | 1 | - | 5 | - | 3.2 | | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Bromodichloromethane | 75254 | 100 | - | 100 | - | 1.1 | | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Bromoform | 75252 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Bromomethane | 74839 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Butanone, 2- | 78933 | - | - | - | - | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | | |
| Carbon disulfide | 75150 | - | - | - | - | 2.4 | | 1 | U | 19 | | 1 | U | 1 | U | | |
| Carbon tetrachloride | 56235 | 3 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Chlorobenzene | 108907 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Chloroethane | 75003 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Chloroform | 676663 | 100 | - | 100 | - | 1.2 | | 1.2 | | 1 | U | 2.9 | | 1 | U | | |
| Chloromethane | 74873 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Dibromochloromethane | 124481 | 100 | - | 100 | - | 1.1 | | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Dichloroethane, 1,1- | 75343 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Dichloroethane, 1,2- | 107062 | 3 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Dichloroethene, 1,1- | 75354 | 7 | - | 7 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Dichloroethene, cis-1,2- | 156592 | 70 | - | 70 | - | 130 | D M | 5.4 | | 130 | D M | 8.8 | | 16 | | | |
| Dichloroethene, trans-1,2- | 156605 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Dichloropropane, 1,2- | 78875 | 5 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Dichloropropene, cis-1,3- | 100061015 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Dichloropropene, trans-1,3- | 10061026 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Ethylbenzene | 100414 | 700 | 30 | 700 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Hexanone, 2- | 73663715 | - | - | - | - | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | | |
| Methyl-2-pentanone, 4- | 108101 | - | - | - | - | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | | |
| Methylene chloride | 75092 | 5 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Styrene | 100425 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Tetrachloroethane, 1,1,2,2- | 79345 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Tetrachloroethene | 127184 | 3 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Toluene | 108883 | 1000 | 40 | 1000 | - | 1 | U | 1 | U | 1 | U | 3.9 | | 1 | U | | |
| Trichloroethane, 1,1,1- | 71556 | 200 | - | 200 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Trichloroethane, 1,1,2- | 79005 | 5 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |
| Trichloroethene | 79016 | 3 | - | 5 | - | 73 | D M | 3.7 | | 150 | D M | 13 | | 24 | D M | | |
| Vinyl chloride | 75014 | 1 | - | 2 | - | 50 | D M | 1.2 | | 6.7 | M | 1 | U | 1 | U | | |
| Xylenes, total | 1330207 | 10000 | 20 | 10000 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | |

Notes:

[1] - Florida MCL/SMCL: Maximum Contaminant Levels (MCLs) or Secondary MCLs (SMCLs) as defined in the Florida Primary and Secondary Drinking Water Standards (F.A.C. 62-550) dated June 1994.

[2] - Federal MCL/SMCL: Maximum Contaminant Levels (MCLs) or Secondary MCLs (SMCLs) as defined in the Federal Drinking Water Regulations and Health Advisories, Office of Water dated October 1996.

**bold** - Analyte was detected in sample.

M -Detected concentration exceeded Florida and/or Federal MCL.

[3] -sampling depth in feet mean sea level

Laboratory Qualifiers:

U - Analyte not detected.

J - Estimated result; result is less than reporting limit.

B - Associated method blank contains target analyte.

E - Estimated result; result concentration exceeds the calibration range.

D - Result was obtained from analysis of a dilution.

: 4
creening Summary
id Intermediate Ground Water Assessment
ries Site, Madison, FL
2000

| 1LP2 -00 | OBGDMLP3 137 22-Feb-00 | | OBGDMLP3 122 22-Feb-00 | | OBGDMLP3 51 22-Feb-00 | | OBGDMLP4 153 8-Mar-00 | OBGDMLP4 133 8-Mar-00 | | OBGDMLP4 63 8-Mar-00 | | OBGDMLP5 143 16-Mar-00 | OBGDMLP5 128 16-Mar-00 | OBGDMLP5 42 16-Mar-00 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| J | 15 | | 10 | U | 580 | D | NS | 10 | U | 10 | U | NS | NS | 410 | D |
| J | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| J | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| J | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| J | 10 | U | 10 | U | 10 | U | NS | 10 | U | 10 | U | NS | NS | 10 | U |
| I | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 2.1 | |
| I | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| I | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| | 10 | U | 10 | U | 10 | U | NS | 10 | U | 10 | U | NS | NS | 10 | U |
| | 10 | U | 10 | U | 10 | U | NS | 10 | U | 10 | U | NS | NS | 10 | U |
| | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1.1 | |
| | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| M | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| M | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |
| | 1 | U | 1 | U | 1 | U | NS | 1 | U | 1 | U | NS | NS | 1 | U |

| | | | | | | Sample ID: | OBGDMLP6 | OBGDMLP6 | OBGDMLP6 | | OBGDMLP7 | OBGDMLP7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Sample Depth[3]: | 148 | 130 | 43 | | 130 | 105 |
| | | | | | | Sample Date: | 16-Mar-00 | 16-Mar-00 | 16-Mar-00 | | 18-Feb-00 | 18-Feb-00 |
| Parameters | CAS # | Screening Level | | | | | | | | | | |
| | | Florida MCL/SMCL[1] | | Federal MCL/SMCL[2] | | | | | | | | |
| | | MCL | SMCL | MCL | SMCL | | | | | | | |
| VOCs - SW8260B (ug/L) | | | | | | | | | | | | |
| Acetone | 67641 | - | - | - | - | | NS | NS | 720 | D | NS | NS |
| Benzene | 71432 | 1 | - | 5 | - | | NS | NS | 1 | U | NS | NS |
| Bromodichloromethane | 75254 | 100 | - | 100 | - | | NS | NS | 1 | U | NS | NS |
| Bromoform | 75252 | 100 | - | 100 | - | | NS | NS | 1 | U | NS | NS |
| Bromomethane | 74839 | - | - | - | - | | NS | NS | 1 | U | NS | NS |
| Butanone, 2- | 78933 | - | - | - | - | | NS | NS | 10 | U | NS | NS |
| Carbon disulfide | 75150 | - | - | - | - | | NS | NS | **2.1** | | NS | NS |
| Carbon tetrachloride | 56235 | 3 | - | 5 | - | | NS | NS | 1 | U | NS | NS |
| Chlorobenzene | 108907 | 100 | - | 100 | - | | NS | NS | 1 | U | NS | NS |
| Chloroethane | 75003 | - | - | - | - | | NS | NS | 1 | U | NS | NS |
| Chloroform | 676663 | 100 | - | 100 | - | | NS | NS | 1 | U | NS | NS |
| Chloromethane | 74873 | - | - | - | - | | NS | NS | 1 | U | NS | NS |
| Dibromochloromethane | 124481 | 100 | - | 100 | - | | NS | NS | 1 | U | NS | NS |
| Dichloroethane, 1,1- | 75343 | - | - | - | - | | NS | NS | 1 | U | NS | NS |
| Dichloroethane, 1,2- | 107062 | 3 | - | 5 | - | | NS | NS | 1 | U | NS | NS |
| Dichloroethene, 1,1- | 75354 | 7 | - | 7 | - | | NS | NS | 1 | U | NS | NS |
| Dichloroethene, cis-1,2- | 156592 | 70 | - | 70 | - | | NS | NS | 1 | U | NS | NS |
| Dichloroethene, trans-1,2- | 156605 | 100 | - | 100 | - | | NS | NS | 1 | U | NS | NS |
| Dichloropropane, 1,2- | 78875 | 5 | - | 5 | - | | NS | NS | 1 | U | NS | NS |
| Dichloropropene, cis-1,3- | 100061015 | - | - | - | - | | NS | NS | 1 | U | NS | NS |
| Dichloropropene, trans-1,3- | 10061026 | - | - | - | - | | NS | NS | 1 | U | NS | NS |
| Ethylbenzene | 100414 | 700 | 30 | 700 | - | | NS | NS | 1 | U | NS | NS |
| Hexanone, 2- | 73663715 | - | - | - | - | | NS | NS | 10 | U | NS | NS |
| Methyl-2-pentanone, 4- | 108101 | - | - | - | - | | NS | NS | 10 | U | NS | NS |
| Methylene chloride | 75092 | 5 | - | 5 | - | | NS | NS | 1 | U | NS | NS |
| Styrene | 100425 | 100 | - | 100 | - | | NS | NS | 1 | U | NS | NS |
| Tetrachloroethane, 1,1,2,2- | 79345 | - | - | - | - | | NS | NS | 1 | U | NS | NS |
| Tetrachloroethene | 127184 | 3 | - | 5 | - | | NS | NS | 1 | U | NS | NS |
| Toluene | 108883 | 1000 | 40 | 1000 | - | | NS | NS | **11** | | NS | NS |
| Trichloroethane, 1,1,1- | 71556 | 200 | - | 200 | - | | NS | NS | 1 | U | NS | NS |
| Trichloroethane, 1,1,2- | 79005 | 5 | - | 5 | - | | NS | NS | 1 | U | NS | NS |
| Trichloroethene | 79016 | 3 | - | 5 | - | | NS | NS | 1 | U | NS | NS |
| Vinyl chloride | 75014 | 1 | - | 2 | - | | NS | NS | 1 | U | NS | NS |
| Xylenes, total | 1330207 | 10000 | 20 | 10000 | - | | NS | NS | 1 | U | NS | NS |

Notes:

1 - Florida MCL/SMCL: Maximum Contaminant Levels (MCLs) or Secondary MCLs (SMCLs) as defined in the Florida Primary and Secondary Drinking Water Standards (F.A.C. 62-550) dated June 1994.

2 - Federal MCL/SMCL: Maximum Contaminant Levels (MCLs) or Secondary MCLs (SMCLs) as defined in the Federal Drinking Water Regulations and Health Advisories, Office of Water dated October 199

**bold** - Analyte was detected in sample.

M - Detected concentration exceeded Florida and/or Federal MCL.

3 -sampling depth in feet mean sea level

Laboratory Qualifiers:

U - Analyte not detected.

J - Estimated result; result is less than reporting limit.

B - Associated method blank contains target analyte.

E - Estimated result; result concentration exceeds the calibration range.

D - Result was obtained from analysis of a dilution.

ıle 4
Screening Summary
ınd Intermediate Ground Water Assessment
stries Site, Madison, FL
), 2000

| ıMLP7<br>2<br>eb-00 | OBGDMLP8<br>129<br>15-Feb-00 | OBGDMLP8<br>77<br>15-Feb-00 | OBGDMLP8<br>24<br>15-Feb-00 | OBGDMLP9<br>147<br>7-Mar-00 | OBGDMLP9<br>127<br>7-Mar-00 | OBGDMLP9<br>48<br>7-Mar-00 | OBGDMLP10<br>144<br>6-Mar-00 | OBGDMLP10<br>129<br>6-Mar-00 | OBGDMLP10<br>54<br>6-Mar-00 |
|---|---|---|---|---|---|---|---|---|---|
| | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1.9 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| | 1 U | 6.2 | 1 U | 1 U | 11 | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 2.4 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1.3 | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 44 D | 1 U | 1 U | 1 U | 1 U | 1 U | 90 D M |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 41 D M | 1 U | 1 U | 1 U | 1 U | 2 | 96 D M |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |

| | | | | | | Sample ID: | | OBGDMLP11 | | OBGDMLP11 | | OBGDMLP11 | | OBGDMLP11 | | OBGDMLP31 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Sample Depth[3]: | | 121 | | 101 | | 83 | | 58 | | 148 | |
| | | | | | | Sample Date: | | 18-Mar-00 | | 18-Mar-00 | | 18-Mar-00 | | 18-Mar-00 | | 1-May-00 | |
| *Parameters* | CAS # | *Screening Level* | | | | | | | | | | | | | | | |
| | | Florida MCL/SMCL[1] | | Federal MCL/SMCL[2] | | | | | | | | | | | | | |
| | | MCL | SMCL | MCL | SMCL | | | | | | | | | | | | |
| VOCs - SW8260B (ug/L) | | | | | | | | | | | | | | | | | |
| Acetone | 67641 | - | - | - | - | 10 | U | 10 | U | 10 | U | 10 | U | 360 | | | |
| Benzene | 71432 | 1 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U | 52 | M | | |
| Bromodichloromethane | 75254 | 100 | - | 100 | - | 1.8 | | 2.8 | | 1.5 | | 1 | U | 0.67 | J | | |
| Bromoform | 75252 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U | 5 | U | | |
| Bromomethane | 74839 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 5 | U | | |
| Butanone, 2- | 78933 | - | - | - | - | 10 | U | 10 | U | 10 | U | 10 | U | 380 | | | |
| Carbon disulfide | 75150 | - | - | - | - | 23 | | 1 | U | 1 | U | 1 | U | 5 | U | | |
| Carbon tetrachloride | 56235 | 3 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U | 5 | U | | |
| Chlorobenzene | 108907 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U | 5 | U | | |
| Chloroethane | 75003 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 5 | U | | |
| Chloroform | 676663 | 100 | - | 100 | - | 1.9 | | 3 | | 1.5 | | 1 | U | 5 | U | | |
| Chloromethane | 74873 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 5 | U | | |
| Dibromochloromethane | 124481 | 100 | - | 100 | - | 1.6 | | 2.3 | | 1.4 | | 1 | U | 5 | U | | |
| Dichloroethane, 1,1- | 75343 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 5 | U | | |
| Dichloroethane, 1,2- | 107062 | 3 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U | 5 | U | | |
| Dichloroethene, 1,1- | 75354 | 7 | - | 7 | - | 1 | U | 1 | U | 1.3 | | 1.7 | | 5 | U | | |
| Dichloroethene, cis-1,2- | 156592 | 70 | - | 70 | - | 5.5 | | 1.9 | | 300 | D M | 320 | D M | 16 | | | |
| Dichloroethene, trans-1,2- | 156605 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U | 5 | U | | |
| Dichloropropane, 1,2- | 78875 | 5 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U | 5 | U | | |
| Dichloropropene, cis-1,3- | 100061015 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 5 | U | | |
| Dichloropropene, trans-1,3- | 10061026 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 5 | U | | |
| Ethylbenzene | 100414 | 700 | 30 | 700 | - | 1 | U | 1 | U | 1 | U | 1 | U | 96 | | | |
| Hexanone, 2- | 73663715 | - | - | - | - | 10 | U | 10 | U | 10 | U | 10 | U | 50 | U | | |
| Methyl-2-pentanone, 4- | 108101 | - | - | - | - | 10 | U | 10 | U | 10 | U | 10 | U | 23 | J | | |
| Methylene chloride | 75092 | 5 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U | 5 | U | | |
| Styrene | 100425 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U | 5 | U | | |
| Tetrachloroethane, 1,1,2,2- | 79345 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 5 | U | | |
| Tetrachloroethene | 127184 | 3 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U | 5 | U | | |
| Toluene | 108883 | 1000 | 40 | 1000 | - | 7.2 | | 1 | U | 1 | U | 1 | U | 950 | D | | |
| Trichloroethane, 1,1,1- | 71556 | 200 | - | 200 | - | 1 | U | 1 | U | 1 | U | 1 | U | 5 | U | | |
| Trichloroethane, 1,1,2- | 79005 | 5 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U | 5 | U | | |
| Trichloroethene | 79016 | 3 | - | 5 | - | 8.4 | M | 1 | U | 140 | D M | 490 | D M | 46 | M | | |
| Vinyl chloride | 75014 | 1 | - | 2 | - | 1 | U | 1 | U | 66 | D M | 36 | D M | 1.9 | J | | |
| Xylenes, total | 1330207 | 10000 | 20 | 10000 | - | 1 | U | 1 | U | 1 | U | 1 | U | 5000 | D | | |

Notes:

[1] - Florida MCL/SMCL: Maximum Contaminant Levels (MCLs) or Secondary MCLs (SMCLs) as defined in the Florida Primary and Secondary Drinking Water Standards (F.A.C. 62-550) dated June 1994.

[2] - Federal MCL/SMCL: Maximum Contaminant Levels (MCLs) or Secondary MCLs (SMCLs) as defined in the Federal Drinking Water Regulations and Health Advisories, Office of Water dated October 19

**bold** - Analyte was detected in sample.

M -Detected concentration exceeded Florida and/or Federal MCL.

[3] -sampling depth in feet mean sea level

Laboratory Qualifiers:

U - Analyte not detected

J - Estimated result; result is less than reporting limit.

B - Associated method blank contains target analyte.

E - Estimated result; result concentration exceeds the calibration range.

D - Result was obtained from analysis of a dilution.

ıle 4
Screening Summary
ınd Intermediate Ground Water Assessment
stries Site, Madison, FL
l, 2000

| MLP31 | OBGDMLP31 | OBGDMLP32 | OBGDMLP32 | OBGDMLP32 | OBGDMLP32 | OBGDMLP33 | OBGDMLP33 | OBGDMLP33 | OBGDMLP33 |
|---|---|---|---|---|---|---|---|---|---|
| 16 | 66 | 146 | 119 | 59 | 14 | 148 | 127 | 74 | 18 |
| ıy-00 | 1-May-00 | 19-Apr-00 | 19-Apr-00 | 19-Apr-00 | 19-Apr-00 | 28-Apr-00 | 28-Apr-00 | 28-Apr-00 | 28-Apr-00 |
| U | 10 U | 20 | 63 | 25 | 10 U | 10 U | 10 U | 470 JD | 10 U |
| J | 0.42 J | 0.31 J | 1 U | 1 U | 1 U | 0.28 J | 1.4 | 6.0 M | 1 U |
| U | 1 U | 1 U | 0.92 J | 1.1 | 0.67 J | 1 U | 1 U | 1 U | 1 U |
| U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| U | 1 U | 0.53 J | 1 | 3.2 | 3.2 | 1 U | 1 U | 1 U | 1 U |
| U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1.8 | 1 U |
| U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| U | 1.7 | 1 U | 1 | 1.7 | 1.7 | 1 U | 1 U | 1 U | 1 U |
| U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| U | 1 U | 1 U | 1.1 | 1.2 | 0.81 J | 1 U | 1 U | 1 U | 1 U |
|  | 1 U | 1 U | 1 U | 4.2 | 1 U | 1 U | 6.1 | 8.3 | 1 U |
| U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.63 J | 1 U | 1 U | 1 U |
| M | 0.48 J | 1 U | 1 U | 19 D M | 2.2 | 1 U | 2.6 | 6.7 | 0.63 J |
| D M | 100 D M | 80 D M | 110 D M | 3900 D M | 79 D M | 250 D M | 1000 D M | 2800 D M | 41 D |
|  | 1 U | 1 U | 0.83 J | 12 U | 1 U | 2.9 | 6.6 | 16 | 1 U |
| J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
|  | 1 U | 1 U | 1 U | 2.7 | 1 U | 360 D | 1 U | 0.44 J | 1 U |
| J | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| J | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U | 10 U |
| J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 0.59 J | 0.59 J |
| J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| J | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
|  | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1.3 | 1 U |
|  | 0.76 J | 1 U | 0.7 J | 16 | 0.56 J | 210 D | 33 JD | 6 | 1 U |
|  | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
|  | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U | 1 U |
| M | 45 D M | 0.34 J | 0.65 J | 100 JD M | 260 D M | 8.9 M | 530 D M | 4900 D M | 330 D M |
| M | 1 U | 0.56 J | 1.5 | 30 D M | 2.3 M | 280 D M | 1100 D M | 1800 D M | 0.46 J |
|  | 1 U | 1 U | 1 U | 1 U | 1 U | 1500 D | 340 D | 19 | 1 U |

| | | | | | | Sample ID: | | OBGDMLP34 | | OBGDMLP34 | | OBGDMLP35 | | OBGDMLP35 | | C |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Sample Depth[3]: | | 149 | | 89 | | 47 | | 148 | | 109 | | |
| | | | | | | Sample Date: | | 1-May-00 | | 1-May-00 | | 1-May-00 | | 5-May-00 | | 5-May-00 | | |
| Parameters | CAS # | Screening Level | | | | | | | | | | | | | | | | |
| | | Florida MCL/SMCL[1] | | Federal MCL/SMCL[2] | | | | | | | | | | | | | | |
| | | MCL | SMCL | MCL | SMCL | | | | | | | | | | | | | |
| VOCs - SW8260B (ug/L) | | | | | | | | | | | | | | | | | | |
| Acetone | 67641 | - | - | - | - | 57 | | 10 | U | 10 | U | 41 | | 10 | U | | | |
| Benzene | 71432 | 1 | - | 5 | - | 1 | U | 0.7 | J | 0.41 | J | 8.8 | M | 2.8 | | | | |
| Bromodichloromethane | 75254 | 100 | - | 100 | - | 4.8 | | 1 | U | 1 | U | 1 | U | 1 | U | | | |
| Bromoform | 75252 | 100 | - | 100 | - | 0.67 | J | 1 | U | 1 | U | 1 | U | 1 | U | | | |
| Bromomethane | 74839 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | | |
| Butanone, 2- | 78933 | - | - | - | - | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | | | |
| Carbon disulfide | 75150 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | | |
| Carbon tetrachloride | 56235 | 3 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U | 0.52 | J | | | |
| Chlorobenzene | 108907 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 0.93 | J | 1 | U | | | |
| Chloroethane | 75003 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | | |
| Chloroform | 676663 | 100 | - | 100 | - | 5 | | 1 | U | 0.83 | J | 1 | U | 3.4 | | | | |
| Chloromethane | 74873 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | | |
| Dibromochloromethane | 124481 | 100 | - | 100 | - | 3.9 | | 1 | U | 1 | U | 1 | U | 1 | U | | | |
| Dichloroethane, 1,1- | 75343 | - | - | - | - | 1 | U | 0.35 | J | 1 | U | 1 | U | 3.9 | | | | |
| Dichloroethane, 1,2- | 107062 | 3 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | | |
| Dichloroethene, 1,1- | 75354 | 7 | - | 7 | - | 1 | U | 1 | U | 1 | U | 0.41 | J | 3.4 | | | | |
| Dichloroethene, cis-1,2- | 156592 | 70 | - | 70 | - | 1.5 | | 22 | | 3.6 | | 8 | | 620 | D M | | | |
| Dichloroethene, trans-1,2- | 156605 | 100 | - | 100 | - | 1 | U | 0.26 | J | 1 | U | 1 | U | 2.3 | | | | |
| Dichloropropane, 1,2- | 78875 | 5 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | | |
| Dichloropropene, cis-1,3- | 100061015 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | | |
| Dichloropropene, trans-1,3- | 10061026 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | | |
| Ethylbenzene | 100414 | 700 | 30 | 700 | - | 1 | U | 1 | U | 1 | U | 0.19 | J | 1 | U | | | |
| Hexanone, 2- | 73663715 | - | - | - | - | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | | | |
| Methyl-2-pentanone, 4- | 108101 | - | - | - | - | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | | | |
| Methylene chloride | 75092 | 5 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | | |
| Styrene | 100425 | 100 | - | 100 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | | |
| Tetrachloroethane, 1,1,2,2- | 79345 | - | - | - | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | | |
| Tetrachloroethene | 127184 | 3 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | | |
| Toluene | 108883 | 1000 | 40 | 1000 | - | 1 | U | 1 | U | 1 | U | 0.63 | J | 1 | U | | | |
| Trichloroethane, 1,1,1- | 71556 | 200 | - | 200 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | | |
| Trichloroethane, 1,1,2- | 79005 | 5 | - | 5 | - | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | | | |
| Trichloroethene | 79016 | 3 | - | 5 | - | 1 | U | 0.64 | J | 21 | M | 0.82 | J | 480 | D M | | | |
| Vinyl chloride | 75014 | 1 | - | 2 | - | 4.4 | M | 31 | D M | 1 | U | 1.5 | | 160 | D M | | | |
| Xylenes, total | 1330207 | 10000 | 20 | 10000 | - | 1 | U | 1 | U | 1 | U | 0.78 | J | 1 | U | | | |

Notes:

1 - Florida MCL/SMCL: Maximum Contaminant Levels (MCLs) or Secondary MCLs (SMCLs) as defined in the Florida Primary and Secondary Drinking Water Standards (F.A.C. 62-550) dated June 1994.

2 - Federal MCL/SMCL: Maximum Contaminant Levels (MCLs) or Secondary MCLs (SMCLs) as defined in the Federal Drinking Water Regulations and Health Advisories, Office of Water dated October 1996.

**bold** - Analyte was detected in sample.

M -Detected concentration exceeded Florida and/or Federal MCL.

3 -sampling depth in feet mean sea level

Laboratory Qualifiers:

U - Analyte not detected.

J - Estimated result; result is less than reporting limit.

B - Associated method blank contains target analyte.

E - Estimated result; result concentration exceeds the calibration range.

D - Result was obtained from analysis of a dilution.

e 4
Screening Summary
nd Intermediate Ground Water Assessment
tries Site, Madison, FL
2000

| ILP35 | OBGDMLP36 | | OBGDMLP36 | | OBGDMLP36 | | OBGDMLP37 | | OBGDMLP37 | | OBGDMLP37 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| -00 | 148 | | 97 | | 64 | | 149 | | 111 | | 80 |
| | 5-May-00 | | 6-May-00 | | 5-Jun-00 | | 3-May-00 | | 3-May-00 | | NS |
| U | 10 | U | 40 | | 10 | U | 10 | U | 10 | U | NS |
| J | 0.54 | J | 3.9 | | 0.54 | J | 8.6 | M | 2.3 | | NS |
| J | 1 | U | 1 | U | 0.53 | J | 1 | U | 1 | U | NS |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | NS |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | NS |
| J | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | NS |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | NS |
| J | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | NS |
| J | 1 | U | 1 | | 1 | U | 1 | U | 1 | U | NS |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | NS |
| | 1 | U | 1 | U | 0.63 | J | 1 | U | 1 | U | NS |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | NS |
| | 1 | U | 1 | U | 0.82 | J | 1 | U | 1 | U | NS |
| | 1 | U | 40 | | 1.6 | | 1 | U | 46 | D | NS |
| | 2 | | 1 | U | 1 | U | 1 | U | 1 | U | NS |
| | 0.21 | J | 41 | D M | 6 | | 1 | U | 48 | D M | NS |
| M | 4.7 | | 15000 | D M | 1300 | D M | 0.24 | J | 16000 | D M | NS |
| | 1 | U | 58 | | 3.1 | | 1 | U | 50 | D | NS |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | NS |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | NS |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | NS |
| | 1 | U | 150 | | 1 | U | 1 | U | 9.5 | | NS |
| | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | NS |
| | 10 | U | 10 | U | 10 | U | 10 | U | 10 | U | NS |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | NS |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | NS |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | NS |
| | 1.2 | | 1 | U | 0.93 | J | 1 | U | 1 | U | NS |
| | 1 | U | 1000 | D M | 4.2 | | 1 | U | 170 | D | NS |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | NS |
| | 1 | U | 1 | U | 1 | U | 1 | U | 1 | U | NS |
| M | 16 | M | 3 | | 2400 | D M | 1 | U | 410 | D M | NS |
| M | 0.47 | J | 12000 | D M | 130 | JD M | 0.35 | J | 9500 | D M | NS |
| | 1 | U | 600 | | 3.1 | | 0.7 | J | 270 | D | NS |

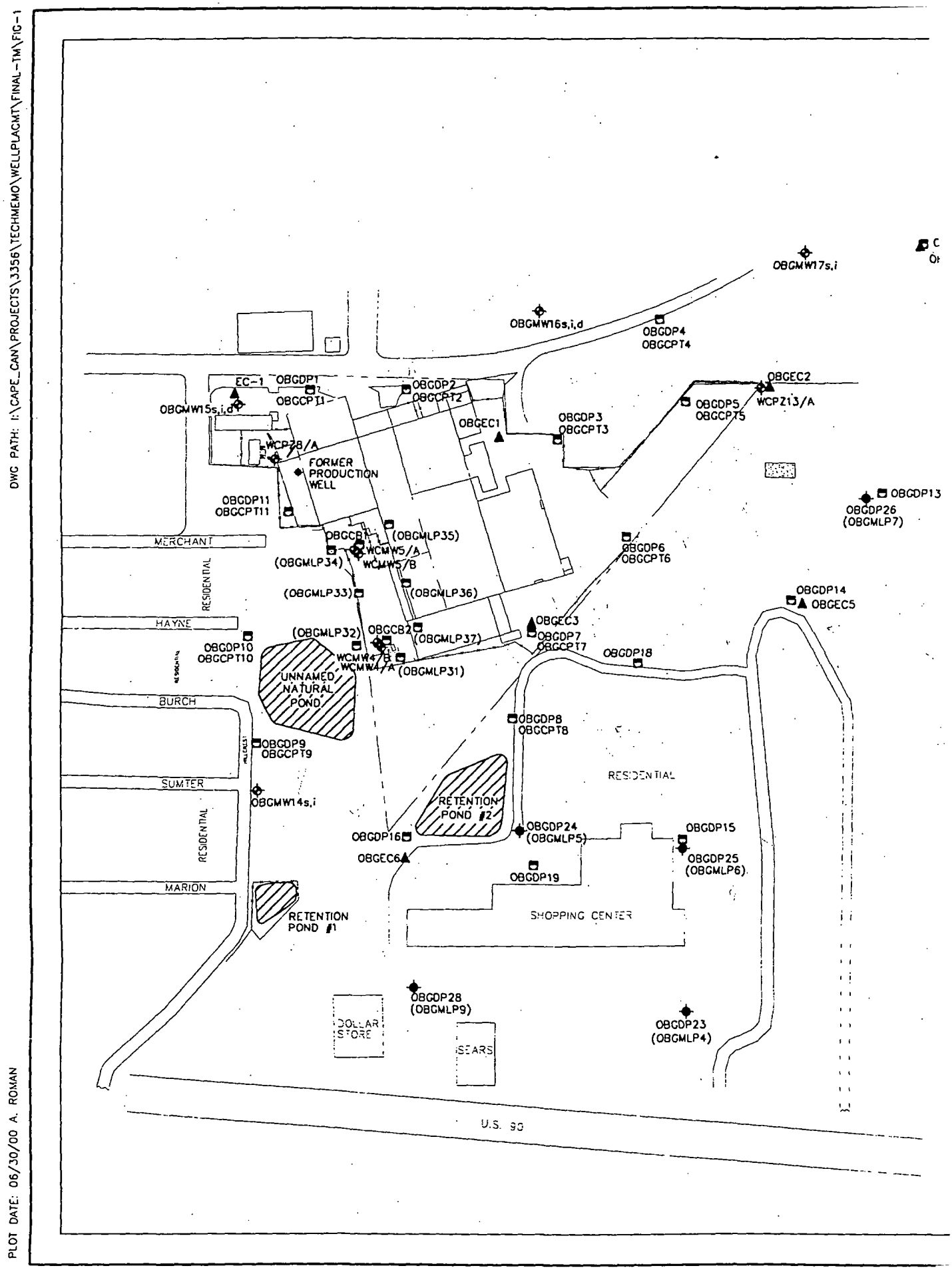
Table 5
Ground Water Analytical Results Summary (WCMW 4A/B and 5A/B)
Final TM Addendum for Shallow and Intermediate Ground Water Assessment
Former Thompson Industries Site, Madison FL.
June 30, 2000

| Sample ID | WCMW5/A | | WCMW5/B | | WCMW4/A | | WCMW4/B | |
|---|---|---|---|---|---|---|---|---|
| Date | 8/95 | 4/26/00 | 8/96 | 4/26/00 | 8/95 | 4/26/00 | 8/96 | 4/26/00 |
| PARAMETER | | | | | | | | |
| | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L | ug/L |
| | | | | | | | | |
| Benzene | <5000 | 7.0 J | <100 | 16 | 13 | 11 | < 1.0 | 1.2 |
| 1,1- Dichloroethene | NA | 31 | NA | 4.4 | NA | ND | ND | 3.2 |
| 1,1 Dichoroethane | NA | 120 | < 1 | 16 | NA | ND | NA | 2.7 |
| 1,4 Dichlorobenzene | NA | ND | < 1 | ND | NA | ND | NA | ND |
| Chlorobenzene | NA | ND | < 1 | ND | NA | 0.61 J | NA | ND |
| Chloroethane | NA | ND | < 1 | ND | NA | ND | NA | ND |
| cis-1,2 Dichloroethene | 63000 | 65000 D | 31,000 | 930 D | 39 | ND | 5500 | 1400 D |
| Ethlybenzene | <5000 | 350 JD | 340 | 41 D | 28 | ND | < 1.0 | 58 JD |
| Toluene | <5000 | 3200 D | 4,100 | 16 | 13 | ND | 550 | 480 D |
| trans-1,2-Dichloroethene | NA | ND | NA | 12 | NA | ND | ND | 4 |
| Trichloroethene | NA | ND | NA | 49 JD | NA | ND | ND | ND |
| Vinyl chloride | 22000 | 27000 D | 44,000 | 220 D | <5.0 | 0.66 J | 520 | 200 D |
| Xylenes (total) | <5000 | 850 D | 1,600 | 19 | 76 | ND | < 1.0 | 220 D |

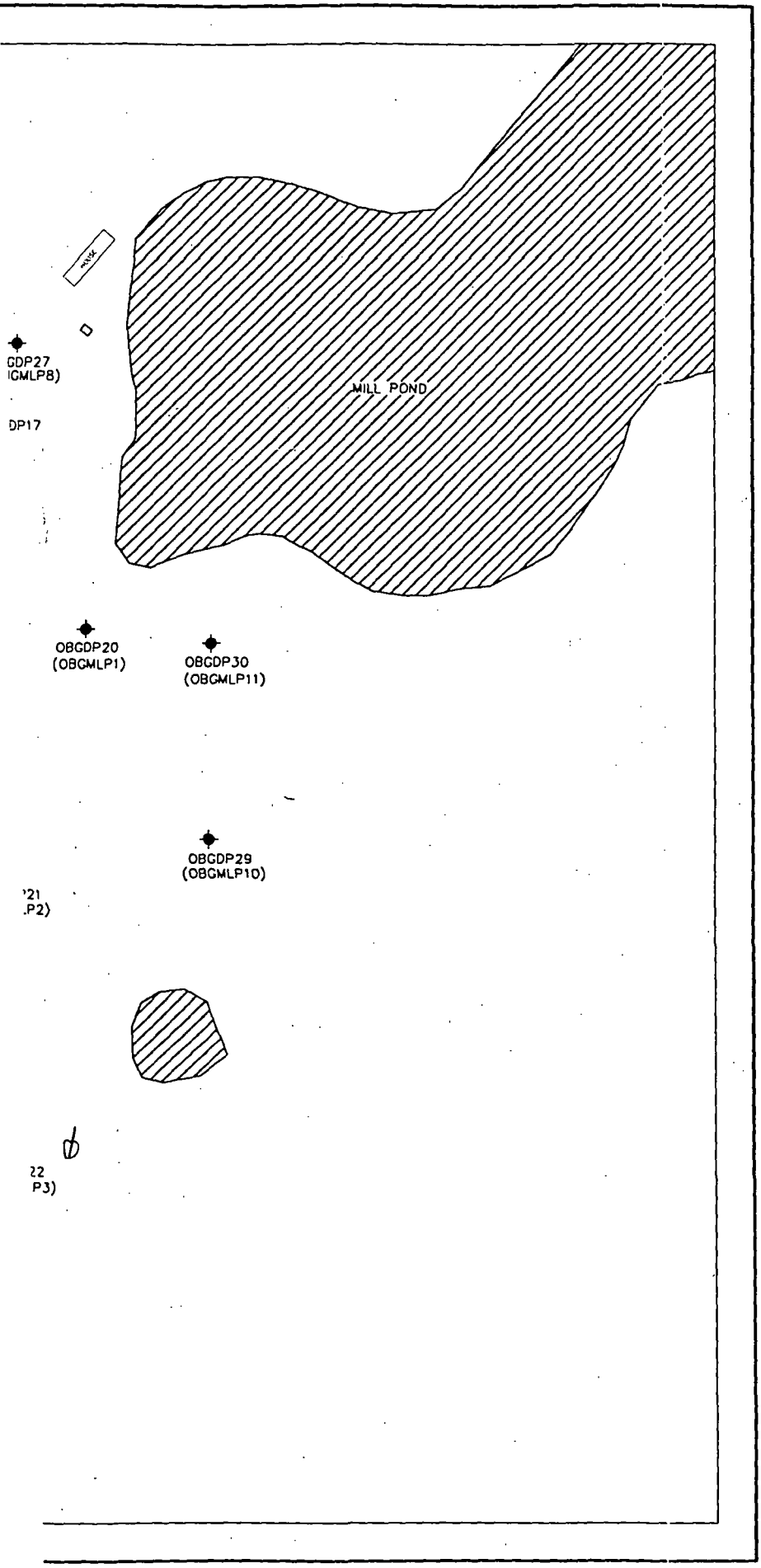
Notes:

Laboratory Qualifiers:

J - Estimated result is less than reporting limit.
D - Result was obtained from analysis of a dilution.
NA - Parameter was not analyzed
ND - Non Detect


DWG PATH: I:\CAPE_CAN\PROJECTS\3356\TECHMEMO\WELLPLACMT\FINAL-TM\FIG-1
PLOT DATE: 06/30/00 A. ROMAN
OBGMW17s,i
OBGMW16s,i,d
OBGDP4
OBGCPT4
EC-1
OBGDP1
OBGCPT1
OBGDP2
OBGCPT2
OBGMW15s,i,d
OBGEC2
WCPZ13/A
OBGDP5
OBGCPT5
OBGEC1
OBGDP3
OBGCPT3
WCP28/A
FORMER PRODUCTION WELL
OBGDP13
OBGDP26
(OBGMLP7)
OBGDP11
OBGCPT11
MERCHANT
OBGCB1
(OBGMLP35)
WCMW5/A
WCMW5/B
(OBGMLP34)
OBGDP6
OBGCPT6
(OBGMLP33)
(OBGMLP36)
RESIDENTIAL
OBGDP14
OBGEC5
HAYNE
OBGEC3
OBGDP7
OBGCPT7
OBGDP10
OBGCPT10
(OBGMLP32)
OBGCB2
(OBGMLP37)
OBGDP18
WCMW4/B
WCMW4/A
(OBGMLP31)
UNNAMED NATURAL POND
BURCH
OBGDP8
OBGCPT8
OBGDP9
OBGCPT9
RESIDENTIAL
SUMTER
OBGMW14s,i
RETENTION POND #2
OBGDP24
(OBGMLP5)
OBGDP15
OBGDP16
OBGEC6
OBGDP25
(OBGMLP6)
OBGDP19
MARION
SHOPPING CENTER
RETENTION POND #1
OBGDP28
(OBGMLP9)
DOLLAR STORE
SEARS
OBGDP23
(OBGMLP4)
U.S. 90

# FIGURE 1




## LEGEND

- CONCRETE
- ASPHALT
- FENCE
- APPROXIMATE PROPERTY BOUNDARY
- OBGMW16 — MONITORING WELLS
- OBGMLP1 — GROUND WATER SCREENING POINT/MULTI-LEVEL PIEZOMETER LOCATIONS
- ENVIROCORE SOIL BORING LOCATION
- OBGDP11 — EXISTING CPT/DP LOCATION

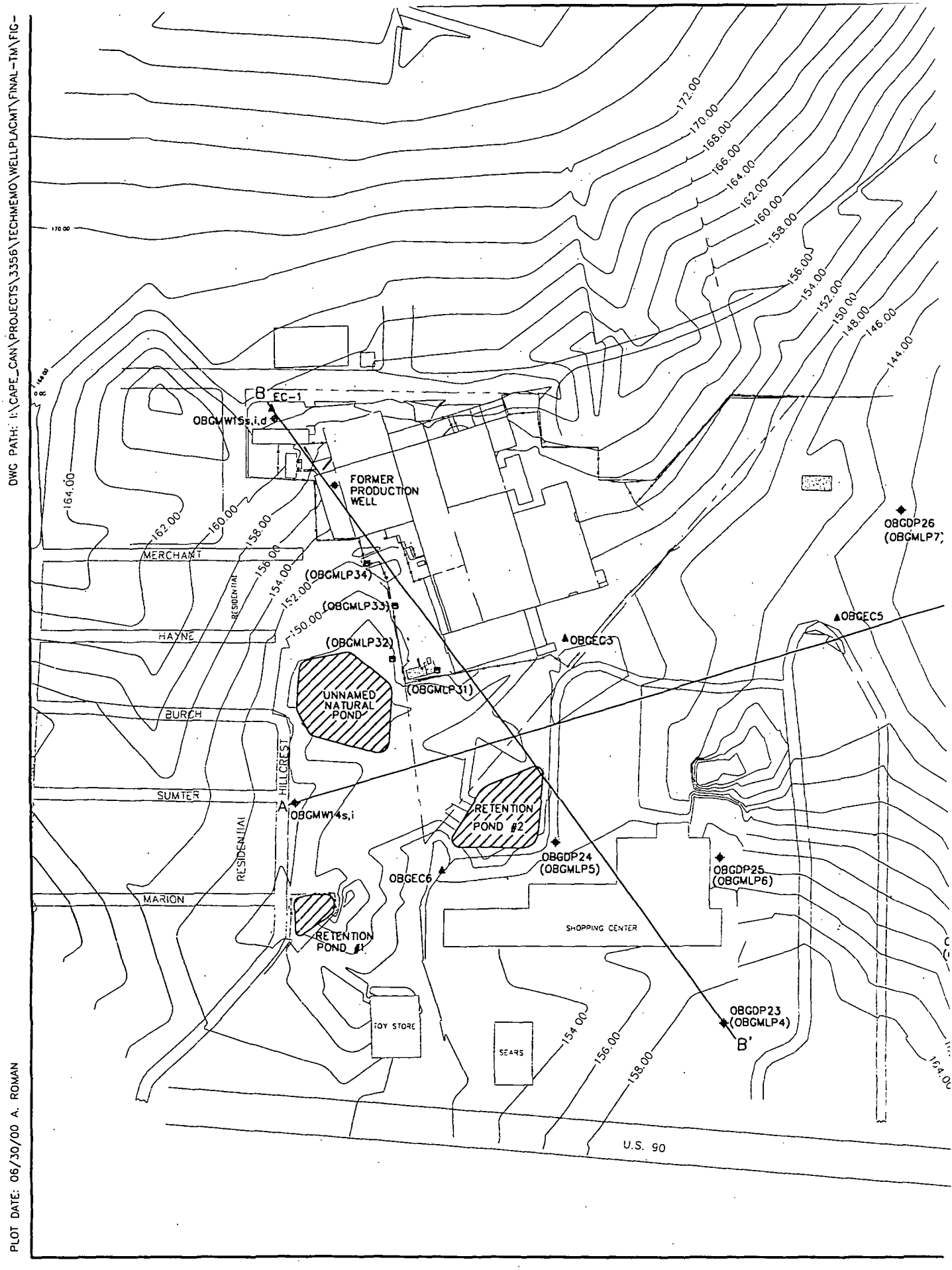
FORMER THOMPSON INDUSTRIES SITE
MADISON, FL.

# SITE SAMPLE/BORING LOCATIONS MAP

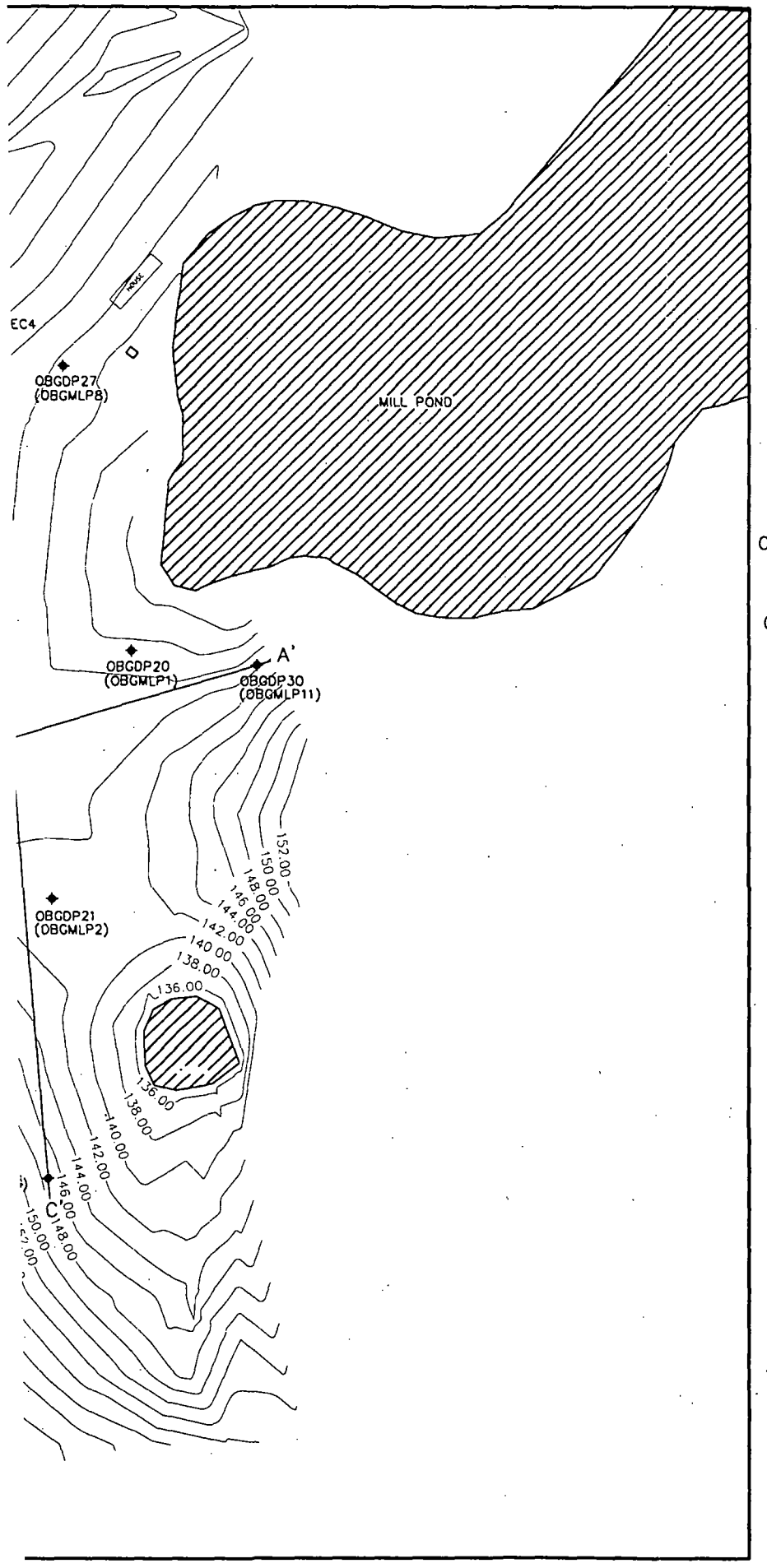
1"=200' 200 0 200

FILE NO. 3356.22992
JUNE, 2000

O'BRIEN & GERE
ENGINEERS INC.


DWG PATH: I:\CAPE_CAN\PROJECTS\3356\TECHMEMO\WELLPLACMT\FINAL-TM\FIG-
PLOT DATE: 06/30/00 A. ROMAN
B
EC-1
OBGMW15s,i,d
FORMER PRODUCTION WELL
OBGDP26 (OBGMLP7)
MERCHANT
HAYNE
BURCH
SUMTER
MARION
RESIDENTIAL
HILLCREST
(OBGMLP34)
(OBGMLP33)
(OBGMLP32)
(OBGMLP31)
OBGEC3
OBGEC5
UNNAMED NATURAL POND
A
OBGMW14s,i
RETENTION POND #2
OBGDP24 (OBGMLP5)
OBGEC6
OBGDP25 (OBGMLP6)
SHOPPING CENTER
RETENTION POND #1
TOY STORE
SEARS
OBGDP23 (OBGMLP4)
B'
U.S. 90
172.00
170.00
168.00
166.00
164.00
162.00
160.00
158.00
156.00
154.00
152.00
150.00
148.00
146.00
144.00

# FIGURE 2




CONCRETE

ASPHALT

FENCE

APPROXIMATE PROPERTY BOUNDARY

OBGMW16 MONITORING WELLS

OBGMLP1 GROUND WATER SCREENING POINT/MULTI-LEVEL PIEZOMETER LOCATIONS

ENVIROCORE SOIL BORING LOCATION

FORMER THOMPSON INDUSTRIES SITE
MADISON, FL.

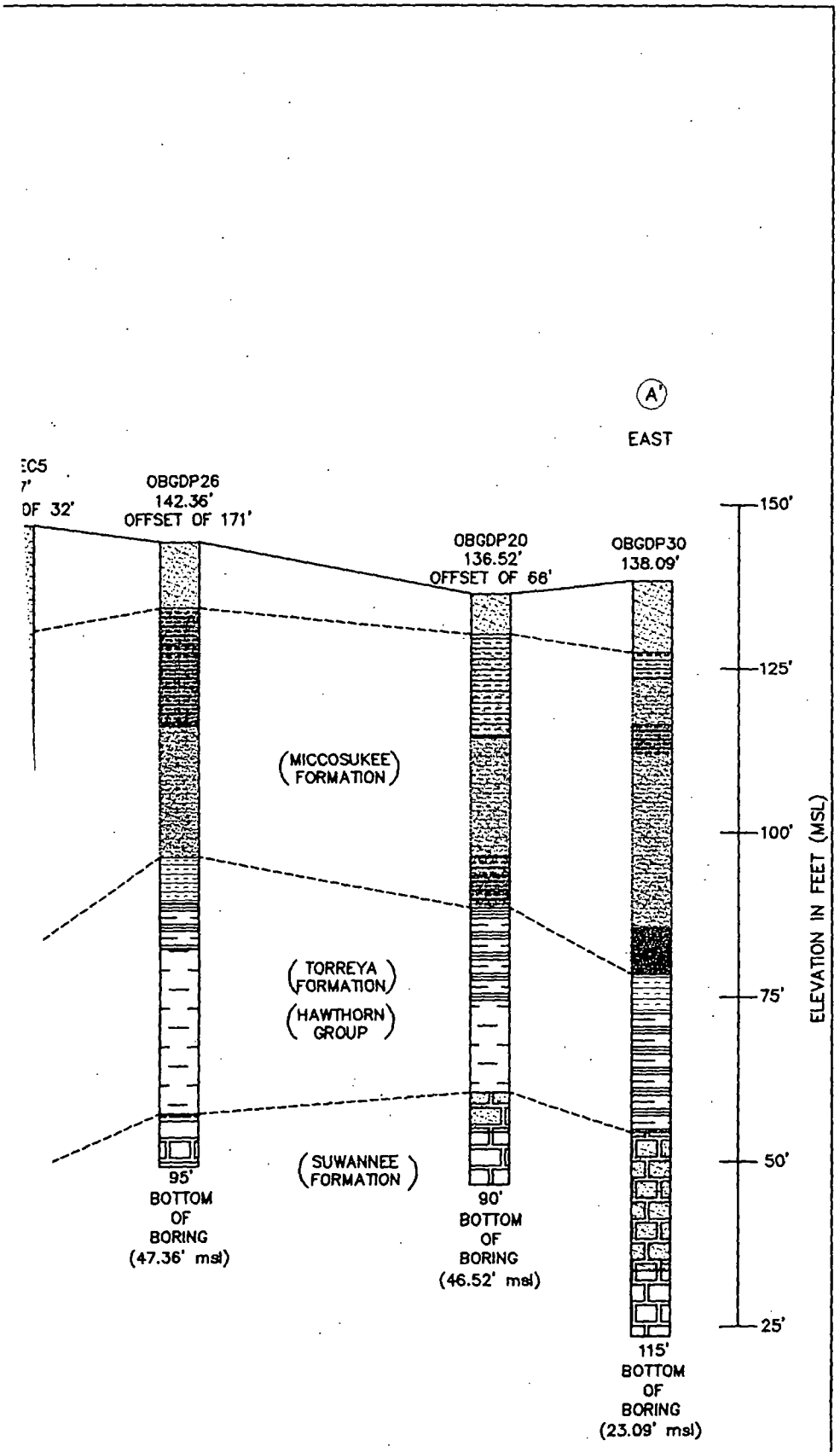
## SITE TOPOGRAPHY AND LOCATION OF CROSS-SECTION TRANSECTS

1"=200' 200 0 200

FILE NO. 3356.22992
JUNE, 2000

O'BRIEN & GERE
ENGINEERS INC.

# FIGURE 3




## LEGEND

163.06 ELEVATION ft-msl

- FINE TO MEDIUM GRAIN, QTZ. SAND W/TRACE TO SOME SILT (FILL)
- GREENISH-GRAY CLAY AND/OR SILT TO NO SILT AND/OR FINE TO COARSE SAND TO NO SAND
- MOTTLED LIGHT GRAY FINE TO MEDIUM QTZ SAND, AND/OR SILT TO NO SILT AND/OR CL TO NO CLAY
- MOTTLED LIGHT GRAY AND BROWN FINE TO MEDIUM QTZ SAND, AND/OR SILT TO NO SILT AND/OR CLAY TO NO CLAY
- MOTTLED LIGHT BROWN QTZ SAND AND/OR SILT TO NO SILT AND/OR CLAY TO NO CLAY
- LIGHT GREENISH GRAY CLAY MOTTLED AND/OR SAND TO NO SAND AND/OR SILT TO NO SILT WITH TRACE WHITE PEBBLES (PHOSPHATE)
- LIGHT GREENISH GRAY FINE TO MEDIUM QTZ SAND WITH NO TO LITTLE CLAY WITH NO TO TRACE WHITE (PEBBLES) PHOSPHATE AND TRACE TO SOME GRAVEL OR NODULES/CONCRECTIONS
- FINE TO MEDIUM QTZ SAND W/LITTLE TO SOME SILT AND/OR CLAY BROWNISH-ORANGE, AND/OR TRACE TO SOME PEBBLE AND GRAVEL
- BROWNISH TO YELLOW-GREY FINE TO MEDIUM QTZ SAND W/NO TO SOME CLAY AND/OR SILT AND NO TO TRACE CONCRETIONS
- CHALKY WHITE LIMESTONE AND CLAY
- WEATHERED CLAY AND/OR SOME FRIABLE LIMESTONE FRAGMENTS/SAND, LITTLE TO NO FOSSILS, LIGHT GRAY TO WHITE (MARL)
- INFERRED LITHOLOGIC CONTACT

## FORMER THOMPSON INDUSTRIES SITE MADISON, FL.

VERTICAL EXAGGERATION = 6X

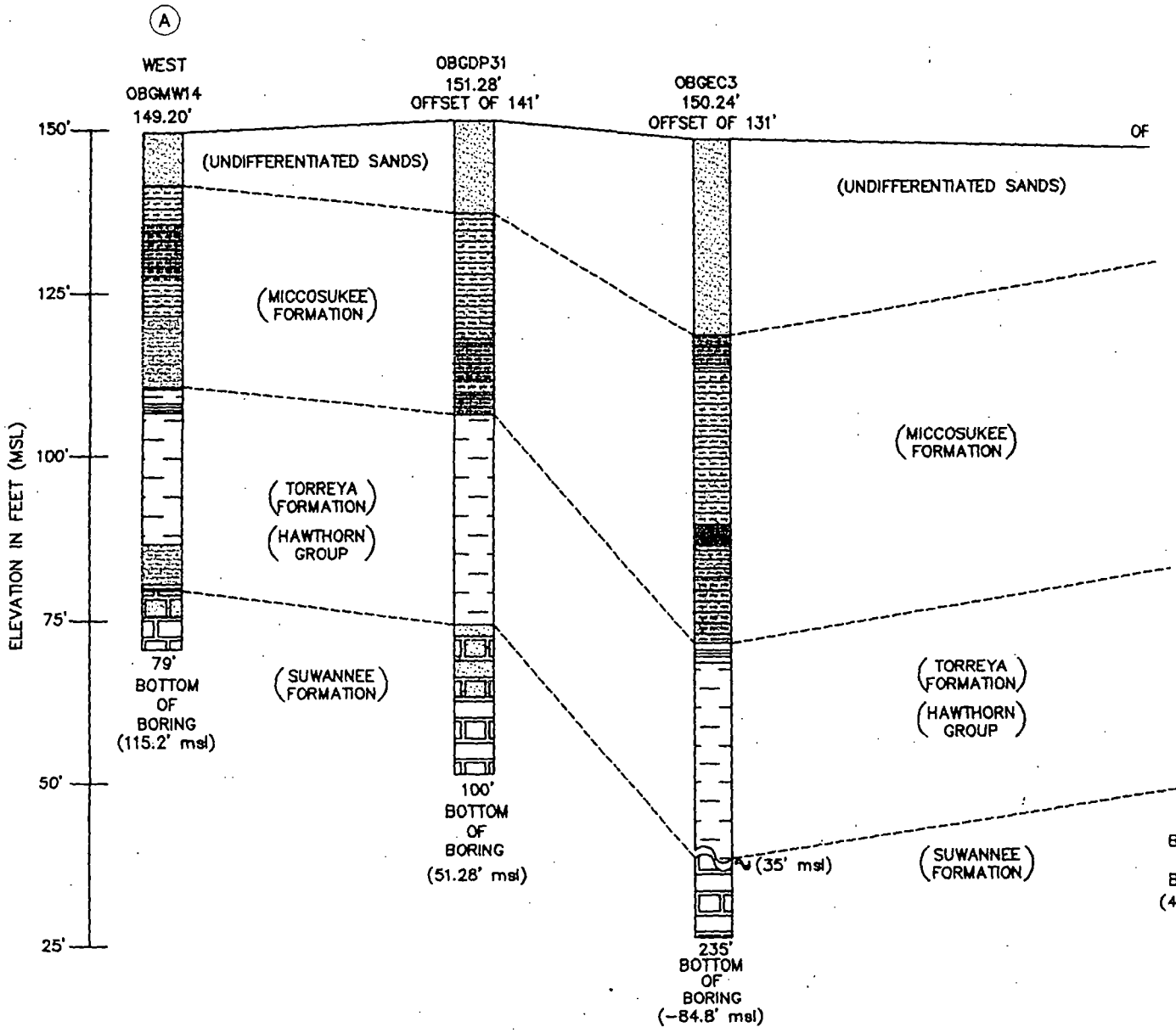
## CONCEPTUAL GEOLOGIC CROSS SECTION A-A'

150 0 150

06/30/00

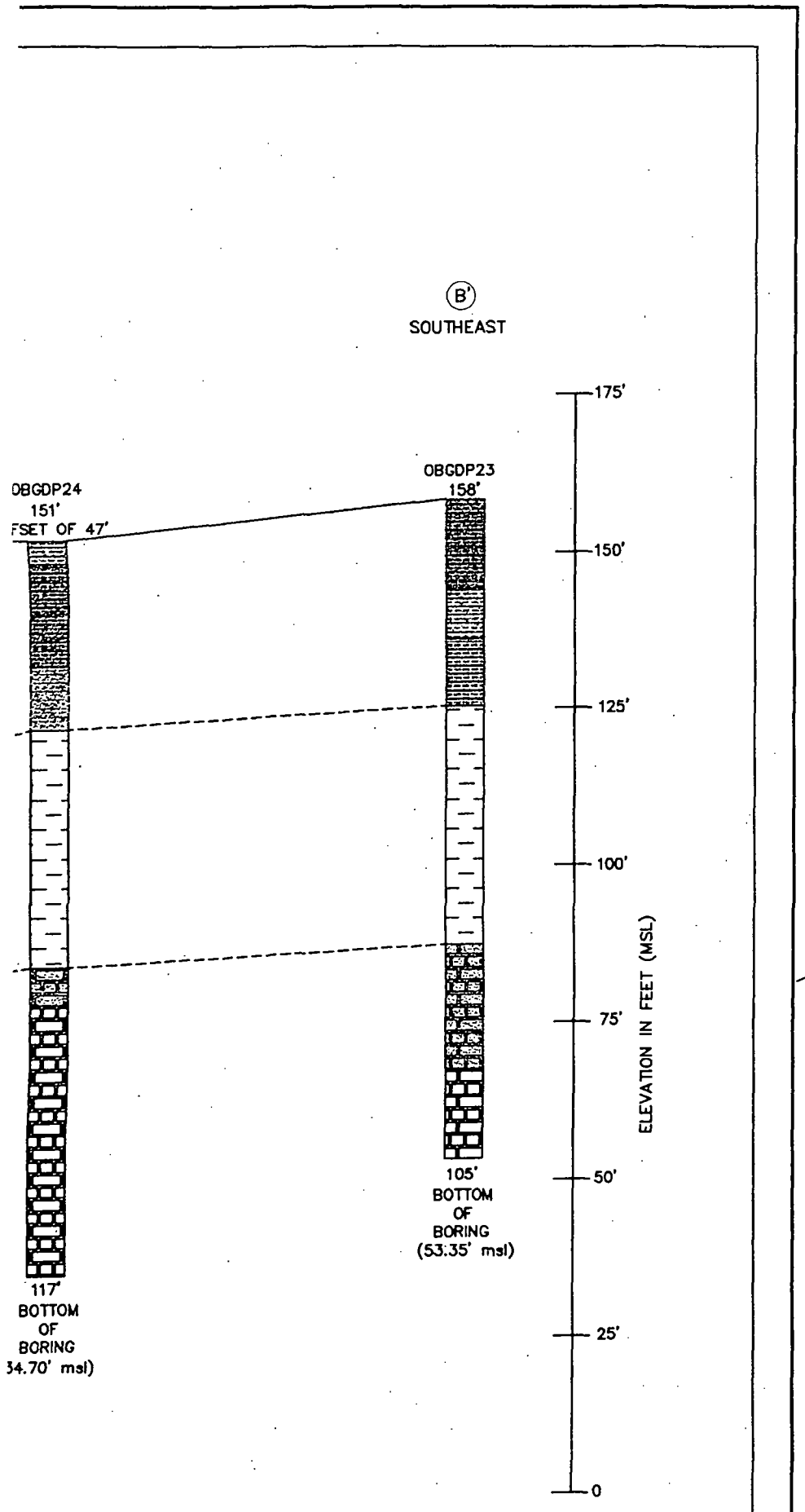
FILE NO.22992

OBRIEN & GERE ENGINEERS




DWG PATH: I:\CAPE_CAN\PROJECTS\3356\22992\8_DWGS\TECHMEMO\WELLPLAC (NAL-
PLOT DATE: 06/30/00

# FIGURE 4




## LEGEND

163.06 ELEVATION ft-msl

FINE TO MEDIUM GRAIN, QTZ. SAND W/TRACE TO SOME SILT (FILL)

GREENISH-GRAY CLAY AND/OR SILT TO NO SILT AND/OR FINE TO COARSE SAND TO NO SAND

MOTTLED LIGHT GRAY FINE TO MEDIUM QTZ SAND, AND/OR SILT TO NO SILT AND/OR CLAY TO NO CLAY

MOTTLED LIGHT GRAY AND BROWN FINE TO MEDIUM QTZ SAND, AND/OR SILT TO NO SILT AND/OR CLAY TO NO CLAY

MOTTLED LIGHT BROWN QTZ SAND AND/OR SILT TO NO SILT AND/OR CLAY TO NO CLAY

LIGHT GREENISH GRAY CLAY MOTTLED AND/OR SAND TO NO SAND AND/OR SILT TO NO SILT WITH TRACE WHITE PEBBLES (PHOSPHATE)

LIGHT GREENISH GRAY FINE TO MEDIUM QTZ SAND WITH NO TO LITTLE CLAY WITH NO TO TRACE WHITE (PEBBLES) PHOSPHATE AND TRACE TO SOME GRAVEL OR NODULES/CONCRECTIONS

FINE TO MEDIUM QTZ SAND W/LITTLE TO SOME SILT AND/OR CLAY BROWNISH-ORANGE, AND/OR TRACE TO SOME PEBBLE AND GRAVEL

BROWNISH TO YELLOW-GREY FINE TO MEDIUM QTZ SAND W/NO TO SOME CLAY AND/OR SILT AND NO TO TRACE CONCRETIONS

CHALKY WHITE LIMESTONE AND CLAY

WEATHERED CLAY AND/OR SOME FRIABLE LIMESTONE FRAGMENTS/SAND, LITTLE TO NO FOSSILS, LIGHT GRAY TO WHITE (MARL)

INFERRED LITHOLOGIC CONTACT

# FORMER THOMPSON INDUSTRIES SITE MADISON, FL.

VERTICAL EXAGGERATION = 6X

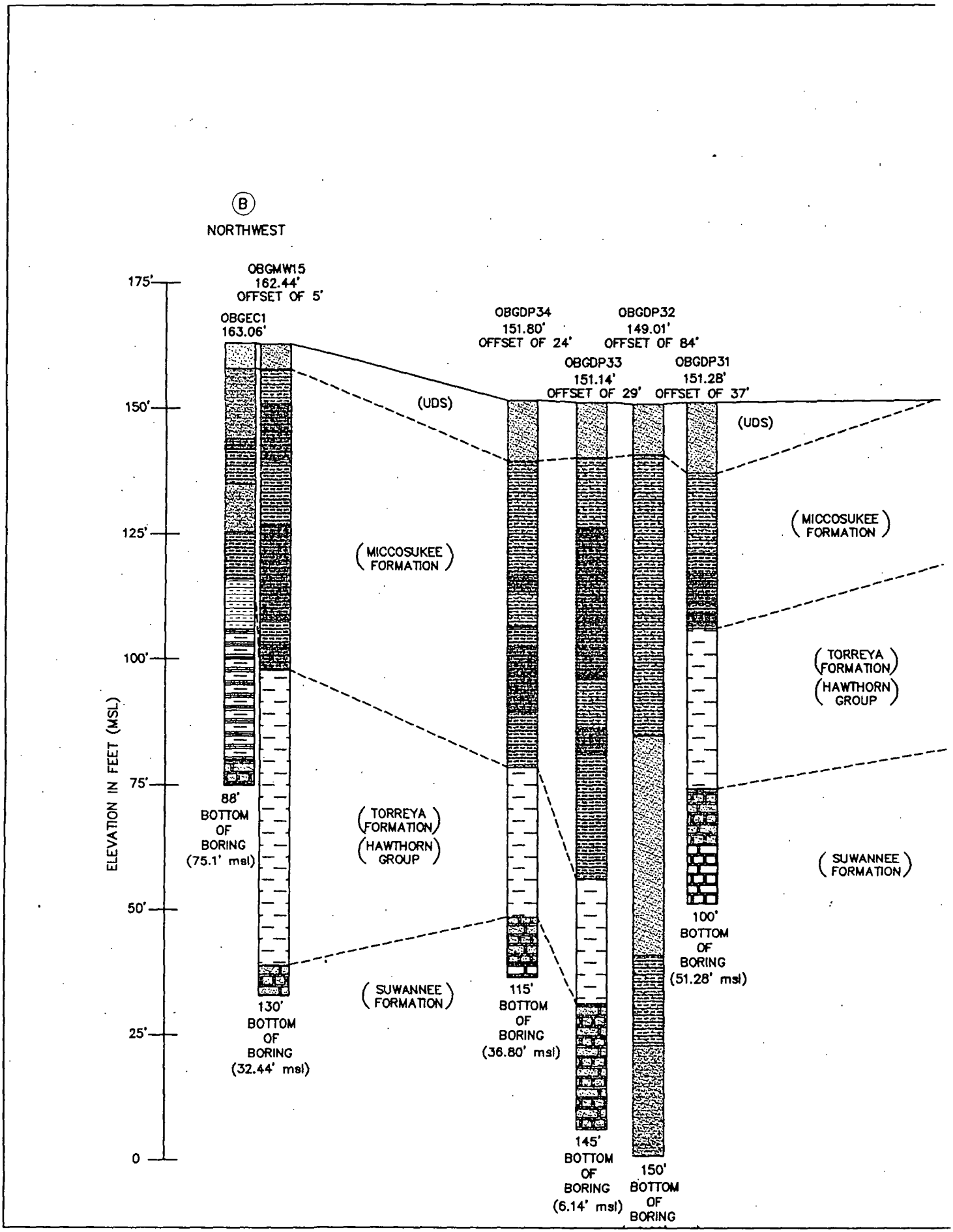
# CONCEPTUAL GEOLOGIC CROSS SECTION B-B'

150 0 150

06/30/00

FILE NO.22992

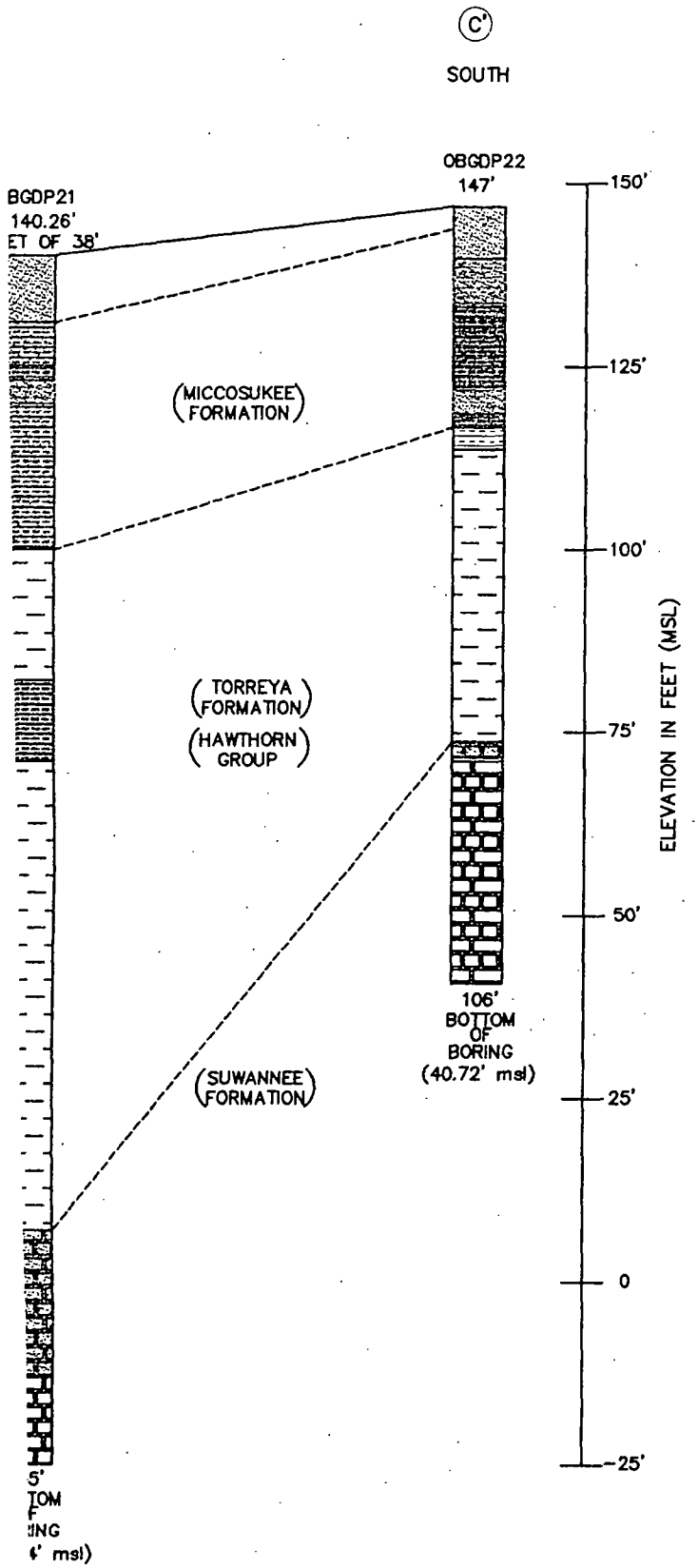
O'BRIEN & GERE ENGINEERS INC.




PLOT DATE:C /00

DWG PATH:I:CAPE_CAN\PROJECTS\3356\22992\8_DWGS\TECHMEMO\WELLP (\FINAL-TM

# FIGURE 5




## LEGEND

163.06 ELEVATION ft-msl

- FINE TO MEDIUM GRAIN, QTZ. SAND W/TRACE TO SOME SILT (FILL)
- GREENISH-GRAY CLAY AND/OR SILT TO NO SILT AND/OR FINE TO COARSE SAND TO NO SAND
- MOTTLED LIGHT GRAY FINE TO MEDIUM QTZ SAND, AND/OR SILT TO NO SILT AND/OR CLAY TO NO CLAY
- MOTTLED LIGHT GRAY AND BROWN FINE TO MEDIUM QTZ SAND, AND/OR SILT TO NO SILT AND/OR CLAY TO NO CLAY
- MOTTLED LIGHT BROWN QTZ SAND AND/OR SILT TO NO SILT AND/OR CLAY TO NO CLAY
- LIGHT GREENISH GRAY CLAY MOTTLED AND/OR SAND TO NO SAND AND/OR SILT TO NO SILT WITH TRACE WHITE PEBBLES (PHOSPHATE)
- LIGHT GREENISH GRAY FINE TO MEDIUM QTZ SAND WITH NO TO LITTLE CLAY WITH NO TO TRACE WHITE (PEBBLES) PHOSPHATE AND TRACE TO SOME GRAVEL OR NODULES/CONCRECTIONS
- FINE TO MEDIUM QTZ SAND W/LITTLE TO SOME SILT AND/OR CLAY BROWNISH-ORANGE, AND/OR TRACE TO SOME PEBBLE AND GRAVEL
- BROWNISH TO YELLOW-GREY FINE TO MEDIUM QTZ SAND W/NO TO SOME CLAY AND/OR SILT AND NO TO TRACE CONCRETIONS
- CHALKY WHITE LIMESTONE AND CLAY
- WEATHERED CLAY AND/OR SOME FRIABLE LIMESTONE FRAGMENTS/SAND, LITTLE TO NO FOSSILS, LIGHT GRAY TO WHITE (MARL)
- INFERRED LITHOLOGIC CONTACT

# FORMER THOMPSON INDUSTRIES SITE MADISON, FL.

VERTICAL EXAGGERATION = 6X

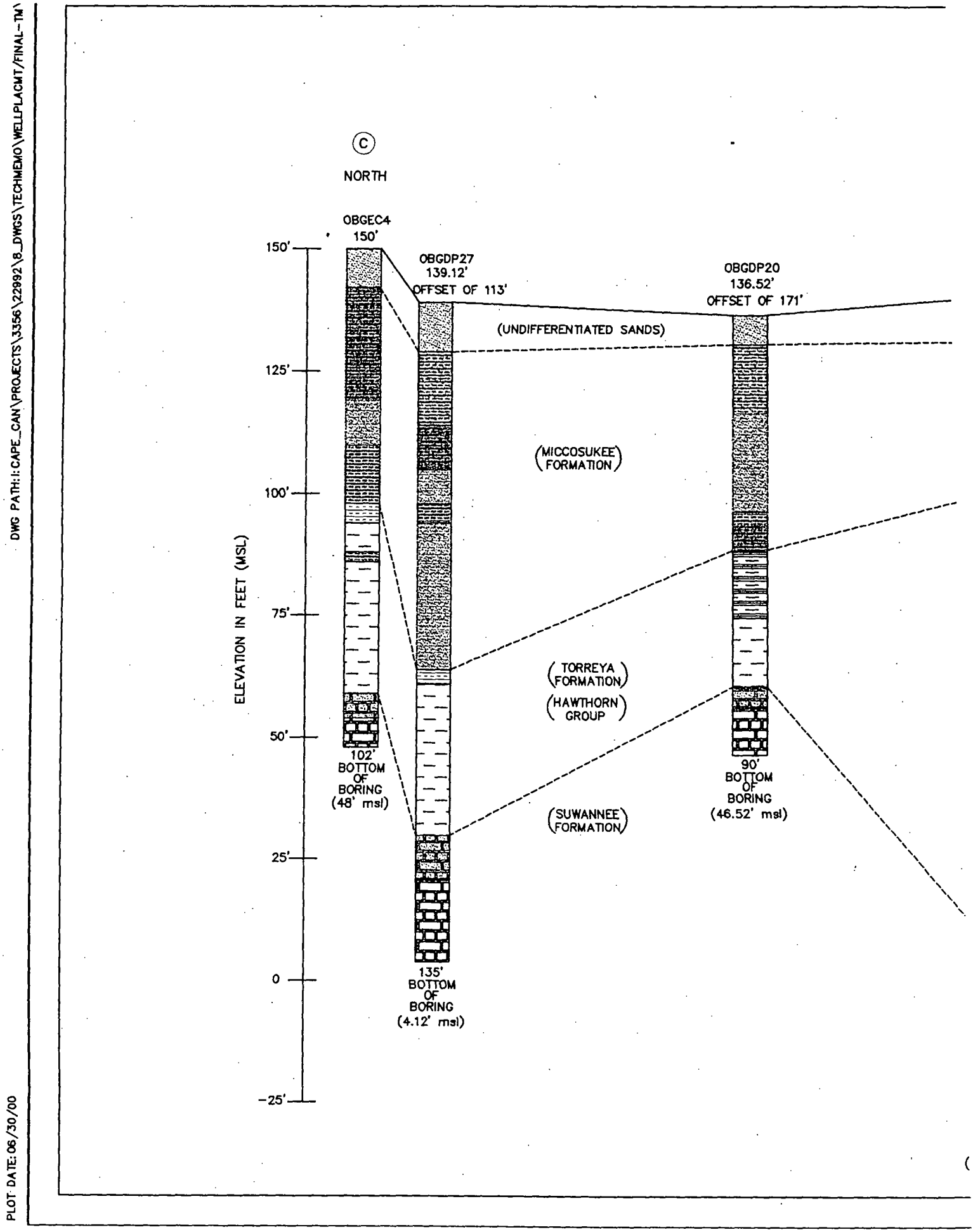
# CONCEPTUAL GEOLOGIC CROSS SECTION C-C'

150 0 150

06/30/00

FILE NO.22992

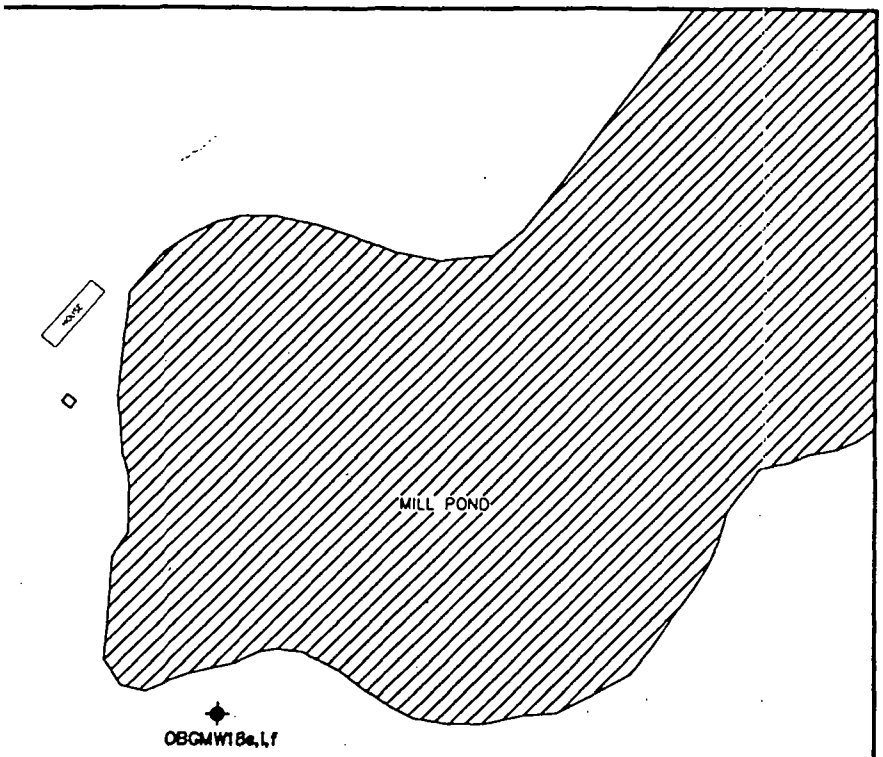
O'BRIEN & GERE ENGINEERS INC.

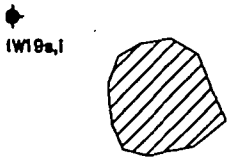



DWG PATH: I:\CAPE_CAN\PROJECTS\3356\22992\8_DWGS\TECHMEMO\WELLPLACMT/FINAL-TM\

PLOT DATE: 06/30/00

# FIGURE 16




LEGEND

- CONCRETE
- ASPHALT
- FENCE
- APPROXIMATE PROPERTY BOUNDARY
- OBGMW 17s,17i — MONITORING WELLS
- OBGMW 22i — PROPOSED MONITORING WELL

FORMER THOMPSON INDUSTRIES SITE
MADISON, FL.

## PROPOSED MONITORING WELL LOCATIONS

1"=200' 200 0 200

FILE NO. 3356.22992
JUNE, 2000

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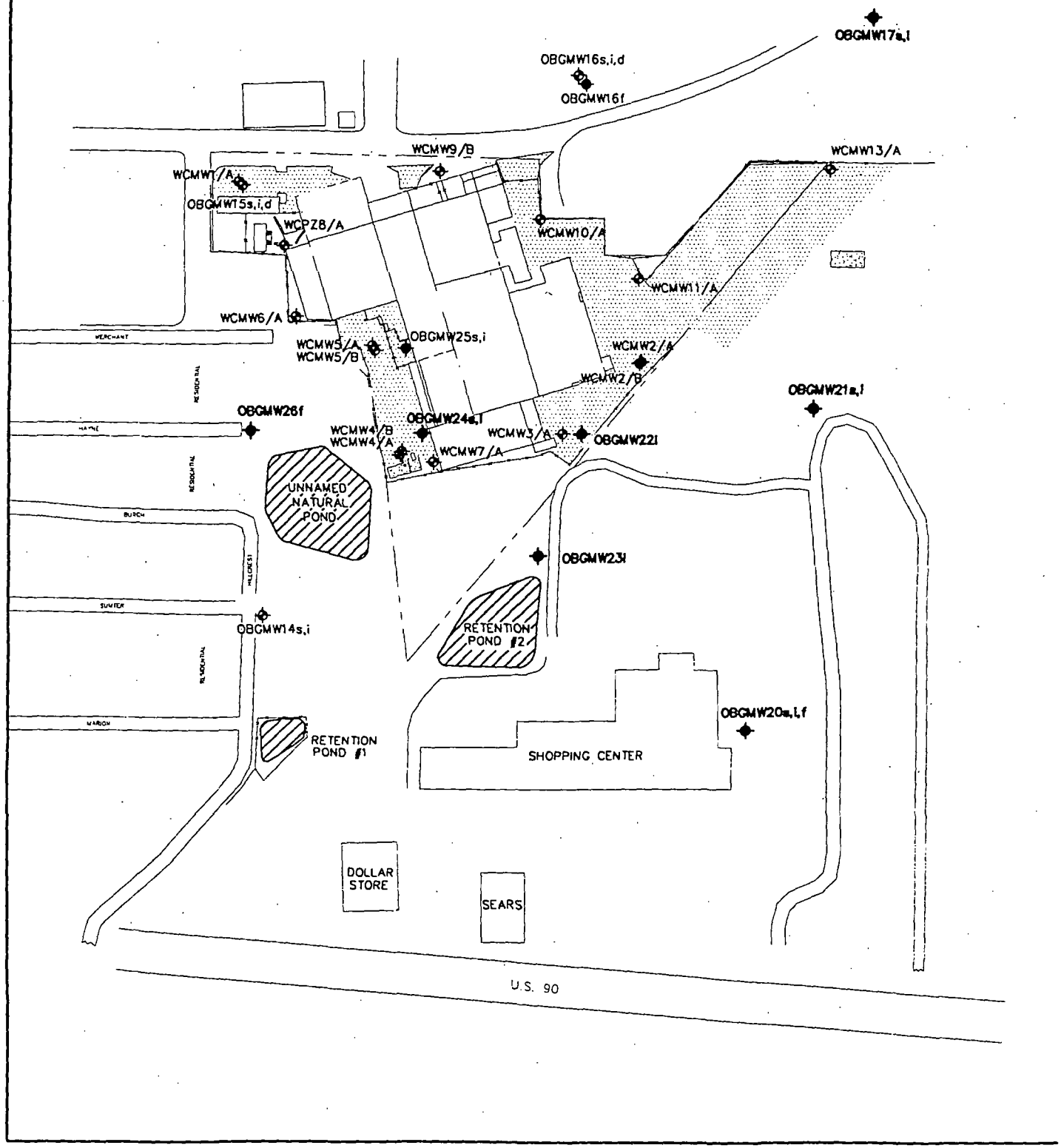
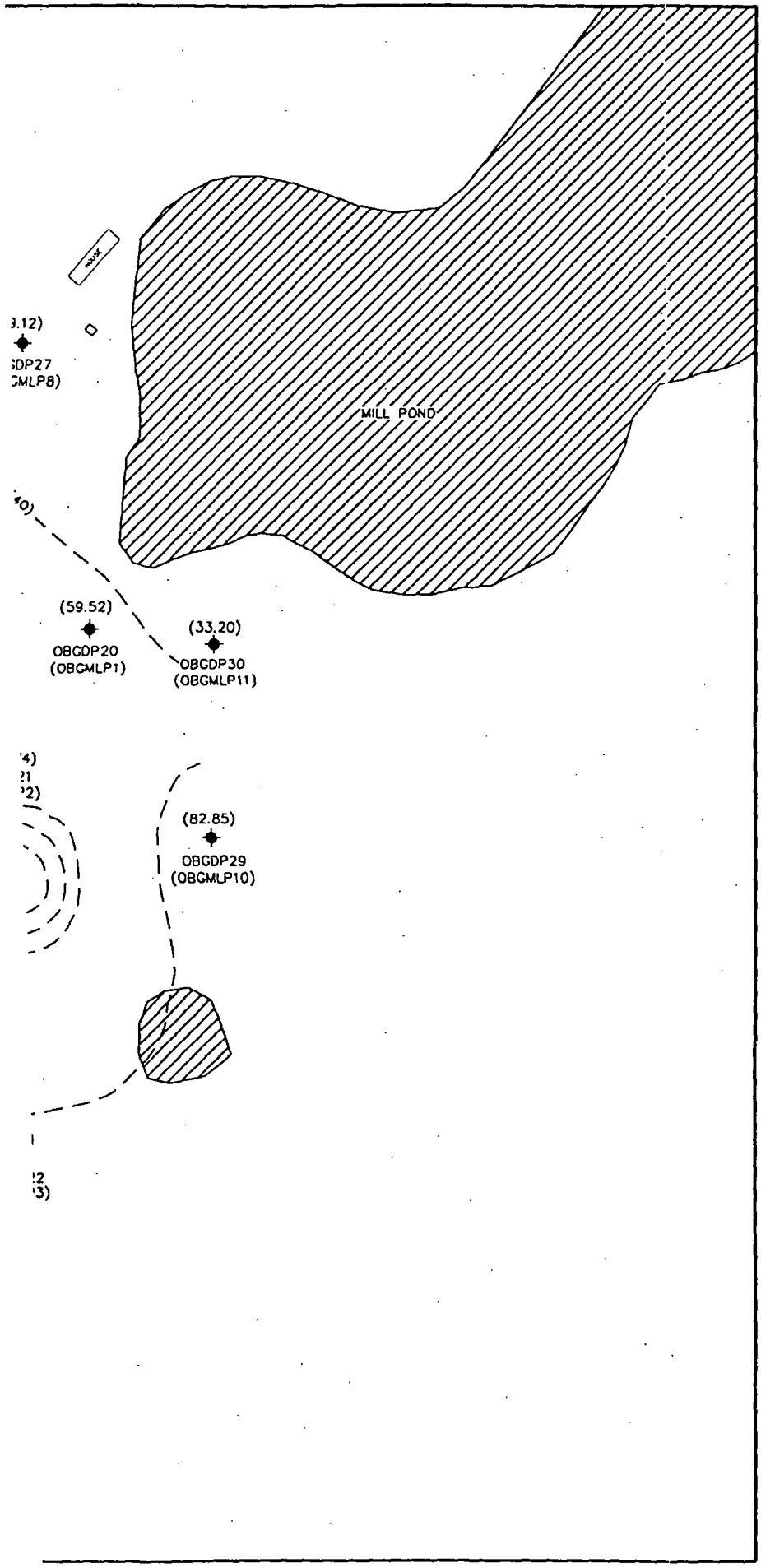
ENGINEERS INC.




DWG PATH: I:\CAPE_CAN\PROJECTS\3356\TECHMEMO\WELLPLACMT\FINAL-TM\FIG-1

PLOT DATE: 06/30/00 A. ROMAN

# FIGURE 15




LEGEND

- CONCRETE
- ASPHALT
- FENCE
- APPROXIMATE PROPERTY BOUNDARY
- OBGMLP1 — GROUND WATER SCREENING POINT/MULTI-LEVEL PIEZOMETER LOCATIONS
- OBGMW16 — MONITORING WELLS
- ENVIROCORE SOIL BORING LOCATION
- (135) — DIFFERENCE IN GROUND WATER ELEVATION

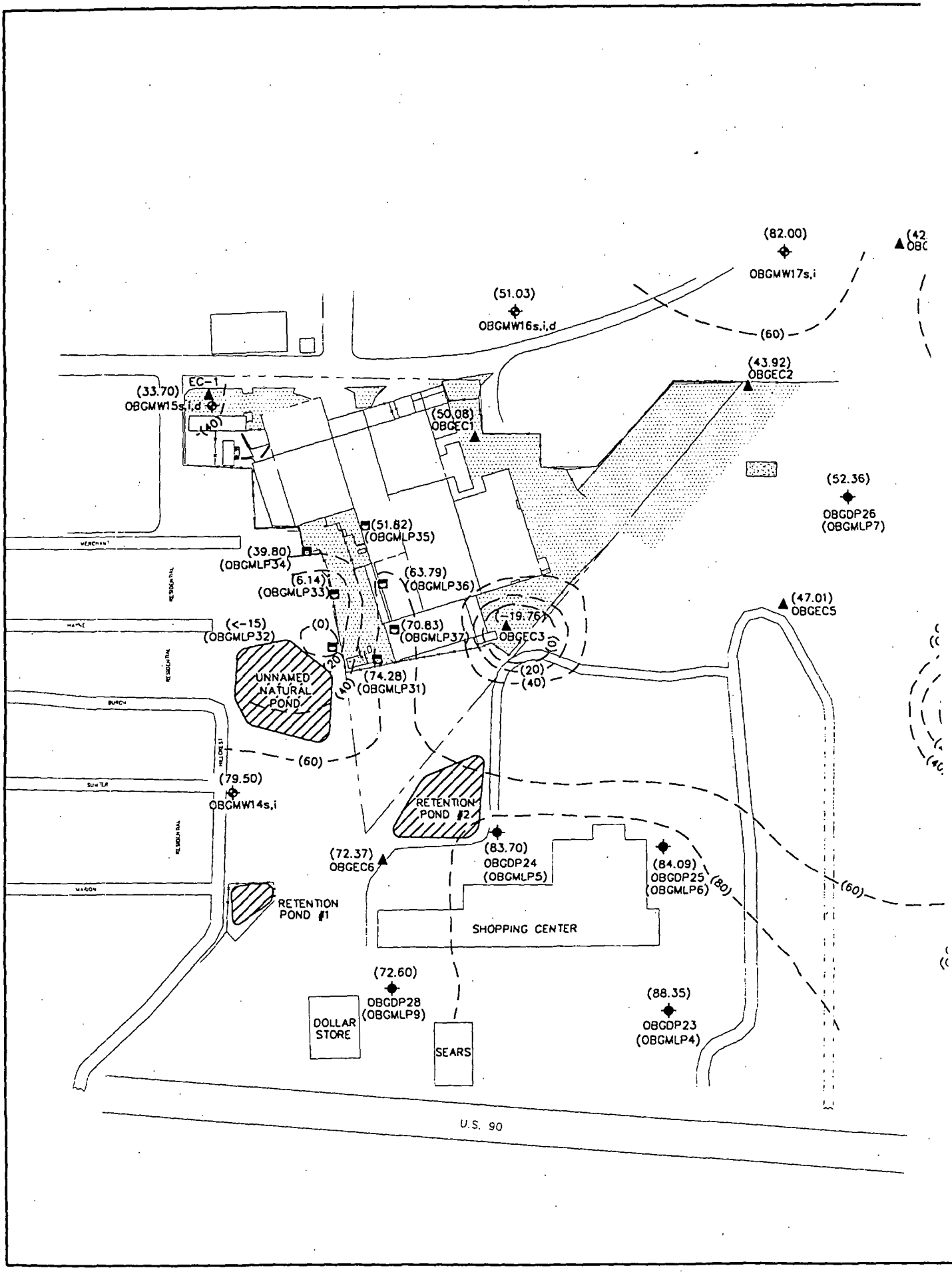
FORMER THOMPSON INDUSTRIES SITE
MADISON, FL.

ELEVATION TOP OF LIMESTONE

1"=200' 200 0 200

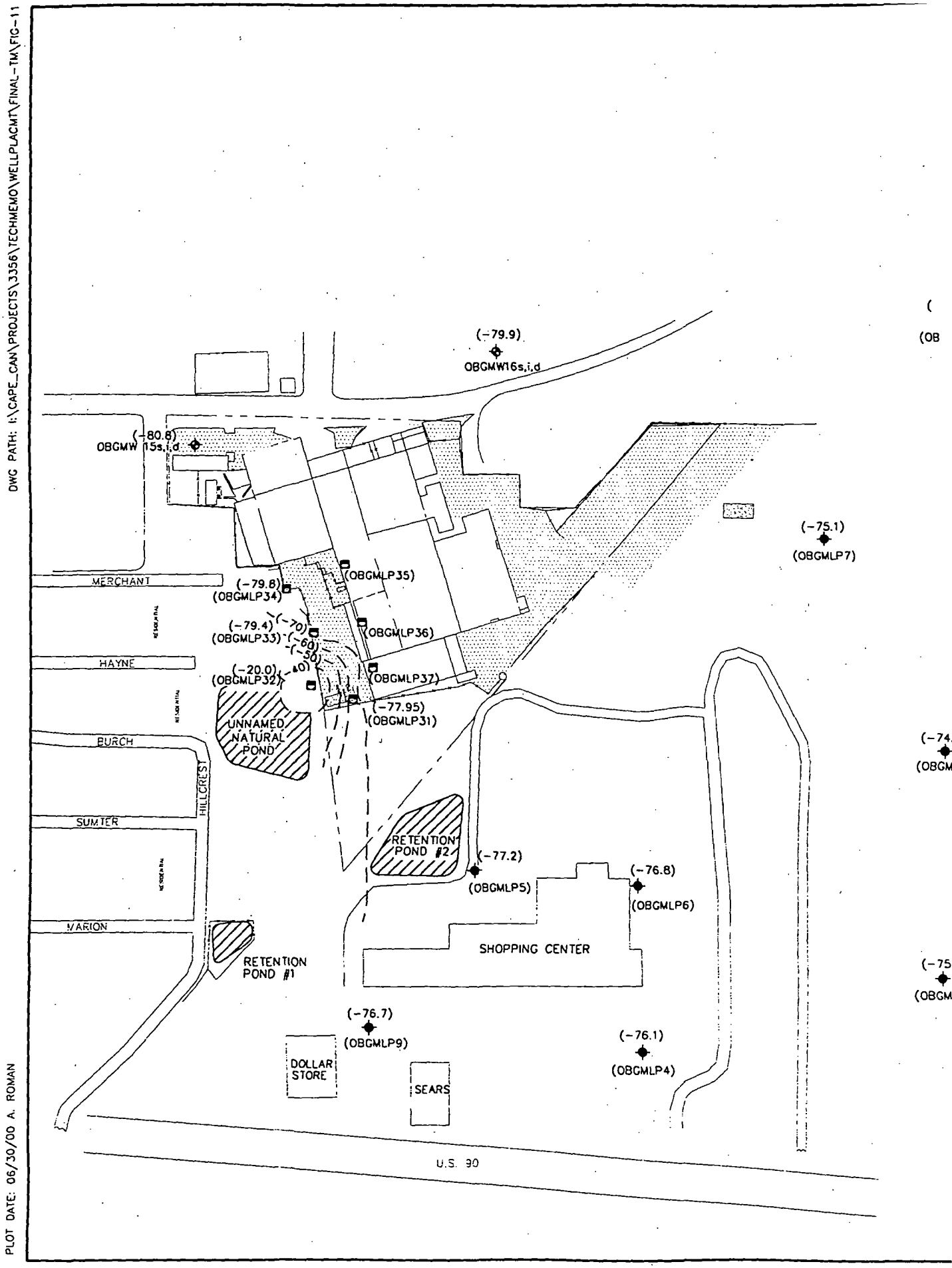
FILE NO. 3356.22992
JUNE, 2000

O'BRIEN & GERE ENGINEERS INC.

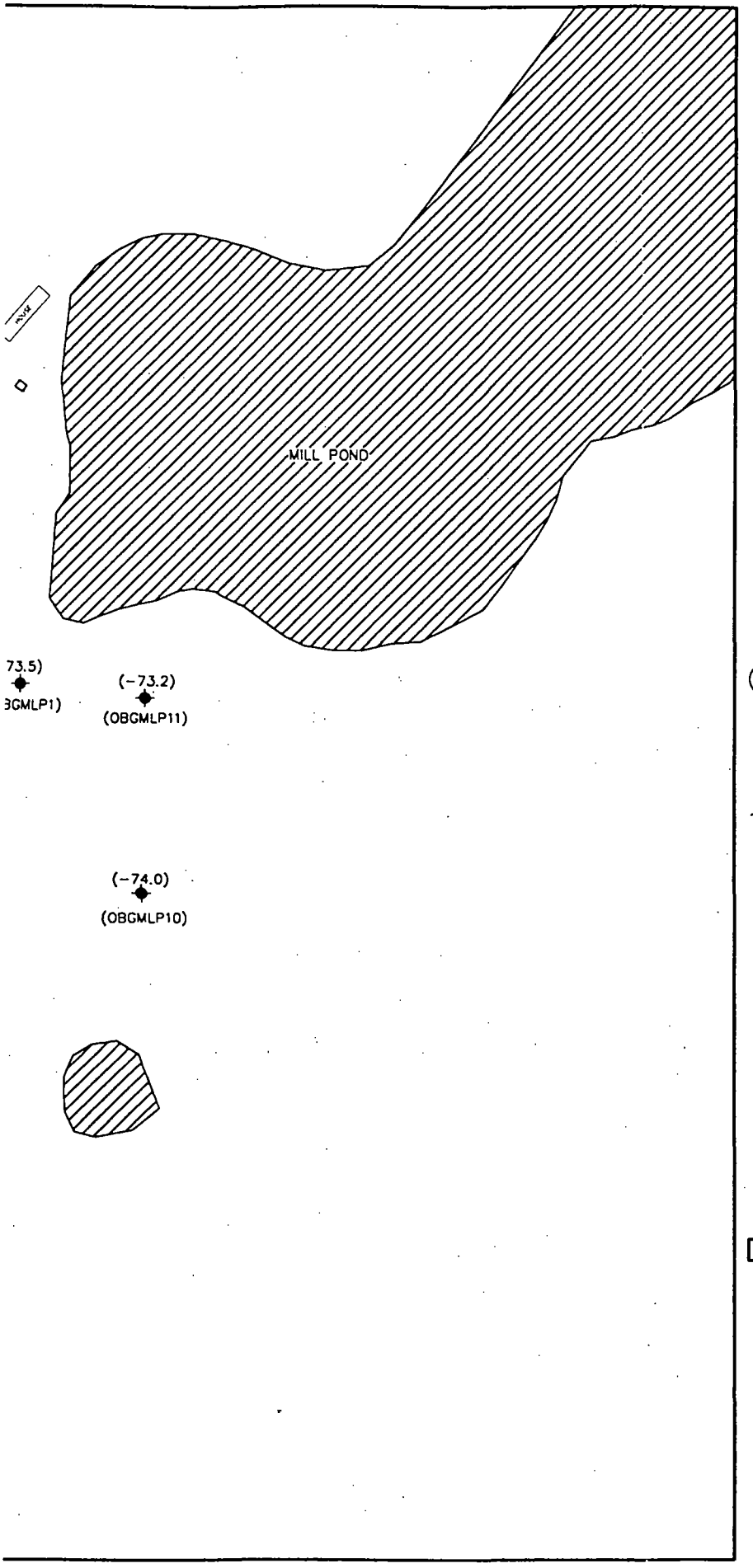



DWG PATH: I:\CAPE_CAN\PROJECTS\3356\TECHMEMO\WELLPLACMT\FINAL-TM\FIG-15

PLOT DATE: 06/30/00 A. ROMAN


DWG PATH: I:\CAPE_CAN\PROJECTS\3356\TECHMEMO\WELLPLACMT\FINAL-TM\FIG-11
PLOT DATE: 06/30/00 A. ROMAN
(-79.9)
OBGMW16s,i,d
(-80.6)
OBGMW 15s,i,d
(-75.1)
(OBGMLP7)
MERCHANT
(-79.8)
(OBGMLP34)
(OBGMLP35)
(-79.4)
(OBGMLP33)
(OBGMLP36)
HAYNE
(-20.0)
(OBGMLP32)
(OBGMLP37)
(-77.95)
(OBGMLP31)
UNNAMED NATURAL POND
BURCH
HILLCREST
SUMTER
RETENTION POND #2
(-77.2)
(OBGMLP5)
(-76.8)
(OBGMLP6)
MARION
SHOPPING CENTER
RETENTION POND #1
(-76.7)
(OBGMLP9)
(-76.1)
(OBGMLP4)
DOLLAR STORE
SEARS
U.S. 90

# FIGURE 11




LEGEND

- CONCRETE
- ASPHALT
- FENCE
- APPROXIMATE PROPERTY BOUNDARY
- OBGDP15 — CPT/DP LOCATION
- OBGMLP1 — GROUND WATER SCREENING POINT/MULTI-LEVEL PIEZOMETER LOCATIONS
- (-73.2) — DIFFERENCE IN GROUND WATER ELEVATION BETWEEN ZONE 2 AND ZONE 3
- (-70) — DIFFERENCE IN GROUND WATER ELEVATION CONTOUR

FORMER THOMPSON INDUSTRIES SITE
MADISON, FL.

JUNE 6, 2000

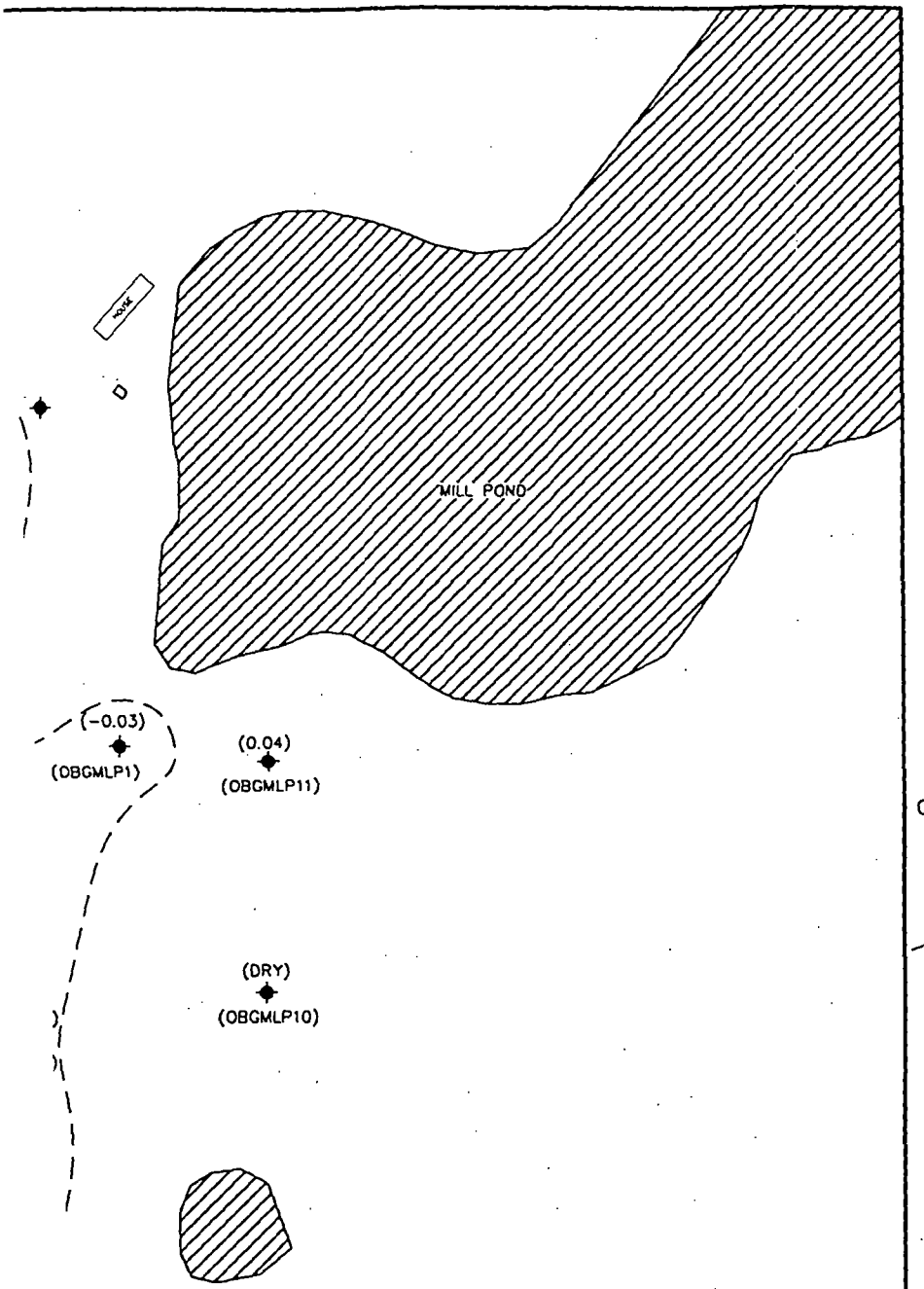
## GROUND WATER ELEVATION DIFFERENCE (FLOW ZONE 2 AND FLOW ZONE 3)

1"=200' 200 0 200

FILE NO. 3356.22992
JUNE, 2000

O'BRIEN & GERE
ENGINEERS INC.

# FIGURE 10




LEGEND

- CONCRETE
- ASPHALT
- FENCE
- APPROXIMATE PROPERTY BOUNDARY
- OBGDP15 — CPT/DP LOCATION
- OBGMLP1 — GROUND WATER SCREENING POINT/MULTI-LEVEL PIEZOMETER LOCATIONS
- OBGMW16 — MONITORING WELLS
- (-5.60) — DIFFERENCE IN GROUND WATER ELEVATION CONTOUR
- (-5.37) DIFFERENCE IN GROUND WATER ELEVATION BETWEEN ZONE 1 AND ZONE 2

FORMER THOMPSON INDUSTRIES SITE
MADISON, FL.

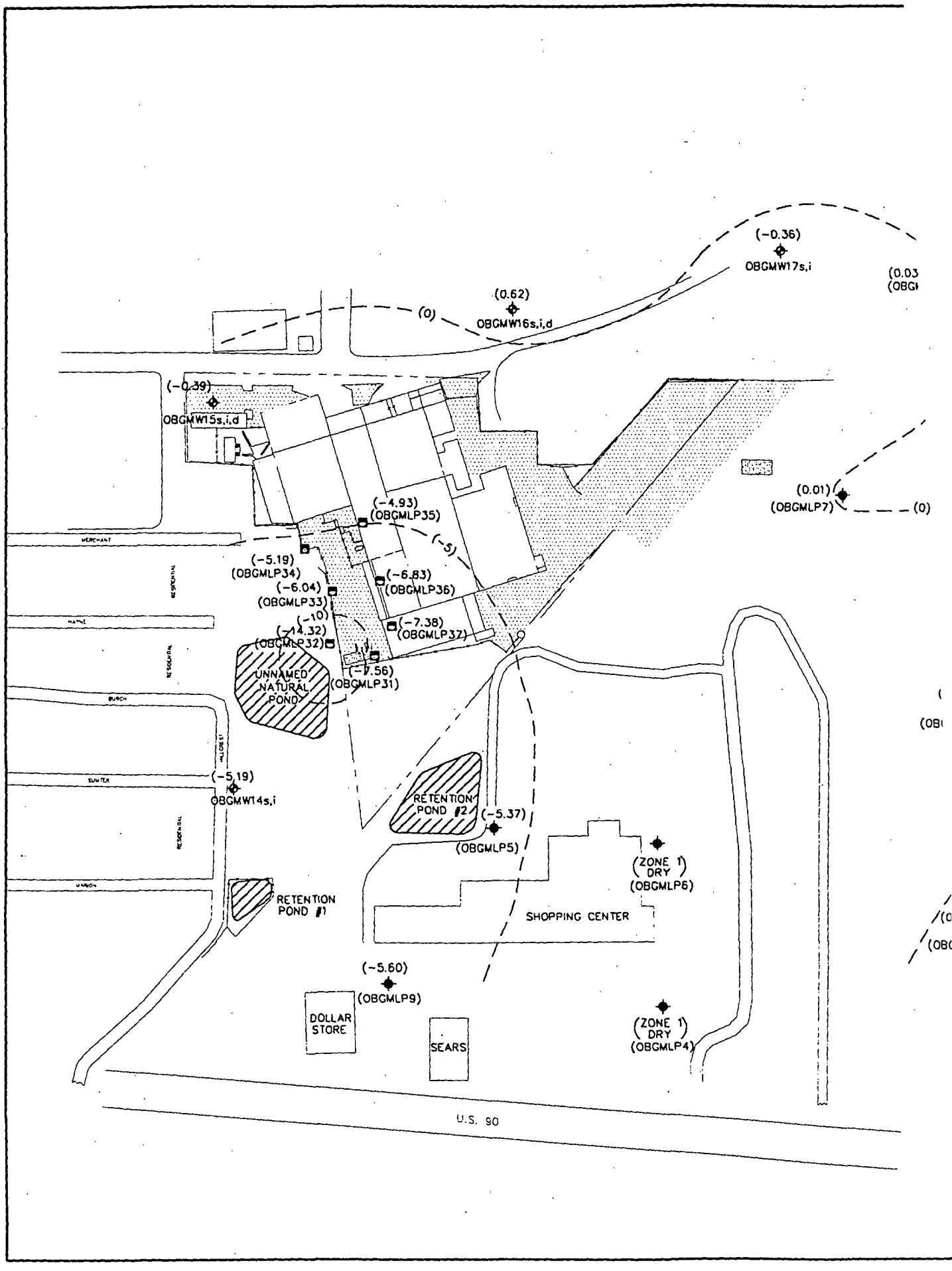
JUNE 6, 2000

## GROUND WATER ELEVATION DIFFERENCE (FLOW ZONE 1 AND FLOW ZONE 2)

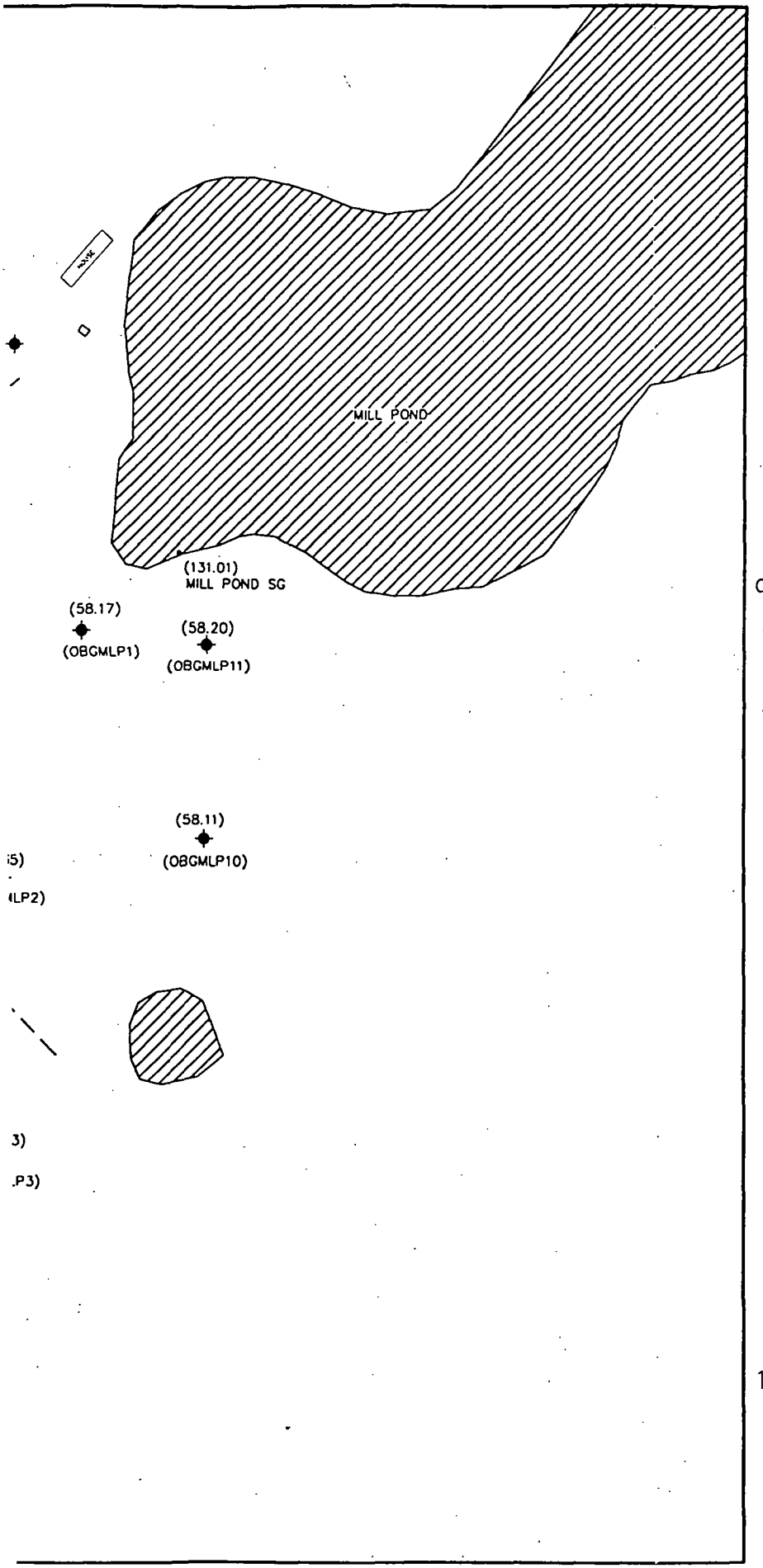
1"=200' 200 0 200

FILE NO. 3356.22992
JUNE, 2000

O'BRIEN & GERE ENGINEERS INC.


DWG PATH: I:\CAPE_CAN\PROJECTS\3356\TECHMEMO\WELLPLACMT\FINAL-TM\FIG-10
PLOT DATE: 06/30/00 A. ROMAN
(-0.36)
OBGMW17s,i
(0.62)
OBGMW16s,i,d
(0)
(-0.39)
OBGMW15s,i,d
(0.01)
(OBGMLP7)
(0)
(-4.93)
(OBGMLP35)
(-5)
(-5.19)
(OBGMLP34)
(-6.04)
(OBGMLP33)
(-6.83)
(OBGMLP36)
(-10)
(-14.32)
(OBGMLP32)
(-7.38)
(OBGMLP37)
(-7.56)
(OBGMLP31)
UNNAMED NATURAL POND
(-5.19)
OBGMW14s,i
RETENTION POND #2
(-5.37)
(OBGMLP5)
(ZONE 1 DRY)
(OBGMLP6)
RETENTION POND #1
SHOPPING CENTER
(-5.60)
(OBGMLP9)
DOLLAR STORE
SEARS
(ZONE 1 DRY)
(OBGMLP4)
U.S. 90
MERCHANT
MAYNE
BIRCH
SUMTER
MARION
RESIDENTIAL

# FIGURE 9




## LEGEND

- CONCRETE
- ASPHALT
- FENCE
- APPROXIMATE PROPERTY BOUNDARY
- OBGDP15 — CPT/DP LOCATION
- OBGMLP1 — GROUND WATER SCREENING POINT/MULTI-LEVEL PIEZOMETER LOCATIONS
- OBGMW16 — MONITORING WELLS
- (135) — GROUND WATER CONTOUR
- (58.00) — WATER TABLE ELEVATION
- DIRECTION OF GROUND WATER FLOW

FORMER THOMPSON INDUSTRIES SITE
MADISON, FL.

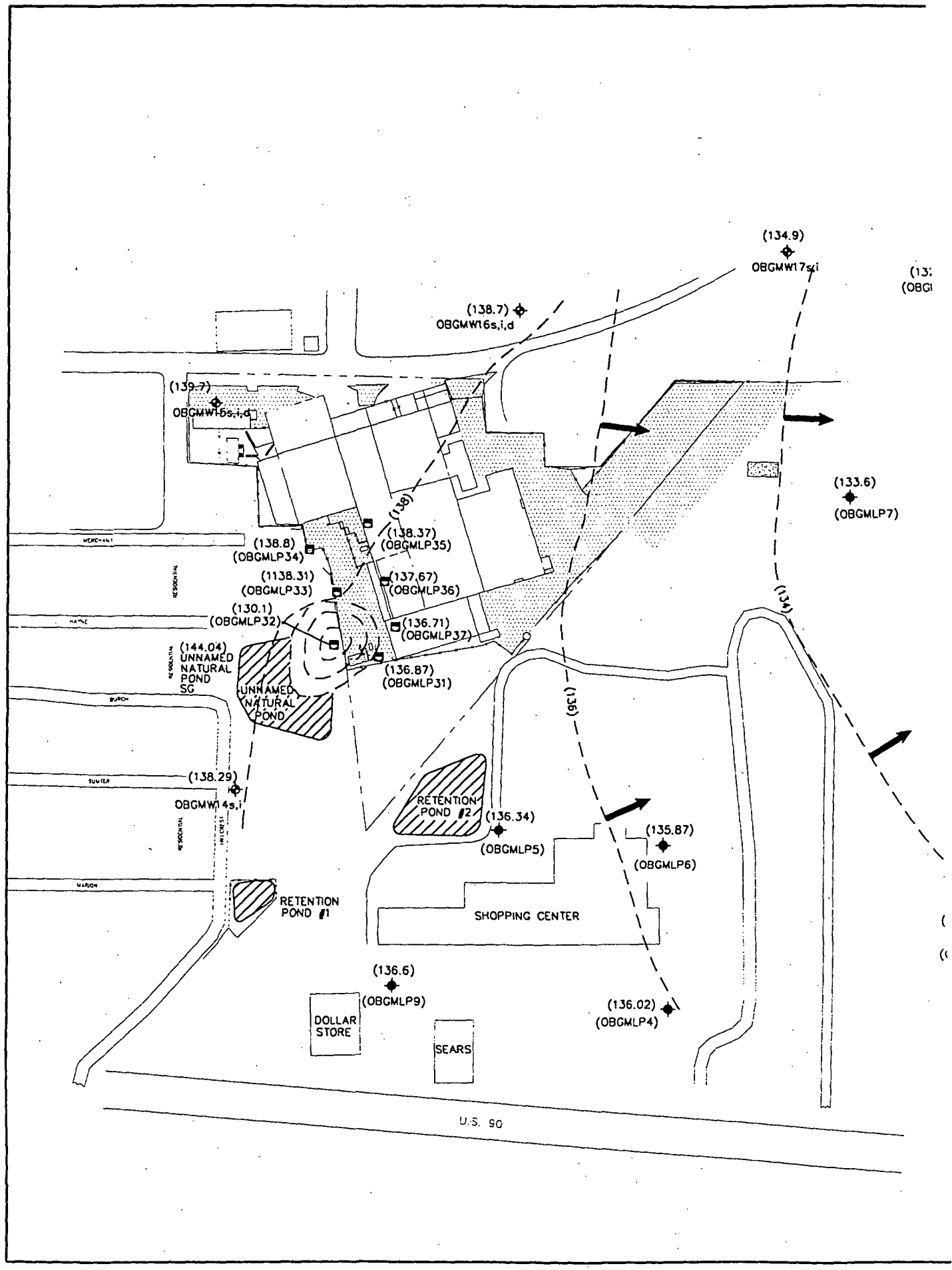
JUNE 6, 2000

# GROUND WATER CONTOUR MAP FLOW ZONE 3

1"=200' 200 0 200

FILE NO. 3356.22992
JUNE, 2000

OBRIEN & GERE
ENGINEERS INC.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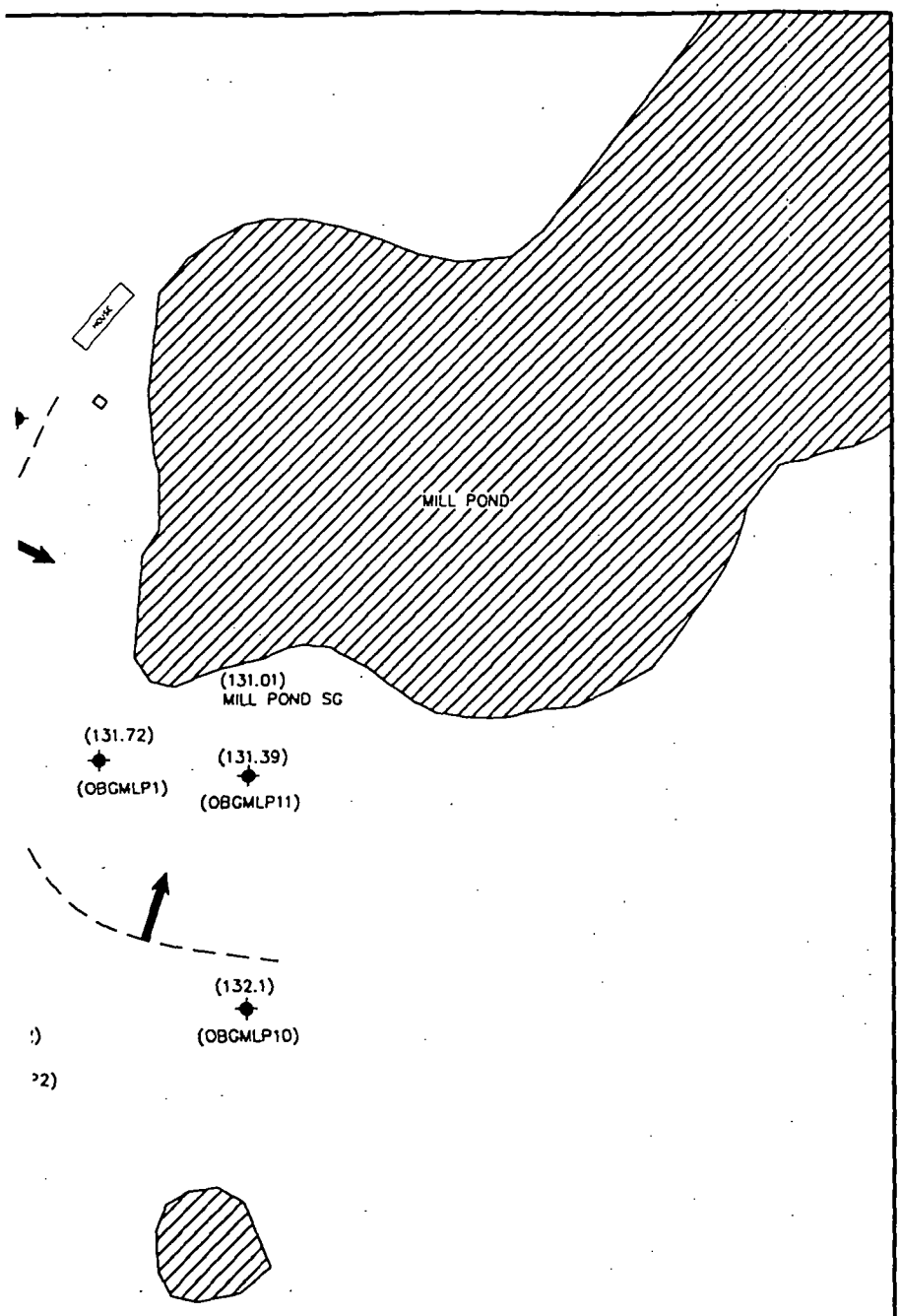
PLOT DATE: 06/30/00 A. ROMAN
(134.9)
OBGMW17s,i
(138.7)
OBGMW16s,i,d
(139.7)
OBGMW15s,i,d
(133.6)
(OBGMLP7)
(138)
(138.37)
(OBGMLP35)
(138.8)
(OBGMLP34)
(1138.31)
(OBGMLP33)
(137.67)
(OBGMLP36)
(130.1)
(OBGMLP32)
(136.71)
(OBGMLP37)
(144.04)
UNNAMED
NATURAL
POND
SG
(136.87)
(OBGMLP31)
UNNAMED
NATURAL
POND
(134)
(136)
(138.29)
OBGMW14s,i
RETENTION
POND #2
(136.34)
(OBGMLP5)
(135.87)
(OBGMLP6)
RETENTION
POND #1
SHOPPING CENTER
(136.6)
(OBGMLP9)
(136.02)
(OBGMLP4)
DOLLAR
STORE
SEARS
U.S. 90
MERCHANT
MAPLE
BIRCH
SUMTER
MARION
RESIDENTIAL

# FIGURE 8




## LEGEND

- CONCRETE
- ASPHALT
- FENCE
- APPROXIMATE PROPERTY BOUNDARY
- OBGDP15 — CPT/DP LOCATION
- OBGMLP1 — GROUND WATER SCREENING POINT/MULTI-LEVEL PIEZOMETER LOCATIONS
- OBGMW16 — MONITORING WELLS
- (135) — GROUND WATER CONTOUR
- (133.22) — WATER TABLE ELEVATION
- DIRECTION OF GROUND WATER FLOW

FORMER THOMPSON INDUSTRIES SITE
MADISON, FL.

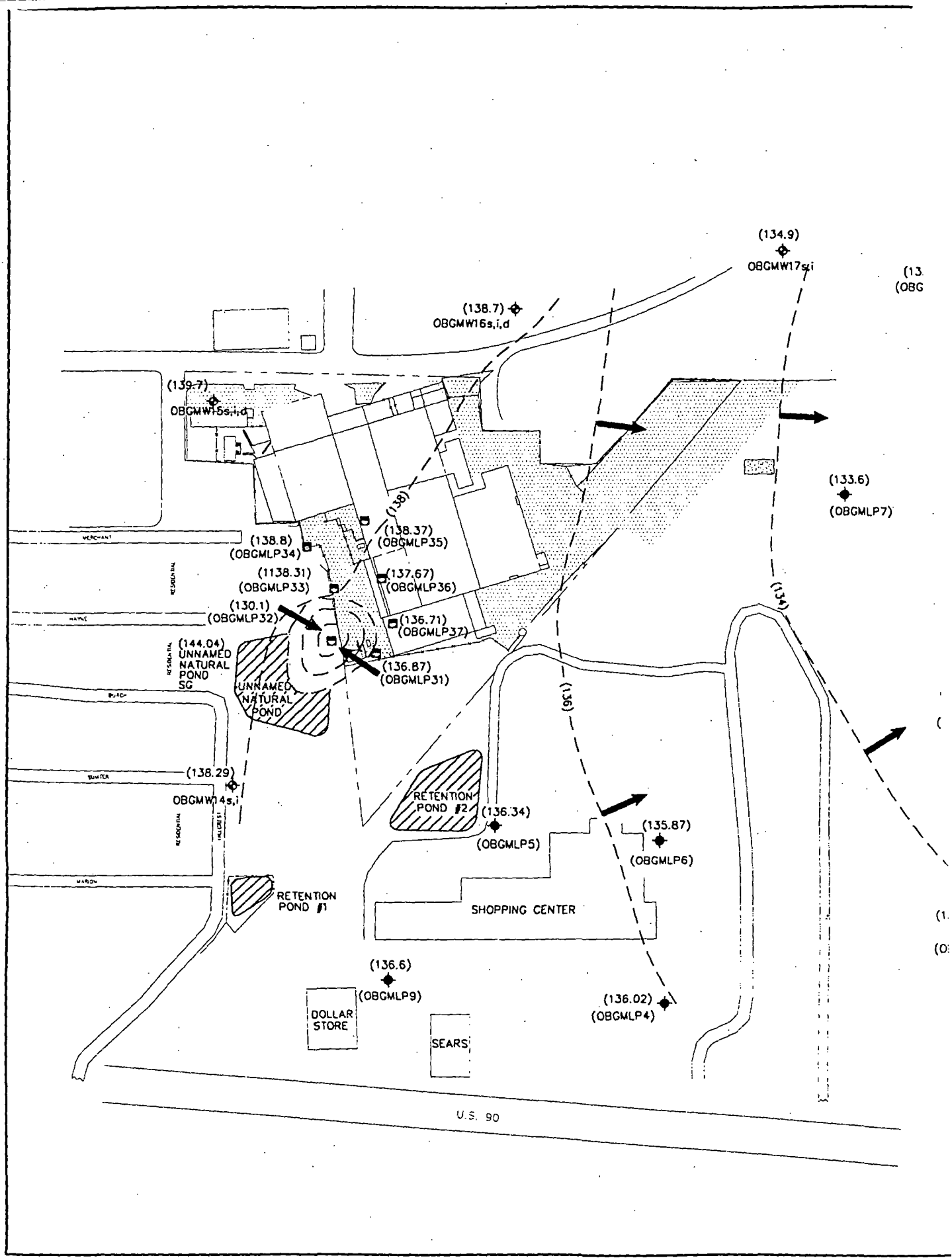
JUNE 6, 2000

# GROUND WATER CONTOUR MAP FLOW ZONE 2

1"=200' 200 0 200

FILE NO. 3356.22992
JUNE, 2000

OBRIEN & GERE
ENGINEERS INC.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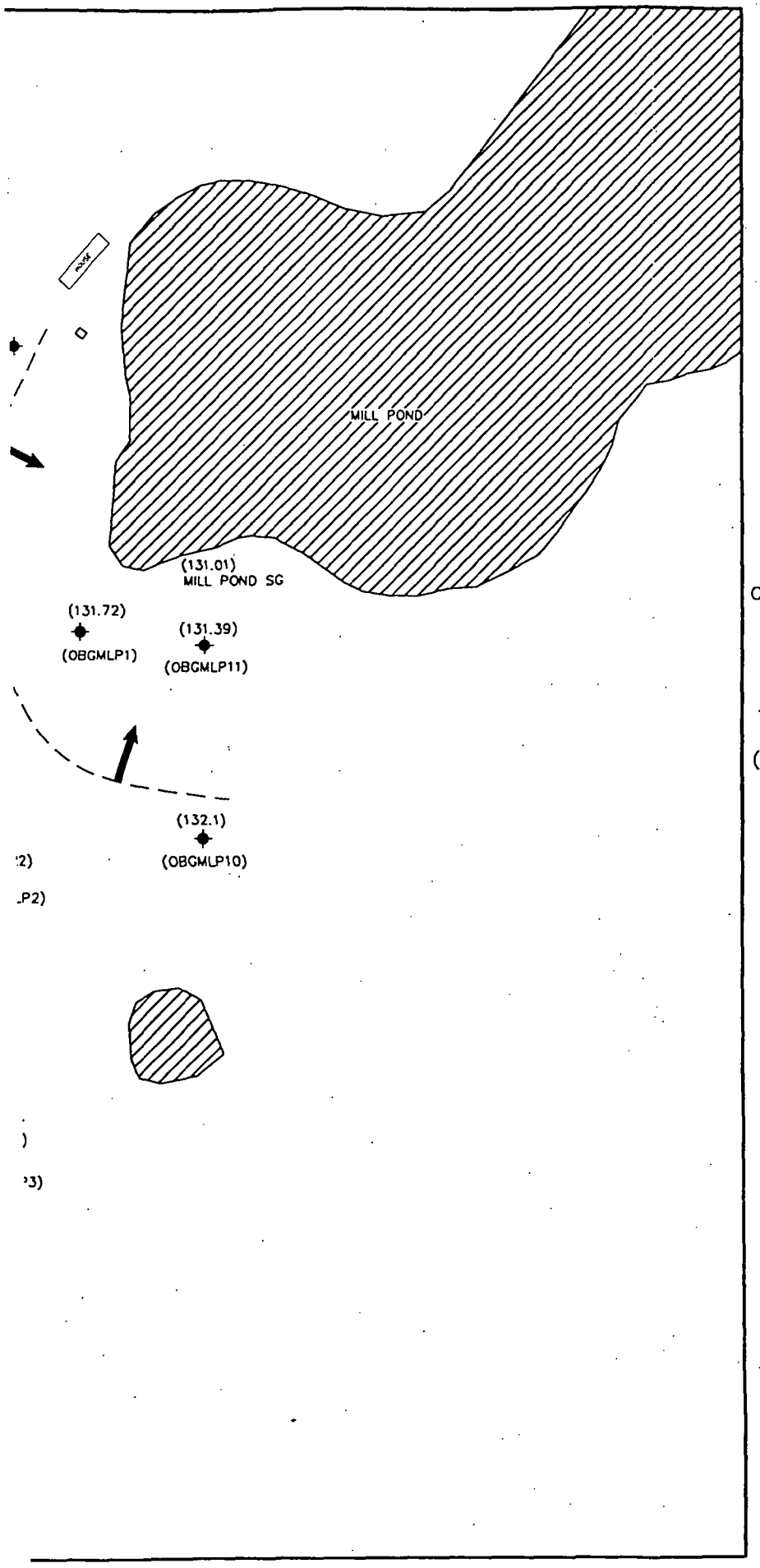
PLOT DATE: 06/30/00 A. ROMAN
(134.9)
OBGMW17s,i
(138.7)
OBGMW16s,i,d
(139.7)
OBGMW15s,i,d
(133.6)
(OBGMLP7)
(138)
(138.8)
(OBGMLP34)
(138.37)
(OBGMLP35)
(1138.31)
(OBGMLP33)
(137.67)
(OBGMLP36)
(130.1)
(OBGMLP32)
(136.71)
(OBGMLP37)
(144.04)
UNNAMED
NATURAL
POND
SG
(136.87)
(OBGMLP31)
UNNAMED
NATURAL
POND
(134)
(136)
(138.29)
OBGMW14s,i
RETENTION
POND #2
(136.34)
(OBGMLP5)
(135.87)
(OBGMLP6)
RETENTION
POND #1
SHOPPING CENTER
(136.6)
(OBGMLP9)
DOLLAR
STORE
SEARS
(136.02)
(OBGMLP4)
U.S. 90

# FIGURE 8




## LEGEND

- CONCRETE
- ASPHALT
- FENCE
- APPROXIMATE PROPERTY BOUNDARY
- OBGDP15 — CPT/DP LOCATION
- OBGMLP1 — GROUND WATER SCREENING POINT/MULTI-LEVEL PIEZOMETER LOCATIONS
- OBGMW16 — MONITORING WELLS
- (135) — GROUND WATER CONTOUR
- (133.22) — WATER TABLE ELEVATION
- DIRECTION OF GROUND WATER FLOW

FORMER THOMPSON INDUSTRIES SITE
MADISON, FL.

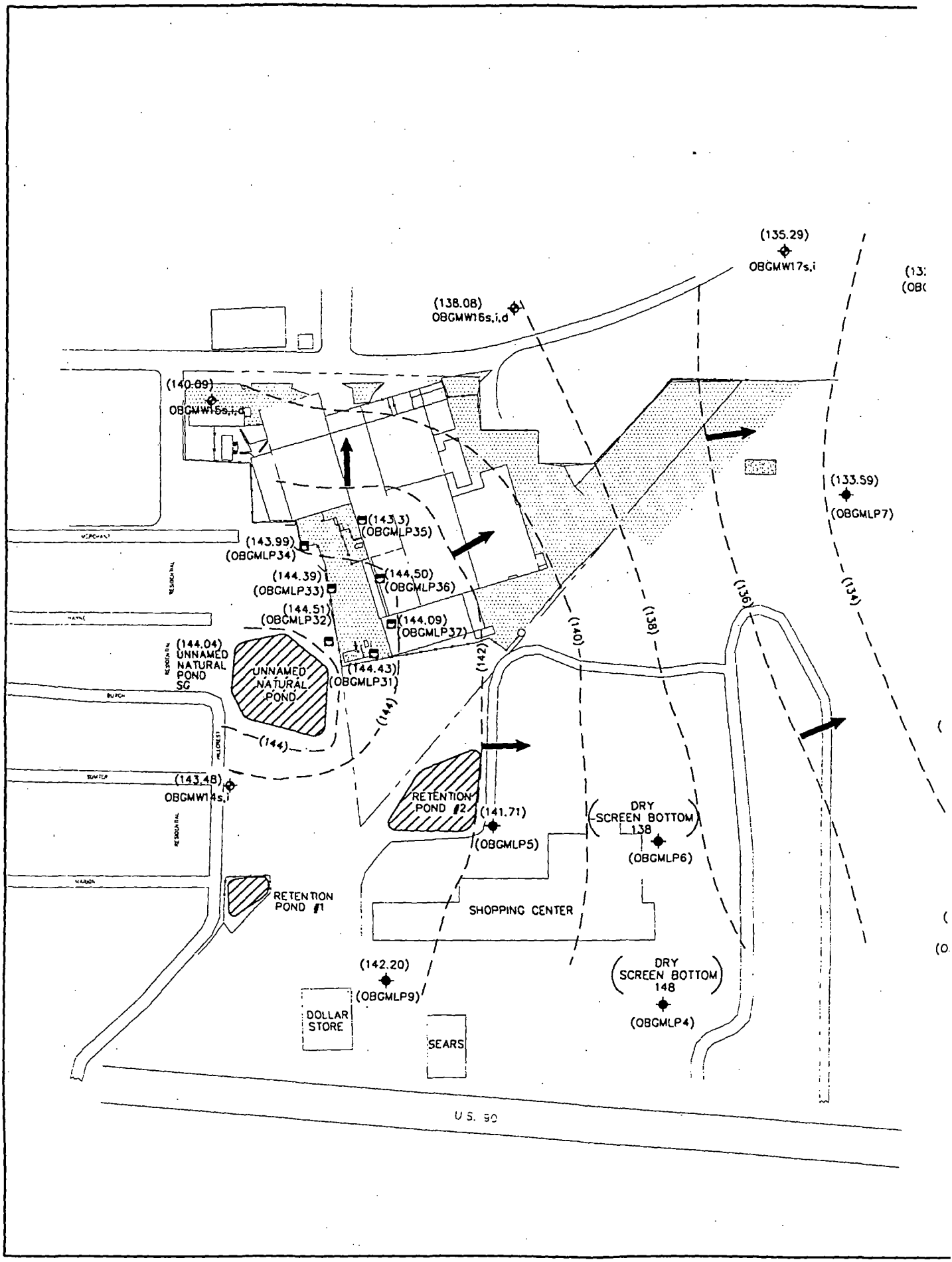
JUNE 6, 2000

# GROUND WATER CONTOUR MAP FLOW ZONE 2

1"=200' 200 0 200

FILE NO. 3356.22992
JUNE, 2000

O'BRIEN & GERE
ENGINEERS INC.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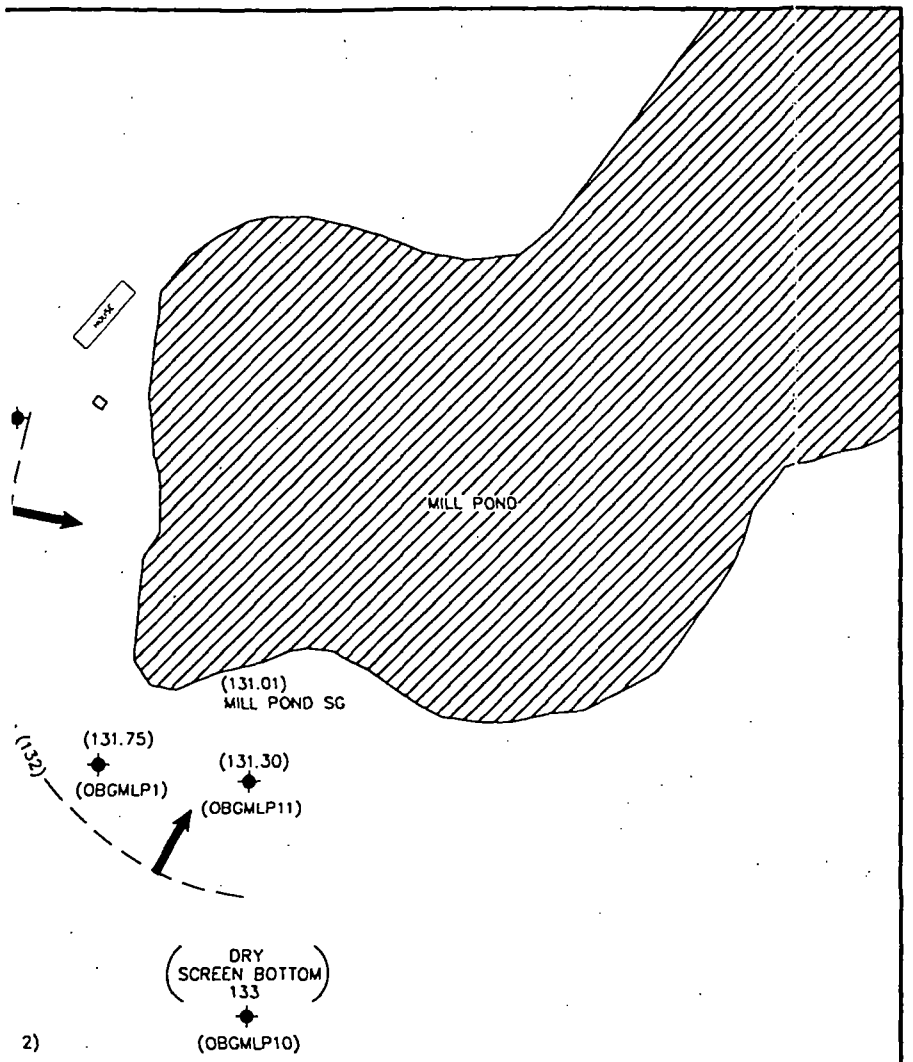
PLOT DATE: 06/30/00 A. ROMAN
(135.29)
OBGMW17s,i
(138.08)
OBGMW16s,i,d
(140.09)
OBGMW15s,i,d
(133.59)
(OBGMLP7)
(143.3)
(OBGMLP35)
(143.99)
(OBGMLP34)
(144.39)
(OBGMLP33)
(144.50)
(OBGMLP36)
(144.51)
(OBGMLP32)
(144.09)
(OBGMLP37)
(144.04)
UNNAMED
NATURAL
POND
SC
UNNAMED
NATURAL
POND
(144.43)
(OBGMLP31)
(143.48)
OBGMW14s,i
RETENTION
POND #2
(141.71)
(OBGMLP5)
DRY
SCREEN BOTTOM
138
(OBGMLP6)
RETENTION
POND #1
SHOPPING CENTER
(142.20)
(OBGMLP9)
DRY
SCREEN BOTTOM
148
(OBGMLP4)
DOLLAR
STORE
SEARS
U.S. 30
(144)
(142)
(140)
(138)
(136)
(134)

# FIGURE 7




## LEGEND

- CONCRETE
- ASPHALT
- FENCE
- APPROXIMATE PROPERTY BOUNDARY
- OBGDP15 — CPT/DP LOCATION
- OBGMLP1 — GROUND WATER SCREENING POINT/MULTI-LEVEL PIEZOMETER LOCATIONS
- OBGMW16 — MONITORING WELLS
- (135) — GROUND WATER CONTOUR
- (131.75) — WATER TABLE ELEVATION
- DIRECTION OF GROUND WATER FLOW

FORMER THOMPSON INDUSTRIES SITE
MADISON, FL.

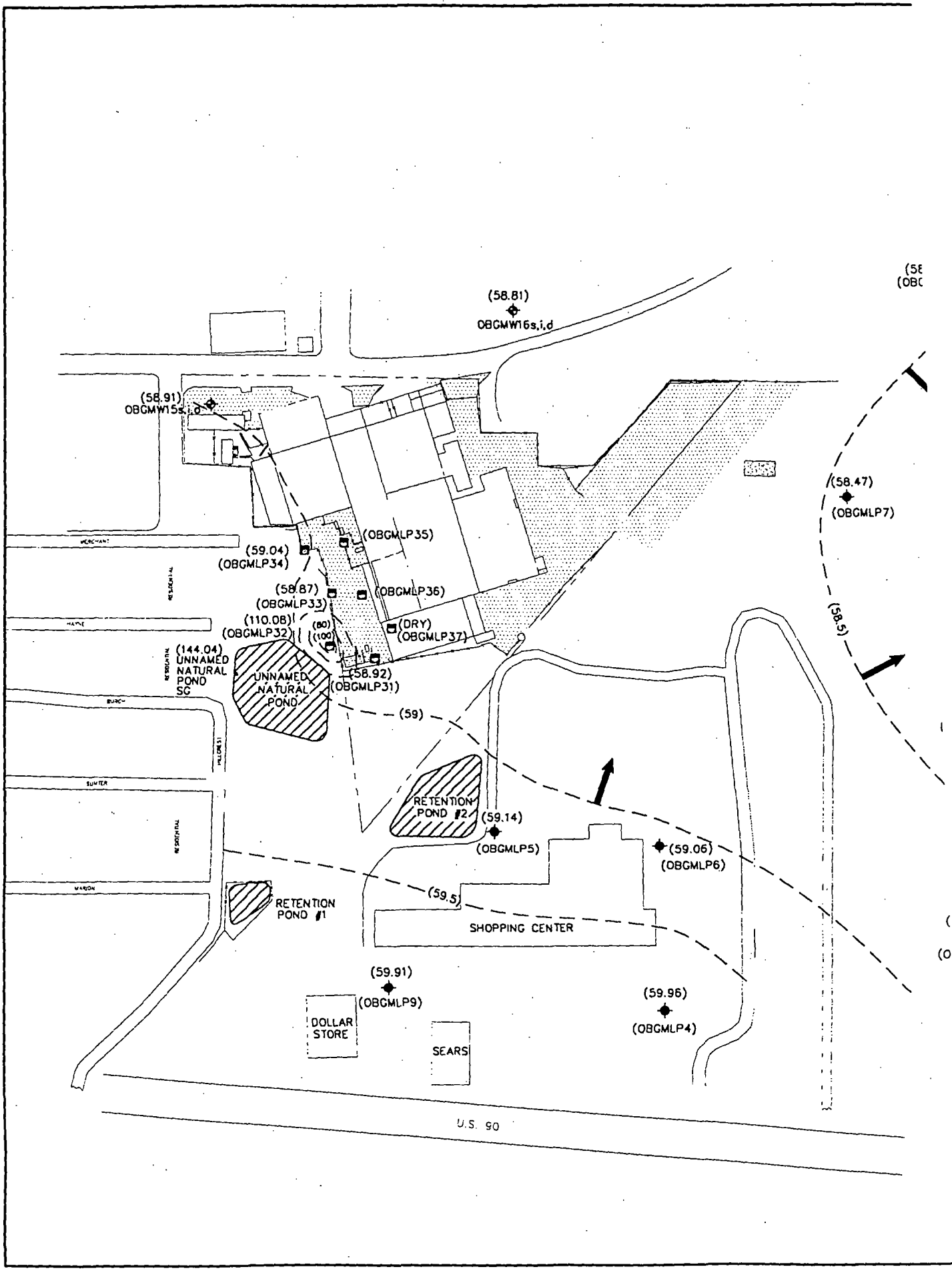
JUNE 6, 2000

# GROUND WATER CONTOUR MAP FLOW ZONE 1

1"=200' 200 0 200

FILE NO. 3356.22992
JUNE, 2000

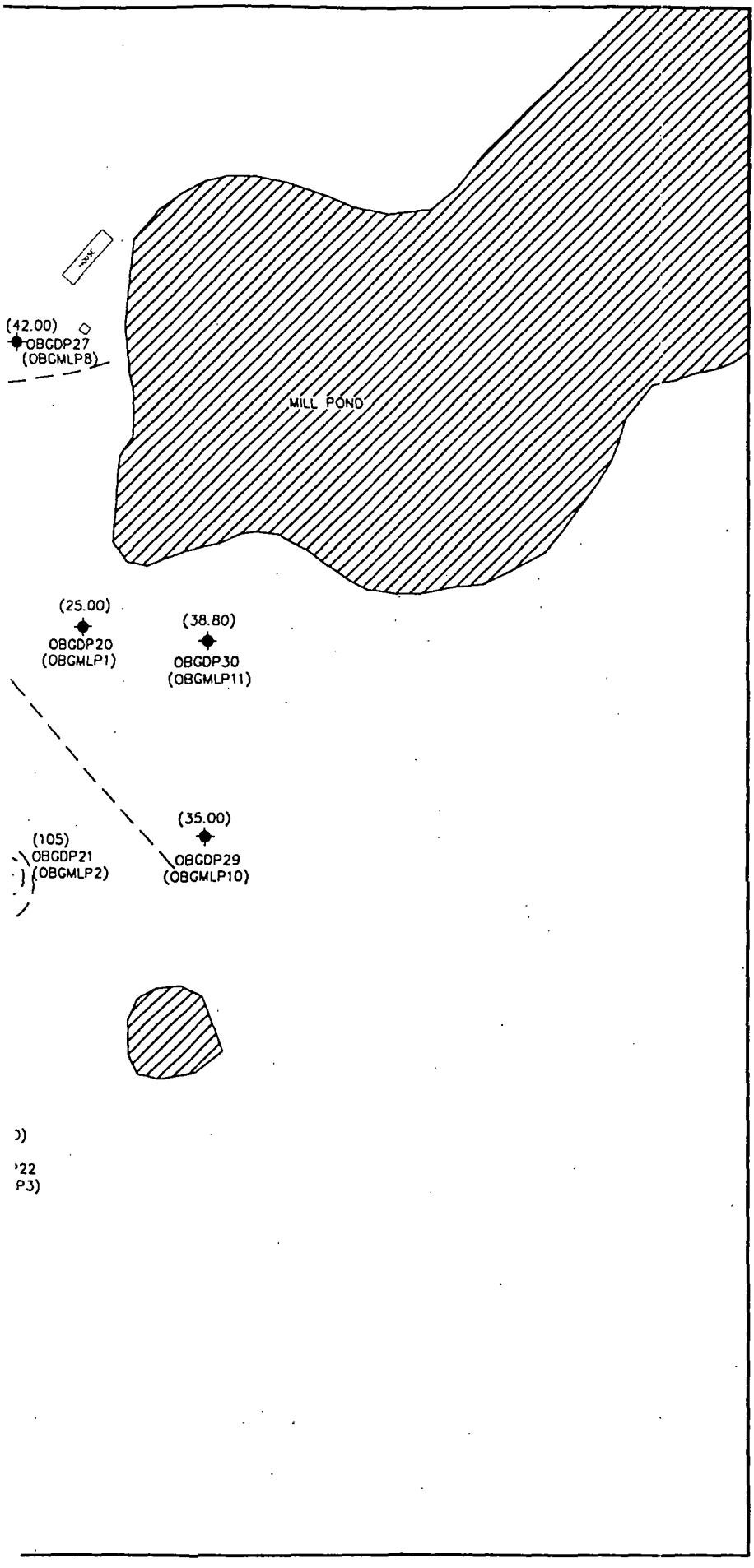
OBRIEN & GERE
ENGINEERS INC.




DWG PATH: I:\CAPE_CAN\PROJECTS\3356\TECHMEMO\WELLPLACMT\FINAL-TM\FIG-9

PLOT DATE: 06/30/00 A. ROMAN

# FIGURE 6




## LEGEND

- CONCRETE
- ASPHALT
- FENCE
- APPROXIMATE PROPERTY BOUNDARY
- OBGMW 16 — MONITORING WELLS
- OBGMLP1 — GROUND WATER SCREENING POINT/MULTI-LEVEL PIEZOMETER LOCATIONS
- ENVIROCORE SOIL BORING LOCATION
- (50) — THICKNESS OF HAWTHORN IN FEET
- (70) — ISOPACH CONTOURS OF HAWTHORN THICKNESS

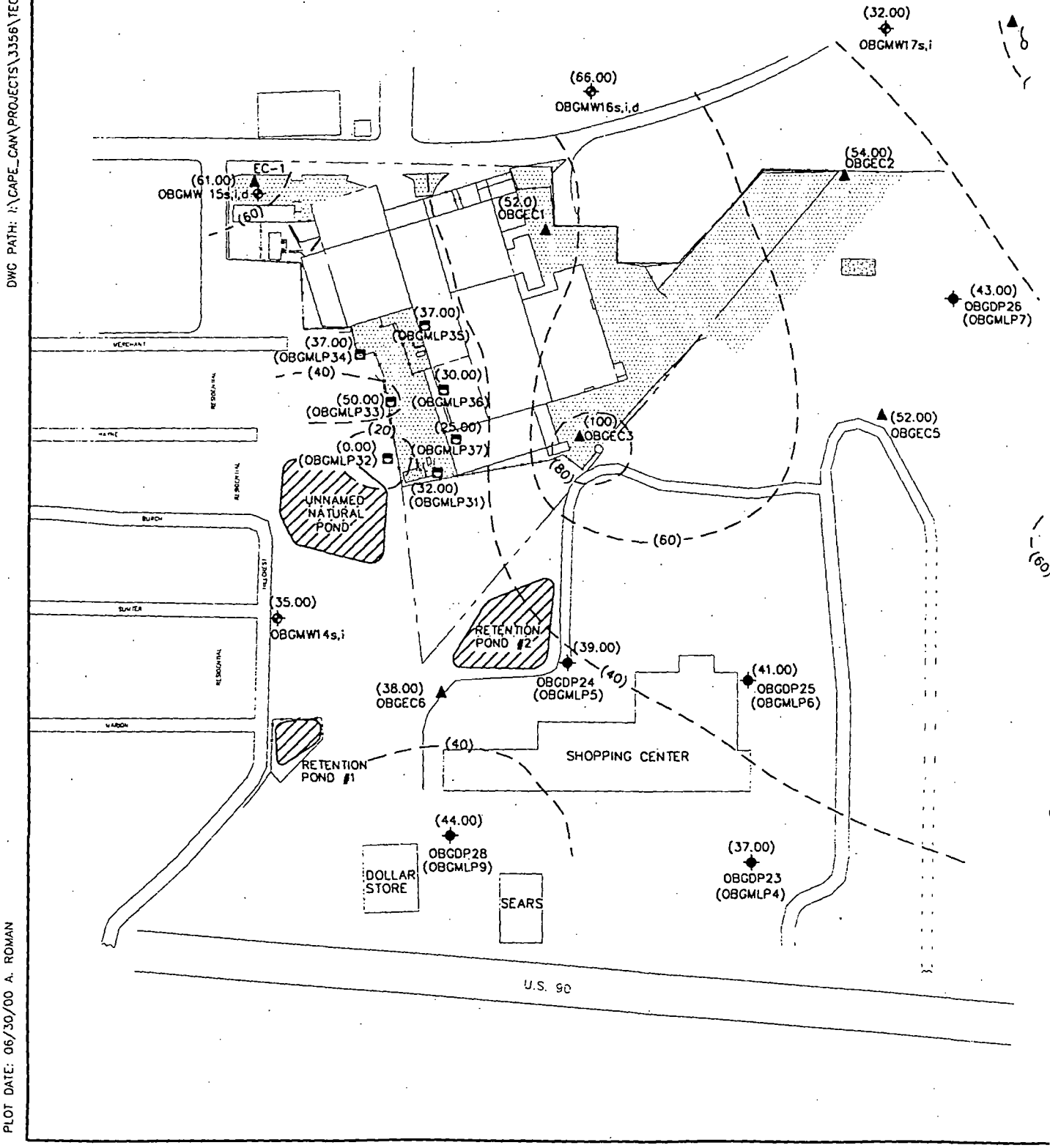
FORMER THOMPSON INDUSTRIES SITE
MADISON, FL.

# ISOPACH MAP OF HAWTHORN

1"=200' 200 0 200

FILE NO. 3356.22992
JUNE, 2000

O'BRIEN & GERE
ENGINEERS INC.




DWG PATH: I:\CAPE_CAN\PROJECTS\3356\TECHMEMO\WELLPLACMT\FINAL-TM\FI

PLOT DATE: 06/30/00 A. ROMAN

APPENDIX A

# Soil Boring Logs/ Monitoring Well Construction Diagrams Former Thompson Industries Site Madison, Florida

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
MLP: OBGMLP-1

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Drilling Company: Boart Longyear

Personnel: Bill Kotziers and Boart Longyear Drill Crew

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers

Page 1 of 1

Location: OBGDP-20

Coordinates: N:536903
E: 2314344

Start Date: 3/03/00

End Date: 3/03/00

Drill Method: ROTOSONIC
Sampler: 6" Core
and Surface Elevation, msl: 136.52'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Stick-up-Threaded SCH 80 PVC
B: 1" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 1" Diameter

Screen = Grout
Riser = Sand Pack
Steel # Bentonite

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye reaction |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft bls: Sand, quartz, fine grain with some silt, dark brown to black, orange roots, water table 1 to 2'. | | SM | Sand/Silt | | | – | – |
| 2 | 2-4 ft bls: Same as above, dark gray. | | SM | Sand/Silt | 0 | 3.7 | – | – |
| 4 | 4-6 ft bls: Sand, quartz, trace Silt, light gray, very wet, loosely consolidated. | | SP | Sand/Little fines | | | – | – |
| 6 | 6-10 ft bls: Sand,quartz, fine grain, with some Silt, and trace of Clay, light gray (2.5 Y 6/1), very hard. | | SC-ML | Sand/w Clay | | | – | – |
| | | | | | 0 | 4.7 | – | – |
| 10 | 10-20 ft bls: Same as above, very dense. | | SC-ML | Sand/Silt/ Clay | 0 | 1.7 | – | – |
| 17 | 17 - 27 ft. bls: TFZ-1. ( Screened from 17-27 ft.). | | | | | | – | – |
| 20 | 20-22 ft bls: Same as above, becoming softer. | | | | | | – | – |
| 22 | 22-24 ft bls: Sand Layer, quartz, fine to medium grained, light gray to light orange-brown (2.5 Y 7/2 to 7/4), unconsolidated, wet, water table. | | | | | | – | – |
| 24 | 24-25 ft bls: Sand, quartz, with some Silt and Clay, light orange-brown - light gray laminates, increasing firmness, and a increase in Clay/Silt mixture. | | SC-CL | Sand/Clay/ Silt | | | – | – |
| 26 | 25-30 ft bls: From 25-27', Sand, quartz, with some Silt, red-orange-brown (7.5 YR 5/8), SP layer. From 27-30', Sand, quartz, fine grained, with some Silt and trace amount of Clay. Firm, light orange-brown (7.5 YR 6/8). | | SC/ML | Sand/Clay/ Silt | | | – | – |
| 30 | 30-40 ft bls: Same as above, becoming firmer. Light Brown-Yellow (10 YR 7/8). | | SC/ML | Sand/Clay/ Silt | | | – | – |
| 37 | | | | | | | – | – |
| | 40-42 ft bls: Clay and Silt, Orange Brown (2.5 Y 7/6), with a 6" quartz Sand layer, light tan, w/ rounded sand nodules, water table encountered. | | SP-SM/CL | Sand/Clay/ little gravel | | | – | – |
| 42 | 42-44 ft bls: Sand, quartz, at 43' various sand nodules/concentrations (angular). | | | | | | – | – |
| 44 | 44-46 ft bls: Sand, quartz with trace Clay, Light Orange-Brown to Light Gray (10 YR 7/2). Increase in Clay content with depth. | | SC-CL | Sand/Clay | | | – | – |
| 46 | 46-48 ft bls: Sand, quartz, fine to medium grain, yellow orange-brown, (10 YR 7/4 to 7.5 YR 7/2), at 46.5' Light Gray to orange-brown, with dark brown organics, (5 Y 7/4 to 10 YR 2/8), oxidized. AT 47.5' Clay, light brown to orange, soft, wet. | | | | 0 | 50 | – | – |
| 48 | 48-52 ft bls: Clay, light brown-orange (10 YR 5/8 to 6/8), soft-/ticky, wet, some small 1-2 mm, white, phosphate nodules. TFZ-2, (screened interval from 37- 47ft.). | | CL | Clay/Sand | | | – | – |
| 52 | 52-54 ft bls: Clay, mottled, light brown to light greenish gray, soft, trace amount of leached phosphate grains (white). | | | | | | – | – |
| 54 | 54-56 ft bls: Same as above, becoming more dense, (GLEY 1 8/1). | | CL | Clay | | | – | – |
| 56 | 56-62 ft bls: Same as above, some dark brown/black organic crossbeds, (US ~3/3.5), light yellow gray to light brown to light olive gray (2.5 Y 7/4). | | | | | | – | – |
| 62 | 62-76 ft bls: Silt and Clay, firm, highly mottled, light gray olive, (5 Y 7/2). 65-75' : R = 4'. | | ML/CL | Silt/Clay | | | – | – |
| 76 | 76-80 ft bls: Clay, lime, weathered, dry, chalky - 77-79'. At 79' very hard, highly mottled layer with some silt. | | CL/ML | Clay/Silt | | | – | – |
| 80 | 80-82 ft bls: Same as above, very friable/weathered, light brown/orange, gray to dark brown to white (10 YR 3/1 - 7.5 YR 4/4). TFZ-3, ( Screened from 80-90 ft.). | | | | | | – | – |
| 82 | 82-84 ft bls: Clayey lime, with limesotne fragments and some Sand, water table encountered, very wet, gritty texture. | | CL/SP | Clay/little gravel | | | – | – |
| 84 | 84-87 ft bls: Same as above, 84-88' - active zone. | | | | | | – | – |
| 87 | Same as above, increasing clay content. | | | | | | – | – |
| 88 | Clay, lime, very firm (GLEY 1 8/1). | | CL | Clay | | | – | – |
| 90 | Total Depth = 90' | | | | | | – | – |
| 100 | | | | | | | | |

Notes: Multi-level piezometer TFZ-1 depth is 28 ft bls. Bottom sand pack is 28 ft, top sand pack is 15 ft, bentonite seal is from 15 ft to 2 ft, screen size 0.010", screened from 17 to 27 ft bls. MLP TFZ-2 depth is 48 ft. Bottom sand pack is 35 ft, bentonite seal 35 ft to 28 ft, screened from 37 ft to 47 ft. MLP TFZ-3 depth is 90 ft. Bottom sand pack 90 ft, top sand pack 78 ft, bentonite seal from 78 to 48 ft, screened from 80 to 90 ft bls.

notes: 1. – not applicable to boring 2. NA - not analyzed due to malfunction of instrument

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
MLP LOCATION: OBGMLP-2

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Bo lling Company: Boart Longyear

Pers...el:

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers

Page 1 of 2

Location: OBGDP-21

Coordinates: N: 536573
E: 2314239

Start Date: 2/19/00

End Date: 2/20/00

Screen
Riser
Steel

Grout
Sand Pack
Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation, msl: 140.26'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Stick-up Threaded SCH 80 PVC
B: 1" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 1" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-3 ft bls: Sand, quartz, fine grain, with some silt, dark gray to black (10 YR 2/1). | | SM | Sand/Silt | NA | NA | - | - |
| 3 | 3 - 7 ft. bls: Sand, quartz, fine grain, well sorted, wet, water table at 3 ft, light grayish brown (10YR 6/3) to pale brown | | SP | Sand/gravel | NA | NA | - | - |
| 7 | 7 - 9 ft. bls: Sand, quartz, fine grain, well sorted, Light gray to white ( 2.5 Y 8/1). | | | | | | - | - |
| 9 | 9 - 15 ft. bls: Sand, Silt, and Clay mixture, light gray (2.5 Y 6/1, 6/2), Firm (US 2.0 T/Ft2). | | SC-CL | Sand/Clay/ Silt | NA | NA | - | - |
| | | | SC | | | | - | - |
| | | | CL | Clay | | | - | - |
| 15 | 15 - 17 ft. bls: Sand, quartz, fine to medium grain, with some Clay nodules, wet, light brownish gray. | | SP | Sand/w gravel | NA | NA | - | - |
| 17 | 17 - 20 ft. bls: Sand, quartz, fine grain, with a trace amount of Clay. | | SC | Clay/Sand | | | - | - |
| 20 | 20 - 30 ft. bls: Sand, quartz, poorly graded, with trace Silt, wet, unconsolidated very light gray (2.5 Y 8/1). TFZ-2 (20 - 30 FL) | | SP | Sand/w gravel | | | - | - |
| | | | SC | Clay/Sand | NA | NA | - | - |
| | | | SC-SP | Sand/w gravel | | | - | - |
| 30 | 30 - 38 ft. bls: Clay with some Sand, quartz, fine grain, light gray ( 5Y 7/1) to (2.5 Y 7/3), some what firm. | | SC-CL | Clay/W Sand | | | - | - |
| | | | CL | Clay | NA | NA | - | - |
| | 38 - 40 ft. bls: Clay, with some Sand, quartz, fine grain, leached phosphate pebbles , very light greenish gray. Top of the Hawthorn at 39 ft. | | CL | Clay | | | - | - |
| | ) - 48 ft. bls: Clay Light yellowish brown (2.5 Y 7/6). | | SC | Clay/Sand | NA | NA | - | - |
| 45 | 45 -50 ft. bls: TFZ-2 (screened from 45' - 50'bls.). | | | | | | - | - |
| 48 | 48 - 57 ft. bls: Sand,quartz, medium grain, with some Clay, wet, light yellowish brown, mottled light greenish gray to red brown | | SP-CL | Sand/w gravel/Clay | NA | NA | - | - |
| 55 | | | | | | | - | - |
| 57 | 57 - 58 ft. bls: Clay, firm, light brown. | | | | | | - | - |
| | 58 - 60 ft. bls: Clay, very loose, sticky with cobble size cemented Sand grains. | | CL | Clay | | | - | - |
| 60 | 60 - 64 ft. bls: Clay with trace Sand, quartz, medium to coarse grain, orange brown. | | SC | Clay/Sand | NA | NA | - | - |
| | | | CL | Clay | | | - | - |
| 64 | 64 - 69 ft. bls: Clay with trace amount of Sand, quartz, medium to coarse grain, very loose, wet, sticky, orangish brown. | | CL | Clay | | | - | - |
| 65 | | | | | | | - | - |
| 69 | 69 - 90 ft. bls: Clay, with some phosphate leached pebbles, very dense, hard (US 2.5 - 5 T/Ft2), mottled, light greenish gray to orangish brown. | | CL-SP | Clay w/ gravel | NA | NA | - | - |
| | | | CL | Clay | NA | NA | - | - |
| 90 | 90 - 105 ft. bls: Clay, soft, with trace amount of Sand, quartz, medium grain, loose, (US 2.0 to 3.5 T/Ft2). Mottled, light greenish gray, (GL 1 7/1) to a dark brown (7.5 YR 2.5/1). | | CL-CH | Clay/high plasticity | NA | NA | - | - |
| 97 | | | | | | | - | - |
| 100 | | | SC-CL | Clay/Sand | NA | NA | - | - |

Notes: Mulit-level piezometer TFZ-1 depth is 30' bls. Bottom of the sand pack is 31', top sand pack is 18' bls. Bentonite seal is from 18'bls to the surface, screen size is 0.010", screen is 20' to 30' bls.
Mulit-level piezometer TFZ-2 depth is 50' bls. Bottom of the sand pack is 51' bls. Top of sand pack is 43'bls. Bentonite seal is 43' to 31'bls. Screen size is 0.010", screen is from 45' - 50' bls.

1. – Not applicable to boring. 2. NA - Not analyzed due to instrument malfunction.

| O'BRIEN & GERE ENGINEERS, INC. | REPORT OF BORING | CONSTRUCTION LOG<br>MLP LOCATION: OBGMLP-2 |
|---|---|---|
| Client: ITT INDUSTRIES INC. | Page 2 of 2 | Drill Method: ROTOSONIC<br>Sampler: 6" Core<br>Land Surface Elevation, msl: 140.26' |
| Project Location: Former Thompson Industries Site, Madison, Florida. | Location: OBGDP-21 | |
| File: 22992.013.001 | Coordinates: N: 536573<br>E: 2314239 | WELL/MLP CONSTRUCTION MATERIALS:<br>FILTER PACK: 30-40 silica sand |
| Bo[illegible] illing Company: Boart Longyear | Start Date: 2/19/00 | BENTONITE SEAL: Pure Gold Granular/Med. Chips |
| Personnel: | End Date: 2/20/00 | WELL RISER:<br>A: Stick-up Threaded SCH 80 PVC<br>B: 1" Diameter |
| Drill Rig: Rotosonic | | |
| OBG Geologist: Bill Kotzlers | Screen / Riser / Steel — Grout / Sand Pack / Bentonite | SCREEN MATERIAL:<br>A: 0.010 Inch Slot SCH. 80 PVC<br>B: 1" Diameter |

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 101 | | | | | | | – | – |
| 105 | 105 - 107 ft. bls: Clay, soft (US ~ 1.0 T/FT2), mottled orangish brown. | | CL | Clay | NA | NA | – | – |
| 107 | 107 109 ft. bls: Sand, quartz, medium grain with some Clay, moist to wet, light gray in color. | | CL | Clay | | | – | – |
| 109 | 109 - 113 ft. bls: Clay, with some Sand, quartz, oxidized layers, wet, firm,light gray to orange brown. | | CL | Clay | | | – | – |
| 113 | 113- 115 ft. bls: Clay, with some Sand, quartz, fine to medium grain, wet, soft, sticky, light gray. Water Table at 114'. | | SC-CL | Clay/Sand | NA | NA | – | – |
| 115 | 115 - 117 ft. bls: Clay, with some Sand, quartz, medium grain, medium stiff, light yellowish gray (2.5 Y 7/2). | | SP | Sand/gravel Clay | | | – | – |
| 117 | 117 - 120 ft. bls: Clay orange brown (10 YR 6/6) with thickly laminated Sands, light gray (2.5 Y 7/2), 3 -10 mm in thickness. | | | | | | – | – |
| 120 | 120 - 125 ft. bls: Clay, with some Sand, quartz, trace amount of leached pebbles, medium stiff, light orange brown to greenish gray, (2.5 Y 7/2) | | CL-SP | Clay/Sand/gravel | NA | NA | – | – |
| 125 | 125 - 130 ft. bls: Clay with Sand, quartz, unconsolidated fragments, sticky, (orange brown ( 10YR 6/8). No HCL acid rxn. | | SC-CI | Clay/Sand | NA | NA | – | – |
| 130 | 130 - 140 ft. bls: Clay, soft, with trace amount of Sand, cemented concretion pebbles. | | CI-SP | Clay/gravel | NA | NA | – | – |
| 1[illegible] | 140 - 142 ft. bls: Sand, quartz, loosely consolidated, trace Clay, light orangish brown. TFZ-3 , ( screen 140' - 150'). | | SP | Sand/gravel | NA | NA | – | – |
| 142 | 142 - 144 ft. bls: Clay with some Sand, quartz, coarse, gravel size grains throughout the interval. | | SC-CL | Sand/Clay | | | – | – |
| 144 | 144 - 155 ft. bls: Calcareous Sand that has reaction with the Hydorchloric acid. Very light orange brown ( 10 YR 7/3) fine to medium grained, and subrounded and well sorted. | | GC | Sand/gravel | NA | NA | – | – |
| 153 | 153 - 155 ft. bls: Sand, quartz, coarse grain, very hard cemented pieces, mixed with some weathered limestone and Limey Clay. | | | | | | – | – |
| 155 | 155 - 165 ft. bls: no recovery. | | GC | Sand/gravel | NA | NA | – | – |
| 165 | Boring Terminated at 165' BGS | | | | | | – | – |

Notes: Mutli-level piezometer TFZ-3 depth is 165 ft bls. Bottom of the sand pack is 155', top sand pack is 138' bls. Bentonite seal is from 165'bls to 155' bls, and then 138' bls to 51' bls. screen size is 0.010", screen is 150' - 140' bls.
1. – Not applicable to boring. 2. NA - Not analyzed due to instrument malfunction.

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
MLP LOCATION: OBGMLP-3

Client: ITT INDUSTRIES INC.

Page 1 of 2

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 146.72'

Project Location: Former Thompson Industries Site, Madison, Florida.

Location: OBGDP-22

File No.: 22992.013.001

Coordinates: N: 536200
E: 2314234

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded SCH 80 PVC
B: 1" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 1" Diameter

/Drilling Company: Boart Longyear

Start Date: 2/18/00

End Date: 2/19/00

Driller:

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers

Screen
Riser
Steel
Grout
Sand Pack
Bentonite

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-4 ft bls: Sand, quartz, fine grain, with some Silt, loose, unconsolidated, dark brown (10 YR 3/2, 2/2) . | | SM | Sand/Silt | 0 | 0 | – | – |
| 2 | | | SM | Sand/Silt | | | – | – |
| 4 | 4 - 7 ft. bls: Sand, quatrz, fine grain, with some Silt, damp to moist. | | | | 0 | 0 | – | – |
| 7 | 7 - 10 ft. bls: Clay, with some Silt, damp, orange brown (7.5 YR 5/8) , Top of the Miccosukee | | SM | Sand/Silt | | | – | – |
| 10 | 10 - 13 ft. bls: Clay with some Silt, soft, wet, ( US 1.0 T/Ft2). (TFZ-1, screened from 10' - 20' bls.). | | SC | Clay/Sand | | | – | – |
| 13 | 13 - 15 ft. bls: Clay with some Silt, firm, wet, mottled orange brown (7.5 YR 6/8) to light greenish gray (GL 1 7/1). | | CL | Clay | | | – | – |
| 15 | 15 - 20 ft. bls: Silt with some Clay, wet, firm. | | SC | Sand/Clay/ | | | – | – |
| 20 | 20 - 25 ft. bls: Clay with some Silt, small oxide fragments, soft, mottled Light gray (5 Y 7/2) to orange brown (10 YR 6/6) | | SM-CL | Silt/Clay | 0 | 0 | – | – |
| 25 | 25 - 28 ft. bls: Sand, quartz, fine grain, with some Clay, soft, wet, orange brown (10 YR 6/6) with some oxide red brown fragments. (TFZ-2, screened from 25' - 30' bls.). | | SC | Sand/Clay | | | – | – |
| 28 | 28 - 30 ft. bls: Clay, very soft, with some Sand, quartz, fine to coarse grain, wet, light gray to brown (10 YR 7/2) | | SC-SP | Sand/gravel | | | – | – |
| 30 | 30 - 33 ft. bls: Sand, quartz, gravelly to coarse, grain, with some Clay, with some oxidized phosphorus black grains. Transition to Hawthorn, soft sticky Clay with some Silt. | | CL | Clay | | | – | – |
| 33 | 33 - 35 ft. bls: 33 ft. Clay, mottled orange brown to light greenish gray. | | CL | Clay | | | – | – |
| 35 | 35 - 60 ft. bls: Clay, orange brown (10YR 6/8) to yellow brownish orange (5 Y 8/3) clay | | | | 0 | 0 | – | – |
| | Same as above. | | CL | Clay | 0 | 0 | – | – |
| 45 | | | CL | Clay | 0 | 0 | – | – |
| | | | | | NA | 1.3 | – | – |
| 55 | | | | | NA | 0 | – | – |
| 60 | 60 - 62 ft. bls: Clay, firm, (US 2- 4 T/Ft2) mottled orangish brown (10 YR 5/8) to green gray (GL 1 7/1) | | CL | Clay | NA | 11 | – | – |
| 62 | 62 - 65 ft. bls: Clay, with some Sand, quartz, medium to coarse size grains, phosphate pebbles, soft (US 1-2 T/Ft2). | | SC-SP | Sand/Clay/ gravels | | | – | – |
| 65 | 65 - 73 ft. bls: Clay, soft, sticky, light gray phosphate pebbles with dark gray laminates ( 2.5 Y 6/2) | | CL-CH | Clay high plast. | NA | 2.3 | – | – |
| 70 | | | | | | | – | – |
| 73 | 73 - 75 ft. bls: Clay with some limey Clay, soft, to medium hardness, light gray (2.5 Y 8/1, 7/3) , slight reaction with HCL. | | CL | Clay | | | – | – |
| 75 | 75 - 84 ft. bls: Top of the Suwanee encountered at 75 ft. Chalky dry Limestone with some Clay and Sand carbonate mud. | | GM | | | | – | – |
| | | | | | NA | 11 | – | – |
| 80 | | | | | | | – | – |
| 84 | 84 - 97.5 ft. bls: Dry Limey Clay with Limestone fragment pieces, subrounded, white to very light gray ( 2.5 Y 8/1). | | GC | Limestone | | | – | – |
| 90 | | | | | | | – | – |
| | 96 - 106 ft. bls: (TFZ-3, screened from 96 - 106 ft. bls ). | | | | | | – | – |
| 97 | 97.5 - 103 ft. bls: Calcareous Clay, wet, sticky, hard, with some fragment concretions. | | GC | Limestone | | | – | – |
| 100 | | | | | | | – | – |

Notes: Multi-level piezometer TFZ-1 depth is 21' bls, bottom of sand pack is 21'bls, top of the sand pack is 8'bls, bentonite seal to surface, screen size 0.010", screened from 10-20'bls.
MLP TFZ-2 depth is 31' bls, bottom sand pack is 31' bls, top of sand pack is 23' bls, bentonite to 21' bls, screen size is 0.010", screened from 25 to 30'bls.

1. – Not applicable to boring 2. NA - Not analyzed due to instrument malfunction.

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
MLP LOCATION: OBGMLP-3

Client: ITT INDUSTRIES INC.

Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Boring/Drilling Company: Boart Longyear

Personnel:

Drill Rig: Rotosonic

OBG Geologist: Bill Kotzlers

Page 2 of 2

Location: OBGDP-22

Coordinates: N: 536200
E: 2314234

Start Date: 2/18/00

End Date: 2/19/00

Screen
Riser
Steel
Grout
Sand Pack
Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 146.72'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded SCH 80 PVC
B: 1" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 1" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 101 | | | | | | | – | – |
| 103 | 103 - 106 ft. bls: Limey Clay, with some wet, weathered Limestone, mixed with a trace amount of fossils. | | GC | limestone | NA | NA | – | – |
| 106 | Boring Terminated. Total Depth = 106 ft. | | | | | | – | – |

Notes: Multi-level piezometer TFZ-3 depth is 106' bls, bottom of sand pack is 106'bls, top of the sand pack is 94'bls, bentonite seal to 31'bls, screen size 0.010", screened from 96-106'
1. – Not applicable to boring. 2. NA - Not analyzed due to instrument malfunction.

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG

MLP LOCATION: OBGMLP-4

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Bc Illing Company: Boart Longyear

Personnel:

Drill Rig: Rotosonic

OBG Geologist: Bill Kotzlers

Page 1 of 2

Location: OBGDP-23

Coordinates: N: 536081
E: 2313747

Start Date: 3/7/00

End Date: 3/7/00

Screen
Riser
Steel

Grout
Sand Pack
Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 158.35'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded SCH 80 PVC
B: 1" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 1" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft bls: Sand, quartz, medium, brown, asphalt, limerock, with some silt (fill). | | SM | Sand/Silt | NA | NA | - | - |
| 2 | 2-6 ft bls: Clay with some Silt and trace amount of Sand, quartz, fine grain, red-brown to light gray. | | SC-SM | Clay/Sand | | | - | - |
| 5 | 5 - 15 ft. bls: (TFZ-1, screened from 5' - 15' bls.). | | | | | | - | - |
| 6 | 6-8 ft bls: Clay and Sand mixture, moist, light gray to orange-brown (10 YR 7/1). | | SC | Sand/Clay | NA | NA | - | - |
| 8 | 8-10 ft bls: Clay with some Silt, firm, and slighty mottled, orange-brown to light gray. | | | | | | - | - |
| 10 | 10-12 ft bls: Clay, wet, sticky, soft, orange-brown. | | | | | | - | - |
| 12 | 12-14 ft bls: Clay with some Silt, very firm, light yellow. | | CL | Clay | | | - | - |
| 14 | 14-16 ft bls: Sand, quartz, fine grain, wet, with some Clay, light gray to light yellow-brown. | | SC | Sand/Clay | NA | NA | - | - |
| 16 | 16-20 ft bls: Same as above, brownish yellow (10 YR 6/8). | | SC | Sand/Clay | | | - | - |
| 20 | 20-22 ft bls: Same as above with a trace mount of Silt, wet, light gray. | | SC-SM | Sand/Silt | NA | NA | - | - |
| 22 | 22-26 ft bls: Sand, quartz, fine to medium grain with some Clay, light gray to light orange-brown. | | SC | Sand/Clay | | | - | - |
| 25 | 25 - 30 ft. bls: (TFZ-2, screened from 25' - 30' bls.). | | | | | | - | - |
| 26 | 26-28 ft bls: Sand, quartz, medium to coarse grain, cemented concretions, wet, loose, dark reddish brown (5 YR 4/6). | | SC-SP | Sand/Clay gravels | | | - | - |
| 28 | 28-30 ft bls: Sand, quartz, light gray (2.5 Y 7/2). | | SC | Sand | | | - | - |
| 30 | 30-32 ft bls: Clay with some Sand, quartz, wet, light gray to light orange-brown, (30-33'). | | | | | | - | - |
| 32-34 | 32-34 ft bls: Clay with some Sand, quartz, fine grain, light greenish gray (5 Y 7/2 to 5 Y 8/3), firm, 33' Top of Hawthorn. | | CL | Clay/Sand | NA | NA | - | - |
| 34 | 34-44 ft bls: Clay with some Sand, quartz, fine grain, firm, light greenish gray (5 Y 7/2 to 5 Y 8/3), some dark black organics, mottled. | | | | | | - | - |
| 44 | 44-45 ft bls: Clay with some Sand lenses, gravel size red-brown (7.5 YR 5/8), with dark gray laminate. | | CL | Clay | | | - | - |
| 45 | 45-47 ft bls: Sand, with some Clay and Silt. | | | | | | - | - |
| 46 | 47-48 ft bls: Clay with some Sand lenses, gravel size red-brown (7.5 YR 5/8), with dark gray laminate. | | CL-SC | Clay/Sand | NA | NA | - | - |
| 48 | 48-50 ft bls: Silt with some Clay, light gray orange-brown (GLEY 7/1). | | | | | | - | - |
| 50 | 50-52 ft bls: Silt with some Sand, quartz, fine grain, light gray. | | | | | | - | - |
| 52 | 52-56 ft bls: Silt with some Sand, quartz, coarse grain, loose. At 53' firm Sand layer gravel size. | | SM-SC | Silt/Sand | NA | NA | - | - |
| 56 | 56-60 ft bls: At 57' Silt with some Clay, light greenish gray, more friable. At 58'Sand, quartz, medium grain. | | SM-CL | Silt/Clay | | | - | - |
| 60 | 60-66 ft bls: Clay and Silt, very hard/ dense and dry, light gray (very slight olive tint). | | ML | Silt/Clay | NA | NA | - | - |
| 66 | 66-70 ft bls: Same as above, very slight reaction w/ HCL, increase in calcium carbonate content. | | ML | Silt/Clay | NA | NA | - | - |
| 70 | 70-72 ft bls: Clay with some weathered Limestone, 71' strong reaction w/ HCL. Suwanee at 71'. | | ML | Silt/Clay | | | - | - |
| 72 | 72-74 ft bls: Same as above, some pieces of hard Limestone present w/some concretion nodules, brown to light olive. | | GM | Silt/gravel | | | - | - |
| 74 | 74-78 ft bls: Clay with some Limestone friable, dry and weathered. | | CL-GM | Limestone/ Clay | | | - | - |
| 78 | 78-90 ft bls: Sand, quartz, fine to medium grain, with some Silt and Clay, mixed with some dry hard Limestone and mafic meinerals, light greenish gray (GLEY 1 7/1, olive yellow (2.5 Y 6/6). | | GC | Sand/Silt/ gravel/clay limestone | NA | NA | - | - |
| 91 | 91-97 ft bls: Weathered Limestone. | | GM | Limestone | NA | NA | - | - |
| | 95 -105 ft. bls: (TFZ-3, screened from 95' - 105' bls.). | | | | | | - | - |
| 97 | 97-103 ft bls: Limestone, very gritty texture,wet, loose, unconsolidated, water table encountered at 103'. | | GM | Limestone | NA | NA | - | - |

Notes: Mulit-level piezometer TFZ-1 depth is 16' bls. Bottom of sand pack 16' bls. Top of sand pack 3' bls. Bentonite seal from 3' to surface. screen size 0.010", screen interval 5' - 15' bls.
Notes: Mulit-level piezometer TFZ-2 depth is 31' bls. Bottom of sand pack 31' bls. Top of sand pack 23' bls. Bentonite seal from 23' to 16', screen size 0.010", screen interval 25 - 30' bls.

1 – Not applicable to boring 2. NA - Not analyzed due to malfunction of instrument.

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O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
MLP LOCATION: OBGMLP-4

Client: ITT INDUSTRIES INC.

Pr. ocation: Former Thompson Industries Site, Madison, Florida.

File ...: 22992.013.001

Boring/Drilling Company: Boart Longyear

Personnel:

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers

Page 2 of 2

Location: OBGDP-23

Coordinates: N: 536081
E: 2313747

Start Date: 3/7/00

End Date: 3/7/00

Screen
Riser
Steel

Grout
Sand Pack
Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 158.35'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded SCH 80 PVC
B: 1" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 1" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| | | | | | NA | NA | – | – |
| 105 | Boring Terminated. Total Depth = 105' | | | | | | – | – |

Notes: Multi-level piezometer TFZ-3 depth is 105' bls. Bottom of sand pack at 105' bls. Top of sand pack at 93' bls. Bentonite seal from 93' - 31' bls. screen size 0.010", screen interval 95' - 105' bls.
1 – Not applicable to boring 2. NA - Not analyzed due to malfunction of instrument

**O'BRIEN & GERE ENGINEERS, INC.**

**REPORT OF BORING**

**CONSTRUCTION LOG**
**MLP LOCATION: OBGMLP-5**

Client: ITT INDUSTRIES INC.
Page 1 of 2
Drill Method: ROTOSONIC
Sampler: 5" Core

Project Location: Former Thompson Industries Site, Madison, Florida.
Location: OBGDP-24
Land Surface Elevation, msl: 151.70'

File No.: 22992.013.001
Coordinates: N: 536377
E: 2313472
WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand

Boring Company: Boart Longyear
Start Date: 2/21/00
BENTONITE SEAL: Pure Gold Granular/Med. Chips

Personnel: Bill Kotziers and Boart Longyear Drilling Crew.
End Date: 2/22/00
WELL RISER:
A: Flush-Threaded SCH 80 PVC
B: 1" Diameter

Drill Rig: Rotosonic
Screen =
Riser
Steel #
Grout
Sand Pack
Bentonite
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 1" Diameter

OBG Geologist: Bill Kotziers

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-4 ft bls: Asphalt and limerock grading into an orangish brown Silt (fill). | | SM | Sand | 1 | 1 | - | - |
| 4 | 4 - 7 ft. bls: Silt with some Clay, light greenish gray. | | CL-SC | Sand/Clay | | | - | - |
| 7 | 7 - 12 ft. bls: Silt with some Clay, grading into a gravelly cemented quartz Sand, orange brown to light gray in color. | | SM-SC | Silt/Clay/ Sand | | | - | - |
| 9 | 9 ft bls: (TFZ-1, screened from 9' - 14' bls.). | | | | | | - | - |
| 12 | 12 - 16 ft. bls: Sand, quartz, medium to coarse grain, with Clay, soft, wet, and unconsolidated light orange-brown in color, small amount of gray clay crossbed lenses. Water table encountered at ~ 14 ft. | | SC-SP | Sand/Clay/ gravels | NA | 12 | - | - |
| 16 | 16 - 20 ft. bls: Clay with a trace of Silt, mottled light gray to orange brown, trace of mafic fragments (40mm). | | CL-SM | Clay/Silt | NA | 15 | - | - |
| 20 | 20 - 24 ft. bls: Silt with some Clay, and a trace amount of Sand. | | CL-SM | Silt/Clay/ Sand | NA | 50 | - | - |
| 24 | 24 - 29 ft. bls: Silt, medium orange-brown grading into a light gray Clay with thin loosely consolidated orange brown laminates. (TFZ-2, screened from 24' - 29' bls.). | | SM | Silt/Clay | NA | 27 | - | - |
| 29 | 29 - 34 ft. bls: Clay, orange-brown grading into a Clay light green-gray (top of the Hawthorn at 30 ft.), leading into | | CL | Clay | | | - | - |
| 30 | a mottled yellow brown ( 10 YR 6/6) to medium brown ( 10 YR 7/6) layer,with a trace of sand. | | | | NA | 6 | - | - |
| 34 | 34 - 60 ft. bls: Clay, light green-gray, very hard (US 4.0 T/Ft2), with minor traces of leached phosphate nodules. Varying shades of green throughout this interval with orange brown laminates at 43 ft. | | CL | Clay | NA | 8 | - | - |
| | | | | | NA | 12 | - | - |
| 45 | | | | | NA | 0 | - | - |
| 50 | | | | | NA | 3 | - | - |
| 55 | | | | | NA | 5 | - | - |
| 60 | 60 - 68 ft. bls: Clay, soft, increased phosphate nodules, light green gray (5 Y 6/3) grading into a yellow brown (10 YR 6/3) | | CL | Clay | NA | 0 | - | - |
| 65 | | | CL | | NA | 2.6 | - | - |
| 68 | 68 - 73 ft. bls: Clay and Limestone transition zone, highly weathered dry, light olive (10YR 7/3). | | CL-GM | Clay/ Limestone | NA | 19 | - | - |
| 73 | 73 - 81 ft. bls: Clay and limestone, re-worked, dry, hard, friable, weathered zone, chalky texture, some chert present at 74 ft. | | CL-GM | Clay/ Limestone | | | - | - |
| 81 | 81 - 103 ft. bls: Limey Clay, weathered, friable and dry. | | CL-GM | Clay/ Limestone | | | - | - |
| 90 | | | | | | | - | - |
| 100 | | | | | | | - | - |

Notes: Multi-level piezometer TFZ-1 depth is 15 ft. Bottom of sand pack is 15 ft. Top of sand pack is 7 ft. Bentonite seal from 7 ft to 2 ft bls, screen size 0.010" screened from 9 ft to 14 ft bls. MLP TFZ-2 depth is 31 ft bls, bottom sand pack is 3 from 31 to 33 ft bls, grout from 0 to 31 ft. bls, screen size 0.010", screened from 35 to 40 ft bls.

1. - Not applicable to boring 2 NA - Not analyzed due to malfunction of instrument

| O'BRIEN & GERE ENGINEERS, INC. | REPORT OF BORING | CONSTRUCTION LOG<br>MLP LOCATION: OBGMLP-5 |
|---|---|---|
| Client: ITT INDUSTRIES INC. | Page 2 of 2 | Drill Method: ROTOSONIC |
| Pro . cation: Former Thompson Industries Site, Madison, Florida. | Location: OBGDP-24 | Sampler: 6" Core<br>Land Surface Elevation, msl: 151.70' |
| File No.: 22992.013.001 | Coordinates: N: 536377<br>E: 2313472 | WELL/MLP CONSTRUCTION MATERIALS:<br>FILTER PACK: 30-40 silica sand |
| Boring/Drilling Company: Boart Longyear | Start Date: 2/21/00 | BENTONITE SEAL: Pure Gold Granular/Med. Chips |
| Personnel: | End Date: 2/22/00 | WELL RISER:<br>A: Flush-Threaded SCH 80 PVC<br>B: 1" Diameter |
| Drill Rig: Rotosonic | Screen / Riser / Steel / Grout / Sand Pack / Bentonite | SCREEN MATERIAL:<br>A: 0.010 Inch Slot SCH. 80 PVC<br>B: 1" Diameter |
| OBG Geologist: Bill Kotziers | | |

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 101 | | | | | | | – | – |
| | | | | | | | – | – |
| 103 | 103 - 104 ft.bls: Sand, quartz, medium grain, with some calcareous limestone, wet, loose. | | GC-GP | Sand/grave Limestone | NA | NA | – | – |
| 104 | 104 - 108 ft. bls: Clay and Lime mixture, moist, white to very light gray . | | | | | | – | – |
| | | | | | | | – | – |
| | | | | | | | – | – |
| | | | | | | | – | – |
| 108 | 108 - 117 ft. bls: Clay, mixed with some Limestone and Sand, quartz, medium grain, gritty texture, loose, and moist | | GC | Clay/Sand/ Limestone | NA | NA | – | – |
| | 110 ft bls: (TFZ-3, screened from 110' - 115' bls.). | | | | | | – | – |
| | | | | | | | – | – |
| | | | | | | | – | – |
| | | | | | | | – | – |
| | | | | | | | – | – |
| | | | | | | | – | – |
| 115 | | | | | | | – | – |
| | | | | | | | – | – |
| 117 | Boring Terminated. Total Depth 117 ft. | | | | | | – | – |

Notes: Multi-level piezometer TFZ-3 depth is 117 ft. Bottom of sand pack is 117 ft. Top of sand pack is 103 ft. Bentonite seal from 103 ft to 31 ft bls, screen size 0.010" screened from 9105 ft 115 ft bls. from 31 to 33 ft bls, grout from 0 to 31 ft. bls, screen size 0.010", screened from 35 to 40 ft bls.

1. – Not applicable to boring 2. NA - Not analyzed due to malfunction of instrument.

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
MLP LOCATION: OBGMLP-6

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Bo 'lling Company: Boart Longyear

Per.. ..el:

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers

Page 1 of 2

Location: OBGDP-25

Coordinates: N: 536351
E: 2313740

Start Date: 2/23/00

End Date: 2/24/00

Screen
Riser
Steel

Grout
Sand Pack
Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 155.09'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded SCH 80 PVC
B: 1" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 1" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-3 ft bls: Asphalt with limerock fill. | | SM | Sand/Silt | | | - | - |
| 3 | 3 - 6 ft. bls: Sand, quartz, fine to medium grain, with some Silt and Clay, orange brown to light gray. | | SM | Sand/Silt | | | - | - |
| 6 | 6 - 8 ft. bls: Clay with some Silt, firm ( US 2 T/FT2), light gray in color. | | CL-SC | Clay w/ Silt | NA | 0.2 | - | - |
| 8 | 8 - 9 ft. bls: Sand, quartz, fine grain, wet, loose, unconsolidated, Water table at 8 ft. | | | | NA | 0.7 | - | - |
| 9 | 9 - 14 ft. bls: Sand, quartz, fine to medium grain, with some concretions 1 to 3 " thick. Light orange. | | SP | Sand w/ litti gravel | NA | 7 | - | - |
| | | | | | NA | 0.4 | - | - |
| 14 | 14 - 17 ft. bls: Sand interval grading into a orange brown to light gray Clay and Silt interval. | | SC-CL | Silt/ Clay/ Sand | NA | 6.1 | - | - |
| 17 | 17 - 19 ft. bls: Silt with some Clay, wet, very firm light gray to orangish brown. TFZ-1 Screen (7-17 Ft.) | | CL | Clay w/ Silt | NA | 6 | - | - |
| 19 | 19 - 25 ft. bls: Clay with some Sand , quartz, fine grain, and trace amount of Silt, Light yellow. | | ML | Clay/Silt/ Sand | NA | 2.7 | - | - |
| 25 | 25 - 31 ft. bls: Clay with some Sand, quartz, fine to medium grain, wet, loose, poorly graded, soft, white to light yellow brown water table at 25 ft. TFZ-2 Screen (25-30 Ft.) | | SP-CL | Sand/Clay little gravel | NA | 1.8 | - | - |
| 30 | | | | | | | - | - |
| 31 | 31 - 33 ft. bls: Clay, hard, with some Silt containing some leached phosphate calcareous nodules, Top of the Hawthorn at 31 ft. Light green gray in color. | | CL | Clay/Silt/ little gravel | NA | 50.1 | - | - |
| 33 | 33 - 37 ft. bls: Clay with some Silt, soft and moist. | | | | | | - | - |
| 37 | 37 - 46 ft. bls: Clay firm, damp, light green gray. | | CL | Clay | NA | 96.1 | - | - |
| | | | CL-SC | | | | - | - |
| 46 | 46 - 54 ft. bls: Clay firm with some organic layers, dark brown to black. | | CL-OH | Clay/Silt/ organics | NA | 17.1 | - | - |
| 50 | | | | | NA | 16 | - | - |
| 54 | 54 - 55 ft. bls: Clay interval with increasing Sand, quartz, medium grain, loose with small amount of pebble size grains. | | SC-SP | Sand/Clay/ gravel | | | - | - |
| 55 | 55 - 64 ft. bls: Clay very hard and dry. | | | | NA | 9 | - | - |
| 60 | | | CL | | NA | 6.2 | - | - |
| 64 | 64 - 65 ft. bls: Sand, quartz, medium to coarse grain, small amount of calcareous grains, no reaction with hydrochloric acid, very light orange brown. | | SP | Sand/gravel | NA | 1.7 | - | - |
| 65 | | | | | NA | 5.7 | - | - |
| 66 | 66 - 70 ft. bls: Clay hard, dry, light greenish gray. | | | | | | - | - |
| 70 | 70 - 71 ft. bls: Silt and Clay interval, damp, hard leading into a firm Clay, light greenish gray. | | ML | Clay/Silt | NA | 2.3 | - | - |
| 71 | 71 - 75 ft. bls: Limey Clay mixed with Limestone, dry and weathered interval. | | | | | | - | - |
| 75 | 75 - 102 ft. bls: Limestone, with some fossilize pieces, very friable , dry and weathered, pale white to light brown. | | GP | Limestone | NA | 21.2 | - | - |
| 81 | 81 ft bls: Dry weathered Limestone/Limey Clay, portions appear re-worked, conglomeritic matrix. | | GC | Limestone/ Clay | | | - | - |
| 90 | 90 ft bls: Limestone dry, weathered, crumbly, mixed with some Limey Clay, white to light Gray. | | GC | Limestone | | | - | - |
| 100 | 100 ft bls: Fossiliferous Limestone, (Bivalves: small 4-7mm), light brown, very pale. | | GC | Limestone | | | - | - |

Notes: MLP TFZ-1 depth is 18 ft bls, bottom of sand pack is 18 ft, top of sand pack is 5 ft bls, bentonite seal from 5 to 2 ft bls, screen size 0.010", screened from 7 to 17 ft bls. MLP TFZ-2 depth is 31 ft bls. bottom of sand pack is 31 ft bls, top of sand pack is 23 ft, bentonite seal from 23 ft to 18 ft bls, screen size 0.010", screened from 25 ft to 30 ft bls.

1. – Not applicable to boring 2. NA - Not analyzed due to malfunction of instrument.

| O'BRIEN & GERE ENGINEERS, INC. | REPORT OF BORING | CONSTRUCTION LOG<br>MLP LOCATION: OBGMLP-6 |
|---|---|---|
| Client: ITT INDUSTRIES INC. | Page 2 of 2 | Drill Method: ROTOSONIC<br>Sampler: 6" Core |
| Project: Former Thompson Industries Site, Madison, Florida. | Location: OBGDP-25 | Land Surface Elevation msl: 155.09' |
| File No.: 22992.013.001 | Coordinates: N: 536351<br>E: 2313740 | WELL/MLP CONSTRUCTION MATERIALS:<br>FILTER PACK: 30-40 silica sand |
| Boring/Drilling Company: Boart Longyear | Start Date: 2/23/00 | BENTONITE SEAL: Pure Gold Granular/Med. Chips |
| Personnel: | End Date: 2/24/00 | WELL RISER:<br>A: Flush-Threaded SCH 80 PVC<br>B: 1" Diameter |
| Drill Rig: Rotosonic | Screen / Riser / Steel; Grout / Sand Pack / Bentonite | SCREEN MATERIAL:<br>A: 0.010 Inch Slot SCH. 80 PVC<br>B: 1" Diameter |
| OBG Geologist: Bill Kotziers | | |

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 101 | | | | | | | - | - |
| 102 | 102 - 115 ft. bls: Limey clay, moist and mixed with Limestone fragments, light Gray. | | GC | Limestone/ Clay | NA | NA | - | - |
| | | | | | | | - | - |
| | | | | | | | - | - |
| | | | | | | | - | - |
| | | | | | | | - | - |
| | | | | | | | - | - |
| | | | | | | | - | - |
| 110 | 110 ft bls: Limey Clay, damp, moist, with some interspersed Limestone Fragments. | | | | | | - | - |
| 112 | 112 ft bls: TFZ-3 Screen (112' - 117'). | | | | | | - | - |
| | | | | | | | - | - |
| | | | | | | | - | - |
| 115 | 115 - 117 ft. bls: Water table encountered at 115 ft. | | | | | | - | - |
| | | | | | | | - | - |
| 117 | Boring terminated at 117 ft. | | | | | | - | - |

Notes: MLP TFZ-3 depth is 117 ft bls, bottom of sand pack is 117 ft, top of sand pack is 110 ft bls, bentonite seal from 110 to 31 ft bls, screen size 0.010", screened from 117 to 112 ft bls.
1 – Not applicable to boring 2 NA - Not analyzed due to malfunction of instrument

**O'BRIEN & GERE ENGINEERS, INC.**

**REPORT OF BORING**

**CONSTRUCTION LOG**
**MLP LOCATION: OBGMLP-7**

Client: ITT INDUSTRIES INC.
Page 1 of 1
Drill Method: ROTOSONIC
Sampler: 6" Core

Project Location: Former Thompson Industries Site, Madison, Florida.
Location: OBGDP-26
Land Surface Elevation, msl: 142.36'

File No.: 22992.013.001
Coordinates: N: 536923
E: 2314045

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Stick-up Threaded SCH 80 PVC
B: 1" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 1" Diameter

ng/Drilling Company: Boart Longyear
Start Date: 2/14/00
End Date: 2/17/00

Personnel:

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers

Screen
Riser
Steel
Grout
Sand Pack
Bentonite

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft bls: Sand, quartz, fine to medium grain with some Silt and organic roots, damp, dark brown (2.5 Y 2/1). | | SM | Sand/Silt | | | - | - |
| 2 | 2 - 4 ft. bls: Sand, quartz, fine grain, with some Silt, light brown (10 YR 3/2), trace organics. | | | | NA | 0 | - | - |
| 4 | 4 - 10 ft. bls: Sand, quartz, fine grain, moist, with some Silt, mottled light orange-brown (10 YR 5/4), to light gray (2.5 Y7/3) stiff ( 3- 4.5 T/Ft2). | | SP-SM | Sand/Silt | NA | 0 | - | - |
| | | | | | NA | 0.2 | - | - |
| | | | | | NA | 1.4 | - | - |
| 10 | 10 - 15 ft. bls: Clay, with some Sand, moist, loose and soft, (US 2.0 T/Ft2), orange-brown (10YR 5/8). | | SC | Sand/Clay | NA | 7.1 | - | - |
| 12 | 12 ft bls: TFZ-1 Screen (12 - 22 ft) | | | | NA | 0.7 | - | - |
| 15 | 15 - 16 ft. bls: Sand, quartz, well sorted, with some Clay, soft, wet and mottled yellowish gray. | | | | NA | 0.7 | - | - |
| 16 | 16 - 18 ft. bls: Sand, fine to medium grain, wet, with some Clay and Silt, unconsolidated and light yellowish-brown | | SP-SC | Sand/Silt/ Clay | | | - | - |
| 18 | 18 - 28 ft. bls: Same as above, increased Clay and Silt content, orange-brown in color. | | | | NA | 200 | - | - |
| | | | | | NA | 300 | - | - |
| | | | | | NA | 300 | - | - |
| 28 | 28 -35 ft. bls: Clay and Silt, mottled light gray to orange-brown. | | CL | Clay/Silt | | | - | - |
| | | | | | NA | 300 | - | - |
| 35 | 35 - 40 ft. bls: missing core, no recovery. | | | | | | - | - |
| 37 | 37 ft bls: TFZ-2 Screen (37 - 47 ft) | | | | | | - | - |
| | 40 - 43 ft. bls: Silt, wet, loose and mottled, dark gray-brown to light orange-brown. | | SM | Silt | NA | 33 | - | - |
| 43 | 43 - 45 ft. bls: Clay with some Silt, moist, interval has laminated crossbeds. | | ML | Clay/Silt | | | - | - |
| 45 | 45 - 47 ft. bls: Clay with Silt, moist highly mottled, brown (7.5 YR 4/6) to light yellow (2.5 Y 6/8), to greenish gray (GL 1 8/1). | | ML | Clay/Silt | NA | 30 | - | - |
| 47 | | | | | | | - | - |
| 48 | 48 - 55 ft. bls: Same as above with Iron oxide fragments throughout the interval. | | | | | | - | - |
| | | | | | NA | 5 | - | - |
| | | | | | | | - | - |
| | | | | | 1.5 | 4.1 | - | - |
| 55 | 55 - 56 ft. bls: Clay, soft, mottled light gray to gray. | | CL | Clay | | 5 | - | - |
| 56 | 56 - 58 ft. bls: Clay soft to stiff same color as above. ( US 3.0 to 4.0 T/Ft2). | | | | | | - | - |
| 58 | 58 - 62 ft. bls: Clay, stiff, with some Sand, quartz, medium to coarse grain. Some sections thickly laminated dark brown to black leached phosphorous nodules. | | SC-SP | Clay/Sand/ little gravel | 2.8 | 4.7 | - | - |
| 62 | 62 - 65 ft. bls: Same as above, with cemented Sand concretions, quartz, medium grain, loose, light olive gray (GI 1 7/1). Sand and Clay mixture, with black laminated crossbeds, light gray (GL 1 8/1) to brownish yellow (10 YR 6/6 , 5/6). | | SP-SC | Clay/Sand/ little gravel | 112 | 3.9 | - | - |
| 65 | 65 - 73 ft. bls: same as above. | | | | 455 | 5 | - | - |
| | | | | | 49 | 0 | - | - |
| | | | | | 112 | 0 | - | - |
| 73 | 73 - 81 ft. bls: Clay, soft, with some Sand and Silt, firm, very light gray | | CL | Clay/Silt/ Sand | | | - | - |
| | | | | | 16.9 | 9.1 | - | - |
| 80 | 80 ft bls: TFZ-3 Screen (80 - 90 ft) | | | | 95.3 | 2.5 | - | - |
| 81 | 81 - 85 ft. bls: Same as above, Firm, wet, with some Sand, quartz, fine grain, black thin laminates at 83 to 85 ft. (US 1.75 T/Ft2) | | CL | | | | - | - |
| | | | | | 0 | 0 | - | - |
| 85 | 85 - 87 ft. bls: Clay, soft, with some Sand and Silt, light gray. | | | Clay/Silt/ Sand | | | - | - |
| 87 | 87 - 90 ft. bls: Limestone with some Clay, very weathered, wet, white, (89 - 90 ft.) Top of the Suwannee. | | GC | Limestone | | | - | - |
| 90 | 90 - 95 ft. bls: Fossiliferous Limestone with some Sand, Quartz, medium grain, loose, white ( 5 Y 8/1) to pale orange (7.5 YR 8/6), some oxidized portions have sections that are gritty in texture, Yellowish brown (10 YR 6/8). | | GM | Limestone | | | - | - |
| | Boring terminated at 95 ft. | | | | 53 | 15 | - | - |

Notes: Multi-level piezometer TFZ-1 depth is 23 ft bls, bottom sand pack 23 ft, top sand pack 10 ft. Bentonite seal from 10 ft to 2 ft. Screen size 0.010", screened from 12 ft to 22 ft. bls. Multi-level piezometer TFZ-2 depth is 48 ft bls ottom sand pack 48 ft bls, top sand pack 35 ft, bentonite seal from 35 ft to 23 ft. screened from 37 to 47 ft bls MLP TFZ-3 depth 95 ft, bottom sand pack 91 ft, top sand pack 78 ft, bentonite seal 78 ft to 48 ft, screened from 80 to 90

1. – Not applicable to boring. 2. NA - Not analyzed due to malfunction of instrument.

**O'BRIEN & GERE ENGINEERS, INC.**

**REPORT OF BORING**

**CONSTRUCTION LOG**
**MLP LOCATION: OBGMLP-8**

**Client:** ITT INDUSTRIES INC.

**Project Location:** Former Thompson Industries Site, Madison, Florida.

**File #** 992.013.001

**Boring Company:** Boart Longyear

**Personnel:** Bill Kotziers, Boart Longyear.

**Drill Rig:** Rotosonic

**OBG Geologist:** Bill Kotziers

**Page 1 of 2**

**Location:** OBGDP-27

**Coordinates:** N: 537279
E: 2314252

**Start Date:** 2-12-00

**End Date:** 2-13-00

Screen | Riser | Steel | Grout | Sand Pack | Bentonite

**Drill Method:** ROTOSONIC
**Sampler:** 6" Core
**Land Surface Elevation, msl:** 139.12'

**WELL/MLP CONSTRUCTION MATERIALS:**
**FILTER PACK:** 30-40 silica sand
**BENTONITE SEAL:** Pure Gold Granular/Med. Chips
**WELL RISER:**
A: Stick-up Threaded SCH 80 PVC
B: 1" Diameter
**SCREEN MATERIAL:**
A: 0.010 Inch Slot SCH. 80 PVC
B: 1" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-5 ft bls: Dark Brown Sand and silt and with organic roots, (10YR 2/1). | | SM | Sand/Silt | | | | |
| 2 | 2 ft bls: Same as Above, damp to moist | | | | 0 | NA | - | - |
| 5 | 5-7ft bls: Sand, quartz, fine to medium grain, loose, damp, with some Silt, light brown. | | SM-SP | Sand/Silt/ little gravel | | | - | - |
| 6 | 6.5 ft bls: Same as Above | | | | | | - | - |
| 7 | 7-10 ft bls: Sand, quartz, fine grain, with some Silt, light gray to off white. | | | | 17 | NA | - | - |
| 10 | 10-15 ft bls: Sand-Clay mixture, very dense and hard, light gray (5Y 7/1) (us ~ 2-2.75 T/ft²). TFZ1 Screened (10 - 20 ft.) | | SC-CL | Clay/Sand | 5 | NA | - | - |
| 15 | 15-20 ft bls: Sand, quartz, fine grain, loose, wet, and mixed with some Clay (5Y 7/1). | | SM | Sand | | | - | - |
| 20 | 20-30 ft bls: Sand with Increasing Clay content, mottled Light Gray, Low Plasticity/soft (u.s. < 0.5 T/ft²) | | CL | Sand/Clay | | | - | - |
| 25 | 25 ft bls: Same as Above, Mottled Orange -Brown | | | | | | - | - |
| 27 | 27ft bls: Same as Above, Moderately Consolidated. | | | | | | - | - |
| 30 | 30-34 ft bls:Sand , quartz, very fine grain, soft with some Clay, which increases in content with depth. | | CL-ML | Sand/Clay | | | - | - |
| 34 | 34-40 ft bls: Top of Miccosukee, est 35' Sand and Clay mixture, very loose, and wet, with some cemented concretions Orange-Brown (7.5YR 5/8) | | SC-SP | Sand/Clay gravelly | | | - | - |
| 39 | bls: Incresed Clay content. | | | | | | - | - |
| 41 | ft bls: Clay, mottled, Light Gray to Light Brown to Red-Brown, Moderately Stiff, (u.s. = 1.5 to 2 t/ft²) | | CL | Clay | | | - | - |
| 43 | ft bls:Clay with some Sand, quartz, medium to coarse grain, soft, wet, orange-brown, mottled orange-brown ight gray, with some pebble sized cemented Sand grains. Saturated at 44-45'. | | SP-SC | Sand/Clay/ gravelly | | | - | - |
| 45 | 45-48 ft bls: Sand quartz, fine to medium grain, wet, soft, orange-brown (10YR 6/8). | | SP | Sand | | | - | - |
| 48 | 48-50 ft bls: Sand with some Clay, soft, to moderately dense, orange-brown, Clay is soft to moderately dense. | | SP-SC | Sand/Clay | 0 | 2 | - | - |
| 50 | 50-57 ft bls: Silt and Sand, Mottled orange-brown to light Gray (GLEY 0/4), minor fine-grained Phosphate (Black) nodules mixed with some quartz Sand. | | SM-SC | Silt/Sand | 0 | 4 | - | - |
| 57 | 57-58 ft bls: Sand, quartz, medium to coarse grain, wet, and loose, orange-brown. | | SP | Sand/gravel | | | - | - |
| 58 | 58-60 ft bls: Clay, with some Sand, quartz, coarse grain, moist, soft, sticky orange-brown. | | SP-SC | Sand/Clay gravelly | | | - | - |
| 60 | 60-65 ft bls: Sand and Clay Mixture, becoming dense, mottled orange-brown to light gray. | | SC | Sand/Clay | | | - | - |
| 62 | 62 ft bls: TFZ2 Screened (62 - 72 ft.) | | | | | | - | - |
| 65 | 65 - 70 ft bls: Sand, Medium grained, orange-brown, Wet. | | SP | Sand/ No Fines | | | - | - |
| 70 | 70-75 ft bls: Clay very soft, wet, and sticky orange-brown. | | CL | Clay | | | - | - |
| 75 | 75-78 ft bls: Clay with some Sand, quartz, moist, soft, and sticky orange-brown with some phosphate grains (white) | | SC | Clay/Sand | | | - | - |
| 78 | 78-90 ft bls: Clay with some Sand and Silt, firm, slight moist, with leached phosphate grains (Hawthorn), light green, gray. | | CL-ML | Clay/Sand/ Silt | | | - | - |
| 81 | 81 ft bls: Same as Above, (5Y 7/3 to 6/3), Mottled. | | | | | | - | - |
| 83 | 83 ft bls: Same as Above, texture varies from soft to firm. | | | | | | - | - |
| 88 | 88 ft bls: Same as Above, Some re-worked phosphate grains. | | | | | | - | - |
| 90 | 90-95 ft bls: Clay-Silt mixture, Same as Above with visible Thin Laminates, Black, Organic Material. | | | | NA | 0 | - | - |
| 94 | 94 ft bls: Same as Above (u.s. ~ 2 T/ft²) | | | | NA | 0 | - | - |
| 95 | 95-109 ft bls: Clay with some Silt, light gray-olive (5Y 6/3), stiff, dry, and mottled, (u.s. ~1.75 to 2.5 T.ft²). | | ML | Clay/Silt | NA | 0 | - | - |

Notes: Multi-level piezometer TFZ-1 depth at 21 ft bls, bottom of sand pack is 21 ft, top of sand pack is 9 ft bls, bentonite seal from 9 ft to 2 ft bls, screen size 0.010", screened from 10 to 20 ft bls. Multi-level Piezometer TFZ-2 depth at 73 ft bls, bottom of sand pack is 73 ft bls, top sand pack is 61 ft bls, bentonite seal from 61 ft to 21 ft bls, screen size 0.010", screened 62 to 72 ft bls.

1. - Not applicable to boring. 2. NA - Not analyzed due to instrument malfunction.

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
MLP LOCATION: OBGMLP-8

Client: ITT INDUSTRIES INC.

Page 2 of 2

Drill Method: ROTOSONIC
Sampler: 6" Core
and Surface Elevation, msl: 139.12'

Project Location: Former Thompson Industries Site, Madison, Florida.

Location: OBGDP-27

File No.: 22992.013.001

Coordinates: N: 537279
E: 2314252

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold
Granular/Med. Chips
WELL RISER:
A: Stick-up Threaded SCH 80 PVC
B: 1" Diameter

Boring Drilling Company: Boart Longyear

Start Date: 2/12/00

Personnel: Bill Kotziers, Boart Longyear.

End Date: 2/13/00

Drill Rig: Rotosonic

Screen
Riser
Steel
Grout
Sand Pack
Bentonite

SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 1" Diameter

OBG Geologist: Bill Kotziers

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 106 | 106 ft bls: Same as above, mottled, Light Gray to Orange | | ML-CL | Clay/Silt | NA | 0 | - | - |
| 109 | 109-119 ft bls: Clay with Silt interval Same as Above, grading to Greenish Gray, softer, Phosphate layer with Gravel size broken Limestone fragments. | | CL-GM | Clay/Silt/ gravelly | | | - | - |
| 113 | 113-114.5 ft bls: Same as Above with very thick laminates Black to brown to orange-brown to gray, with some shell fragments. | | CL | Clay | NA | 0 | - | - |
| 115 | 115-118 ft bls: Limey Clay interval, white to light gray, Dry, TFZ 3 Screened (115 - 125). | | | | | | - | - |
| 118 | 118-119 ft bls: Weathered Limestone, oxidized orange-brown layers, Top of Suwannee limestone, Strong reaction with HCL. | | GM | Limestone | | | - | - |
| 120 | 120 - 125 ft bls: Limey Clay, Weathered Limestone, Soft nodules that can be cut with knife. | | CL-GM | Limestone/ Clay | | | - | - |
| 125 | 125 - 130 ft bls: Harder Limestone with Sand, gritty texture, wet, light brown to off-white (5Y 8/1 - 8/2), can flake with knife. some fossils present. | | GM | Limestone | NA | 0 | - | - |
| 130 | 130 - 132 ft bls: Increased Sand content, loose zone. | | GC | Sand | | | - | - |
| 132 | 132 - 133 ft bls: Clay lenses, soft, sticky, orange-brown with some limestone fragments. | | | | | | - | - |
| 133 | 133 - 135 ft bls: Dry, crumbly white Limestone | | | | | | - | - |
| 135 | Boring Terminated Total Depth = 135' bls | | | | | | - | - |

Notes: Multi-level piezometer TFZ-3 depth at 135 ft bls, grout from 135 to 126, bottom of sand pack is 126 ft, top of sand pack is 113 ft bls, grout from 113 to 73 ft. bls, screen size 0.010", screened from 125 ft to 115 ft bls

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
MLP LOCATION: OBGMLP-9

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Bor' illing Company: Boart Longyear

Per. .: Bill Kotziers, Boart Longyear.

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers

Page 1 of 2

Location: OBGDP-28

Coordinates: N: 536119
E: 2313299

Start Date: 3-5-00

End Date: 3-5-00

Screen
Riser
Steel

Grout
Sand Pack
Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface elevation msl: 151.60'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded SCH 80 PVC
B: 1" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 1" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-4 ft bls: Asphalt, Limerock, Silt and Sand mixture with fill material. | | SM | Sand/Silt | | | - | - |
| 4 | 4-6 ft bls: Sand, quartz, fine to very fine grain with some silt dark gray to light brown, moist. | | SM | Sand/Silt | | | - | - |
| 5 | 5 ft bls: TFZ1 screen ( 5 - 15 ft.) | | | | NA | 3 | - | - |
| 6 | 6-10 ft bls: Clay and silt light yellow brown, moist to wet. | | ML-CL | Clay/Silt | | | - | - |
| 10 | 10-16 ft bls: Sand, quartz, fine grain, with some Silt and Clay, light gray to orange brown, becoming firmer with depth, GLEY 1 7/1 | | SC-ML | Clay/Sand/ Silt | NA | 15 | - | - |
| 16 | 16-20 ft bls: Same as above with some coarse quartz fragments light gray to brown. | | | | NA | 12 | - | - |
| 20 | 20-22 ft bls: Clay and Sand mixture with some cemented sand grains (<1.5"). | | SC-Cl | Sand/Clay | | | - | - |
| 22 | 22-26 ft bls: Sand, quartz, medium to coarse grain, with some oxidized stains, light gray (5 Y 7/1). | | SP | Sand/ gravelly | | | - | - |
| 25 | 25 ft bls: TFZ2 screen ( 25 - 30 ft.) | | | | | | - | - |
| 26 | 26-28 ft bls: Clay and Silt layer wet, becoming firmer with depth. | | CL | Clay/Silt | | | - | - |
| 28 | 28-30 ft bls: Silt and Clay, trace Sand, core becoming less dense at various places. | | | | | | - | - |
| 30 | 30-32 ft bls: Same as above very light gray (2.5 Y 7/2). | | CL | Clay/Silt | | | - | - |
| 32 | 32-35 ft bls: Sand, quartz, fine grained and well sorted laminates and medium size cobbles.White (5 Y 8/1) to Light Orange (2.5 YR 7/6). | | SP | Sand/ no fines | NA | 0.5 | - | - |
| 35 | 35-42 ft bls: Silt and Clay layer at 35' very soft and sticky, light grayish brown, with some white phosphate grains and iron stained Sand pebbles (angular) to (subangular). At 39' very firm, light orange-brown. | | CL-SM | Silt/Clay/ Sand | NA | 1 | - | - |
| 42 | 42-44 ft bls: Sand, quartz, fine grain, with some Clay and trace organics, highly mottled, firm, dark brown (10 YR 2/1). | | Cl | Sand/Clay | NA | 0 | - | - |
| 44 | 44-60 ft bls: Sand and Clay unit light orange-brown to light gray (10 YR 6/8) with small phosphate grains, lt. gray to lt. brown. | | SC | Sand/Clay | | | - | - |
| 60 | 60-64 ft bls: Sand and Clay mixture, light gray highly mottled with dark brown organics. | | SC | Sand/Clay | NA | 0 | - | - |
| 64 | 64-68 ft bls: Sand quartz, gravel size pebbles, very friable, soft and unconsolidated material at 67 ft. | | SW | Sand/no fines/ well-graded | | | - | - |
| 68 | 68-74 ft bls: Clay with gravelly Sand nodules, light greenish-gray soft, mottled brown laminate at 73' soft, white to very light gray. | | CL-SP | Clay/Sand gravelly | | | - | - |
| 74 | 74-78 ft bls: Clay with some Sand, firm, light greenish gray; some leached phosphate grains mixed with some dark brown organics. | | CL | Clay | | | - | - |
| 78 | 78-94 ft bls: Weathered Hawthorn mixed with a Limey Clay, small RXN w/ HCL at 79'. 79' Top of Suwannee Limestone. Light Brown (10 YR 6/3 - 8/2), dry chalky limestone, very few hard limestone pieces in return. | | GM | Limestone | NA | 0 | - | - |
| | -105 ft bls: Dry chalky limestone. | | GM | Limestone | | | - | - |

Notes: MLP TFZ-1 depth is 16 ft bls, bottom of sand pack is 16 ft, top of sand pack is 3 ft bls, bentonite seal from 3 to 0 ft. screen size 0.010", screened from 5 to 15 ft bls. MLP TFZ-2 depth is 31 ft bls, bottom of sand pack is 31 ft bls, top of sand pack is 23 ft, bentonite seal from 23 to 16 ft bls, screen size 0.010", screened from 25 to 30 ft bls.

1. – Not applicable to boring. 2. NA - Not analyzed due to instrument malfunction.

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| O'BRIEN & GERE ENGINEERS, INC. | REPORT OF BORING | CONSTRUCTION LOG<br>WELL/MLP LOCATION: OBGMLP-9 |
|---|---|---|
| Client: ITT INDUSTRIES INC. | Page 2 of 2 | Drill Method: ROTOSONIC |
| Project Location: Former Thompson Industries Site, Madison, Florida. | Location: OBGDP-28 | Sampler: 6" Core<br>Land Surface elevation msl: 151.60' |
| FII 2992.013.001 | Coordinates: N: 536119<br>E: 2313299 | WELL/MLP CONSTRUCTION MATERIALS:<br>FILTER PACK: 30-40 silica sand |
| Boring/Drilling Company: Boart Longyear | Start Date: 3-5-00 | BENTONITE SEAL: Pure Gold Granular/Med. Chips |
| Personnel: Bill Kotziers, Boart Longyear. | End Date: 3-5-00 | WELL RISER:<br>A: Flush-Threaded SCH 80 PVC<br>B: 1" Diameter |
| Drill Rig: Rotosonic | Screen / Riser / Steel / Grout / Sand Pack / Bentonite | SCREEN MATERIAL:<br>A: 0.010 Inch Slot SCH. 80 PVC<br>B: 1" Diameter |
| OBG Geologist: Bill Kotziers | | |

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| | | | | | NA | 0 | – | – |
| | | | | | NA | 0 | – | – |
| | | | | | NA | 0 | – | – |
| 104 | 104 ft bls: TFZ3 screen ( 104 - 114 ft.) | | GP | Limestone | NA | 0 | – | – |
| 105 | 105-110 ft bls: Increased Clay content at 105', wet from pushing sample out of core barrel. Some hard Limestone pieces w/ visible bivalves. | | | | NA | 0 | – | – |
| | | | | | NA | 0 | – | – |
| | | | | | NA | 0 | – | – |
| | | | | | NA | 0 | – | – |
| | | | | | NA | 0 | – | – |
| 110 | 110-112 ft bls: Back into dry weather Limestone w/ clay. | | LS | Limestone | NA | 0 | – | – |
| | | | | | NA | 0 | – | – |
| 112 | 112-114 ft bls: Limestone somewhat / slightly moist. | | | | NA | 0 | – | – |
| | | | | | NA | 0 | – | – |
| 114 | Boring Terminated ~ 114 ft bls. | | | | NA | 0 | – | – |
| | Total Depth = 114 ft. | | | | | | | |

Notes: MLP TFZ-3 depth is 114 ft bls, bottom of sand pack is 114 ft, top of sand pack is 102 ft bls, bentonite seal from 102 to 31 ft, screen size 0.010", screened from 104 to 114 ft bls.

1. – Not applicable to boring. 2. NA - Not analyzed due to instrument malfunction.

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O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG

MLP LOCATION: OBGMLP-10

Client: ITT INDUSTRIES INC.

Page 1 of 2

Drill Method: ROTOSONIC

Sampler: 6" Core

Project Location: Former Thompson Industries Site, Madison, Florida.

Location: OBGDP-29

Land Surface elevation msl: 148.85'

File No.: 22992.013.001

Coordinates: N: 636625
E: 2314506

WELL/MLP CONSTRUCTION MATERIALS:

FILTER PACK: 30-40 silica sand

Boring Drilling Company: Boart Longyear

Start Date: 3/02/00

BENTONITE SEAL: Pure Gold Granular/Med. Chips

Per : Bill Kotziers, Boart Longyear.

End Date: 3/02/00

WELL RISER:

A: Stick-up Threaded SCH 80 PVC

B: 1" Diameter

Drill Rig: Rotosonic

Screen
Riser
Steel

Grout
Sand Pack
Bentonite

SCREEN MATERIAL:

A: 0.010 Inch Slot SCH. 80 PVC

B: 1" Diameter

OBG Geologist: Bill Kotzlers

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft bls: Sand quartz, fine grain brown (10 Yr 4/3) to gray (10 YR 4/4). | | SM | Sand | NA | 0 | - | - |
| 2 | 3 ft. bls: Miccosukee formation at 3 ft. | | | | | | - | - |
| 4 | 4 - 8 ft. bls: Very loose, friable material, alternating in color from light gray (10 YR 7/1) to red orangish brown ( 7.5 YR 5/8). difficult to identify the soil due to drilling process and uncohesiveness. TFZ-1 (5-15 ft screened interval). | | SM | Sand | NA | 0 | - | - |
| 6 | | | | | | | - | - |
| 8 | 8 - 10 ft. bls: Sand, quartz, fine to medium grain, with Silt wet, loose, unconsolidated white to pale yellow laminates. | | | | | | - | - |
| 10 | 10-15 ft bls: Silt and Sand, quartz, fine to medium grain, loose and moist. | | SM | Sand/Silt | NA | 0 | - | - |
| 15 | 15 - 16 ft. bls: Clay, firm, moist, light orange brown (10YR 6/8) to light green (GL1 7/1), (US 3.5 T/FT2) | | CL-ML | Clay/Sand | NA | 0 | - | - |
| 16 | 16 - 20 ft. bls: Clay with some quartz Sand pebble concretions, orange brown. | | SP-SC | Sand/Clay gravelly | | | - | - |
| 20 | 20-24 ft bls: Clay with Silt, and Sand, firm, wet with thin laminates throughout the interval light gray , (US 3- 4 T/FT2). | | CL | Clay/Silt/ Sand | NA | 0 | - | - |
| 24 | 24 - 26 ft. bls: Silt and Clay lenses, firm with depth mottled light gray to orange brown. | | SC-CL-SM | Clay/Silt | NA | 0 | - | - |
| 26 | 26-30ft bls: Clay mottled lenses leading into a cemented Sand concretion layer, with some iron oxide staining, very wet saturated interval. Water table encountered at 30 ft. (TFZ-2), (Screened from 20 - 30 ft.) | | SC | Clay/Sand | | | - | - |
| 28 | | | | | | | - | - |
| 30 | 30-32 ft bls: Transition into the Hawthorn Clay at 31 ft. | | SC-CL | Clay/Sand | NA | 0 | - | - |
| 32 | 32-34 ft bls: Clay and Silt light greenish gray (GL 1 7/1) to orange brown to dark brown mottled laminates. | | CL | Clay | NA | 0 | - | - |
| 34 | 34 - 36 ft. bls: Sand, quartz, poorly graded, leading into a Clay with some leached white phosphate nodules. | | SP-CL | Sand/Clay/ gravelly | | | - | - |
| 36 | 36 - 43 ft. bls: Silt and Clay interval, damp, light greenish gray (GL 1 8/1). | | CL | Silt/Clay | | | - | - |
| 42 | | | | | | | - | - |
| 43 | 43 - 51 ft. bls: Clay mixed with some Sand and phosphate grains, highly mottled, dark brown ( 10 YR 6/2) | | SC | Clay/Sand | NA | 0 | - | - |
| 50 | | | | | | | - | - |
| 51 | 51- 55 ft. bls: Clay with trace amount of gravel size concretions , firm and light greenish gray (GL 1 7/1), (US 4.5T/FT2) | | GC | Clay/ gravels | | | - | - |
| 55 | 55 - 57 ft. bls: Clay with some Sand, quartz grains, stiff, light yellowish brown (US ~ 4.0 T/FT2) . | | SC | Clay/Sand | NA | 0 | - | - |
| 57 | 57 - 60 ft. bls: Clay with trace amounts of dark brown organic laminates, white to light gray reworked sediments. | | OL | Clay/with organics | | | - | - |
| 60 | 60-65 ft bls: Sand, quartz, fine to medium grain, with some Clay, soft, damp, with some phosphate grains present (1-2 T/FT2) | | CL | Sand/Clay | | | - | - |
| 65 | 65 - 66 ft. bls: Clay, soft medium plasticity leading into a limey clay. | | CL | Clay | | | - | - |
| 66 | 66 - 75 ft. bls: Top of the Suwannee at 65 ft. Dry hard limestone mixed with a dark brown to light (2.5 Y 7/4) limey clay. no reaction with the Hydrochloric acid, some orangish brown chert at 67 ft. The limestone is white to very pale orangish yellow (2.5 8/4) and finely crystalline. | | GP | Limestone | NA | 0 | - | - |
| 70 | | | | | | | - | - |
| 75 | 75 - 99 ft. bls: Clay, dry and friable with a chalky texture. | | CL-GP | Clay/Lime-stone | NA | 0 | - | - |
| 80 | | | | | | | - | - |
| 85 | | | | | | | - | - |
| 90 | | | | | | | - | - |
| | , - 105 ft. bls: TFZ-3, (Screened interval from 95-105 ft.) | | | | | | - | - |
| 99 | 99 - 106 ft. bls: Clay, Limestone mixture, wet, saturated at 99 ft. A very hard, gritty quartz Sand throughout the limestone. | | GP-CL | Clay/Lime-stone | | | - | - |
| 100 | | | | | | | - | - |

Notes: Multi level piezometer TFZ-1 is 16 ft bls, bottom of sand pack is 16 ft, top of sand pack is 3 ft bls, bentonite seal from 3 ft. surface, screened size 0.010", screened from 5' to 15 ft.bls.
Multi-level piezometer TFZ-2 is 31 ft.bls, bottom of sand pack is 31 ft, top of sand is 18ft. Bentonite seal to 16 ft. screen size 0.010", screened from 20 to 30 ft. bls.

1. – Not applicable to boring. 2. NA - Not analyzed due to instrument malfunction.

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
MLP LOCATION: OBGMLP-10

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Boring/Drilling Company: Boart Longyear

Personnel: Bill Kotziers, Boart Longyear.

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers

Page 2 of 2

Location: OBGDP-29

Coordinates: N: 536625
E: 2314506

Start Date: 3/02/00

End Date: 3/02/00

Screen
Riser
Steel

Grout
Sand Pack
Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface elevation msl: 148.85'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Stick-up Threaded SCH 80 PVC
B: 1" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 1" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 101 | | | GP | Limestone | | | – | – |
| | | | | | | | – | – |
| | | | | | | | – | – |
| | | | | | | | – | – |
| 106 | Boring Terminated, Total Depth 106 ft. | | | | | | – | – |

Note: Multi-level piezometer TFZ-3 depth is 106' bls, bottom of sand pack is 106' bls, top of sand pack is 93' bls, Bentonite seal is 93' to 31' bls. Screen size is 0.010" 95 ft to 105 ft bls.

1. – Not applicable to boring. 2. NA - Not analyzed due to instrument malfunction.

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
MLP LOCATION: OBGMLP-11

Client: ITT INDUSTRIES INC.

Page 1 of 2

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 138.09'

Project Location: Former Thompson Industries Site, Madison, Florida.

Location: OBGDP-30

File No.: 22992.013.001

Coordinates: N: 536884
E: 2314508

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded SCH 80 PVC
B: 1" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 1" Diameter

Boring/Drilling Company: Boart Longyear

Start Date: 3-15-00

Pe. .: Bill Kotziers, Boart Longyear.

End Date: 3-16-00

Drill Rig: Rotosonic

Screen
Riser
Steel
Grout
Sand Pack
Bentonite

OBG Geologist: Bill Kotziers

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft bls: Sand, quartz, with some Silt, dark brown/black, with organics (roots). | | SM | Sand/Silt | | | - | - |
| 2 | 2-3 ft bls: Sand, quartz, with some Silt, light brown, damp to moist. | | SP-SM | Sand/Silt | | | - | - |
| 3 | 3-6 ft bls: Sand, quartz, with trace Silt, water table present at 3' bls, loose material. | | SP | gravelly | | | - | - |
| 6 | 6-15 ft bls: Same as above, increased Clay content, light gray to light orange-brown (10YR 7/2), somewhat consolidated, Wet. | | SC | Sand/Clay | NA | 1 | - | - |
| 11 | 11 ft bls: Same as Above, becoming firmer, (us ~ 2 5-3 T/ft$^2$), Light Gray, (10 YR 6/2), moist. | | | | NA | 1 | - | - |
| 15 | 15-27 ft bls: Sand, quartz, fine to medium grained, light brown, well-sorted. | | SP | Sand/ no fines | NA | 3 | - | - |
| 17 | 17 ft bls: Same as Above, Becoming Light Gray. Water Table Present. ( TFZ-1, screened 17' - 27'). | | | | | | - | - |
| 22 | 22 ft bls: Same as Above, Light Orange-Brown, Loose (2.5Y 7/3). Saturated. | | SP | | NA | 3 | - | - |
| 27 | 27-30 ft bls: Clay with some sand, (us > 4.5 T/ft$^2$), firm, light gray w/ orange-brown laminates. | | SC-CL | Clay/Sand | NA | 8 | - | - |
| 30 | 30-36ft bls: Sand and Clay mixture, becoming soft (us < 1.5 T/ft$^2$), Light Gray with orange-brown mottling, (10YR 6/2). | | SC | Sand/Clay | NA | 0 | - | - |
| 32 | 32 ft bls: Same as above, with some minor Clay stringers (white). | | | | | | - | - |
| 35 | | | | | | | - | - |
| 36 | 36-45 ft bls: Water Table Present, Sand, quartz, medium to coarse, well-sorted, sub-angular to well-rounded, trace pebbles/sand concretions up to 2" diameter, very loose, unconsolidated. | | SP | Sand/Clay | NA | 0 | - | - |
| 43 | 43 ft bls: Same as Above, Sand becomes finer, white (5y 8/1). | | | | NA | 0 | - | - |
| 45 | 45-53 ft bls: Clay, soft, light gray (2.5Y 7/2), with some Sand, orange-brown (7.5YR 5/8). (TFZ-2, screened 45' - 35'). | | CL | Clay/Sand | NA | 0 | - | - |
| 47 | 47 ft bls: Same as Above, Saturated, light Yellow-Brown (2.5 Y 8/2). | | CL-SC | Clay/Sand | | | - | - |
| 49 | 49.5 ft bls: Same as Above, Inreasing Clay content. | | CL-SC | Clay/Sand | | | - | - |
| 53 | 53-54 ft bls: Sand, quartz, light yellow-brown | | SP | Sand/ no fines | | | - | - |
| 54 | 54-55 ft bls: Sand-Clay mixture w/ some gravel, light green-gray. | | | | | | - | - |
| 55 | 55-60 ft bls: Sand, fine, very wet, looose, light gray, (2.5Y 7/2 - 7/3). | | SC | Sand/w fin | NA | 0 | - | - |
| 60 | 60-64 ft bls: Sand and Clay Mixture, loose, soft, light gray (5Y 7/2), (TFZ-2A screened 60'-55'). | | SC-CL | Sand/Clay | | | - | - |
| 64 | 64-66 ft bls: Same as above with Increasing Clay content, some sand concretions. | | CL-GC | Clay/gravels | | | - | - |
| 66 | 66-68 ft bls: Clay, soft, sticky, with some Clay nodules or gravel. | | GC | Clay/gravel | | | - | - |
| 68 | 68 ft bls: Visible portions of micosukee sand unit re-worked with clay layer. | | CL | Clay | | | - | - |
| 69 | 69-70 ft bls: Highly weathered clay, light green-gray to orange-brown. | | | | | | - | - |
| 70 | 70-82.5 ft bls: Top of Hawthorn, Clay, light green-gray to orange-brown laminae, (us ~ 1.5-2.25 T/ft$^2$) (med stiff), with some sand, quartz, and some leached phosphate (white) | | CL | Clay | | | - | - |
| 73 | 73 ft bls: Highly Mottled, Light Greenish-Gray to Orange-Brown to Reddish-Brown (GLEY 1 8/1) to (5YR 5/3) | | CL | Clay | NA | 0 | - | - |
| 78 | 78 ft bls: Clay medium plasticity, firm. | | CI | Clay | | | - | - |
| 80 | | | | | | | - | - |
| 82 | 82.5-84 ft bls: Clay, highly weathered, white to light green-gray, with some white leached phosphate nodules, and some Sand, quartz, gravel-sized. | | | | | | - | - |
| 84 | 84 ft bls: Sand, limestone, calcarenite, light yellow brown (2.5Y 8/4) to white, water table. | | GM-SP | Sand/gravel | | | - | - |
| 85 | 85-95 ft bls: No soil boring return. | | | | | | - | - |
| 90 | 80 - 90 ft. bls: TFZ-3 (screened from 80' to 90'). | | | | | | - | - |
| | 90-99 ft bls: Clay, Sand, and Limestone, very loose mixture, highly re-worked with some visible Pelecypod fragments. | | GC | Sand/gravel/ clay/lime-stone | | | - | - |
| 99 | 99-100 ft bls: Clay, soft, mottled, light orange-brown. | | | | | | - | - |
| 100 | 100-102 ft bls: Clay and recrystallined, fine grained, Limestone, off-white, to pale orange, wet. | | GP | Limestone | | | - | - |

Notes: Multi-level piezometer TFZ-1 depth is 28 ft bls, bottom of sand pack is 28 ft, top of sand pack is 15 ft bls, bentonite seal is from 15 ft to 2 ft. Screen size is 0.010", screened from 17-27'.
Multi-level piezometer TFZ-2 depth is 46', bottom of sand pack is 46 ft bls, top sand pack is 33 ft bls, bentonite to 28 ft, screen size is 0.010", screened from 35- 45 ft bls.

1. - Not applicable to boring. 2. NA - Not analyzed due to instrument malfunction.

| O'BRIEN & GERE ENGINEERS, INC. | REPORT OF BORING | CONSTRUCTION LOG<br>MLP LOCATION: OBGMLP-11 |
|---|---|---|
| Client: ITT INDUSTRIES INC. | Page 2 of 2 | Drill Method: ROTOSONIC |
| Project Location: Former Thompson Industries Site, Madison, Florida. | Location: OBGDP-30 | Sampler: 6" Core<br>Land Surface Elevation msl: 138.09' |
| File No.: 22992.013.001 | Coordinates: N: 536884<br>E: 2314508 | WELL/MLP CONSTRUCTION MATERIALS:<br>FILTER PACK: 30-40 silica sand |
| P[illegible]g/Drilling Company: Boart Longyear | Start Date: 3-15-00 | BENTONITE SEAL: Pure Gold<br>Granular/Med. Chips |
| [illegible]nel: Bill Kotziers, Boart Longyear. | End Date: 3-15-00 | WELL RISER:<br>A: Flush-Threaded SCH 80 PVC<br>B: 1" Diameter |
| Drill Rig: Rotosonic | Screen / Riser / Steel / Grout / Sand Pack / Bentonite | SCREEN MATERIAL:<br>A: 0.010 Inch Slot SCH. 80 PVC<br>B: 1" Diameter |
| OBG Geologist: Bill Kotziers | | |

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 102 | 102-104.5 ft bls:Thick Soft Hawthorn-Like Clay, orange-brown to dark-brown (10YR 7/8 to 10YR 5/1), possible collapse structure, Highly mottled, light green-Gray (GLEY1 8/1), with some Limestone fragments. | | SP-SM | Sand/Clay/ gravelly w/ limestone | NA | NA | – | – |
| 105 | 104.5-115 ft bls: White Weathered Limestone, Wet, with varying amounts of Clay and Limestone (fossiliferrous) (10YR 8/1-8/1 to 2.5YR 8/2), Pale Yellow. | | SP | | NA | NA | – | – |
| | | | GP | limestone | NA | NA | – | – |
| | | | | | NA | NA | – | – |
| 115 | | | | | | | – | – |

Boring Terminated Total Depth = 115' bls

Notes: Multi-level piezometer TFZ-2A depth is 61 ft bls, bottom of sand pack is 61 ftbls, top of the sand pack is 53 ft bls, betonite seal to 46 ft bls, screen size 0.010", screened from 55-60'.
MLP TFZ-3 depth is 115 ft bls, betonite seal from 115 to 91 ft bls. Bottom of sand from 91 ft bls, top of sand pack is 78 ft bls, bentonite to 61' bls, screen size is 0.010", screened from 80 to 90'bls.

1. – Not applicable to boring. 2. NA - Not analyzed due to instrument malfunction.

**O'BRIEN & GERE ENGINEERS, INC.** — REPORT OF BORING — CONSTRUCTION LOG

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Drilling Company: Boart Longyear

Channel: Bill Kotziers, Steve Cook, Roger Baldwin, Tim Jellett, Boart Drilling Crew

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers, Steve Cook

Page 1 of 1

Location: OBGDP-31

Coordinates: N: 536665
E: 2313286

Start Date: 4-27-00

End Date: 4-28-00

Screen, Riser, Steel — Grout, Sand Pack, Bentonite

MLP LOCATION: OBGMLP-31

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 151.14'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Stick-up Threaded SCH 80 PVC
B: 1" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 1" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-4 ft bls: Concrete Fill Material (R~1.5') | | SP-SM | | | | NR | NR |
| | | | | | | | NR | NR |
| 2 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 4 | 4-5 ft bls: Same as above (R~1.5') Saturated @ 4 to 5', Strong Petroleum Odor, | | SM-SP | Sand | | | NR | NR |
| | 5-6 ft bls: Sand with some Silt, dark black to dark grey, some Brick/Fill @ 4.5' | | | | 1900 | NA | NR | NR |
| 6 | 6-7 ft bls: Same as above, Unconsolidated. | | | | | | NR | NR |
| | 7-8 ft bls: Wood Chips, dark grey-brown | | | Sand | 650 | >3277 | NR | NR |
| 8 | 8-9 ft bls: Same as above, Turp./Creosote Odor (10YR 2/2), dark brown. | | SM-SP | | | | NR | NR |
| | 9-10 ft bls: Sand, quartz, Fine to Med.Grained, with some Silt, Light brown. | | | | | | NR | NR |
| 10 | 10-14 ft bls: Same as above, Wet, Unconsolidated, Petroleum Odor. TFZ-1 (~3-13') | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 12 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 14 | 14-23 ft bls: Sand, quartz, fine to med-grained, subrounded grains, with some Clay, firm (us ~ 2-25 T/ft2). | | SC | Sand & Clay | | | NR | NR |
| | light gray, (2.5Y 7/1-6/2). | | | | 100 | 1380 | NR | NR |
| 16 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 18 | | | | | | | NR | NR |
| | | | | Sand w/ Clay | 136 | 1821 | NR | NR |
| 20 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 22 | | | | | | | NR | NR |
| | 23-24 ft bls: Clay, moderately stiff, light gray, to light yellow-brown, (Top of Micc. ~23') | | CL | Sand w/ Clay | | | NR | NR |
| 24 | 24-26 ft bls: Sand, quartz, light gray lens, (Gley 1 7/1 - 10YR 6/8), mottled. | | SP | | | | NR | NR |
| | | | | | 20 | 540 | NR | NR |
| 26 | 26-30 ft bls: Silt and Sand, quartz, light gray, Soft, (us < 1 T/ft$^2$), (2.5Y 7/1 to 6/1)/(5Y 7/2). | | ML | | | | NR | NR |
| | | | | Sand w/ Clay | | | NR | NR |
| 28 | | | | | 29.4 | 1725 | NR | NR |
| | | | | | | | NR | NR |
| 30 | 30-32ft bls: Clay, light gray, (10YR 7/1-7/2), with some fine gravel-sized Sand (pebbles/concretions), | | CL | Clay w/ Sand | | | NR | NR |
| | Soft to moderately firm (us ~.5 to 1 T/ft2). TFZ-2 screen (30 - 40'). | | | | | | NR | NR |
| 32 | 32-34 ft bls: Sand layer, quartz, 32.5'- 33' (7.5YR 5/8 to 10YR 7/6). | | SP | | | | NR | NR |
| | | | | | | | NR | NR |
| 34 | 34-36 ft bls: Sand, quartz, fine grained, light orange-yellow at 36' Distinct Contact/Unconformity to Clay. | | SP-SM | | | | NR | NR |
| | | | | Clay w/some | 235 | 656 | NR | NR |
| 36 | 36-40 ft bls: Clay, soft, light grey to light yellow, White (2.5Y 8/1) to Pale Yellow, (2.5Y 8/2). | | CL | Sand | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | 40-42 ft bls: Sand, quartz, fine grained, with some Silt/Clay plus minor cemented Sand | | SP-SM | | 354 | 863 | NR | NR |
| | nodules up to 2" diameter, light brownish yellow (10YR 6/8 - 7/8), Wet. | | | Sand w/Silt | 317 | 874 | NR | NR |
| 42 | 42-45 ft bls: Sand, quartz, fine-grained, sub-rounded to rounded, light gray (2.5Y 7/2 - 8/2) | | CL | | | | NR | NR |
| | to reddish-brown (5YR 5/8 - 7.5YR 5/8) | | | | | | NR | NR |
| 44 | | | | | | | NR | NR |
| 45 | 45-48 ft bls: Clay, moderately plastic, light greenish-gray (7.5YR 5/4 : brown), | | | | | | NR | NR |
| 46 | transition to Hawthorn, soft (us~ 0.75 T/ft2). | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 48 | 48-51 ft bls: Same as above, (Gley 1 8/1) | | | | | | NR | NR |
| | | | CL | Clay | 8.4 | 3.1 | NR | NR |
| 50 | | | | | | | NR | NR |
| 51 | 51-57 ft bls: Same as Above, increasing firmness (us~1.25 T/ft2) | | | | | | NR | NR |
| 52 | | | CL | Clay | | | NR | NR |
| | | | | | | | NR | NR |
| 54 | | | | | | | NR | NR |
| | | | | | 8.5 | 9.7 | NR | NR |
| 56 | | | | | | | NR | NR |
| 57 | 57-59 ft bls: Same as above, Stiff (us~3.5 T/ft2) | | | | | | NR | NR |
| 58 | | | | | | | NR | NR |
| 59 | 59-60 ft bls: Same as above, increased Sand, quartz, fine to coarse, light yellow, (2.5Y 8/3), Soft. | | SC-CL | | 5 | 4.5 | NR | NR |
| 60 | 60-65 ft bls: Same as above with dark brown - black - gray laminates (10YR 3/1) (59'-60'), 61': (us~3.25 T/ft2) | | CL | Clay w/some Sand | 4.4 | 2.9 | NR | NR |
| 62 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 64 | | | | | | | NR | NR |
| 65 | 65-66 ft bls: Clay, soft with some Sand. | | | | | | NR | NR |
| 66 | 66-68 ft bls: Sand, quartz, and Clay, unconsolidated zone with trace cemented Sand fragments, | | SC | Clay w/some | | | NR | NR |
| | fine to coarse gravel size. | | | Sand | 32 | 21 | NR | NR |
| 68 | 68-70 ft bls: Clay, soft, with some Sand, quartz. | | SC-CL | | | | NR | NR |
| | | | | | | | NR | NR |
| 70 | 70-77 ft bls: Friable Silt with Some Clay, and trace coarse gravel-sized cemented nodules (Chert) | | ML | Silt w/ Clay | | | NR | NR |
| | | | | | | | NR | NR |
| 72 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 74 | | | | | | | NR | NR |
| | | | | | 10.4 | 13.3 | NR | NR |
| 76 | | | | | | | NR | NR |
| 77 | 77-83 ft bls: Clay-Limestone/Limey Clay, Marl, Dry, Weathered, white, (2.5Y 8/1). | | GM | Limestone | | | NR | NR |
| 78 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 1.7 | 2.1 | NR | NR |
| 82 | | | | | | | NR | NR |
| 83 | 83-88 ft bls: R=0', Difficulty in removing core barrel and sample fell out. No recovery | | | | 929 | 1899 | NR | NR |
| 84 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 86 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 88 | 88-90 ft bls: Same as Above (77-83'); Clay-Limestone, Dry, Weathered. | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 90 | 90-95 ft bls: R=5'; Clay-Limestone, White, Dry, Chalky Texture; 94' - Damp to Moist. | | GM | Limestone | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 0 | 5 | NR | NR |
| | | | | | | | NR | NR |
| | 95-100 ft bls: Same as Above; (Dry) | | | | | | NR | NR |
| 95 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 98 | | | | | 9 | 56 | NR | NR |
| | | | | | | | NR | NR |
| 100 | Boring Terminated at 100' TFZ-3 Screen (90 - 100) Total Depth = 100' bls | | | | | | NR | NR |

Notes: Multi-level piezometer TFZ1 depth is 14 ft bls, bottom of sand pack is 14 ft, top of the sand pack is 1 ft, betonite seal to surface. Screen size 0.010", screened from 3 ft to 13 ft bls. MLP TFZ-2 depth is 41 ft bls, bottom of san top of sand pack is 28 ft bls, betonite seal from 28 ft to 14 ft, screened from 30 to 40 ft bls. MLP TFZ-3 depth is 100 ft bls, bottom of sand pack 100 ft, top of sand is 88 ft bls, betonite seal from 88 ft to 41 ft bls. Screened from 90 ft t

1. NR - No reaction. 2. NA Not analyzed due to instrument malfunction.

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| O'BRIEN & GERE ENGINEERS, INC. | REPORT OF BORING | CONSTRUCTION LOG<br>MLP LOCATION: OBGMLP-32 |
|---|---|---|
| Client: ITT INDUSTRIES INC. | Page 1 of 2 | Drill Method: ROTOSONIC<br>Sampler: 6" Core |
| Project Location: Former Thompson Industries Site, Madison, Florida. | Location: OBGDP-32 | Land Surface elevation msl: 149.01' |
| File No.: 22992.013.001 | Coordinates: N: 536685<br>E: 2313213 | WELL/MLP CONSTRUCTION MATERIALS:<br>FILTER PACK: 30-40 silica sand |
| Boring Drilling Company: Boart Longyear | Start Date: 4/14/00 | BENTONITE SEAL: Pure Gold Granular/Med. Chips |
| Pers Bill Kotziers, Steve Cook, Roger Baldwin, Tim Jellett, Boart Drilling Crew | End Date: 4/15/00 | WELL RISER:<br>A: Stick-up Threaded SCH 80 PVC<br>B: 1" Diameter |
| Drill Rig: Rotosonic | Screen / Riser / Steel; Grout / Sand Pack / Bentonite | SCREEN MATERIAL:<br>A: 0.010 Inch Slot SCH. 80 PVC<br>B: 1" Diameter |
| OBG Geologist: Bill Kotziers, Steve Cook | | |

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-3 ft bls: Concrete pavement, 0-5' = R = 2', no recovery. | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 3 | 3-6 ft bls: Sand, quartz, with some Silt, dark grayish brown (2.5 Y 4/1), moist to wet, water table 3.5-4'. (TFZ-1 Screen 3 - 13 ft bls.) | | SP-SM | Sand/Silt | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 240 | 375 | NR | NR |
| 6 | 6-8 ft bls: Sawdust Material (fill), dark brown/gray (10 YR 2/2 - 2/1). | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 8 | 8-9 ft bls: Sand, quartz, Very-fine to fine grained, loose, wet, light gray to dark black (2.5 Y 6/1 to 10 YR 2/1). | | SC | Sand | | | NR | NR |
| 9 | 9-10 ft bls: Sand, quartz, fine grained, with some Clay, dark black (10 YR 2/1), (organic peat). | | | | 140 | 4638 | NR | NR |
| 10 | 10-15 ft bls: Sand, quartz, fine-grained, soft, loose, with some Clay, light gray (2 5 Y 6/1). | | SC | Sand/Clay | 116 | 4638 | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 28.8 | 2000 | NR | NR |
| | | | | | 99 | 3000 | NR | NR |
| 15 | 15-20 ft. bls: 0' Return. | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 20 | 20-25 ft bls: Sand, very fine grained, very loose, with some Clay and Silt, unconsolidated, light gray. | | SC | Sand/Clay/ trace Silt | 9.5 | 845 | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 25 | 25-34 ft. bls: Missing 25-33' No Recovery. 33-34': Same as above, loose, very unconsolidated. | | | | 0 | 3320 | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 30 | 30 ft bls: TFZ-2 Screen (30 - 40 ft). | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 20 | 13 | NR | NR |
| 34 | 34-38 ft bls: Sand, quartz, with some Silt, very loose, unconsolidated, subrounded to subangular grains, light gray (10 YR 6/1). | | SP-SM | Sand | 22 | 95 | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 38 | 38-54 ft bls: Clay and Silt, some medium gray mottling | | | | 13 | 500 | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 30 | 840 | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 70 | 2400 | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 64 | 1000 | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 91 | 1200 | NR | NR |
| 54 | 54-60 ft bls: Same as above, light gray. | | SP-SM | Sand/Silt | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 50 | NA | NR | NR |
| 60 | 60-66 ft bls: Same as above, light gray, loose, wet, unconsolidated. | | SP-SM | Sand/Silt | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 45 | NA | NR | NR |
| | | | | | | | NR | NR |
| 66 | 66-76 ft bls: Same as above, slight increase in Clay/Silt contents, some small Sand/Clay nodules, unconsolidated. | | | Clay/Silt/ trace Sand | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 20 | NA | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 8 | NA | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 5.2 | NA | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 0 | NA | NR | NR |
| 76 | 76-80 ft bls: Same as above, organic, earthy odor. | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 5 | NA | NR | NR |
| 80 | 80-82 ft bls: Same as above, Increasing Clay content. | | CL | Clay | | | NR | NR |
| | | | | | 7.8 | | NR | NR |
| 82 | 82-84 ft bls: Clay with some Sand, light brown-gray (2.5 Y 6/2), firmer, slightly plastic, soft. | | | Clay/Sand | 2.6 | | NR | NR |
| | | | | | 5.5 | NA | NR | NR |
| 84 | 84-90 ft bls. Sand and Clay mixture, soft, loose, wet. | | SC | Clay/Sand | | | NR | NR |
| | | | | | 2.2 | NA | NR | NR |
| | | | | | 31 | NA | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 26 | NA | NR | NR |
| 90 | 90-95 ft bls: Sand lenses with little to some Clay, (10 YR 6/2), grading into SC mixtures, gray (2.5 Y 6/1). (TFZ-2A Screen 90 - 100 ft bls). | | SC | Sand | | | NR | NR |
| | | | | | 54 | NA | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 44 | NA | NR | NR |
| 95 | 95-104 ft bls: Same as above. | | | | 37 | NA | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 61 | NA | NR | NR |

Notes: Multi-level piezometer TFZ-1 depth is 14 ft, bottom of sand pack is 14 ft bls, top of sand pack is 1 ft, betonite seal from 1 ft to the surface, screen size 0.010", screened from 3 to 13 ft. MLP TFZ-2 depth is pack bottom is 41 ft, sand pack top is 28 ft bls, betonite seal from 28 ft to 14 ft, screen size 0.010" screened from 30 to 40 ft bls.

1. NR - No reaction. 2. NA. Not analyzed due to instrument malfunction.

**O'BRIEN & GERE ENGINEERS, INC.** | **REPORT OF BORING** | **CONSTRUCTION LOG**

**Client:** ITT INDUSTRIES INC.
**Project Location:** Former Thompson Industries Site, Madison, Florida.
**File #:** 992.013.001
**Boring Drilling Company:** Boart Longyear
**Personnel:** Bill Kotziers, Steve Cook, Roger Baldwin, Tim Jellett, Boart Drilling Crew
**Drill Rig:** Rotosonic
**OBG Geologist:** Bill Kotziers, Steve Cook

**Page 2 of 2**
**Location:** OBGDP32
**Coordinates:** N: 536685 E: 2313213
**Start Date:** 4/14/00
**End Date:** 4/15/00

Screen =
Riser
Steel #
Grout
Sand Pack
Bentonite

**MLP LOCATION:** MLP-32
**Drill Method:** ROTOSONIC
**Sampler:** 6" Core
**Land Surface elevation msl:** 149.01'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Stick-up Threaded SCH 80 PVC
B: 1" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 1" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 104 | 104-106 ft bls: Same as above, some pebble to gravel sized Clay nodules. | | SC | Sand | 50 | NA | NR | NR |
| | | | | | | | NR | NR |
| 106 | 106-110 ft bls: Same as above, increased Clay content, light brown-gray, soft, sticky. | | CL | Clay | 45 | NA | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 52 | NA | NR | NR |
| 110 | 110-116 ft bls: Sand, quartz, with Clay, loose, unconsolidated. | | SC | Clay/Sand | 31 | NA | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 93 | NA | NR | NR |
| | | | | | 133 | NA | NR | NR |
| | | | | | | | NR | NR |
| 116 | 116-128 ft bls: Same as above, light gray. | | SC | Clay/Sand | | | NR | NR |
| | | | | | 49 | NA | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 89 | NA | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 91 | NA | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 128 | 128-131 ft bls: Same as above, yellow brown ((2.5 Y 7/4) - (10 YR 7/6)), some oxidized present. | | SC | Clay/Sand | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 13 | 136 ft bls: Same as above, increased Clay content. | | SC | Clay/Sand | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 135 | 135 ft bls: (TFZ-3 Screen 135 - 145 bls). | | | | 6 | NA | NR | NR |
| 136 | 136-142 ft bls: Sand and Clay mixture, loose, some oxidation (Y-GR). | | SC | Clay/Sand | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 0 | NA | NR | NR |
| | | | | | 3 | NA | NR | NR |
| 142 | 142-146 ft bls: Same as above, becoming firmer, (US ~1 T/ft$^2$). | | SC-Cl | Clay/Sand | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 146 | 146-150 ft bls: Same as above, becoming firmer, (US ~ 2.5 T/ft$^2$). | | SC-Cl | Clay/Sand | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 5 | NA | NR | NR |
| | | | | | | | NR | NR |
| 150 | | | | | | | NR | NR |
| | Total Depth = 150' | | | | | | | |

Notes: Multi-level piezometer TFZ-2A depth is 101 ft, bottom of sand pack is 101 ft bls, top of sand pack is 88 ft, betonite seal from 88 to 41 ft bls, screen size 0.010", screened from 90 to 100 ft bls.
Multi-level piezometer TFZ-3 depth is 150 ft bls. Betonite seal from 150 to 146 ft, bottom of sand pack is 146 ft, top of sand pack 133 ft, betonite seal from 133 to 101 ft, screened from 135 to 145 ft bls.

1. NR - No reaction. 2. NA Not analyzed due to instrument malfunction.

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
MLP LOCATION: OBGMLP-33

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Br Drilling Company: Boart Longyear

P. el: Bill Kotziers, Steve Cook, Roger Baldwin, Tim Jellett, Boart Drilling Crew

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers, Steve Cook

Page 1 of 2

Location: OBGDP-33

Coordinates: N: 536842
E: 2313217

Start Date: 4/17/00

End Date: 4/18/00

Screen
Riser
Steel

Grout
Sand Pack
Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 151.14'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Stick-up Threaded SCH 80 PVC
B: 1" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 1" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft bls: Sand with Silt, dark gray brown, (fill). | | SP-SM | | | | NR | NR |
| 2 | 2-6 ft bls: Clay and Silt with some Sand, orange-red-brown to light gray. | | SP-SM | | | | NR | NR |
| 3 | 3ft bls: water table encountered at 3 feet. (TFZ-1 Screen 3 - 13 ft bls). | | | Sand | 296 | 2100 | NR | NR |
| 5 | 5-10 ft bls: Sand with some Silt, trace Clay, wet/loose, dark brown/black (10YR 2/1). | | | | | | NR | NR |
| 6 | | | | Clay w/Sand | 62 | 2194 | NR | NR |
| 8 | | | | | | | NR | NR |
| 10 | | | | | | | NR | NR |
| 11 | 11-15 ft bls: Sand with some Silt, well-sorted, fine-grained, unconsolidated, loose, light gray ( 5Y 7/1). | | SP | | | | NR | NR |
| 12 | | | | | | | NR | NR |
| 15 | 15-20 ft. bls: Same as above, light gray ( 5Y 7/1). | | | Sand w/Silt | 94 | 1350 | NR | NR |
| 20 | 20-25 ft bls: Same as above, light gray ( 5Y 7/1). | | SP | Sand w/Silt | 37 | 800 | NR | NR |
| 23 | 23 ft. bls: Same as above, light yellowish brown ( 10YR 6/4). | | | | | | NR | NR |
| 24 | 24 ft bls: (TFZ-2 Screen 24 - 34 ft bls). | | | Sand w/Silt | 158 | 1390 | NR | NR |
| 25 | 25-30 ft. bls: Same as above, light gray ( 5Y 7/2), with orange brown mottling ( 10YR 5/8), firmer. | | SP-SC | | | | NR | NR |
| 30 | 30-33 ft. bls: Same as above | | | Sand w/Silt | 70 | 1466 | NR | NR |
| 33 | 33-40 ft. bls: Sand and Clay mixture, increase in clay content, stiffer, (US: 1-2 T/Ft$^2$), light gray (more consolidated). | | SC | Sand w/Clay | 105 | 874 | NR | NR |
| | | | | Clay w/Sand | 456 | 189 | NR | NR |
| | 40- 45 ft. bls: Clay with some Sand, fine grained, light gray, with some yellowish-brown mottling. | | SC-CL | Clay w/Sand | 100 | 770 | NR | NR |
| 45 | 45-55 ft. bls: Same as above with some light gray Clay stringers. | | | Clay w/Sand | 438 | 152 | NR | NR |
| 48 | 48 ft bls: Same as above, becoming more stiff ( US 1-2 T/Ft$^2$). | | | Clay w/Sand | 68 | 63 | NR | NR |
| 50 | | | | | | | NR | NR |
| 55 | 55-65 ft. bls: Clay and Sand mixture, light gray. | | SC-CL | Clay w/Sand | 33 | 80 | NR | NR |
| | | | | Clay w/Sand | 20.3 | 11 | NR | NR |
| 64 | 64 - 64.5 ft. bls: Clay, with increased Sand content, last 6" in core barrel (light gray/orange - brown). | | | Clay w/Sand | 8 | 10 | NR | NR |
| 65 | 65- 70 ft. bls: Sand and Clay, light gray, some mottling (5 YR 4/4 - 10 YR 6/6). | | CL | | | | NR | NR |
| 68 | 68 - 68.5 ft. bls: Clay, firm (US 3.5 T/Ft$^2$), light yellow brown to brown. | | CL | | | | NR | NR |
| 70 | 70 -72 ft. bls: Sand, medium grain, Light gray white, loose, with some cemented Sand concretions | | SP | | 250 | 389 | NR | NR |
| 72 | 72 - 73 ft. bls: Sand with some Clay, Brown, light gray to light orangish brown, soft Clay ( US 1.0 T/Ft$^2$) with some gravel size sand concretions. | | SC-CL | | 123 | 439 | NR | NR |
| 75 | 75- 78 ft. Clay with Silt light gray ( 5Y 8/1) to light yellow ( 2.5 Y 7/6), with medium to coarse gravel size cemented Sand fragments (75-76'). | | | | | | NR | NR |
| 77 | 77 ft. bls: (TFZ-2A Screen 77 - 87 ft bls). | | | | 41 | 185 | NR | NR |
| 78 | 78 - 82 ft. bls: Silt with some Sand, soft, light gray. | | | | 54 | 10 | NR | NR |
| 82 | 82 - 84 ft. bls: Clay, plastic, with some cemented Sand fragments, light gray to light yellow brown . | | CL | | | | NR | NR |
| 84 | 84 - 85 ft. bls: Sand, fine grained, with some Clay, dark brown ( 2.5 YR 4/6), unconsolidated with some cemented Sand concretions. | | SP-SC | | | | NR | NR |
| 86 | 86 - 94 ft. bls: Clay, soft, light yellow brown (10 YR 6/8) to light gray, with some oxidized dark brown Sand. | | SP-CL | | 113 | 409 | NR | NR |
| 90 | | | | | 34 | 267 | NR | NR |
| | 94 - 105 ft. bls: Sand with some Clay (mixture), and some cemented Sand fragments ( 7.5 YR 5/8) | | | Sand w/Clay | 60 | 0 | NR | NR |
| | Clay, firm ( US 2.0 T/Ft$^2$), (Top of the Hawthorn at 95 ft.) ; 95 - 100 ft. bls: Light greenish gray ( GL 1 8/1), to mottled light gray/white to dark black, some portions thinly laminated with some minor white leached phosphate pebbles. | | SC-CL | | | | NR | NR |
| | | | | Clay | 24 | 61 | NR | NR |

Notes: Multi-level piezometer TFZ-1 depth is 14 ft. bottom of sand pack 14 ft bls, top of sand pack is 1 ft, bentonite seal 1 ft to the surface, screen size 0.010", screened 3 to 13 ft bls. MLP TFZ-2 depth is 25 ft, bottom of sand pack 35 ft bls, top of sand pack 22 ft, bentonite seal from 22 ft to 14 ft, screen size 0.010", screened from 24 to 34 ft bls.

1. NR - No reaction 2. NA: Not analyzed due to instrument malfunction.

| O'BRIEN & GERE ENGINEERS, INC. | REPORT OF BORING | CONSTRUCTION LOG<br>MLP LOCATION: OBGMLP-33 |
|---|---|---|
| Client: ITT INDUSTRIES INC. | Page 2 of 2 | Drill Method: ROTOSONIC |
| Project Location: Former Thompson Industries Site, Madison, Florida. | Location: OBGDP-33 | Sampler: 6" Core<br>Land Surface Elevation msl: 151.14' |
| Ft. 22992.013.00 | Coordinates: N: 536842<br>E: 2313217 | WELL/MLP CONSTRUCTION MATERIALS:<br>FILTER PACK: 30-40 silica sand |
| Boring/Drilling Company: Boart Longyear | Start Date: 3/7/00 | BENTONITE SEAL: Pure Gold Granular/Med. Chips |
| Personnel: Bill Kotziers, Steve Cook, Roger Baldwin, Tim Jellett, Boart Drilling Crew | End Date: 3/7/00 | WELL RISER:<br>A: Stick-up Threaded SCH 80 PVC<br>B: 1" Diameter |
| Drill Rig: Rotosonic | Screen = \ Grout<br>Riser : Sand Pack<br>Steel # Bentonite | SCREEN MATERIAL:<br>A: 0.010 Inch Slot SCH. 80 PVC<br>B: 1" Diameter |
| OBG Geologist: Bill Kotziers, Steve Cook | | |

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 100 | 100 - 105 ft. bls: Same as above. | | | Clay | 23 | 78 | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 105 | 105 - 115 ft. bls: Clay, same as above, firm ( US 2-2.5 T/Ft$^2$). | | CL | | | | NR | NR |
| | | | | Clay | 1 | 4 | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | Clay | 1 | 0 | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 115 | 115 - 120 ft. bls: Clay, firm light greenish gray (GL 1 7/1 - 8/1), mottled white to black with some leached phosphate laminates. | | CL | Sand w/Silt | 0 | 0 | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 120 | 120 - 123 ft. bls: Sand, with some Silt and Clay, very fine grained, portions highly mottled and laminated light gray to black. | | SP-SC | Clay w/Sand | 0 | 1 | NR | NR |
| | | | | | | | NR | NR |
| 123 | 123 - 124 ft. bls: Clay with Sand, Soft, light greensh gray to dark brown ( US 1.5 T/Ft$^2$). | | CL | | | | NR | NR |
| 124 | 124 - 128 ft. bls: Missing interval from core barrel | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | Clay | 0 | 0 | NR | NR |
| | | | | | | | NR | NR |
| 128 | 128 - 135 ft. bls: Clay, firm ( US 3-3.5 T/Ft$^2$), light greenish gray with very minor Limestone dispersed throughout. | | CL | | | | NR | NR |
| | | | | | 5.4 | 0 | NR | NR |
| | | | | | | | NR | NR |
| | | | | Clay | 0 | 0 | NR | NR |
| | | | | | | | NR | NR |
| 133 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 135 | 135 - 137 ft. bls: Clay, Limey, soft and weathered, white . | | | | | | NR | NR |
| | | | | Clay/Marl | 0 | 0 | NR | NR |
| 137 | 137 - 142 ft. bls: Sand with some Limestone, subrounded to subangular, loose, with trace Clay, Light gray ( 2.5 Y 7/2) to White ( 10 YR 8/1), micritic limestone, with Clay. | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | Limestone | 0 | 0 | NR | NR |
| 142 | 142 - 145 ft. bls: Sand with some Clay (10YR 6/8) brownish yellow, soft, ( US 1.0 T/Ft$^2$) interspersed with Limestone fragments, very pale brown, ( 10 YR 7/3), gritty texture. | | GM | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 145 | | | | | | | NR | NR |
| | Bore hole terminated at 145 ft. | | | | | | | |

Notes: Multi-level piezometer TFZ-2A depth is 88 ft. bottom of sand pack 88 ft bls, top of sand pack is 75 ft, bentonite seal 75 ft to 35 ft bls, screen size 0.010", screened 77 ft to 87 ft bls. MLP TFZ-3 depth is 145 ft bls. bottom of sand pack 145 ft bls, top of sand pack 131 ft, bentonite seal 131 to 88 ft, screen size 0.010", screened from 133 to 143 ft bls.

1. NR - No reaction. 2. NA Not analyzed due to instrument malfunction.

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O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG

Client: ITT INDUSTRIES INC.

Page 1 of 2

MLP LOCATION: MLP-34

Project Location: Former Thompson Industries Site, Madison, Florida.

Location: OBGDP34

Drill Method: ROTOSONIC

Sampler: 6" Core

Land Surface Elevation msl: 151.80'

File No.: 22992.013.001

Coordinates: N: 536842
E: 2313172

WELL/MLP CONSTRUCTION MATERIALS:

FILTER PACK: 30-40 silica sand

Boring Company: Boart Longyear

Start Date: 4/17/00

BENTONITE SEAL: Pure Gold Granular/Med. Chips

Personnel: Bill Kotziers, Steve Cook, Roger Baldwin, Tim Jellett, Boart Drilling Crew

End Date: 4/27/00

WELL RISER:
A: Stick-up Threaded SCH 80 PVC
B: 1" Diameter

Drill Rig: Rotosonic

Screen
Riser
Steel

Grout
Sand Pack
Bentonite

SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 1" Diameter

OBG Geologist: Bill Kotziers, Steve Cook

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft. bls: Asphalt surface and lime rock (fill). | | SP-SM | | | | NR | NR |
| 2 | 2-4 ft. bls: (fill), dry, dark gray ( 10 YR 3/1). | | SP-SM | | | | NR | NR |
| 4 | 4 - 5 ft. bls: Same as above, water table encountered at 4.5 ft. | | SP-SM | Sand | | | NR | NR |
| 5 | 5 -7 ft. bls: Silt and Sand, highly organic soil, dark brown (10YR 3/1). (TFZ-1 Screened from 3 - 13 ft bls.) | | | Sand | 6.4 | 140 | NR | NR |
| 8 | 8 - 10 ft. bls: Sand, quartz, fine to very fine grained, Light gray (2.5 Y 6/1), increasing clay/silt content. | | SP-SM | Sand | | | NR | NR |
| 10 | 10 - 12 ft. bls: Sand with some Clay, light gray (5 Y6/2) to light yellowish brown (10YR5/8). | | SC | | 0 | 400 | NR | NR |
| 12 | 12 - 13 ft. bls: Clay, stiff (3.25 T/Ft$^2$), light gray (5Y 6/2), mottled light yellowish brown. | | CL | Clay | | | NR | NR |
| 13 | 13 - 16 ft. bls: Same as above, increasing Sand content, soft to slightly firm (1.25 T/Ft$^2$). | | | Clay | 0 | 60 | NR | NR |
| 15 | 15 ft. Clay is soft, grayish with laminae. | | SC | | | | NR | NR |
| 16 | 16 - 20 ft. bls: Sand, quartz, fine grain, with some Clay, becoming firmer with depth. (US 2.25 T/Ft$^2$). | | | | | | NR | NR |
| 20 | 20 -22 ft. bls: Same as above, increasing Sand content mixed with some Clay. | | SC | Sand w/Clay | 7.6 | 110 | NR | NR |
| 22 | 22 - 27 ft. bls: Sand, quartz, fine grained, with some Silt, white to light gray (5 Y 8/1, to 7/1). | | SP-SM | | | | NR | NR |
| 27 | 27 - 32 ft. bls: Sand and Clay, gray ( 5 Y 6/1), firmer ( US 2.5 - 3.5 T/Ft$^2$). | | SC-CL | Sand/Clay | 43 | 700 | NR | NR |
| 30 | | | | | | | NR | NR |
| 32 | 32 - 34 ft. bls: Sand with some Clay, Stiff ( US 3.5 4 T/Ft2). | | SC | Sand/Clay | 10 | 200 | NR | NR |
| 34 | 34 - 37 ft. bls: Sand, quartz, fine grain, with some Clay, loose, light gray to light yellow (5 Y 8/2). | | SC-CL | Sand/Clay | | | NR | NR |
| 37 | 37 ft. bls: Same as above, with Increasing Clay and Silt content throughout the interval. | | SC-SM | Sand/Silt/ Clay | 378 | – | NR | NR |
| 38 | 38 - 43 ft. bls: Sand with some Clay, light gray, firm to Stiff, ( US 3.75 - 4.0 T/Ft$^2$). | | | | | | NR | NR |
| 43 | 43 - 45 ft. bls: Sand, quartz, fine to medium grained, unconsolidated, some light gray Clay and Silt. | | SP-SC | Sand/Clay | 120 | 40 | NR | NR |
| 45 | 45 - 49 ft. bls: Sand, quartz, fine to medium grained, with trace amount of cemented Sand concretions, coarse gravel sized. (1-3"), light yellow ( 2.5 Y 7/4). | | SP-SM | gravelly Sand/Clay gravelly | 180 | 1000 | NR | NR |
| 49 | 49 - 52 ft. bls: Clay, mottled light yellow brown to light gray, soft, plastic. | | CL | Clay | 266 | 980 | NR | NR |
| 52 | 52 - 60 ft. bls: Clay and Silt mixture, becoming softer, (US 1.25 T/Ft$^2$), light gray (5 Y 7/1 to 8/1). | | ML | Clay | 85 | 300 | NR | NR |
| 60 | 60 ft. bls: Silt and Clay mixture, soft, light gray. | | ML | Silt/Clay | 66 | – | NR | NR |
| 61 | 61 - 62 ft. bls: Clay, light brownish gray (2.5Y 6/2), soft, with some yellow and brown mottling | | | | | | NR | NR |
| 62 | 62 - 68 ft. bls: Sand with some Silt, light yellowish brown to reddish brown (5 YR 5/8), wet, loose, with some | | | | | | NR | NR |
| 63 | oxidized dark brown Sand concretions light gray, containing varying Clay and Silt mixture. | | SP-SM | Sand/Clay/ gravelly | | | NR | NR |
| 66 | | | SC | | 131 | – | NR | NR |
| 68 | 68 - 70 ft. bls: Sand with some Clay, brownish yellow ( 10YR 6/8), soft. | | SC | Sand/Clay | | | NR | NR |
| 70 | 70 - 73 ft. bls: Sand with some Clay, light gray, (TFZ-2 Screened 63 - 73 ft. bls) | | | | 1 | 20 | NR | NR |
| 72 | 72 ft. bls: Sand, medium grained, light gray-white, loose. | | | | | | NR | NR |
| 73 | 73 ft.bls: Top of the Hawthorn | | CL | Clay | | | NR | NR |
| 74 | 74 - 88 ft. bls: Clay, light gray with a greenish tint, some portions brownish yellow, transition from the Miccosukee to the Hawthorn. | | | | 3 | 6 | NR | NR |
| 80 | 80 - 82 ft. bls: Clay, stiff (US 2 T/Ft$^2$). | | | | 0 | 1 | NR | NR |
| 88 | 88 - 92 ft. bls: Clay, light olive to greenish gray (GL 1 7/1) grading into a white clay. | | CL | Clay | 0 | 0 | NR | NR |
| 90 | | | | | 0 | 0 | NR | NR |
| 92 | 92 - 100 ft. bls: Clay with some Sand, brownish yellow (10YR 6/8), stiff (US 4 T/Ft$^2$). | | SC | Clay/Sand | 0 | 0 | NR | NR |
| 100 | 100 - 103 ft. bls: Clay with some Silt, Friable, stiff ( US 4.5T/Ft$^2$). | | CI | Clay/Silt | 0 | 0 | NR | NR |

Notes: Multi-level piezometer TFZ-1 depth is 14 ft, bottom of sand pack is 14 ft, top of sand pack is 1 ft, bentonite seal 1 ft to surface, screen size 0.010", screened 3 to 13 ft.
Multi-level piezometer TFZ-2 depth is 74 ft. Bottom of sand pack is 74 ft, top of sand pack is 61 ft, bentonite seal 61 ft to 14 ft bls, screen size 0.010", screened 63 to 73 ft bls.

1. NR - No reaction. 2. NA. Not analyzed due to instrument malfunction.

| O'BRIEN & GERE ENGINEERS, INC. | REPORT OF BORING | CONSTRUCTION LOG<br>MLP LOCATION: MLP-34 |
|---|---|---|
| Client: ITT INDUSTRIES INC. | Page 2 of 2 | Drill Method: ROTOSONIC |
| Proj[illegible]cation: Former Thompson Industries Site, Madison, Florida. | Location: OBGDP34 | Sampler: 6" Core<br>Land Surface Elevation msl: 151.80' |
| File [illegible]. [illegible]2992.013.001 | Coordinates: N: 536842<br>E: 2313172 | WELL/MLP CONSTRUCTION MATERIALS:<br>FILTER PACK: 30-40 silica sand |
| Boring/Drilling Company: Boart Longyear | Start Date: 4/17/00 | BENTONITE SEAL: Pure Gold Granular/Med. Chips |
| Personnel: Bill Kotziers, Steve Cook, Roger Baldwin, Tim Jellett, Boart Drilling Crew | End Date: 4/27/00 | WELL RISER:<br>A: Stick-up Threaded SCH 80 PVC<br>B: 1" Diameter |
| Drill Rig: Rotosonic | Screen / Riser / Steel | SCREEN MATERIAL:<br>A: 0.010 Inch Slot SCH. 80 PVC.<br>B: 1" Diameter |
| OBG Geologist: Bill Kotziers, Steve Cook | Grout / Sand Pack / Bentonite | |

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 101 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 103 | 103 - 106 ft. bls: Clay, weathered, light greenish gray, stiff (US 3-4 T/Ft²) with yellow-brown oxidized portions, that show slight reaction to hydrochloric acid. | | CL | Clay | | | NR | NR |
| | | | | | | | NR | NR |
| 105 | 105 ft bls: (TFZ-3 Screened 105 - 115 ft bls.) | | | | | | NR | NR |
| 106 | 106 - 108 ft. bls: Clay, with some pieces of white limestone. | | CL-GP | Clay/lime-stone | | | NR | NR |
| | | | | | | | NR | NR |
| 108 | 108 - 110 ft. bls: Clay with some Sand and some Silt, light gray, mixed with occasional gray brown Sand lenses. | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 110 | 110 - 115 ft. bls: Limestone, white, weathered, with some Clayey lime, wet, cohesive throughout the interval, no visible hydraullically active zones. | | GP | Limestone | 0 | 0 | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 115 | Boring Terminated at 115 ft. | | | | 0 | 0 | NR | NR |

Notes: Multi-level piezometer TFZ-3 depth is 115 ft, bottom of sand pack is 115 ft, top of sand pack is 103 ft, betonite seal 103 ft to 74, screen size 0.010", screened 105 to 115 ft bls.

1. NR - No reaction. 2. NA Not analyzed due to instrument malfunction.

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O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
MLP LOCATION:OBGMLP-35 TFZ-1

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Drilling/Drilling Company: Precision Sampling

Personnel: Bill Kotziers, Steve Cook, Roger Baldwin, Tim Jellet, Precision Drilling Crew.

Drill Rig: Vibratory Direct-Push Rig

OBG Geologist: Bill Kotziers, Steve Cook

Page 1 of 1

Location: OBGDP35

Coordinates: N: 536886
E: 2313270

Start Date: 4/25/00

End Date: 4/26/00

Screen
Riser
Steel

Grout
Sand Pack
Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 155.83'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded SCH 80 PVC
B: 3/4" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 3/4" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | TFZ-1 | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft bls: concrete, lime rock, and sand fill. | | | Fill/Sand | 53 | 93 | NR | NR |
| 2 | 2-4 ft. Bls: Sand,quartz, very fine grain, with some silt, light olive brown ( 10 YR 5/6) to dark gray ( 10 YR 3/1). | | SP-SM | | | | NR | NR |
| 4 | 4 - 7 ft. Bls: same as above light gray (2.5 Y 4/2) to dark gray. | | | Sand w/Silt | 50 | 35 | NR | NR |
| 7 | 7 - 10 ft. bls: Sand, quartz, fine to medium grain, wet, loose, and unconsolidated, light to medium gray (10 YR 5/2), | | | Sand w/Silt | 3.8 | 150 | NR | NR |
| 8 | 8 ft bls: TFZ-1 Screen (8 - 18 ft). | | | | | | NR | NR |
| 10 | 10 - 16 ft. bls: Sand, quartz, fine grain, firm, with some Clay, dark gray (5 Y4/1). | | SC | | 0.7 | 120 | NR | NR |
| | | | | Sand w/Clay | 0 | 47 | NR | NR |
| 16 | 16 - 18 ft. bls: Clay, and Sand mixture, yellowish brown (10YR 5/4) changing to a light gray (2.5 Y 5/1 , 6/1) with some vertical dark gray stringers. | | | Sand w/Clay | 0 | 45 | NR | NR |
| 18 | 18 - 25 ft. bls: Clay and Sand mixture, stiff ( US 4 T/Ft2) increase in Sand content with depth, medium grain size light yellowish brown sand with some white to light gray nodules at the bottom portion of the run. | | SC-CL | Clay w/Sand | 0 | 50 | NR | NR |
| | Boring Terminated at 19 ft. bls. | | | | | | | |

Notes: Multi-level piezometer TFZ-1 depth is 19 ft bls, bottom of sand pack is 19 ft, top of sand pack is 6 ft bls, bentonite seal from 6 ft to 2 ft, screen size 0.010", screened from 8 to 18 ft.
1. NR - No reaction. 2. NA Not analyzed due to instrument malfunction.

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
MLP LOCATION: MLP35 TFZ-2

Client: ITT INDUSTRIES INC.
Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Drilling Company: Precision Sampling

Personnel: Bill Kotziers, Steve Cook, Roger Baldwin, Tim Jellet, Precision Drilling Crew.

Drill Rig: Vibratory Direct-Push Rig

OBG Geologist: Bill Kotziers, Steve Cook

Page 1 of 1

Location: OBGDP35

Coordinates: N: 536886
E: 2313268

Start Date: 4/25/00

End Date: 4/26/00

Screen | Grout
Riser | Sand Pack
Steel | Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 155.82'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded SCH 80 PVC
B: 3/4" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 3/4" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft bls: concrete, lime rock, and sand fill. | | | | | NR | NR |
| 2 | 2-4 ft. Bls: Sand,quartz, very fine grain, with some silt, light olive brown ( 10 YR 5/6) to dark gray ( 10 YR 3/1). | SP-SM | Fill/Sand | 53 | 93 | NR | NR |
| 4 | 4 - 7 ft. Bls: same as above light gray (2.5 Y 4/2) to dark gray. | | Sand w/Silt | 50 | 35 | NR | NR |
| 7 | 7 - 10 ft. bls: Sand, quartz, fine to medium grain, wet, loose, and unconsolidated, light to medium gray (10 YR 5/2). | | Sand w/Silt | 3.8 | 150 | NR | NR |
| 8 | 8 ft bls: TFZ-1 Screen (8 - 18 ft). | | | | | NR | NR |
| 10 | 10 - 18 ft. bls: Sand, quartz, fine grain, firm, with some Clay, dark gray (5 Y4/1). | SC | | 0.7 | 120 | NR | NR |
| | | | Sand w/Clay | 0 | 47 | NR | NR |
| 16 | 16 - 18 ft. bls: Clay, and Sand mixture, yellowish brown (10YR 5/4) changing to a light gray (2.5 Y 5/1 , 6/1) with some vertical dark gray stringers. | | Sand w/Clay | 0 | 45 | NR | NR |
| 18 | 18 - 25 ft. bls: Clay and Sand mixture, stiff ( US 4 T/Ft2) increase in Sand content with depth, medium grain size light yellowish brown sand with some white to light gray nodules at the bottom portion of the run. | SC-CL | Clay w/Sand | 0 | 50 | NR | NR |
| | | | Sand w/Clay | 0.2 | 105 | NR | NR |
| 25 | 25 - 30 ft. bls: Sand,quartz, medium grain, moist to wet, mixed with Clay laminates, and cemented Sand fragments 1.25" in size from 29-31 ft, light gray in color. | SC | | 0 | 112 | NR | NR |
| | | | Sand w/Clay | 0 | 219 | NR | NR |
| 30 | 30 - 32 ft. bls: Sand, quartz, fine to medium, with Clay and a trace amount of silt, gray (5 Y 6/1), brown (7.5 YR 3/4). | SC | | | | NR | NR |
| 32 | 32 - 37 ft. bls: Sand, quartz, fine to medium grain, very loose, unconsolidated yellowish brown ( 10 YR 5/8). | CL | Clay | 1.6 | 31.4 | NR | NR |
| 34 | | SP-SM | Sand | 0 | 12.1 | NR | NR |
| 37 | 37 - 40 ft. bls: no recovery from this interval. | | | -- | -- | NR | NR |
| | 40 - 46 ft. bls: Clay with some Sand with some oxidized grains, light brownish yellow (10YR 6/6 , 6/8), dark reddish brown. | CL | Clay w/Sand | 5.3 | 42 | NR | NR |
| | | | Clay | 0.9 | 28 | NR | NR |
| 46 | 46 - 49 ft. bls: no recovery | | Clay w/Sand | 18 | 76 | NR | NR |
| 47 | 47 ft bls: TFZ-2 Screen (47 - 57 ft). | | | | | NR | NR |
| 49 | 49 - 52 ft. bls: Clay with Sand, soft, 10% recovery. | SC | Sand w/Silt &Clay | 2.2 | 91.8 | NR | NR |
| 52 | 52 - 57 ft. bls: Sand/Clay mixture, wet, fine to medium grain, light yellowish brown (10 YR 6/8) . | SC | Sand & Silt | 0 | 5.1 | NR | NR |
| 54 | 54 ft bls: TFZ-2a Screen (54 - 64 ft). | | | 0 | 2.2 | NR | NR |
| 57 | Boring Terminated at 57 ft bls. | | | | | NR | NR |

Notes: MLP TFZ-2 depth is 58 ft bls, bottom of sand 58 ft bls. Top of sand pack 45 ft, bentonite seal from 45 ft.to 2 ft, screen size 0.010", screened from 47 to 57 ft bls.
1. NR - No reaction. 2. NA Not analyzed due to instrument malfunction.

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
MLP LOCATION:MLP 35TFZ-2A

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Boring/Drilling Company: Precision Sampling

Personnel: Bill Kotziers, Steve Cook, Roger Baldwin, Tim Jellet, Precision Drilling Crew.

Drill Rig: Vibratory Direct-Push Rig

OBG Geologist: Bill Kotziers, Steve Cook

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Location: OBGDP35

Coordinates: N: 536886
E: 2313264

Start Date: 4/25/00

End Date: 4/26/00

Screen
Riser
Steel

Grout
Sand Pack
Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 155.82'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded SCH 80 PVC
B: 3/4" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 3/4" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft bls: concrete, lime rock, and sand fill. | | Fill/Sand | 53 | 93 | NR | NR |
| 2 | 2-4 ft. Bls: Sand,quartz, very fine grain, with some silt, light olive brown ( 10 YR 5/6) to dark gray ( 10 YR 3/1). | SP-SM | | | | NR | NR |
| 4 | 4 - 7 ft. Bls: same as above light gray (2.5 Y 4/2) to dark gray. | | Sand w/Silt | 50 | 35 | NR | NR |
| 7 | 7 - 10 ft. bls: Sand, quartz, fine to medium grain, wet, loose, and unconsolidated, light to medium gray (10 YR 5/2). | | Sand w/Silt | 3.8 | 150 | NR | NR |
| 8 | 8 ft bls: TFZ-1 Screen (8 - 18 ft). | | | | | NR | NR |
| 10 | 10 - 16 ft. bls: Sand, quartz, fine grain, firm, with some Clay, dark gray (5 Y4/1). | SC | | 0.7 | 120 | NR | NR |
| | | | Sand w/Clay | 0 | 47 | NR | NR |
| 16 | 16 - 18 ft. bls: Clay, and Sand mixture, yellowish brown (10YR 5/4) changing to a light gray (2.5 Y 5/1 , 6/1) with some vertical dark gray stringers. | | Sand w/Clay | 0 | 45 | NR | NR |
| 18 | 18 - 25 ft. bls: Clay and Sand mixture, stiff ( US 4 T/Ft2) increase in Sand content with depth, medium grain size light yellowish brown sand with some white to light gray nodules at the bottom portion of the run. | SC-CL | Clay w/Sand | 0 | 50 | NR | NR |
| | | | Sand w/Clay | 0.2 | 105 | NR | NR |
| 25 | 25 - 30 ft. bls: Sand,quartz, medium grain, moist to wet, mixed with Clay laminates, and cemented Sand fragments 1.25" in size from 29-31 ft, light gray in color. | SC | | 0 | 112 | NR | NR |
| | | | Sand w/Clay | 0 | 219 | NR | NR |
| 30 | 30 - 32 ft. bls: Sand, quartz, fine to medium, with Clay and a trace amount of silt, gray (5 Y 6/1), brown (7.5 YR 3/4). | SC | | | | NR | NR |
| 32 | 32 - 37 ft. bls: Sand, quartz, fine to medium grain, very loose, unconsolidated yellowish brown ( 10 YR 5/8). | CL | Clay | 1.6 | 31.4 | NR | NR |
| 34 | | SP-SM | Sand | 0 | 12.1 | NR | NR |
| 37 | 37 - 40 ft. bls: no recovery from this interval. | | | -- | -- | NR | NR |
| | 40 - 46 ft. bls: Clay with some Sand with some oxidized grains, light brownish yellow (10YR 6/6 , 6/8), dark reddish brown. | CL | Clay w/Sand | 5 3 | 42 | NR | NR |
| | | | Clay | 0.9 | 28 | NR | NR |
| 46 | 46 - 49 ft. bls: no recovery | | Clay w/Sand | 18 | 76 | NR | NR |
| 47 | 47 ft bls: TFZ-2 Screen (47 - 57 ft). | | | | | NR | NR |
| 49 | 49 - 52 ft. bls: Clay with Sand, soft, 10% recovery. | SC | Sand w/Silt &Clay | 2.2 | 91.8 | NR | NR |
| 52 | 52 - 57 ft. bls: Sand/Clay mixture, wet, fine to medium grain, light yellowish brown (10 YR 6/8) . | SC | Sand & Silt | 0 | 5.1 | NR | NR |
| 54 | 54 ft bls: TFZ-2a Screen (54 - 64 ft). | | | 0 | 2.2 | NR | NR |
| 57 | 57 - 60 ft. bls: no recovery | | | 0 | 0 | NR | NR |
| 60 | 60 - 61 ft. bls: Clay with a trace amount of sand, reddish brown (2.5 YR 4/6) | SC | Sand & Silt &Clay | 0 | 0 | NR | NR |
| 62 | 62 ft. bls: Target Flow Zone 2 | | | | | NR | NR |
| 64 | 64 - 68 ft. bls: Silt light gray to white with a trace amount of sand, very soft, flower type texture. Boring terminated 65 ft bls. | ML | Sand & Clay | 0 | 0 | NR | NR |

Notes: Mulit-level piezometer TFZ-2A depth is 55 ft bls, bottom of sand pack is 55 ft, top of sand pack is 42 ft bls, bentonite seal from 42 ft to 2 ft, screen size 0.010", screened from 44 to 54 ft.

1. NR - No reaction. 2. NA Not analyzed due to instrument malfunction.

**O'BRIEN & GERE ENGINEERS, INC.**

**REPORT OF BORING**

**CONSTRUCTION LOG**
MLP LOCATION: MLP35TFZ-3

Client: ITT INDUSTRIES INC.

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Drill Method: ROTOSONIC
Sampler: 6" Core

Project Location: Former Thompson Industries Site, Madison, Florida.

Location: OBGDP35A

Land Surface Elevation msl: 151.67'

File No.: 22992.013.001

Coordinates: N: 536854
E: 2313222

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Stick-up SCH 80 PVC
B: 3/4" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 3/4" Diameter

Drilling Company: Precision Sampling

Start Date: 6/6/00

Personnel: Bill Kotziers, Steve Cook, Roger Baldwin, Tim Jellet, Precision Drilling Crew.

End Date: 6/6/00

Drill Rig: Vibratory Direct-Push Rig

Screen = | Grout
Riser | Sand Pack
Steel // | Bentonite

OBG Geologist: Bill Kotziers, Steve Cook

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft bls: concrete, lime rock, and sand fill. | | | | | NR | NR |
| | | | Fill/Sand | | | NR | NR |
| 2 | 2-4 ft. Bls: Sand,quartz, very fine grain, with some silt, light olive brown ( 10 YR 5/6) to dark gray ( 10 YR 3/1). | SM | | 106 | 1155 | NR | NR |
| | | | | | | NR | NR |
| 4 | 4 - 7 ft. Bls: same as above light gray (2.5 Y 4/2) to dark gray. | | Sand | 282 | 3051 | NR | NR |
| | | | | | | NR | NR |
| | | SM | | 60 | 96 | NR | NR |
| 7 | 7 - 10 ft. bls: Sand, quartz, fine to medium grain, wet, loose, and unconsolidated, light to medium gray (10 YR 5/2), | | Sand w/Silt | | | NR | NR |
| 8 | 8 ft bls: TFZ-1 Screen (8 - 18 ft). | | | 0 | 382 | NR | NR |
| | | | | | | NR | NR |
| 10 | 10 - 16 ft. bls: Sand, quartz, fine grain, firm, with some Clay, dark gray (5 Y4/1). | ML | | 0 | 856 | NR | NR |
| | | | | | | NR | NR |
| | | ML | | | | NR | NR |
| | | | Sand w/Cla | 0 | 236 | NR | NR |
| | | | | | | NR | NR |
| | | | | | | NR | NR |
| 16 | 16 - 18 ft. bls: Clay, and Sand mixture, yellowish brown (10YR 5/4) changing to a light gray (2.5 Y 5/1 , 6/1) with some vertical dark gray stringers. | SW CL | Sand w/Cla | 0 | 110 | NR | NR |
| | | | | | | NR | NR |
| 18 | 18 - 25 ft. bls: Clay and Sand mixture, stiff ( US 4 T/Ft2) increase in Sand content with depth, medium grain size light yellowish brown sand with some white to light gray nodules at the bottom portion of the run. | | | | | NR | NR |
| | | | | 0 | 338 | NR | NR |
| | | | | 0 | 614 | NR | NR |
| | | | | | | NR | NR |
| | | | | | | NR | NR |
| | | | | | | NR | NR |
| | | | | 4.8 | 189 | NR | NR |
| 25 | 25 - 30 ft. bls: Sand,quartz, medium grain, moist to wet, mixed with Clay laminates, and cemented Sand fragments 1.25" in size from 29-31 ft, light gray in color. | CL | | 18 | 227 | NR | NR |
| | | | | | | NR | NR |
| | | | | | | NR | NR |
| | | | Sand w/Clay | 27 | 141 | NR | NR |
| | | | | | | NR | NR |
| 30 | 30 - 32 ft. bls: Sand, quartz, fine to medium, with Clay and a trace amount of silt, gray (5 Y 6/1), brown (7.5 YR 3/4). | CL | | 67 | 1060 | NR | NR |
| | | | Clay | | | NR | NR |
| 32 | 32 - 37 ft. bls: Sand, quartz, fine to medium grain, very loose, unconsolidated yellowish brown ( 10 YR 5/8). | | | | | NR | NR |
| | | | | 8.4 | 61 | NR | NR |
| 34 | | ML | Clay w/ silt | 1.1 | 21 | NR | NR |
| | | | | | | NR | NR |
| | | | | | | NR | NR |
| 37 | 37 - 40 ft. bls: no recovery from this interval. | | | 0 | 14 | NR | NR |
| | | SW | Sand w/clay | | | NR | NR |
| | | | | | | NR | NR |
| | 40 - 46 ft. bls: Clay with some Sand with some oxidized grains, light brownish yellow (10YR 6/6 , 6/8), dark reddish brown. | | Clay w/ silt | 0 | 28.3 | NR | NR |
| | | CL | | | | NR | NR |
| | | | | | | NR | NR |
| | | | | | | NR | NR |
| | | | | | | NR | NR |
| | | | | | | NR | NR |
| 46 | 46 - 49 ft. bls: no recovery | CL | Clay w/San | 0 | 8.1 | NR | NR |
| 47 | 47 ft bls: TFZ-2 Screen (47 - 57 ft). | | | | | NR | NR |
| | | | | | | NR | NR |
| 49 | 49 - 52 ft. bls: Clay with Sand, soft, 10% recovery. | | Sand w/Silt &Clay | 0 | 8.6 | NR | NR |
| | | | | | | NR | NR |
| 52 | 52 - 57 ft. bls: Sand/Clay mixture, wet, fine to medium grain, light yellowish brown (10 YR 6/8) . | | Sand & Silt | | | NR | NR |
| | | | | | | NR | NR |
| 54 | 54 ft bls: TFZ-2a Screen (54 - 64 ft). | | | | | NR | NR |
| | | SM | | | | NR | NR |
| | | | | | | NR | NR |
| 57 | 57 - 60 ft. bls: no recovery | | | | | NR | NR |
| | | | | 0 | 0 | NR | NR |
| | | | | | | NR | NR |
| 60 | 60 - 61 ft. bls: Clay with a trace amount of sand, reddish brown (2.5 YR 4/6) | | Sand & Silt | | | NR | NR |
| | | | | 0 | 0 | NR | NR |
| 62 | 62 ft. bls: Target Flow Zone 2 | SM | | | | NR | NR |
| | | | | | | NR | NR |
| 64 | 64 - 68 ft. bls: Silt light gray to white with a trace amount of sand, very soft, flower type texture. | | Sand w/ silt | | | NR | NR |
| | | | | 0 | 4.4 | NR | NR |
| 66 | 66 - 67 ft. bls: Top Hawthorn | ML | Clay | | | NR | NR |
| | | | | | | NR | NR |
| 68 | 68 - 70 ft. bls: Clay, soft, some Sand present light greenish gray ( GL 1 7/1) (US 1.25 T/Ft2), white (10 YR 8/1) leached phosphate clay nodules. | | | | | NR | NR |
| 70 | 70 - 74 ft. bls: Clay, stiff, mottled black organic material dark brown ( 2.5 YR 5/8) iron oxidized portions, becoming stiffer with depth (US3.5 T/Ft2). | | | | | NR | NR |
| | | | | | | NR | NR |
| | | CL | Clay | 0 | 0 | NR | NR |
| | | | | | | NR | NR |
| 74 | 74 - 78 ft bls: Clay with Some sand, Light Greenish Gray (GLEY 1 7/1). Very stiff (u.s. > 4.5 T/ft$^2$), with some dark black laminates present throughout. | | | | | NR | NR |
| | | | | | | NR | NR |
| | | CL | Clay | 0 | 0 | NR | NR |
| 78 | 78 - 80 ft bls: Same as above, ~ 25% gravel-sized Sand. | | | | | NR | NR |
| | | | | | | NR | NR |
| 80 | 80 - 86 ft bls: Clay/Silt, Very stiff, with trace Sand ~ 10%. | CL | Clay | 0 | 13.2 | NR | NR |
| | | | | | | NR | NR |
| | | | | | | NR | NR |
| | | | | | | NR | NR |
| | | | | | | NR | NR |
| | | | | | | NR | NR |
| 86 | 86 ft bls: Clay/Silt (u.s. ~ 4.5 T/ft$^2$). | | | | | NR | NR |
| 87 | 87 - 88 ft bls: Same as above, Softer (u.s. ~ 1 T/ft$^2$) | CL | Clay | 0 | 11 | NR | NR |
| 88 | 88 - 90 ft bls: Silt/ Sand mixture ~ 50-50% soft, White (5Y 8/1). | | | | | NR | NR |
| | | | | | | NR | NR |
| 90 | 90 ft bls: Sand, quartz gravel, Sub-rounded to rounded, very fine, damp to moist, with some quartz gravel. | | | | | NR | NR |
| | | | | 0 | 98 | NR | NR |
| | | CL | Silt w/clay trace sand | | 143 | NR | NR |
| | 93 ft bls: TFZ-3 Screen (93 - 103 ft). | | | | | NR | NR |
| | 94 ft bls: Increasing Density | | | | | NR | NR |
| | | | | | 300 | NR | NR |
| 96 | 96 - 99 ft bls: Clay/Silt, soft light greenish gray (GLEY 1 8/1), to gray-brown with some dark black organic Laminates. (u.s. ~ 4.0 T/ft$^2$) | CL | Clay and Sil | 0 | 11.7 | NR | NR |
| | | | | | | NR | NR |
| | | GM | | 0 | 11.2 | NR | NR |
| 99 | 99 - 102 ft bls: Limestone with Limey Clay dry, friable, weathered white. | | Clay/silt/ Limestone | 0 | 6.3 | NR | NR |

Notes: Multi-level piezometer TFZ-3 depth is 108 ft bls, bottom of sand pack is 110 ft, top of sand pack is 96 ft bls, bentonite seal from 96 ft to 2 ft, screen size 0.010", screened from 98 to108 ft.
1. NR - No reaction. 2. NA Not analyzed due to instrument malfunction.

| O'BRIEN & GERE ENGINEERS, INC. | REPORT OF BORING | CONSTRUCTION LOG<br>MLP LOCATION: MLP35TFZ-3 |
|---|---|---|
| Client: ITT INDUSTRIES INC. | Page 2 of 2 | Drill Method: ROTOSONIC<br>Sampler: 6" Core |
| Project Location: Former Thompson Industries Site, Madison, Florida. | Location: OBGDP35A | Land Surface Elevation msl: 151.67' |
| Jo.: 22992.013.001 | Coordinates: N: 536886<br>E: 2313268 | WELL/MLP CONSTRUCTION MATERIALS:<br>FILTER PACK: 30-40 silica sand |
| Boring/Drilling Company: Boart Longyear | Start Date: 4/19/00 | BENTONITE SEAL: Pure Gold Granular/Med. Chips |
| Personnel: | End Date: 4/20/00 | WELL RISER:<br>A: Flush-Threaded SCH 80 PVC<br>B: 3/4" Diameter |
| Drill Rig: Rotosonic | Screen = \ Grout<br>Riser Sand Pack<br>Steel # Bentonite | SCREEN MATERIAL:<br>A: 0.010 Inch Slot SCH. 80 PVC<br>B: 3/4" Diameter |
| OBG Geologist: Bill Kotzlers | | |

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|
| 101 | 101-104 ft. Bls: Limestone, white dry, very hard, trace amount of silt, some limey clay | GM | Limestone | 0 | 6.3 | NR | NR |
| | | | | 0 | 11 | NR | NR |
| | | | | 0 | 0 | NR | NR |
| 104 | 104-110 ft. Bls: Limestone with limey clay, moist, hard, white. | GM | Limestone | 0 | 0 | NR | NR |
| 105 | | | | 0 | 0 | NR | NR |
| | | | | 0 | 0 | NR | NR |
| | | | | 0 | 0 | NR | NR |
| | | | | 0 | 0 | NR | NR |
| | | | | 0 | 0 | NR | NR |
| 110 | Boring terminated at 110 ft. Bls. | | | 0 | 0 | NR | NR |

Notes: Mulit-level piezometer TFZ-3 depth is 108 ft bls, bottom of sand pack is 110 ft, top of sand pack is 96 ft bls, bentonite seal from 96 ft to 2 ft, screen size 0.010", screened from 98 to108 ft.
1. NR - No reaction 2 NA Not analyzed due to instrument malfunction.

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
MLP LOCATION: OBGMLP-36TFZ-1

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Boring/Drilling Company: Precision Sampling

Personnel: Bill Kotziers, Steve Cook, Roger Baldwin, Tim Jellet, Precision Drilling Crew

Drill Rig: Vibratory Direct-Push Rig

OBG Geologist: Bill Kotziers, Steve Cook

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Location: OBGDP36

Coordinates: N: 536790
E: 2313298

Start Date: 4-30-00

End Date: 5-5-00

Screen
Riser
Steel

Grout
Sand Pack
Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 155.78'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded SCH 80 PVC
B: 3/4"-1" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 3/4"-1" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | TFZ-1 | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft bls: Concrete floor with Sand and fill. | | | Sand | 0 | 0 | NR | NR |
| 2 | 2-12 ft bls: Snad,quartz, fine grain, loose, light yellowish brown (10 YR 6/4), dry, water table 6-8'. | | SP-SM | | | | NR | NR |
| | | | | Sand | 20 | 472 | NR | NR |
| 8 | | | | Sand w/ Silt | 26 | 623 | NR | NR |
| 12 | 12-16 ft bls: Sand, quartz, fine grain, with some Silt dark gray to grayish brown (10 YR 4/1). | | | Sand w/ Silt &Clay | 1 | 200 | NR | NR |
| 16 | 16-18 ft bls: Sand, quartz, fine to medium grain, subrounded to subangular, light gray. | | SP-SM | Sand w/ Silt to | 3.2 | 133 | NR | NR |
| 18 | 18-30 ft bls: Sand, quartz, firm, with some Clay, light gray. TFZ-1 Screen (8 - 18 ft). | | SC | Sand w/ Clay | | | NR | NR |
| | Boring terminated at 19 ft. bls | | | | | | | |

Notes: Multi-level piezometer TFZ-1 depth is 19 ft. Bottom of sand pack is 19 ft. top of sand pack is 6 ft bls, bentonite seal from 6 ft to 2 ft. Screen size 0.010", screened from 8 to 18 ft.

1. NR - No reaction. 2. NA Not analyzed due to instrument malfunction

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG

MLP LOCATION: OBGMLP-36TFZ-2

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Bi... tilling Company: Precision Sampling

Personnel: Bill Kotziers, Steve Cook, Roger Baldwin, Tim Jellet, Precision Drilling Crew.

Drill Rig: Vibratory Direct-Push Rig

OBG Geologist: Bill Kotziers, Steve Cook

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Location: OBGDP36

Coordinates: N: 536789
E: 2313295

Start Date: 4-30-00

End Date: 5-5-00

Screen, Riser, Steel

Grout, Sand Pack, Bentonite

Drill Method: ROTOSONIC

Sampler: 6" Core

Land Surface Elevation msl: 155.78'

WELL/MLP CONSTRUCTION MATERIALS:

FILTER PACK: 30-40 silica sand

BENTONITE SEAL: Pure Gold Granular/Med. Chips

WELL RISER:
A: Flush-Threaded SCH 80 PVC
B: 3/4"-1" Diameter

SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 3/4"-1" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | TFZ-2 | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft bls: Concrete floor with Lime rock fill. | | | Sand | 0 | 0 | NR | NR |
| 2 | 2-12 ft bls: Sand, quartz, fine grain, light Yellowish Brown (10 YR 6/4), dry, water table 6-8'. | | SP-SM | | | | NR | NR |
| | | | | Sand | 20 | 472 | NR | NR |
| 8 | | | | Sand w/ Silt | 26 | 623 | NR | NR |
| 12 | 12-16 ft bls: Sand, quartz, fine grain, loose, moist, with some silt, dark gray to grayish brown (10 YR 4/1). | | | Sand w/ Silt &Clay | 1 | 200 | NR | NR |
| 16 | 16-18 ft bls: Sand, quartz, fine to medium grain, subrounded to subangular, light gray. | | SP-SM | Sand w/ Silt to | 3.2 | 133 | NR | NR |
| 18 | 18-30 ft bls: Sand, firm, with trace amount of clay, TFZ-1 Screen (8 - 18 ft). | | SC | Sand w/ Clay | | | NR | NR |
| | | | | Sand & Silt/Clay | 12 | 143 | NR | NR |
| | | | | Sand & Silt/Clay | 48 | 299 | NR | NR |
| | | | | Sand & Silt/+Clay | 20 | 90 | NR | NR |
| 30 | 30-40 ft bls: Clay with Sand, quartz, medium grain, dry, medium firm, light gray. | | SC | | | | NR | NR |
| | | | | Sand & Clay/+Silt | 58 | 256 | NR | NR |
| | | | | Sand | 63 | 349 | NR | NR |
| | 40-42 ft bls: Clay with Sand light gray. | | SC | Sand/Clay | 62 | 221 | NR | NR |
| 42 | 42-44 ft bls: Clay, medium stiff light gray ( 5 Y 7/2). | | CL | | | | NR | NR |
| 44 | 44-48 ft bls: Sand, quartz, cemented fragments, firm, dry, some Clay/Silt mixture brownish yellow (10 YR 6/8) | | CL | Clay/Sand | 234 | 206 | NR | NR |
| 48 | 48-50 ft bls: Sand with silt, medium stiff, light brown - brownish yellow. | | | Clay | 208 | 197 | NR | NR |
| 50 | 50-52 ft bls: Sand fine grain, quartz, with Clay, and trace Silt, pale yellow /gray (5 Y 7/2). | | SC | | | | NR | NR |
| 52 | 52-54 ft bls: Clay lenses, light yellow to yellow (2.5 Y 8/2 -7/2). | | SP-SM | Clay | 262 | 679 | NR | NR |
| 54 | 54-56 ft bls: Sand, fine gravel size fragments, Increase in Clay content, light gray to brown. | | SC-CL | | | | NR | NR |
| 56 | 56-58 ft bls: Sand, quartz, highly oxidized, with some Clay, light yellowish brown (2.5 Y 6/4), yellowish - red (10 YR 6/8). | | CL | Clay/Sand | – | 12.3 | NR | NR |
| 58 | 58-60 ft bls: Snad, quartz, fine to medium grain, wet, brownish yellow (10 YR 6/8). | | SP-SM | | | | NR | NR |
| 59 | 59 ft bls: TFZ-2 Screen (59 - 69 ft). | | | | | | NR | NR |
| 60 | 60-62 ft bls: Clay with Silt, and trace amount of Sand, brown (7.5 YR 5/8). | | SC | Sand | 140 | 527 | NR | NR |
| 62 | 62-64 ft bls: Clay with Silt mixture, with some Sand, brown. Color change at 63' - Light Gray to White (5 Y 8/1 - 7/2). | | SC | | | | NR | NR |
| 64 | 64-66 ft bls: Sand, quartz, fine grain, well sorted, poorly graded, wet, yellow (2.5 Y 7/8 - 10 YR 6/8). | | SP-SM | Sand | 14.8 | 38 | NR | NR |
| 66 | 66-70 ft bls: Sand with Silt and some Clay, brown (7.5 YR 5/8), slightly greater Silt content. At 69' increase Clay / Silt content. | | SP-SM | | | | NR | NR |
| | | | | Sand/Clay | 237 | 20 | NR | NR |
| 70 | 70-72 ft bls: Clay with some white nodules / laminates (thin), at 71' some leached phosphates, white to light gray to brownish gray. | | SC | | | | NR | NR |
| 72 | 72-76 ft bls: Clay light greenish gray to brown gray (2.5 y 7/2 - 10 YR 5/2), organics dispensed throughout sample, 73' Top of Hawthorne. | | SC-CL | Trans. Zone | 768 | 14 | NR | NR |
| 76 | | | | | | | NR | NR |

Total Depth = 76 ft.

Notes: MLP TFZ-2 depth is 76 ft bls bentonite from 76 to 70 ft, bottom of sand pack is 70 ft, top of sand pack is 57 ft bls, bentonite seal from 57 ft to 2 ft, screen size 0.010" screened from 59 ft to 69 ft bls.
1. NR - No reaction. 2. NA Not analyzed due to instrument malfunction.

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG

MLP LOCATION: OBGMLP-36TFZ-3

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

P Drilling Company:

I .iel: Steve Cook, Tim Jellet, Bob Kline.

Drill Rig: Vibratory Direct-Push Rig

OBG Geologist: Steve Cook

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Location: OBGDP36A

Coordinates: N: 536766
E: 2313266

Start Date: 6-5-00

End Date: 6-5-00

Screen = Grout
Riser Sand Pack
Steel # Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 151.87'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded SCH 80 PVC
B: 3/4"-1" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 3/4"-1" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | TFZ-3 | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft bls: Concrete floor with Lime rock fill. | | ML | limerock | 2799 | 0.0 | NR | NR |
| | | | | | | | NR | NR |
| 2 | 2-12 ft bls: Sand, quartz, fine grain, light Yellowish Brown (10 YR 6/4), dry, water table 6-8'. | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | SM | Sand | 2799 | 0.0 | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 2000 | 4.1 | NR | NR |
| | | | | | | | NR | NR |
| 8 | | | SM | Sand | 6663 | 0.0 | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 1900 | 0.0 | NR | NR |
| | | | | | | | NR | NR |
| 12 | 12-16 ft bls: Sand, quartz, fine grain, loose, moist, with some silt, dark gray tc grayish brown (10 YR 4/1). | | SM | Sand w/ Silt | 1241 | 0.0 | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 6663 | 170 | NR | NR |
| | | | | | | | NR | NR |
| 16 | 16-18 ft bls: Sand, quartz, fine to medium grain, subrounded to subangular, light gray. | | | | 368 | 184 | NR | NR |
| | | | | | | | NR | NR |
| 18 | 18-30 ft bls: Sand, firm, with trace amount of clay, TFZ-1 Screen (8 - 18 ft). | | SC | Sand w/ Clay | 657 | 589 | NR | NR |
| | | | | | 615 | 347 | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 145 | 65.4 | NR | NR |
| | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| | | | SC | | 16.4 | 4 | NR | NR |
| | | | | | 500 | 400 | NR | NR |
| | | | | | 582 | 882 | NR | NR |
| | | | | | 4 | 23 | NR | NR |
| | | | | | 604 | 994 | NR | NR |
| 30 | 30-40 ft bls: Clay with Sand, quartz, medium grain, dry, medium stiff, light gray. | | CL-SP | Clay/ w Sand gravelly | 811 | 1296 | NR | NR |
| | | | | | 111 | 183 | NR | NR |
| | | | | | 1014 | 1184 | NR | NR |
| | | | | | 279 | 387 | NR | NR |
| | | | CL-SC | | 192 | 239 | NR | NR |
| | | | | | 316 | 645 | NR | NR |
| | | | | | 292 | 707 | NR | NR |
| | | | | | 70 | 363 | NR | NR |
| | | | | | | | NR | NR |
| | | | | | 211 | 1077 | NR | NR |
| | 40-42 ft bls: Clay with Sand light gray. | | CL | Clay w/ Sand | 682 | 1097 | NR | NR |
| | | | | | 76 | 150 | NR | NR |
| | 42-44 ft bls: Clay, medium stiff light gray ( 5 Y 7/2). | | CL | | 111 | 468 | NR | NR |
| | | | | | 79 | 103 | NR | NR |
| 44 | 44-48 ft bls: Sand, quartz, cemented fragments, firm, dry, some Clay/Silt mixture brownish yellow (10 YR 6/8) | | | | 111 | 226 | NR | NR |
| | | | | | 590 | 949 | NR | NR |
| | | | SP-CL | Clay/Silt/ Sand | 5 | 31 | NR | NR |
| | | | | | 94 | 91 | NR | NR |
| 48 | 48-50 ft bls: Sand with silt, medium stiff, light brown - brownish yellow. | | SM | Sand w/ Silt | 45 | 51 | NR | NR |
| | | | | | 41 | 58.6 | NR | NR |
| 50 | 50-52 ft bls: Sand fine grain, quartz, with Clay, and trace Silt, pale yellow /gray (5 Y 7/2). | | CL | Sand/Silt/ Clay | 182 | 160 | NR | NR |
| | | | | | 113 | 79 | NR | NR |
| 52 | 52-54 ft bls: Clay lenses, light yellow to yellow (2.5 Y 8/2 -7/2). | | | | 71 | 360 | NR | NR |
| | | | | | 149 | 129 | NR | NR |
| 54 | 54-56 ft bls: Sand, fine gravel size fragments, Increase in Clay content, light gray to brown. | | | | 530 | 295 | NR | NR |
| | | | | | 81 | 60 | NR | NR |
| 56 | 56-58 ft bls: Sand, quartz, highly oxidized, with some Clay, light yellowish brown (2.5 Y 6/4), yellowish - red (10 YR 6/8). | | SC | Clay/Sand | 22 | 19 | NR | NR |
| | | | | | 101 | 109 | NR | NR |
| 58 | 58-60 ft bls: Snad, quartz, fine to medium grain, wet, brownish yellow (10 YR 6/8). | | | | 87 | 38 | NR | NR |
| 59 | 59 ft bls: TFZ-2 Screen (59 - 69 ft). | | | | 0.0 | 13.8 | NR | NR |
| 60 | 60-62 ft bls: Clay with Silt, and trace amount of Sand, brown (7.5 YR 5/8). | | SC | Sand/Clay | 0.0 | 28 | NR | NR |
| | | | | | 0.0 | 11.9 | NR | NR |
| 62 | 62-64 ft bls: Clay with Silt mixture, with some Sand, brown. Color change at 63' - Light Gray to White (5 Y 8/1 - 7/2). | | CL-SC | Clay/Silt w/ trace sand | 0.0 | 12.9 | NR | NR |
| 64 | 64-66 ft bls: Sand, quartz, fine grain, well sorted, poorly graded, wet, yellow (2.5 Y 7/8 - 10 YR 6/8). | | | | 0.0 | 13.3 | NR | NR |
| | | | | | 0.0 | 8.8 | NR | NR |
| | | | | | 0.0 | 0.0 | NR | NR |
| 66 | 66-70 ft bls: Sand with Silt and some Clay, brown (7.5 YR 5/8), slightly greater Silt content. At 69' increase Clay / Silt conten | | SM-Cl | Sand/Silt/ Clay | 0.0 | 0.0 | NR | NR |
| | | | | | 0.0 | 0.0 | NR | NR |
| | | | | | 0.0 | 0.0 | NR | NR |
| | | | | | 0.0 | 0.0 | NR | NR |
| 70 | 70-72 ft bls: Clay with some white nodules / laminates (thin), at 71' some leached phosphates, white to light gray to brownish gray. | | CL | Clay | 0.0 | 0.0 | NR | NR |
| | | | | | 0.0 | 0.0 | NR | NR |
| 72 | 72-76 ft bls: Clay light greenish gray to brown gray (2.5 y 7/2 - 10 YR 5/2), organics dispensed throughout sample, 73' Top of Hawthorne. | | | Clay | 0.0 | 0.0 | NR | NR |
| | | | | | 0.0 | 0.0 | NR | NR |
| | | | | | 0.0 | 0.0 | NR | NR |
| | | | | | 0.0 | 0.0 | NR | NR |
| 76 | | | CL | Clay | 0.0 | 0.0 | NR | NR |
| | | | | | 0.0 | 0.0 | NR | NR |
| | | | | | 0.0 | 0.0 | NR | NR |
| | | | | | 0.0 | 0.0 | NR | NR |
| | | | | | 0.0 | 0.0 | NR | NR |
| | | | | | 0.0 | 0.0 | NR | NR |
| 82 | 82-86 ft bls: Clay with Silt, medium stiff, to stiff, slightly moist, with some phosphate pebbles, light gray (GL 1 8/10). | | CL | Clay/Silt | 7.1 | 3 | NR | NR |
| | | | | | 20 | 42 | NR | NR |
| | | | | | 70 | 38 | NR | NR |
| | | | | | | | NR | NR |
| 86 | 86-90 ft. bls: Clay with Silt, dry, friable, stiff, olive green (GL1 8/10) to white (GL1 8/1) | | CL | Clay w/ silt | 0.0 | 0.0 | NR | NR |
| | | | | | 0.0 | 0.0 | NR | NR |
| | | | | | 0.0 | 0.0 | NR | NR |
| | 90-92 ft bls. Limey Clay, with trace amount of Limestone. | | Cl | Clay w/ lime-stone | 0.0 | 0.0 | NR | NR |
| | | | | | 0.0 | 0.0 | NR | NR |
| 92 | 92-96 ft bls: Limey clay with limerock. | | | | 0.0 | 0.0 | NR | NR |
| | | | | | 3.7 | 26.4 | NR | NR |
| | | | | | 56.1 | 83.7 | NR | NR |
| | 95 ft. bl | | | | 56.8 | 88.7 | NR | NR |
| | 96-98 ft bls: Limestone, wet, friable, and weathered. | | GP | Limestone | 130 | 50 | NR | NR |
| | | | | | 149 | 0.0 | NR | NR |
| | 98 ft. bls: TFZ-3 Screen (88-98 ft) | | | | 730 | 0.0 | NR | NR |
| | Total Depth 98 ft. bls. | | | | | | | |

Notes: MLP TFZ-2 depth is 76 ft bls bentonite from 76 to 70 ft, bottom of sand pack is 70 ft, top of sand pack is 57 ft bls, bentonite seal from 57 ft to 2 ft, screen size 0.010" screened from 59 ft to 69 ft bls.
1. NR - No reaction. 2. NA Not analyzed due to instrument malfunction.

E:\cape_can\projects\3356\22992\5_rpts\technemo\wellplacement\FinalTM\newboring\DP36-3.xls

| O'BRIEN & GERE ENGINEERS, INC. | REPORT OF BORING | CONSTRUCTION LOG<br>WELL/MLP LOCATION: OBGMLP 37TFZ-1 |
|---|---|---|
| Client: ITT INDUSTRIES INC. | Page 1 of 1 | Drill Method: ROTOSONIC<br>Sampler: 6" Core |
| Project Location: Former Thompson Industries Site, Madison, Florida. | Location: OBGDP-37 | Land Surface Elevation msl: 155.83' |
| File No.: 22992.013.001 | Coordinates: N: 536715<br>E: 2313313 | WELL/MLP CONSTRUCTION MATERIALS:<br>FILTER PACK: 30-40 silica sand |
| Boring/Drilling Company: Precision Sampling | Start Date: 4-28-00 | BENTONITE SEAL: Pure Gold Granular/Med. Chips |
| Personnel: Bill Kotziers, Steve Cook, Roger Baldwin, Tim Jellet, Precision Drilling Crew | End Date: 5-2-00 | WELL RISER:<br>A: Flush-Threaded SCH 80 PVC<br>B: 3/4"-1" Diameter |
| Drill Rig: Vibratory Direct-Push Rig | Screen \| Grout<br>Riser Sand Pack<br>Steel # Bentonite | SCREEN MATERIAL:<br>A: 0.010 Inch Slot SCH. 80 PVC<br>B: 3/4"-1" Diameter |
| OBG Geologist: Bill Kotziers, Steve Cook | | |

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | TFZ-1 | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-10 ft bls: Concrete Floor, R=8", No Recovery. | | | | | | NR | NR |
| 2 | | | | | | | NR | NR |
| 4 | | | | | | | NR | NR |
| 6 | | | | | | | NR | NR |
| 8 | 8 ft bls: TFZ-1 Screen (8 - 18 ft). | | | Fill | 0 | 0.5 | NR | NR |
| 10 | 10-13 ft bls: R=0", Switch to Geoprobe, 2nd Attempt R=3", Light Gray to Dark Gray, Fine Grained to Medium Grained Sand with Silt, Wet, Loose/Unconsolidated | | SP-SM | Sand w/ Sil | 0 | 130 | NR | NR |
| 12 | | | | | | | NR | NR |
| 13 | 13-16 ft bls: Light Gray, Fine Grained, Silty/Clayey Sand, Increasing Clay/Silt Content with Depth | | | | 0 | 133 | NR | NR |
| 14 | | | SM/SC | Clay w/ Silt | | | NR | NR |
| 16 | 16-19 ft bls: Same as Above, R=8"/12" | | | | 0 | 182 | NR | NR |
| 18 | | | | | | | NR | NR |
| 19 | 19-22 ft bls: Light Gray Sandy Clay, Moderately Plastic, R=1.5' | | SC-CL | Sand w/ Silt & Clay | 0 | 75 | NR | NR |
| 20 | Boring terminated at 19 ft. bls. | | | | | | | |

Notes: Multi-level piezometer TFZ-1 depth is 19 ft. Bottom of sand pack is 19 ft. Top of sand pack is 6 ft. Bentonite seal from 6 ft to 2 ft bls. screen size 0.010" screened from 8 ft to 18 ft bls.

1. NR - No Reaction.

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG

MLP LOCATION: MLP 37TFZ-2

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

ing/Drilling Company: Precision Sampling

ersonnel: Bill Kotziers, Steve Cook, Roger Baldwin, Tim Jellet, Precision Drilling Crew.

Drill Rig: Vibratory Direct-Push Rig

OBG Geologist: Bill Kotziers, Steve Cook

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Location: OBGDP-37

Coordinates: N: 536715
E: 2313314

Start Date: 4-28-00

End Date: 5-2-00

Screen
Riser
Steel

Grout
Sand Pack
Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 155.83'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded SCH 80 PVC
B: 3/4"-1" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 3/4"-1" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|
| 0 | 0-10 ft bls: Concrete Floor, R=8", No Recovery. | | | | | NR | NR |
| 2 | | | | | | NR | NR |
| 4 | | | | | | NR | NR |
| 6 | | | | | | NR | NR |
| 8 | 8 ft bls: TFZ-1 Screen (8 - 18 ft). | | Fill | 0 | 0.5 | NR | NR |
| 10 | 10-13 ft bls: R=0', Switch to Geoprobe, 2nd Attempt R=3', Light Gray to Dark Gray, Fine Grained to Medium Grained Sand with Silt, Wet, Loose/Unconsolidated | SP-SM | Sand/Silt | 0 | 130 | NR | NR |
| 12 | | | | | | NR | NR |
| 13 | 13-16 ft bls: Light Gray, Fine Grained, Silty/Clayey Sand, Increasing Clay/Silt Content with Depth | | | 0 | 133 | NR | NR |
| 14 | | SM/SC | Silt/ Clay | | | NR | NR |
| 16 | 16-19 ft bls: Same as Above, R=8"/12" | | | 0 | 182 | NR | NR |
| 18 | | | | | | NR | NR |
| 19 | 19-22 ft bls: Light Gray Sandy Clay, Moderately Plastic, R=1.5' | SC-CL | Sand w/ Silt & Clay | 0 | 75 | NR | NR |
| 20 | | | | | | NR | NR |
| 22 | 22-25 ft bls: Stiff, Firm Sandy Clay, R=3', Light Gray with some Medium Gray Clay Stringers | SC | Sand w/ Silt & Clay | 0 | 237 | NR | NR |
| 24 | | | | | | NR | NR |
| 25 | 25-28 ft bls: Light Gray to Gray Clay Sand, Fine to Medium Grained, 50% Recovery | SC | Sand w/ Silt & Clay | 0 | 100 | NR | NR |
| 26 | | | | | | NR | NR |
| 28 | 28-30 ft bls: Light Greenish, Gray, Moderately Stiff, R=4", Switch to Macro-Core | CL | Clay | 0 | 0 | NR | NR |
| 30 | 30-31 ft bls: Clayey Sand | SC | | | | NR | NR |
| 31 | 31-33 ft bls: Cemented Sand Fragments, Light Gray (Gley 1 7/1) to 10YR 6/8; Light Yellow-Brown | | | 28 | 140 | NR | NR |
| 32 | | | | | | NR | NR |
| 33 | 33-36 ft bls: Same as Above; Increasing Sand Content. | | | | | NR | NR |
| 34 | | | | | | NR | NR |
| 36 | 36-38 ft bls: Same as Above; ~37.5' Increased Sand Content (Fine Grained), 36-40':R=4' | SP-SC | Sand & Clay | 115 | 289 | NR | NR |
| 38 | 38-39 ft bls: Light Gray/White (Wet) | | | | | NR | NR |
| 39 | 39-41 ft bls: Orange-Brownish Yellow Sandy Clay, 40-44': R=4' | SC | | | | NR | NR |
| 40 | | SP | Sand w/Clay | 9.9 | 66.7 | NR | NR |
| 41 | 41-44 ft bls: Light Yellow to White, Loose, Wet, Fine grained, Sand | | | | | NR | NR |
| 42 | @ 42.5' Sandy Clay Grading to Clay | SC | | | | NR | NR |
| | | CL | | | | NR | NR |
| 44 | 44-46 ft bls: @44' Reddish Brown Sand with Oxidized (Dark Brown) Cementious Sand (Hard Pan) 44-48': R=3.5' | SC | Sand w/ Silt &Clay | 3.7 | 35 | NR | NR |
| 45 | 45 ft bls: TFZ-2 Screen (45 - 55 ft). | | | | | NR | NR |
| 46 | 46-48 ft bls: Light Yellow-Orange-Brown-Gray Clayey Sand (Fine Grained) | | | | | NR | NR |
| 48 | 48-50 ft bls: Orange-Brown (7.5YR 5/8) Fine to Medium Grained | | Sand | 41 | 92 | NR | NR |
| 50 | 50-52 ft bls: Quartz Sand with Some Silt/Clay Subrounded Quartz Grains | SP/SP-SM | | | | NR | NR |
| 52 | 52-59 ft bls: White (10YR 8/1) Friable Silt with Sand and Clay, Some Very Minor Oxidation | ML | Sand | 90 | 191 | NR | NR |
| 54 | | | | | | NR | NR |
| 56 | | | Sand to Clay | 32 | 19 | NR | NR |
| 58 | Boring terminated at 56 ft | | | | | | |

Notes: Multi-level piezometer TFZ-2 depth is 56 ft. Bottom of sand pack is 56 ft. Top of sand pack is 43 ft. Bentonite seal from 43 ft to 2 ft bls. screen size 0.010" screened from 45 ft to 55 ft bls.
1. NR - No Reaction

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
MLP LOCATION: MLP 37 TFZ-3

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Boring/Drilling Company: Precision Sampling

Personnel: Bill Kotziers, Steve Cook, Roger Baldwin, Tim Jellet, Precision Drilling Crew.

Drill Rig: Vibratory Direct-Push Rig

OBG Geologist: Bill Kotziers, Steve Cook

Page 1 of 1

Location: OBGDP-37

Coordinates: N: 536713
E: 2313313

Start Date: 4-28-00

End Date: 5-2-00

Screen
Riser
Steel

Grout
Sand Pack
Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 155.83'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded SCH 80 PVC
B: 3/4"-1" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Slot SCH. 80 PVC
B: 3/4"-1" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | TFZ- | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-10 ft bls: Concrete Floor, R=8", No Recovery. | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 2 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 4 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 6 | | | | | | | NR | NR |
| | | | | Fill | 0 | 0.5 | NR | NR |
| 8 | 8 ft bls: TFZ-1 Screen (8 - 18 ft). | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 10 | 10-13 ft bls: R=0', Switch to Geoprobe, 2nd Attempt R=3', Light Gray to Dark Gray, Fine Grained to Medium Grained Sand with Silt, Wet, Loose/Unconsolidated | | SP-SM | Sand/Silt | 0 | 130 | NR | NR |
| | | | | | | | NR | NR |
| 12 | | | | | | | NR | NR |
| 13 | 13-16 ft bls: Light Gray, Fine Grained, Silty/Clayey Sand, Increasing Clay/Silt Content with Depth | | | | 0 | 133 | NR | NR |
| 14 | | | SM/SC | Clay/ Silt | | | NR | NR |
| | | | | | | | NR | NR |
| 16 | 16-19 ft bls: Same as Above, R=8"/12" | | | | 0 | 182 | NR | NR |
| | | | | | | | NR | NR |
| 18 | | | | | | | NR | NR |
| 19 | 19-22 ft bls: Light Gray Sandy Clay, Moderately Plastic, R=1.5' | | SC-CL | Sand w/ Silt & Clay | 0 | 75 | NR | NR |
| 20 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 22 | 22-25 ft bls: Stiff, Firm Sandy Clay, R=3', Light Gray with some Medium Gray Clay Stringers | | SC | Sand w/ Silt & Clay | 0 | 237 | NR | NR |
| | | | | | | | NR | NR |
| 24 | | | | | | | NR | NR |
| 25 | 25-28 ft bls: Light Gray to Gray Clay Sand, Fine to Medium Grained, 50% Recovery | | SC | Sand w/ Silt & Clay | 0 | 100 | NR | NR |
| 26 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 28 | 28-30 ft bls: Light Greenish, Gray, Moderately Stiff, R=4", Switch to Macro-Core | | CL | Clay | 0 | 0 | NR | NR |
| | | | | | | | NR | NR |
| 30 | 30-31 ft bls: Clayey Sand | | SC | | | | NR | NR |
| 31 | 31-33 ft bls: Cemented Sand Fragments, Light Gray (Gley 1 7/1) to 10YR 6/8; Light Yellow-Brown | | | | 28 | 140 | NR | NR |
| 32 | | | | | | | NR | NR |
| 33 | 33-36 ft bls: Same as Above; Increasing Sand Content. | | | | | | NR | NR |
| 34 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 36 | 36-38 ft bls: Same as Above; ~37.5' Increased Sand Content (Fine Grained), 36-40':R=4' | | | Sand & Clay | 115 | 289 | NR | NR |
| | | | SP-SC | | | | NR | NR |
| 38 | 38-39 ft bls: Light Gray/White (Wet) | | | | | | NR | NR |
| 39 | 39-41 ft bls: Orange-Brownish Yellow Sandy Clay, 40-44': R=4' | | SC | | | | NR | NR |
| 40 | | | SP | Sand w/Clay | 9.9 | 66.7 | NR | NR |
| 41 | 41-44 ft bls: Light Yellow to White, Loose, Wet, Fine grained, Sand | | | | | | NR | NR |
| 42 | @ 42.5' Sandy Clay Grading to Clay | | SC | | | | NR | NR |
| | | | CL | | | | NR | NR |
| 44 | 44-46 ft bls: @44' Reddish Brown Sand with Oxidized (Dark Brown) Cementious Sand (Hard Pan) 44-48': R=3.5' | | SC | Sand w/ Silt &Clay | 3.7 | 35 | NR | NR |
| 45 | 45 ft bls: TFZ-2 Screen (45 - 55 ft). | | | | | | NR | NR |
| 46 | 46-48 ft bls: Light Yellow-Orange-Brown-Gray Clayey Sand (Fine Grained) | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 48 | 48-50 ft bls: Orange-Brown (7.5YR 5/8) Fine to Medium Grained | | | Sand | 41 | 92 | NR | NR |
| | | | SP/SP-SM | | | | NR | NR |
| 50 | 50-52 ft bls: Quartz Sand with Some Silt/Clay Subrounded Quartz Grains | | | | | | NR | NR |
| | | | ML | | | | NR | NR |
| 52 | 52-59 ft bls: White (10YR 8/1) Friable Silt with Sand and Clay, Some Very Minor Oxidation | | | Sand | 90 | 191 | NR | NR |
| | | | | | | | NR | NR |
| 54 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 56 | | | | Sand to Clay | 32 | 19 | NR | NR |
| | | | | | | | NR | NR |
| 58 | | | | | | | NR | NR |
| 59 | 59-60 ft bls: @ 59.5' Top of Hawthorn; Greenish Gray CL with some White/Leached Phosphate Grains | | CL | | | | NR | NR |
| 60 | 60-66 ft bls: Same as Above; Light Greenish Gray Clay with Sand (Gley 1 8/1) | | | Clay | 5.9 | 13 | NR | NR |
| | (Note: Samples are dry, therefore moisture content and texture are difficult to determine) | | | | | | NR | NR |
| 62 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 64 | | | | Clay | 2 | 4 | NR | NR |
| | | | | | | | NR | NR |
| 66 | 66-70 ft bls: Same as Above; Some Dark Black Organics Present | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 68 | | | | Clay | -- | -- | NR | NR |
| | | | | | | | NR | NR |
| 70 | 70-73 ft bls: Same as Above; Becoming Softer | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 72 | | | | Clay&Sand | 0 | 0 | NR | NR |
| 73 | 73-76 ft bls: Back into Firmer CL with Sand | | | | | | NR | NR |
| 74 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 76 | 76-80 ft bls: Same as Above; Firmer Material | | | Clay w/Silt & sand | 1 | 3 | NR | NR |
| | | | | | | | NR | NR |
| 78 | | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 80 | 80-82 ft bls: Increasing Sand (Very Fine to Fine) Content; White to Very Light Gray | | SC-CL | Silt w/Sand | 1 | 0 | NR | NR |
| | | | | | | | NR | NR |
| 82 | 82-85 ft bls: Same as Above, Becoming Softer | | | | | | NR | NR |
| | | | | | | | NR | NR |
| 84 | | | | Limestone | 0 | 0 | NR | NR |
| 85 | 85-86 ft bls: @ 85' Weathered Clayey Limestone, White (Marl) | | GP | | | | NR | NR |
| 86 | 86 ft bls: "3/4" Piezometer set to 86', u.s. readings unavailable. TFZ-3 Screen (76 - 86 ft). | | | | | | NR | NR |
| | Boring Terminated at 86' | | | | | | | |

Notes: Multi-level piezometer TFZ-3 depth is 86 ft. Bottom of sand pack is 86 ft. Top of sand pack is 74 ft. Bentonite seal from 74 ft to 2 ft bls, screen size 0.010" screened from 76 ft to 86 ft bls.
1. NR - No Reaction

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG

WELL/MLP LOCATION: OBG-MW14s

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Drilling/Drilling Company: Boart Longyear

Personnel: Bill Kotziers, Boart Longyear drilling crew.

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers

Page 1 of 1

Location: OBGMW-14

Coordinates: N: 536443
E: 2313052

Start Date: 3/30/00

End Date: 4/1/00

Screen
Riser
Steel

Grout
Sand Pack
Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 149.50'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded SCH 80 PVC
B: 2" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Stainless Steel
B: 2" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft | Grass and fill material. | SM | Sand | 0 | 0 | – | – |
| 2 | 2-3ft | Dark gray/black highly organic material, water table encountered at 2.5 ft. | | | | | – | – |
| 3 | 3 ft | TFZ-1 (3-13 ft bls) | | | | | – | – |
| | 4-8ft | Sand with some Silt, gray (10YR6/1). | SP-SM | Sand/Silt | 0 | 0 | – | – |
| | | | | | | | – | – |
| | | | | | | | – | – |
| 8 | 8-13ft | Clay, moderately indurated, light gray (2.5Y 6/1) | | | | | – | – |
| | | | SC-CL | Clay/San | 0 | 0 | – | – |
| | | | | | | | – | – |
| | | | | | | | – | – |
| 13 | | | | | | | – | – |
| | | Boring terminated at 13 ft bls. | | | | | | |

Notes: Monitoring well depth is 13 ft bls, bottom of sand pack is 13 ft, top of sand pack is 3 ft bls, bentonite seal from 2 to 0 ft bls, screen size 0.010", screened from 3 to 13 ft bls.

1. – not applicable to boring. 2. NA - Not analyzed due to malfunction of instrument.

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O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
WELL/MLP LOCATION: OBG-MW14i

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Ing/Drilling Company: Boart Longyear

Personnel: Bill Kotziers, Boart Longyear drilling crew.

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers

Page 1 of 1

Location: OBGMW-14

Coordinates: N: 536449
E: 2313053

Start Date: 3/30/00

End Date: 4/1/00

Screen =
Riser
Steel #
Grout
Sand Pack
Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 149.20'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded SCH 80 PVC
B: 2" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Satinless Steel 80 PVC
B: 2" Diameter

| Depth Below Land Surface | | LITHOLOGIC SAMPLE DESCRIPTION | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft | Grass and fill material. | SM | Sand/ Silt | 0 | 0 | – | – |
| 2 | 2-3ft | Dark gray/black highly organic material, water table encountered at 2.5 ft. | | | | | – | – |
| 3 | 3 ft | | | | | | – | – |
| | 4-8ft | Sand with some Silt, gray (10YR6/1). | SP-SM | sand w/ S | 0 | 0 | – | – |
| 8 | 8-13ft | Clay, moderately indurated, light gray (2.5Y 6/1) | SC-CL | Clay | 0 | 0 | – | – |
| 14 | 14-22ft | Clay, Light yellow-greenish-gray, mottled orange brown (2.5 Y 7/2) with some silt, and trace to little gravel present. | CL | Clay w/ Si | 0 | 0 | – | – |
| 17 | | Clay and Silt mixture (2.5 Y8/2) | | | | | – | – |
| 22 | 22-25ft | Sand with some Silt and Clay, loose, light gray (5Y 7/1) | SM-SC | Sand w/ Si & Clay | • | • | – | – |
| 25 | 25-28ft | Silt with some Sand, light gray, firm. | SM | Silt w/ San | • | • | – | – |
| 28 | 28-29ft | Sand and Silt, fine grained, orange-brown (10Yr 6/8) lenses, some laminates reddish brown (2.5 Y 7/6) Sand-Clay mixture, Top of Miccosucci. TFZ-2 (28-33 ft bls). | SM<br>SC | Sand/Silt clay | • | • | – | – |
| 30 | 30-32ft | same as above, with little cemented sand concretions, gravel size, light yellow. | SC-SP | Clay w/ gravel | | | – | – |
| 32 | 32-35ft | Clay, soft, light brown (7.5 YR 5/6), highly mottled, with some Sand and Silt and trace phosphate grains, white (7.5YR 5/2). | CL | Clay/ Silt/ Sand | • | • | – | – |
| | | Boring Terminated at 34 ft bls. | | | | | – | – |

Notes: Monitoring well depth is 40.5' ft bls, bottom of sand pack is 41 ft, top of sand pack is 33 ft bls, bentonite seal from 31 to 33 ft bls, grout from 0 to 31 ft. bls, screen size 0.010", screened from 35 to 40 ft bls

1. – not applicable to boring. 2. NA - Not analyzed due to malfunction of instrument.

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O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
WELL LOCATION:MW15s

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Drilling Company:

Personnel:

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers

Page 1 of 1

Location: OBGMW-15

Coordinates: N: 537077
E: 2313011

Start Date: 3/2300

End Date: 3/23/00

Screen =
Riser
Steel //
Grout
Sand Pack
Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 162.27'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
: Flush-Threaded SCH 80 PVC
B: 3/4"-1" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Stainless Steel
B: 2" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft Asphalt and fill material. | | | | | – | – |
| 2 | 2-4ft Sand with some Silt, light brown. | SP-SM | Sand/ Silt | | | – | – |
| 5 | 5-8ft. Silt, very firm (US >4.5 T/Ft2), mottled gray to reddish brown (2.5Y6/1), to dark gray brown and red (2.5YR 4/8). | ML | Silt w/ sand | 0 | 2.5 | – | – |
| 8 | 8-10ft. Silt with some gray clay stringers, reddish brown (5YR 4/4) to (2.5Y 5/1) gray, very loosely consolidated. | ML | Silt w/ sand | | | – | – |
| 10 | | | | 0 | 10 | – | – |
| 12 | 12-18ft Sand with some Silt, slightly damp, light orange red, to yellowish red (5YR5/8). | SM | Sand w/ silt | | | – | – |
| | | | | 0 | 2.2 | – | – |
| 19 | 19-22ft. Sand, quartz, fine to medium grained, damp to moist, brownish yellow (10YR6/8), with some clay, water table encountered at 21ft. (TFZ-1 19-29 ft. bls) | SP-SC | Sand/Clay w/ gravels | 0 | 5.6 | – | – |
| 22 | | | | | | – | – |
| 23 | 23.5-24ft Clay with some Sand, laminated white to light gray brownish yellow (10YR 6/8) . | SC | Clay w/ sand | | | – | – |
| 24 | grading back into Sand, quartz, fine to medium grained, with some Clay. | | | 0 | 12.1 | – | – |
| 26 | 26-28ft same as above with, wet gravel to cobble sized cemented Sand concretion/nodules, light yellowish brown (10YR 6/4), subangular. | SP-SC | Clay/Sand/ gravelly mix | | | – | – |
| 29 | 29-32ft Clay and Silt, firm, (US 2.75T/Ft$^2$), light yellowish brown (2.5Y 6/4) to (10Y 5/8). | ML-CL | Clay/ Silt | 0 | 3.3 | – | – |
| | Boring terminated at 30 ft bls. | | | | | | |

Notes: Monitoring well 15s depth is 30 ft bls, bottom of sand pack is 30 ft, top of sand pack is 16 ft bls, bentonite seal from 16 ft to 2 ft bls, screen size 0.010", screened from 19 to 29 ft bls.

1. – not applicable to boring. 2. NA - Not analyzed due to malfunction of instrument.

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
WELL/MLP LOCATION:MW15i

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Boring/Drilling Company:

Personnel:

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers

Page 1 of 1

Location: OBGMW-15

Coordinates: N: 537082
E: 2313018

Start Date: 3/19/00

End Date: 3/22/00

Screen | Grout
Riser | Sand Pack
Steel # | Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 162.54'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold GranularMed. Chips
WELL RISER:
: Flush-Threaded Stainless Steel
B: 2" Diameter
SCREEN MATERIAL:
A: 0.006 Inch Stainless Steel
B: 2" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft Asphalt and fill material. | | | | | – | – |
| 2 | 2-4ft Sand with some Silt, light brown. | SP-SM | Sand/ Silt | | | – | – |
| 5 | 5-8ft. Silt, very firm (US >4.5 T/Ft2), mottled gray to reddish brown (2.5Y6/1), to dark gray brown and red (2.5YR 4/8). | ML | Silt w/ san | 0 | 2.5 | – | – |
| 8 | 8-10ft. Silt with some gray clay stringers, reddish brown (5YR 4/4) to (2.5Y 5/1) gray, very loosely consolidated. | ML | Silt w/ sand | | | – | – |
| 10 | | | | 0 | 10 | – | – |
| 12 | 12-18ft Sand with some Silt, slightly damp, light orange red, to yellowish red (5YR5/8). | SM | Sand w/ silt | | | – | – |
| | | | | 0 | 2.2 | – | – |
| 19 | 19-22ft. Sand, quartz, fine to medium grained, damp to moist, brownish yellow (10YR6/8), with some clay, water table encountered at 21ft. | SP-SC | Sand/Clay w/ gravels | 0 | 5.6 | – | – |
| 22 | | | | | | – | – |
| 23 | 23.5-24ft Clay with some Sand, laminated white to light gray brownish yellow (10YR 6/8), | SC | Clay w/ sand | | | – | – |
| 24 | grading back into Sand, quartz, fine to medium grained, with some Clay. | | | 0 | 12.1 | – | – |
| 26 | 26-28ft same as above with, wet gravel to cobble sized cemented Sand concretion/nodules, light yellowish brown (10YR 6/4), subangular. | SP-SC | Clay/Sand/ gravelly mix | | | – | – |
| 29 | 29-32ft Clay and Silt, firm, (US 2.75T/Ft$^2$), light yellowish brown (2.5Y 6/4) to (10Y 5/8). | ML-CL | Clay/ Silt | | | – | – |
| | | | | 0 | 3.3 | – | – |
| 33 | 33-36ft Sand, quartz, fine to medium grained, well sorted, wet, subrounded, light yellowish gray (2.5 YR 7/2) to brownish yellow (10YR 6/8). | SP | Sand w/ gravels | | | – | – |
| 36 | 36-45ft. Silt with some Clay, soft, friable. | ML | Silt/ Clay | 0 | 53.1 | – | – |
| 45 | 45-49ft Sand and Clay mixture, very uncohesive (can't cut with knife), light gray to light yellowish orange. | SC | Sand w/ Clay | | | – | – |
| 50 | 50-53ft. Clay with some Sand, soft, light yellowish gray. | SC | Clay w/ sand | | | – | – |
| 53 | 53-55ft Clay with some Sand, soft, with reddish brown quartz sand lens, trace black organics at 53 ft. | SC | Clay w/ sand | | | – | – |
| | Clay, soft, brownish orange with some light gray mottling from 54 to 55 ft. | CL-SP | Clay w/ sand | | | – | – |
| 55 | 55-65ft Sand with some Clay, wet with varying Clay content throughout the interval, 58 ft., some gravel sized, cemented sand concretions. (TFZ-2 55-65 ft. bls) | | gravels | | | – | – |
| | | | | 0 | – | – | – |
| 60 | Sand and Clay mixture, wet, orangish brown in color. | SC-CL | Clay/Sand | | | – | – |
| | | | | 0 | – | – | – |
| 65 | 65 ft. Top of Hawthorn encountered at 65 ft. TFZ-2 at this interval | CL | Clay | | | – | – |
| 66 | 66-68ft. Clay, highly reworked sediments, light brown, firm (US 1.75 to 2 T/Ft.$^2$), light gray to gray. | | | | | – | – |
| | Boring Terminated at 66 ft bls. | | | | | | |

Notes: Monitoring well 15i depth is 66 ft bls, bottom of sand pack is 65 ft, top of sand pack is 53 ft bls, bentonite seal from 53 ft to 2 ft bls, screen size 0.010", screened from 55 to 65 ft bls.
1. – not applicable to boring. 2. NA - Not analyzed due to malfunction of instrument.

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O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
WELL/MLP LOCATION:MW15d

Client: ITT INDUSTRIES INC.

Project Location: *Former Thompson Industries Site, Madison, Florida.*

File No.: 22992.013.001

ng/Drilling Company:

sonnel:

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers

Page 1 of 2

Location: OBGMW-15

Coordinates: N: 537084
E: 2313023

Start Date: 3/19/00

End Date: 3/29/00

Screen #
Riser
Steel #
Grout
Sand Pack
Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 162.44'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
: Flush-Threaded SCH 80 PVC
B: 2" Diameter
SCREEN MATERIAL:
A: 0.010 Inch Stainless Steel
B: 2" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft | Asphalt and fill material. | | | | | - | - |
| 2 | 2-4ft | Sand with some Silt, light brown. | SP-SM | Sand/ Silt | | | - | - |
| 5 | 5-8ft. | Silt, very firm (US >4 5 T/Ft2), mottled gray to reddish brown (2.5Y6/1), to dark gray brown and red (2.5YR 4/8). | ML | Silt w/ sand | 0 | 2.5 | - | - |
| 8 | 8-10ft. | Silt with some gray clay stringers, reddish brown (5YR 4/4) to (2.5Y 5/1) gray, very loosely consolidated. | ML | Silt w/ sand | | | - | - |
| 10 | | | | | 0 | 10 | - | - |
| 12 | 12-18ft | Sand with some Silt, slightly damp, light orange red, to yellowish red (5YR5/8). | SM | Sand w/ silt | | | - | - |
| | | | | | 0 | 2.2 | - | - |
| 19 | 19-22ft. | Sand, quartz, fine to medium grained, damp to moist, brownish yellow (10YR6/8), with some clay, water table encountered at 21ft. | SP-SC | Sand/Clay w/ gravels | 0 | 5.6 | - | - |
| 22 | | | | | | | - | - |
| 23 | 23.5-24ft | Clay with some Sand, laminated white to light gray brownish yellow (10YR 6/8) . | SC | Clay w/ sand | | | - | - |
| 24 | | grading back into Sand, quartz, fine to medium grained, with some Clay. | | | 0 | 12.1 | - | - |
| 26 | 26-28ft | same as above with, wet gravel to cobble sized cemented Sand concretion/nodules, light yellowish brown (10YR 6/4), subangular. | SP-SC | Clay/Sand/ gravelly mix | | | - | - |
| 29 | 29-32ft | Clay and Silt, firm, (US 2.75T/Ft$^2$), light yellowish brown (2.5Y 6/4) to (10Y 5/8). | ML-CL | Clay/ Silt | 0 | 3.3 | - | - |
| 33 | 33-36ft | Sand, quartz, fine to medium grained, well sorted, wet, subrounded, light yellowish gray (2.5 YR 7/2) to brownish yellow (10YR 6/8). | SP | Sand w/ gravels | 0 | 53.1 | - | - |
| 36 | 36-45ft. | Silt with some Clay, soft, friable. | ML | Silt/ Clay | | | - | - |
| 45 | 45-49ft | Sand and Clay mixture, very uncohesive (can't cut with knife), light gray to light yellowish orange. | SC | Sand w/ Cla | NA | NA | - | - |
| 50 | 50-53ft. | Clay with some Sand, soft, light yellowish gray. | SC | Clay w/ sand | | | - | - |
| 53 | 53-55ft | Clay with some Sand, soft, with reddish brown quartz sand lens, trace black organics at 53 ft. | SC | Clay w/ san | NA | NA | - | - |
| | | Clay, soft, brownish orange with some light gray mottling from 54 to 55 ft. | CL-SP | Clay w/ sand | | | - | - |
| 55 | 55-65ft | Sand with some Clay, wet with varying Clay content throughout the interval, 58 ft., some gravel sized, cemented sand concretions. | | gravels | | | - | - |
| 60 | | Sand and Clay mixture, wet, orangish brown in color. | SC-CL | Clay/Sand | NA | NA | - | - |
| 65 | 65 ft. | Top of Hawthorn encountered at 65 ft. TFZ-2 at this interval | CL | Clay | | | - | - |
| 66 | 66-68ft. | Clay, highly reworked sediments, light brown, firm (US 1.75 to 2 T/Ft$^2$), light gray to gray. | | | | | - | - |
| 70 | 70-73ft. | Clay, same as above, becoming firm and less mottled. | | Clay | | | - | - |
| 73 | 73-75ft. | Silt, soft, light gray layer. | ML | Silt w/ clay | NA | NA | - | - |
| 76 | 76-79ft. | Clay, light gray to gray. | CL | Clay | | | - | - |
| 79 | 79-90ft. | Clay with increase mottling, brownish orange color, some gravel sized quartz sand with leached phosphate nodules. | SP-CL | Clay w/ san & gravels | NA | NA | - | - |
| | 90-92 ft. | sand, quartz, gravel sized, light gray to gray, same as above | SP | Sand w/ no fines | | | - | - |
| 94 | 94-100ft | Clay, very firm, hard, dense. | CL | Clay | NA | NA | - | - |

Notes:
1. - not applicable to boring. 2. NA - Not analyzed due to malfunction of instrument.

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
WELL/ LOCATION: MW 15d

Client: ITT INDUSTRIES INC.

Page 2 of 2

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl:162.44'

Project Location: Former Thompson Industries Site, Madison, Florida.

Location: MW-15

File No.: 22992.013.001

Coordinates: N: 537082
E: 2313023

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded SCH 80 PVC
B: 3/4"-1" Diameter

\g/Drilling Company:

Start Date: 3/19/00

Drill Rig: Rotosonic

End Date: 3/29/00

OBG Geologist: Bill Kotziers

Screen, Riser, Steel; Grout, Sand Pack, Bentonite

SCREEN MATERIAL:
A: 0.010 Inch Slot Stainless Steel
B: 2" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 97 | | | | | | | | |
| 100 | 100-110ft | Same as above, somewhat friable, less firm. | CL | Clay | NA | NA | - | - |
| 110 | 110-116ft | Clay, firm, light gray, grading to a clay with little to some gravel, and becomming soft, and damp to moist, with some gravel size concretions. | CL-SP | Clay w/grave | NA | NA | - | - |
| 116 | 116-122ft | Clay, firm to hard, (US 2.5 T/Ft.$^2$), dark gray. | CL | Clay | | | | |
| 119 | 119 ft | (TFZ-3 119-129 ft. bls) | | | | | | |
| 122 | 122-123ft | Clay, soft, dark gray. | CL | Clay | NA | NA | - | - |
| 124 | 124-125ft | Clay, orangish brown to yellow (10 YR7/8), with weathered Limestone grading to wet Clay and Limestone, sticky/soft, light yellow (2.5 YR 8/4), intermixed with Clay and Silt. | CL<br>GP | Clay/ lime-stone | | | | |
| 126 | | Limestone, Micritic, Pale yellow (2.5YR 8/4), with increasing Clay content | | | | | | |
| 129 | 129 ft | Same as above, Color change to Brownish yellow (10YR 5/8). | GP | | | | | |
| 130 | | Boring Terminated. Total Depth = 130' | | | | | | |

Notes: Monitoring well 15d depth is 129 ft bls, bottom of sand pack is 130 ft, top of sand pack is 116 ft bls, bentonite seal from 116 to 2 ft bls, screen size 0.010", screened from 119 to 129 ft bls.

1. - not applicable to boring. 2 NA - Not analyzed due to malfunction of instrument.

| O'BRIEN & GERE ENGINEERS, INC. | REPORT OF BORING | CONSTRUCTION LOG<br>WELL/MLP LOCATION: OBG-MW16s |
|---|---|---|
| Client: ITT INDUSTRIES INC. | Page 1 of 1 | Drill Method: ROTOSONIC<br>Sampler: 6" Core<br>Land Surface Elevation msl: 163.03' |
| Project Location: Former Thompson Industries Site, Madison, Florida. | Location: OBGMW-16 | |
| File No.: 22992.013.001 | Coordinates: N: 537233<br>E: 2313509 | WELL/MLP CONSTRUCTION MATERIALS:<br>FILTER PACK: 30-40 silica sand |
| Boring/Drilling Company: Boart Longyear | Start Date: 4/13/00 | BENTONITE SEAL: Pure Gold<br>Granular/Med. Chips |
| Personnel: Bill Kotziers, Boart Longyear. | End Date: 4/13/00 | WELL RISER:<br>A: Flush-Threaded Stainless Steel |
| Drill Rig: Rotosonic | | B: 2" Diameter |
| OBG Geologist: Bill Kotziers | Screen / Riser / Steel — Grout / Sand Pack / Bentonite | SCREEN MATERIAL:<br>A: 0.006 Inch Slot Stainless Steel<br>B: 2" Diameter |

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | USC Code | General Lithology | PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|
| 0 | 0-3 ft bls: Gray-brown Topsoil w/Rootlets. Becoming orange-brown to brown | SP-SM | sand | | | – | – |
| 3 | 3-5 ft. bls: Damp to moist, at 3.5' slightly firm Sandy Silt. | | | | | – | – |
| 5 | 5-12 ft bls: Reddish Brown-Gray Silt/Silty Sand with Trace Clay (7.5yr 5/8 to 5Y 7/1). | SM | Sand w/ silt | | | – | – |
| | Dry crumbly texture. | | | 132 | NA | – | – |
| 10 | 10 ft bls: Becoming yellowish-brown (10YR 5/6). | | | | | – | – |
| 12 | 12-14.5 ft bls: Thickly laminated light gray to brown Clayey Sand, somewhat Firm (us <1T/ft$^2$) | SC | Clay w/ sa | 71.3 | NA | – | – |
| 14 | 14.5-15 ft bls: Light gray (GLEY 1 7/1) to light orange brown(10YR 6/6), Laminated Clay, (us ~ 2.5T/ft$^2$). | CL | Clay/sand | | | – | – |
| 15 | 15-16.5 ft bls: Light brown sand with Clay (10YR 5/6). | SP-SC | Clay/sand | 66.5 | NA | – | – |
| 16 | 16.5-17.5 ft bls: Light gray Clay (GLEY 1 8/1) with Gravel (us ~ 2.75 T/ft$^2$). | | w/ gravels | 58.3 | NA | – | – |
| 17 | 17.5-20 ft bls: orange-brown (7.5YR 5/8) fine-grained Sand w/some interspersed Clay, and some nodules. | | | | | – | – |
| | | | | 24.8 | NA | – | – |
| 20 | 20 ft bls: mottled light Gray to Orange-brown Sand/Silty sand w/some coarse gravel | SP-SM | Silt/clay w/ | | | – | – |
| 21 | 21 ft bls: Light Gray very fine-grained Sand/Silty-Clayey Sand | | gravel | | | – | – |
| 22 | 22 ft bls: Dense to wet very fine-grained sand/clay-sand mixture (10YR 7/8-6/8) | SC | Clay/sands | | | – | – |
| 23 | 23-24 ft bls: Firm Clay/Silt layer (us ~ 2.75 T/ft$^2$) | CL | Clay/silts | | | – | – |
| 24 | 24-32 ft bls: Clayey Sand (10YR 7/6), light orange-yellow-brown, Sandy Silt/Clay mixture, very friable. | SC | Clay/sand/ | | | – | – |
| | | | silt | | | – | – |
| | | | | 0 | NA | – | – |
| 31 | 31 ft bls: Increasing Clay/Silt content | | | | | – | – |
| 32 | 32-33.75 ft bls: Firm (us ~ 2T/ft$^2$), Clay with loose Gravel light orange-Brown (10YR 7/6) | CL | Clay/gravel | | | – | – |
| 33 | | | sands | | | – | – |
| 34 | 33.75-34 ft bls: Loose sand clay mixture | SC | Sand w/ clay | | | – | – |
| | Boring Terminated at 34 ft bls. | | | | | | |

Notes: Monitoring well depth is 40.5' ft bls, bottom of sand pack is 41 ft, top of sand pack is 33 ft bls, bentonite seal from 31 to 33 ft bls, grout from 0 to 31 ft. bls, screen size 0.010", screened from 35 to 40 ft bls.

1. – not applicable to boring 2. NA - Not analyzed due to malfunction of instrument.

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O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG

Client: ITT INDUSTRIES INC.

Page 1 of 1

WELL/MLP LOCATION: OBG-MW16I

Project Location: Former Thompson Industries Site, Madison, Florida.

Location: OBGMW-16

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 163.13'

File No.: 22992.013.001

Coordinates: N: 537234
E: 2313509

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded Stainless Steel
B: 2" Diameter
SCREEN MATERIAL:
A: 0.006 Inch Slot Stainless Steel
B: 2" Diameter

ring/Drilling Company: Boart Longyear

Start Date: 3/20/00

rsonnel: Bill Kotziers, Boart Longyear.

End Date: 3/22/00

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers

Screen | Grout
Riser | Sand Pack
Steel | Bentonite

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|
| 0 | 0-3 ft bls: Gray-brown Topsoil w/Roollets. Becoming orange-brown to brown | SP-SM | sand | | | – | – |
| 3 | 3-5 ft. bls: Damp to moist, at 3.5' slightly firm Sandy Silt. | | | | | – | – |
| 5 | 5-12 ft bls: Reddish Brown-Gray Silt/Silty Sand with Trace Clay (7.5yr 5/8 to 5Y 7/1). Dry crumbly texture. | SM | Sand w/ silt | 132 | – | – | – |
| 10 | 10 ft bls: Becoming yellowish-brown (10YR 5/6). | | | | | – | – |
| 12 | 12-14.5 ft bls: Thickly laminated light gray to brown Clayey Sand, somewhat Firm (us <1T/ft$^2$) | SC | Clay w/ sand | 71.3 | – | – | – |
| 14 | 14.5-15 ft bls: Light gray (GLEY 1 7/1) to light orange brown(10YR 6/6), Laminated Clay. (us ~ 2.5T/ft$^2$). | CL | Clay/sand | | | – | – |
| 15 | 15-16.5 ft bls: Light brown sand with Clay (10YR 5/6). | SP-SC | Clay/sand | 66.5 | – | – | – |
| 16 | 16.5-17.5 ft bls: Light gray Clay (GLEY 1 8/1) with Gravel (us ~ 2.75 T/ft$^2$). | | w/ gravels | 58.3 | – | – | – |
| 17 | 17.5-20 ft bls: orange-brown (7.5YR 5/8) fine-grained Sand w/some interspersed Clay, and some nodules. | | | 24.8 | – | – | – |
| 20 | 20 ft bls: mottled light Gray to Orange-brown Sand/Silty sand w/some coarse gravel | SP-SM | Silt/clay w/ gravel | | | – | – |
| 21 | 21 ft bls: Light Gray very fine-grained Sand/Silty-Clayey Sand | | | | | – | – |
| 22 | 22 ft bls: Dense to wet very fine-grained sand/clay-sand mixture (10YR 7/8-6/8) | SC | Clay/sands | | | – | – |
| 23 | 23-24 ft bls: Firm Clay/Silt layer (us ~ 2.75 T/ft$^2$) | CL | Clay/silts | | | – | – |
| 24 | 24-32 ft bls: Clayey Sand (10YR 7/6), light orange-yellow-brown, Sandy Silt/Clay mixture, very friable. TFZ-1 (22-32 ft) | SC | Clay/sand w/ silt | | | – | – |
| 31 | 31 ft bls: Increasing Clay/Silt content | | | 0 | – | – | – |
| 32 | 32-33.75 ft bls: Firm (us ~ 2T/ft$^2$), Clay with loose Gravel light orange-Brown (10YR 7/6) | CL | Clay/gravel sands | | | – | – |
| 34 | 33.75-34 ft bls: Loose sand clay mixture | SC | Sand/Clay | | | – | – |
| 35 | 35 ft bls: TFZ-2 (35-45 ft) | | | | | – | – |
| 36 | 36-40 ft bls: fine loose sand reddish brown(5YR 5/8) grading to pale yellow silty sand (2.5 Y 7/3) loose gravel size nodules. | SM-SP | Sand/silt/ gravel | 0 | -- | – | – |
| 40 | 40-44 ft. bls: Reddish brown (5 YR 5/8) , moist sand, with clayey silt lenses, mixed with trace organic nodules | SC-CL | Sand/silt/ clay | 0 | – | – | – |
| 44 | | | | 0 | -- | – | – |
| 46 | 46-56 ft bls: Marine silty clay, Hawthorn encountered at 47 ft bls. Light greenish gray (GL1 8/1). | CL | Clay w/ silt | | | – | – |

Boring Terminated at 46 ft bls.

Notes: Monitoring well depth is 46 ft bls, bottom of sand pack is 45 ft, top of sand pack is 33 ft bls, bentonite seal from 33 to 2 ft bls. screen size 0.006", screened from 35 to 45 ft bls.

1. – not applicable to boring. 2. NA - Not analyzed due to malfunction of instrument.

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O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG

WELL/MLP LOCATION: OBG-MW16d

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Boring/Drilling Company: Boart Longyear

Personnel: Bill Kotziers, Boart Longyear.

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers

Page 2 of 2

Location: OBGMW -16

Coordinates: N: 537235
E: 2313209

Start Date: 3/20/00

End Date: 3/22/00

Screen | Grout
Riser | Sand Pack
Steel | Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 163.03'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded Stainless Steel
B: 2" Diameter
SCREEN MATERIAL:
A: 0.006 Inch Slot Stainless Steel
B: 2" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Completion | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 102 | 102-103 ft. bls: very firm silty clay with trace sand dark brown (2.5 Y 4/2) | | ML-CL | Silt/sand/clay | | | - | - |
| 104 | 104-109 ft. bls: firm (US 4.0 T/Ft.2), silty clay, pale yellow (2.5 Y 8/3) mixed with some sand. | | CL | Silt/clay w/ trace sand | NA | NA | - | - |
| 109 | | | | | | | - | - |
| 110 | 110-112 ft. bls: pale yellow to olive yellow (2.5 Y 6/7) silty clay , firm ( US 3 0 T/Ft.2). TFZ-3 (110-115). | | CL | Clay w/ silt | NA | NA | - | - |
| 112 | 112-115 ft. bls: Limestone encountered, white weathered clayey limestone, to very pale yellow 113-115 ft. no recovery | | CL-GP | Clay w/ lime-stone | | | - | - |
| 115 | Boring terminated at 115 ft. | | | | | | - | - |

Notes: Monitoring well depth is 115 ft bls, bottom of sand pack is 115 ft, top of sand pack is 103 ft bls, bentonite seal from 103 to 2 ft bls, screen size 0.006", screened from 105 to 115 ft bls.

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG
WELL/MLP LOCATION: OBG-MW16d

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Drilling/Drilling Company: Boart Longyear

Personnel: Bill Kotziers, Boart Longyear.

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers

Page 1 of 2

Location: OBGMW-16

Coordinates: N: 537235
E: 2313209

Start Date: 3/20/00

End Date: 3/22/00

Screen | Grout
Riser | Sand Pack
Steel | Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 163.03'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded Slot PVC Sch 80
B: 2" Diameter
SCREEN MATERIAL:
A: 0.006 Inch Slot Stainless Steel
B: 2" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|
| 0 | 0-3 ft bls: Gray-brown Topsoil w/Rootlets. Becoming orange-brown to brown | SP-SM | sand | | | - | - |
| 3 | 3-5 ft. bls: Damp to moist, at 3.5' slightly firm Sandy Silt. | | | | | - | - |
| 5 | 5-12 ft bls: Reddish Brown-Gray Silt/Silty Sand with Trace Clay (7.5yr 5/8 to 5Y 7/1). Dry crumbly texture. | SM | Sand w/ silt | 132 | NA | - | - |
| 10 | 10 ft bls: Becoming yellowish-brown (10YR 5/6). | | | | | - | - |
| 12 | 12-14.5 ft bls: Thickly laminated light gray to brown Clayey Sand, somewhat Firm (us <1T/ft$^2$) | SC | Clay w/ san | 71.3 | NA | - | - |
| 14 | 14.5-15 ft bls: Light gray (GLEY 1 7/1) to light orange brown(10YR 6/6), Laminated Clay, (us ~ 2.5T/ft$^2$). | CL | Clay/sand | | | - | - |
| 15 | 15-16.5 ft bls: Light brown sand with Clay (10YR 5/8). | SP-SC | Clay/sand w/ | 66.5 | NA | - | - |
| 16 | 16.5-17.5 ft bls: Light gray Clay (GLEY 1 8/1) with Gravel (us ~ 2.75 T/ft$^2$). | | gravels | 58.3 | NA | - | - |
| 17 | 17.5-20 ft bls: orange-brown (7.5YR 5/8) fine-grained Sand w/some interspersed Clay, and some nodules. | | | 24.8 | NA | - | - |
| 20 | 20 ft bls: mottled light Gray to Orange-brown Sand/Silty sand w/some coarse gravel | SP-SM | Silt/clay w/ gravel | | | - | - |
| 21 | 21 ft bls: Light Gray very fine-grained Sand/Silty-Clayey Sand | | | | | - | - |
| 22 | 22 ft bls: Dense to wet very fine-grained sand/clay-sand mixture (10YR 7/8-6/8) | SC | Clay/sands | | | - | - |
| 23 | 23-24 ft bls: Firm Clay/Silt layer (us ~ 2.75 T/ft$^2$) | CL | Clay/silts | | | - | - |
| 24 | 24-31 ft bls: Clayey Sand (10YR 7/6), light orange-yellow-brown, Sandy Silt/Clay mixture, very friable. | SC | Clay/sand w/ silt | | | - | - |
| 31 | 31 ft bls: Increasing Clay/Silt content | | | 0 | NA | - | - |
| 32 | 32-33.75 ft bls: Firm (us ~ 2T/ft$^2$), Clay with loose Gravel light orange-Brown (10YR 7/6) | CL | Clay/gravel sands | | | - | - |
| 34 | 33.75-34 ft bls: Loose sand clay mixture | SC | Sand/Clay | | | - | - |
| 35 | 35 ft bls: TFZ-1 (35-45 ft) | | | | | - | - |
| 36 | 36-40 ft bls: fine loose sand reddish brown(5YR 5/8) grading to pale yellow silty sand (2.5 Y 7/3) loose gravel size nodules. | SM-SP | Sand/silt/ gravel | 0 | NA | - | - |
| 40 | 40-44 ft. bls: Reddish brown (5 YR 5/8) , moist sand, with clayey silt lenses, mixed with trace organic nodules | SC-CL | Sand/silt/ clay | 0 | NA | - | - |
| 44 | | | | 0 | NA | - | - |
| 46 | 46-56 ft bls: Marine silty clay. Hawthorn encountered at 47 ft bls. Light greenish gray (GL1 8/1). | CL | Clay w/ silt | | | - | - |
| 50 | 50-55 ft. bls: Soft greenish gray clay (US 0.8T/Ft.2) | CL | Clay | 0 | NA | - | - |
| 56 | 56-57ft. Bls: medium light greenish gray clay. | CL | clay | 0 | NA | - | - |
| 58 | 58-61 ft. bls: light gray clay (Gl1 8/1) firm (US 2.5 T/Ft.2) | | | 0 | NA | - | - |
| 62 | 62-63 ft. bls: Firm, slightly moist, gray clay leading into a friable dry clay. | CL | Clay | | | - | - |
| 64 | 64-75 ft. bls: Very hard, light gray (GL1 8/1), dry , silty clay. Very Firm (US 4.0 T/Ft.2) clayey silt. | CL | Clay w/ silt | 0 | NA | - | - |
| | | | | 0 | NA | - | - |
| | | | | 0 | NA | - | - |
| 76 | 76-80 ft. bls: Fine, very hard, Firm (US 4.5 T/Ft.2) greenish gray (GL1 4/1) clayey silt. | CL | Silt w/ clay | | | - | - |
| 80 | 80-84 ft. bls: Mottled dark gray silty clay. | | | 0 | NA | - | - |
| 84 | 84-88 ft. bls: Silty clay with small limestone nodules, very firm throughout the interval. | Cl | clay w/ silt | 0 | NA | - | - |
| 90 | 90-95 ft. bls: Silty Clay pale yellow ( 2.5 Y 8/4) , very firm, slightly moist, with lime rock gravel. | ML | Clay w/ silt | | | - | - |
| 96 | 96-100 ft. Bls: Pale yellow (2.5Y 8/4) silty clay, grading into a mottled olive yellow ( 2.5Y6/6) silty clay, with trace sa | ML | Clay w/ silt | | | - | - |
| 100 | | | | | | - | - |

Notes:

O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Boring/Drilling Company: Boart Longyear

Personnel: Bill Kotziers, Boart Longyear.

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers

Page 1 of 1

Location: OBGMW-17

Coordinates: N: 537318
E: 2313940

Start Date: 3-17-00

End Date: 3-17-00

Screen
Riser
Steel

Grout
Sand Pack
Bentonite

WELL/MLP LOCATION: OBG-MW17s

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 152.00'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded Stainless Steel
B: 2" Diameter
SCREEN MATERIAL:
A: 0.006 Inch Stainless Steel
B: 2" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|
| 0 | 0-5 ft bls: Dark Brown Silty Sand, Very fine grained Silty-Sand (7.5YR 6/6), Unconsolidated, Dry. | SP-SM | Sand/Silt | NA | NA | – | – |
| | | SP | Sand/gravels | NA | NA | – | – |
| 5 | 5-14 ft bls: Reddish Fine to Medium Grained Sand, Trace Clay, (5YR 5/8), slightly Red. Highly re-worked sediments. | SC | Sand w/ silt & clay | NA | NA | – | – |
| 14 | 14-16 ft bls: Same as above, Reddish Brown, (5YR 5/8), Damp to Moist, Mottled Dark Brown-Black. TFZ-1 (15-25 ft) | | | | | – | – |
| 16 | 16-21 ft bls: Clayey-Silt, Friable Silty-Clay, Clayey-Silt layer, Firm, Light gray (2.5y 7/2) (us 1.75 to 2.5 T/ft2) Mottled to Orange-Brown, (7.5yr 6/8) | SC | Clay w/ silt | NA | NA | – | – |
| 21 | 21-26 ft bls: Very Soft, Fine Grained Sand, Light Orange-Brown (10yr 6/8), Water Table (TFZ-1). | SM | Sand | NA | NA | – | – |
| 23 | 23 ft bls: Same as Above, with Some Cemented/ Sand Concretions (1-2"). | SP-SM | Sand w/ gravel | NA | NA | – | – |
| 26 | 26-30 ft bls: Increasing clay content. Light gray Clay stringers, Orange to Brown Sandy Clay (Wet) Boring Terminated at 26 ft bls. | SC-CL | Clay w/ silt | NA | NA | – | – |

Notes: Monitoring well depth is 26 ft bls, bottom of sand pack is 26 ft, top of sand pack is 13 ft bls, bentonite seal from 13 to 2 ft bls, screen size 0.006", screened from 15 to 25 ft bls.

1. – not applicable to boring 2. NA - Not analyzed due to malfunction of instrument.

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O'BRIEN & GERE ENGINEERS, INC.

**REPORT OF BORING**

**CONSTRUCTION LOG**
ELL/MLP LOCATION: OBGMW-17I

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Bo[illegible]illing Company: Boart Longyear

Pe[illegible]:

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers

Page 1 of 1

Location: OBGMW-17

Coordinates: N: 537322
E: 2313945

Start Date: 3/17/00

End Date: 3/17/00

Screen
Riser
Steel

Grout
Sand Pack
Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 152.03'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded Stainless Steel
B: 2" Diameter
SCREEN MATERIAL:
A: 0.006 Inch Stainless Steel Slot
B: 2" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|
| 0 | 0-20 ft bls: No Returns ( Empty to 55 Gal. Drum). | | | | | -- | -- |
| 20 | 20-22 ft bls: Light-Orange-Brown, sandy clay to clay. | SC | Sand w/ clay | NA | NA | -- | -- |
| 22 | 22-28 ft bls: SC-Cl | | | | | -- | -- |
| 28 | 28-30 ft bls: Some sand fragments (1/2 - 2in.), increasing clay content. | SC-Cl | Sand w/ clay | NA | NA | -- | -- |
| 30 | 30-32 ft bls: Soft clay, wet. | SC-Cl | Clay | | | -- | -- |
| 32 | 32-36 ft bls: Reddish-Orange-Brown,Miccosukee sands, F-G to M-C w/silt, water table (33-35'). TFZ-2 33 - 38 ft. | SP-SM | Sand w/ silt & gravel. | NA | NA | -- | -- |
| 36 | 36-40 ft bls: Light Orange-Brown, soft, wet, soft/stick, gray-brown clay, wet w/some white phosphate grains. | CL | Clay | NA | NA | -- | -- |
| 39 | 39 ft bls: Top of Hawthorne. | | | | | -- | -- |
| 40 | Well Depth = 40' BGS | | | | | -- | -- |

Total Depth = 40' BGS

Notes: Monitoring well depth is 40 ft bls, bottom of sand pack is 39 ft, top of sand pack is 31 ft bls, bentonite seal from 31 to 2 ft bls, , screen size 0.006", screened from 33 to 38 ft bls.

1 - not applicable to boring. 2. NA - Not analyzed due to malfunction of instrument.

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O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG

BORING LOCATION: OBG-CB2

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

ring/Drilling Company: Boart Longyear

rsonnel: Roger Baldwin, Steve Cook, Tim Jellet, Bill Kotziers, Boart Longyear.

Drill Rig: Rotosonic

OBG Geologist: Steve Cook and Bill Kotziers

Page 1 of 1

Location: OBGCB-2

Coordinates: N: 536682
E: 2313250

Start Date: 4-11-00

End Date: 4-11-00

Screen
Riser
Steel

Grout
Sand Pack
Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 150.79'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: 30-40 silica sand
BENTONITE SEAL: Pure Gold Granular/Med. Chips
WELL RISER:
A: Flush-Threaded Stainless Steel
B: 2" Diameter
SCREEN MATERIAL:
A: 0.006 Inch Slot Stainless Steel
B: 2" Diameter

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft bls: Asphalt Pavement top; White to light Pale Yellow Silty Sand (2.5Y 8/2), Limerock fill. | | | | | | – | – |
| 2 | 2-5 ft bls: Grading to Dark Gray-Brown Silty Sand w/ Limestone Gravel (5Y 3/1). Part of buried Hubcap ~ 3.5-4 bgs, Damp to moist, Noticeable odor. | | SP-SM | Sand | 275 | 7700 | – | – |
| 4 | 4 ft bls: Estimated Water Table | | | | | | – | – |
| 5 | 5-8.5 ft bls: Same as Above, Wet Silty Sand w/ pieces of limerock gravel intermixed | | | Sand | 311 | 725 | – | – |
| 7 | 7 ft bls: Still some Metal Stamping/Scrap metal (10YR 4/1) | | | | | | – | – |
| 8 | 8.5-10 ft bls: Gray-brown sawdust/fill material (10YR 2/1) black to a slightly yellowish brown material | | | | | | – | – |
| 10 | 10-11 ft bls: Silty Sand, Dark Brown to Black, Wet, Loose, Slight Sheen (GLEY1 2.5/N). | | | Sand/Silt | 115 | 1831 | – | Y |
| 11 | 11-15 ft bls: Clayey Sand, Sand and Clay, Loose, wet, color change to light gray (5Y 6/1) | | SP-SC | Sand/Silt | 110 | 1744 | – | Y |
| 15 | 15-22 ft bls: Same as Above, loose, wet, Silty/Clayey Sand, Light Gray. | | SP-SC/SM | | | | – | – |
| | | | | Sand | 0.7 | 1700 | – | – |
| | | | | Clay w/San | – | 2400 | – | Y |
| 22 | 22-30 ft bls: Increasing Clay content, becoming firmer (us < 1 T/ft$^2$), Light Gray (5Y 6/1). | | SP-CL | Sand w/Cla | 544 | 1740/2300 | – | Y |
| 25 | 25 ft bls: Increasing consolidation, Clayey Sand, Light Gray. | | | | | | – | – |
| | | | | Sand w/Cla | 24.2 | 245 | – | Y |
| 30 | 30-39.5 ft bls: Clay stringers (1-6mm thick), Increasing Silt/Clay content, (us ~ 2-3.5 T/ft$^2$) | | SC-CL | | | | – | – |
| 31 | 31 ft bls: Same as above, Color becoming (2.5Y 6/1) light gray. | | | | | | – | – |
| 33 | 33.5 ft bls: Same as Above, becoming firmer (us > 4.5 T/ft$^2$), very firm | | | | | | – | – |
| 34 | 34.5 ft bls: Increasing SP content, soft zone. | | SC | | | | – | – |
| 35 | 35 ft bls: Clayey Sand, firmer SC (us ~ 1.5-2 t/ft$^2$), light Gray, (2.5Y 5/1), some clay stringers (35'-37') | | | Sand w/Cla | 70.6 | 384 | – | – |
| 38 | 38 ft bls: Sand lens, light Gray. | | SP-SC | Sand w/Cla | 7.1 | 309 | – | – |
| 39 | 39.5-40 ft bls: Firm Clay, Light brown to orange to Gray (2.5Y 6/2 to 5Y 6/2); Top of Hawthorn? | | SC | | | | – | – |
| 40 | | | CL | Clay | 11.5 | 420 | – | – |
| | Boring Terminated. Total Depth of Borehole = 40' | | | | | | | |

Notes: bentonite seal from 40 ft. bls to the surface.

1. – not applicable to boring. 2. NA - not analyzed due to malfunction of instrument.

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O'BRIEN & GERE ENGINEERS, INC.

REPORT OF BORING

CONSTRUCTION LOG

BORING LOCATION: OBG-CB1

Client: ITT INDUSTRIES INC.

Project Location: Former Thompson Industries Site, Madison, Florida.

File No.: 22992.013.001

Drilling/Drilling Company: Boart Longyear

Personnel: Bill Kotziers, Boart Longyear.

Drill Rig: Rotosonic

OBG Geologist: Bill Kotziers

Page 1 of 1

Location: OBGCB-1

Coordinates: N: 536843
E: 2313250

Start Date: 4-12-00

End Date: 4-12-00

Screen =
Riser
Steel #

Grout
Sand Pack
Bentonite

Drill Method: ROTOSONIC
Sampler: 6" Core
Land Surface Elevation msl: 151.61'

WELL/MLP CONSTRUCTION MATERIALS:
FILTER PACK: N/A
BENTONITE SEAL: N/A

WELL RISER: N/A
A:
B:

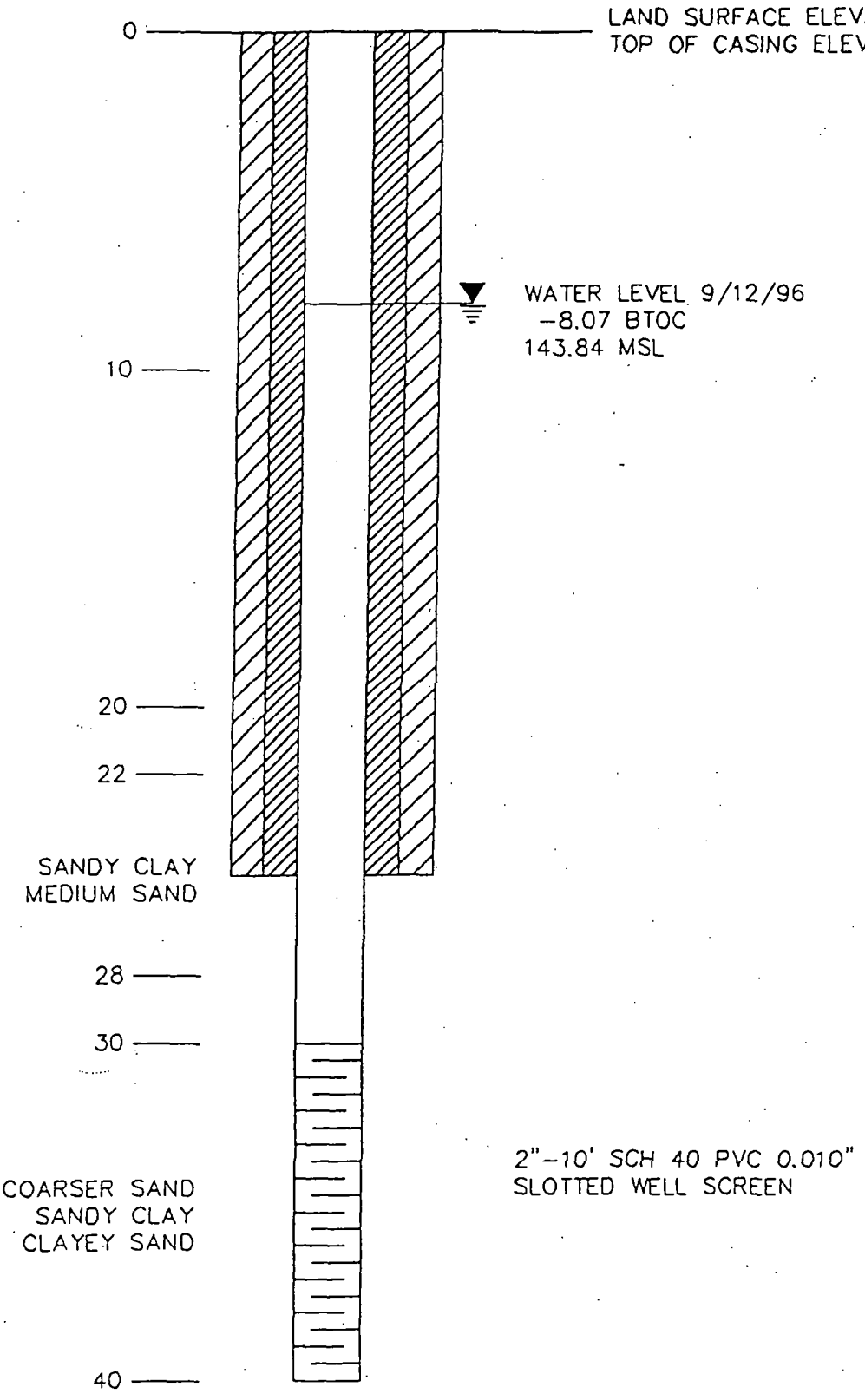
SCREEN MATERIAL: N/A
A:
B:

| Depth Below Land Surface | LITHOLOGIC SAMPLE DESCRIPTION | Equipment Installed | USC Code | General Lithology | Field Test Screening Results: PID (ppm) | FID (ppm) | UV Reaction | Hydrophobic Dye Reactions |
|---|---|---|---|---|---|---|---|---|
| 0 | 0-2 ft bls: Asphalt/Pavement, Fill, Limerock Material. | | | | | | - | - |
| 2 | 2-5 ft bls: Fine Grained Sand with silt (2.5Y 5/3), light olive brown to gray brown | | SP-SM | | | | - | - |
| 5 | 5-7 ft. bls: Fine grained to very fine grained silty sand, Very dark gray - Black (10YR 3/1) | | | Sand w/Silt | 401 | 2800 | - | - |
| 7 | 7-10 ft bls: No Return | | | Sand w/Silt | 521 | 1800 | - | - |
| 10 | 10 ft bls: Light gray Fine-grained Sand, some silt (5Y 7/1). | | | Sand w/Silt | 80 | 1588 | - | - |
| 12 | 12-14.5 ft bls: Thickly laminated light gray to brown Clayey Sand, somewhat Firm (us <1T/ft$^2$) | | SC | | | | - | - |
| 14 | 14.5-15 ft bls: Light gray (GLEY 1 7/1) to light orange brown(10YR 6/6), Laminated Clay, (us ~ 2.5T/ft$^2$). | | CL | Clay w/Sand | 106 | 1800 | - | - |
| 15 | 15-16.5 ft bls: Light brown sand with Clay (10YR 5/6). | | SP-SC | | | | - | - |
| 16 | 16.5-17.5 ft bls: Light gray Clay (GLEY 1 8/1) with Gravel (us ~ 2.75 T/ft$^2$). | | CL | | | | - | - |
| 17 | 17.5-20 ft bls: orange-brown (7.5YR 5/8) fine-grained Sand w/some interspersed Clay, and some nodules. | | SP | | | | - | - |
| 20 | 20 ft bls: mottled light Gray to Orange-brown Sand/Silty sand w/some coarse gravel | | SP-SM | Sand w/Clay | 200 | 2300 | - | - |
| 21 | 21 ft bls: Light Gray very fine-grained Sand/Silty-Clayey Sand | | | Sand w/Clay | 35 | 145 | - | - |
| 22 | 22 ft bls: Dense to wet very fine-grained sand/clay-sand mixture (10YR 7/8-6/8) | | SP-SC | Clay w/Sand | 100 | 335 | - | - |
| 23 | 23-24 ft bls: Firm Clay/Silt layer (us ~ 2.75 T/ft$^2$) | | CL | | | | - | - |
| 24 | 24-32 ft bls: Clayey Sand (10YR 7/6), light orange-yellow-brown, Sandy Silt/Clay mixture, very friable. | | SC | Clay w/Sand | 249 | 1000 | - | - |
| 31 | 31 ft bls: Increasing Clay/Silt content | | | Sand w/Clay | 300 | 1826 | - | - |
| 32 | 32-33.75 ft bls: Firm (us ~ 2T/ft$^2$), Clay with loose Gravel light orange-Brown (10YR 7/6) | | CL | | | | - | - |
| 34 | 33.75-34 ft bls: Loose sand clay mixture | | SC | | | | - | - |
| 36 | 36 ft bls: Light Gray clayey sand, Light Brown-Gray (2.5 Y 6/2), med. to coarse grain sand, some fine gravel. | | | Sand w/Clay | 260 | 2300 | - | - |
| 37 | 37 ft bls: Firm plastic clay, some gravel, light gray w/some interspersed. | | | Sand | 14 | 387 | - | - |
| 38 | 38 ft bls: Flat sand pepples - light olive tint, fine grain sand, (very minor mafics). | | | Clay | 23 | 596 | - | - |
| 39 | 39 ft bls: Color change to Light Orange Yellow-Brown to Brown (10 YR 6/8 - 7.5 YR 4/6). | | | | | | - | - |
| 40 | 40 ft bls: Some Light Gray (5 Y 7/2). | | | | | | - | - |

Total Depth = 40'

Notes: bentonite seal from 40 ft. bls to the surface

1. - not applicable to boring. 2. NA - not analyzed due to malfunction of instrument.




ITT CORPORATION

MADISON, FLORIDA

Woodward-Clyde Consultants
Engineering & sciences applied to the earth & its environment
Tallahassee, Florida

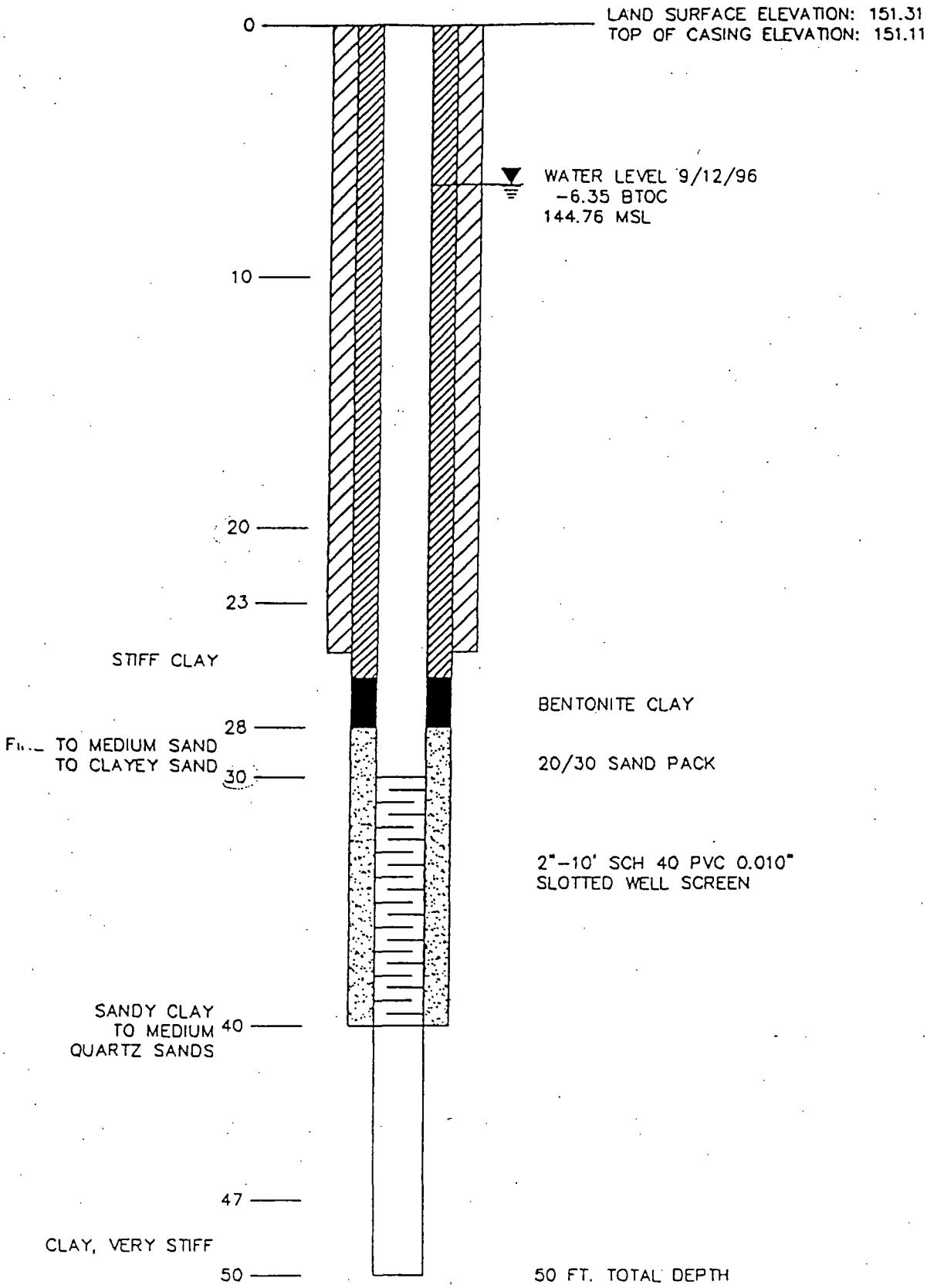
| SCALE | DRAWN BY: KH | DATE: 9/23/96 |
|---|---|---|
| NTS | CHECKED BY: TK | DATE: 9/23/96 |

K:\ACAD\DWGS\95\95F841\MW5B

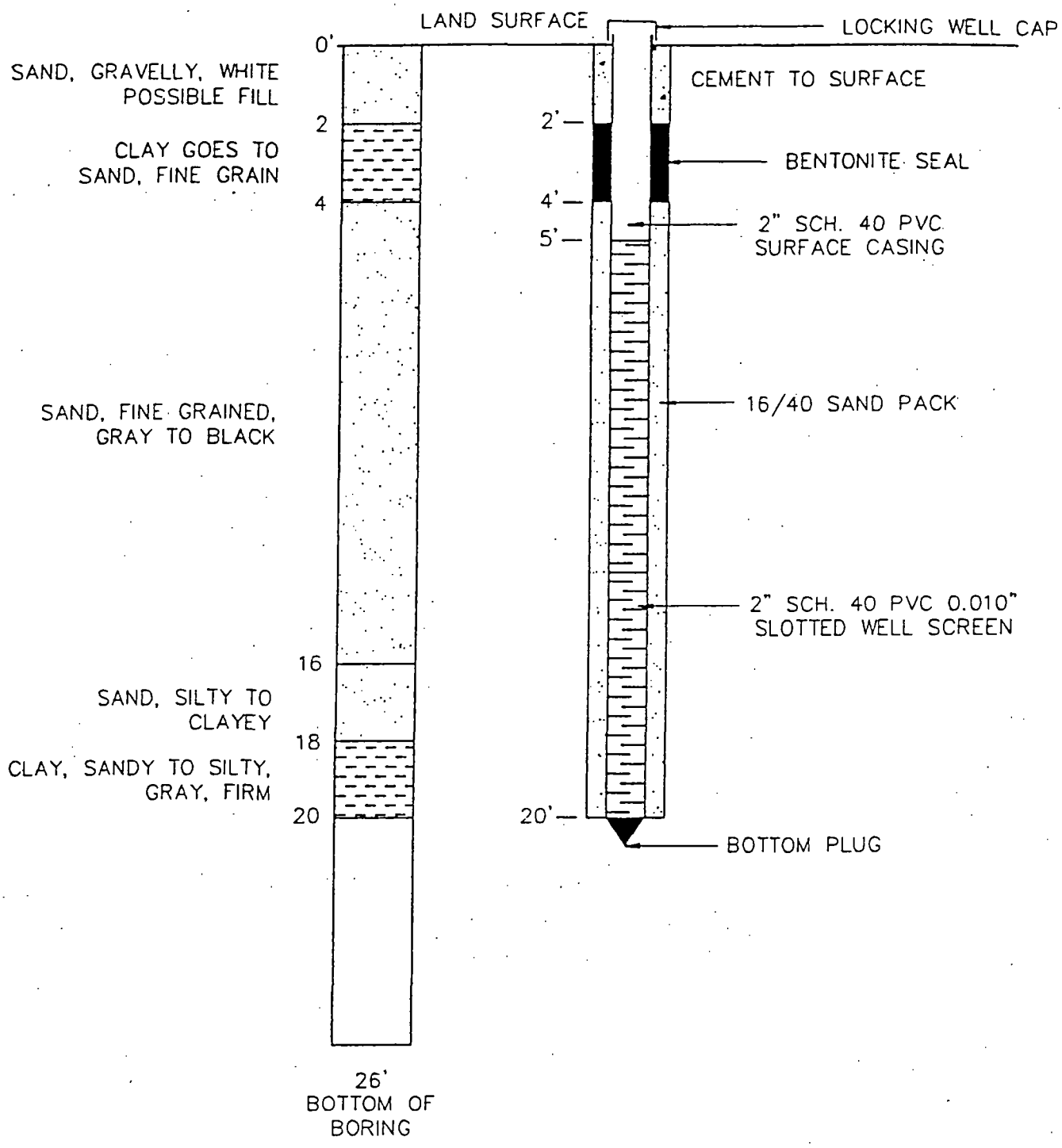
SOIL BORING AND WELL SCHEMATIC MW-5B

PROJ N. 95F8

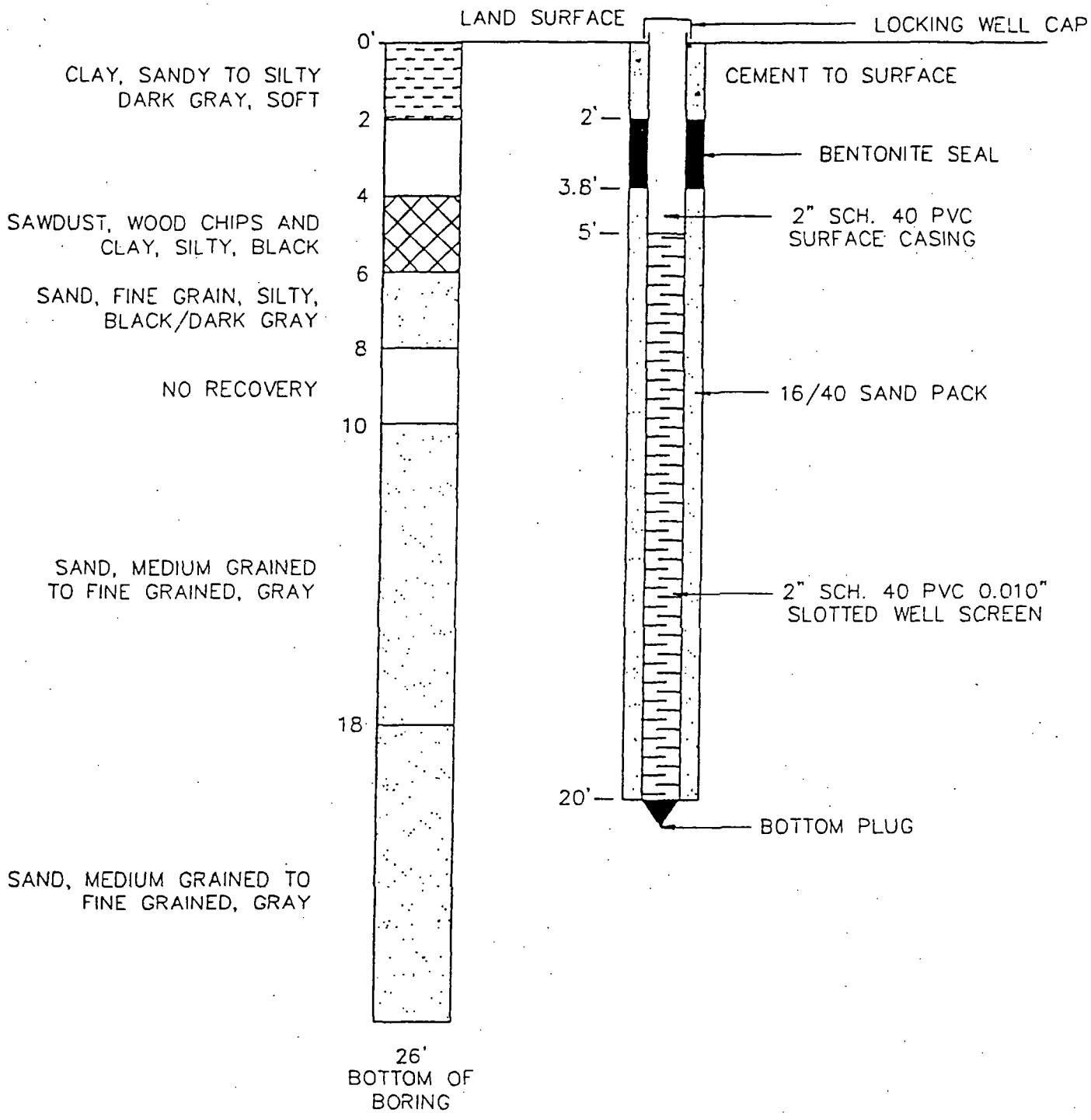
FIG NO 11




| | | | |
|---|---|---|---|
| .TT CORPORATION<br>MADISON, FLORIDA | Woodward-Clyde Consultants<br>Engineering & sciences applied to the earth & its environment<br>Tallahassee, Florida<br>SCALE: NTS \| DRAWN BY: KH \| DATE: 9/23/96<br>CHECKED BY: TK \| DATE: 9/23/96<br>K:\ACAD\DWGS\95\95F841\MW4B | SOIL BORING AND WELL SCHEMATIC<br>MW-4B | PROJ NO<br>95F84<br>FIG NO<br>10 |

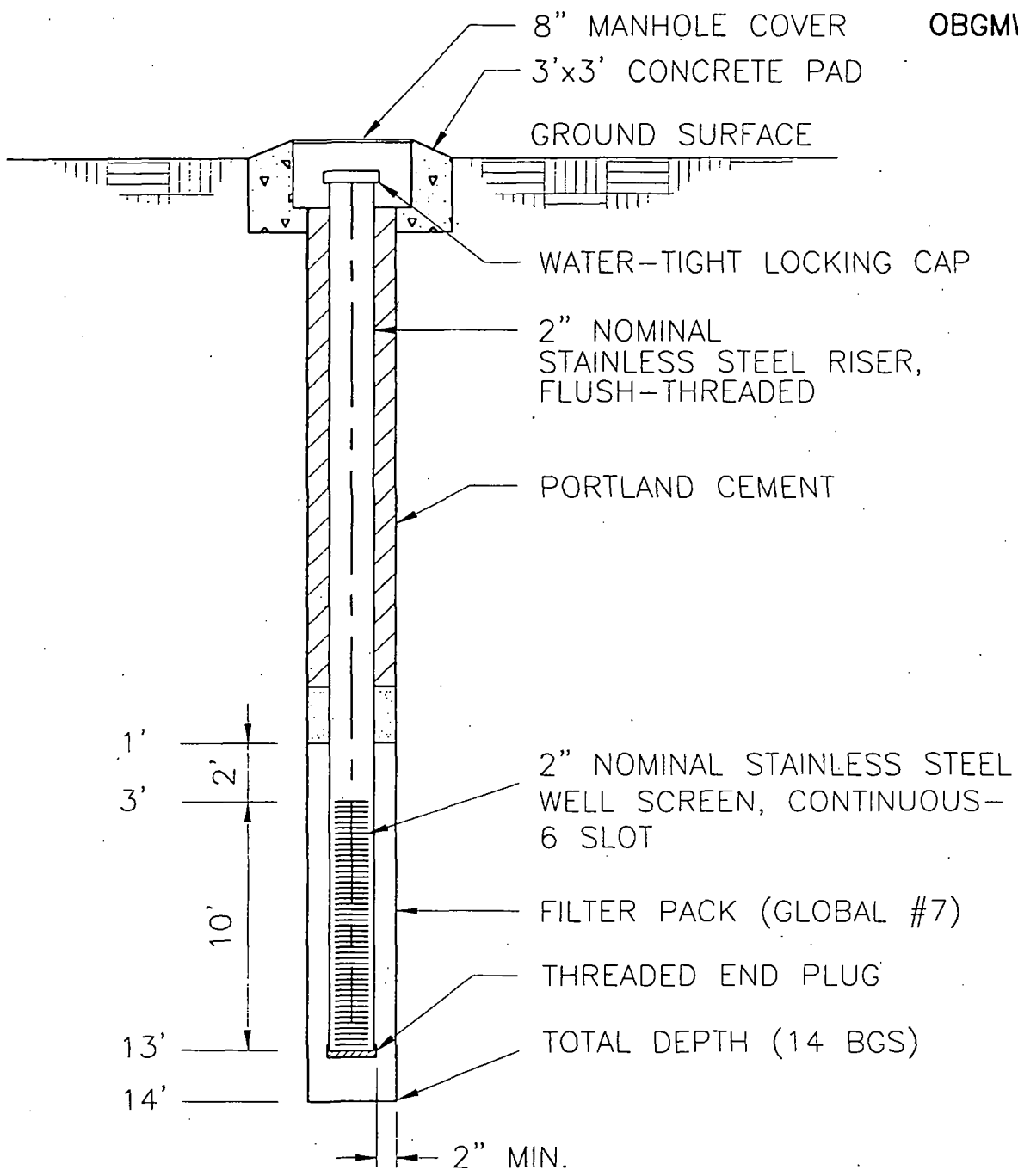



| | | | |
|---|---|---|---|
| ITT CORPORATION<br>MADISON, FLORIDA | Woodward-Clyde Consultants<br>Engineering & sciences applied to the earth & its environment<br>Tallahassee, Florida<br>SCALE 1" = 4' \| DRAWN BY: KH \| DATE: 8/9/95<br>CHECKED BY: TK \| DATE: 8/9/95<br>K:\ACAD\DWGS\95\95F841\MW4 | WELL SCHEMATIC<br>MW-5 | PROJ NO 95F841<br>FIG NO 10 |




| | | | |
|---|---|---|---|
| ITT CORPORATION<br>MADISON, FLORIDA | Woodward-Clyde Consultants<br>Engineering & sciences applied to the earth & its environment<br>Tallahassee, Florida<br>SCALE 1" = 4' \| DRAWN BY: KH \| DATE: 8/9/95<br>CHECKED BY: TK \| DATE: 8/9/95<br>K:\ACAD\DWGS\95\95F841\MW4 | WELL SCHEMATIC<br>MW-4 | PROJ NO 95F841<br>FIG NO 9 |

OBGMW-14S




FORMER THOMPSON
INDUSTRIES SITE
MADISON, FL.

# WELL CONSTRUCTION DETAIL

22992.010.001
06/00

O'BRIEN & GERE
ENGINEERS INC.

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PLOT DATE: 06/19/00

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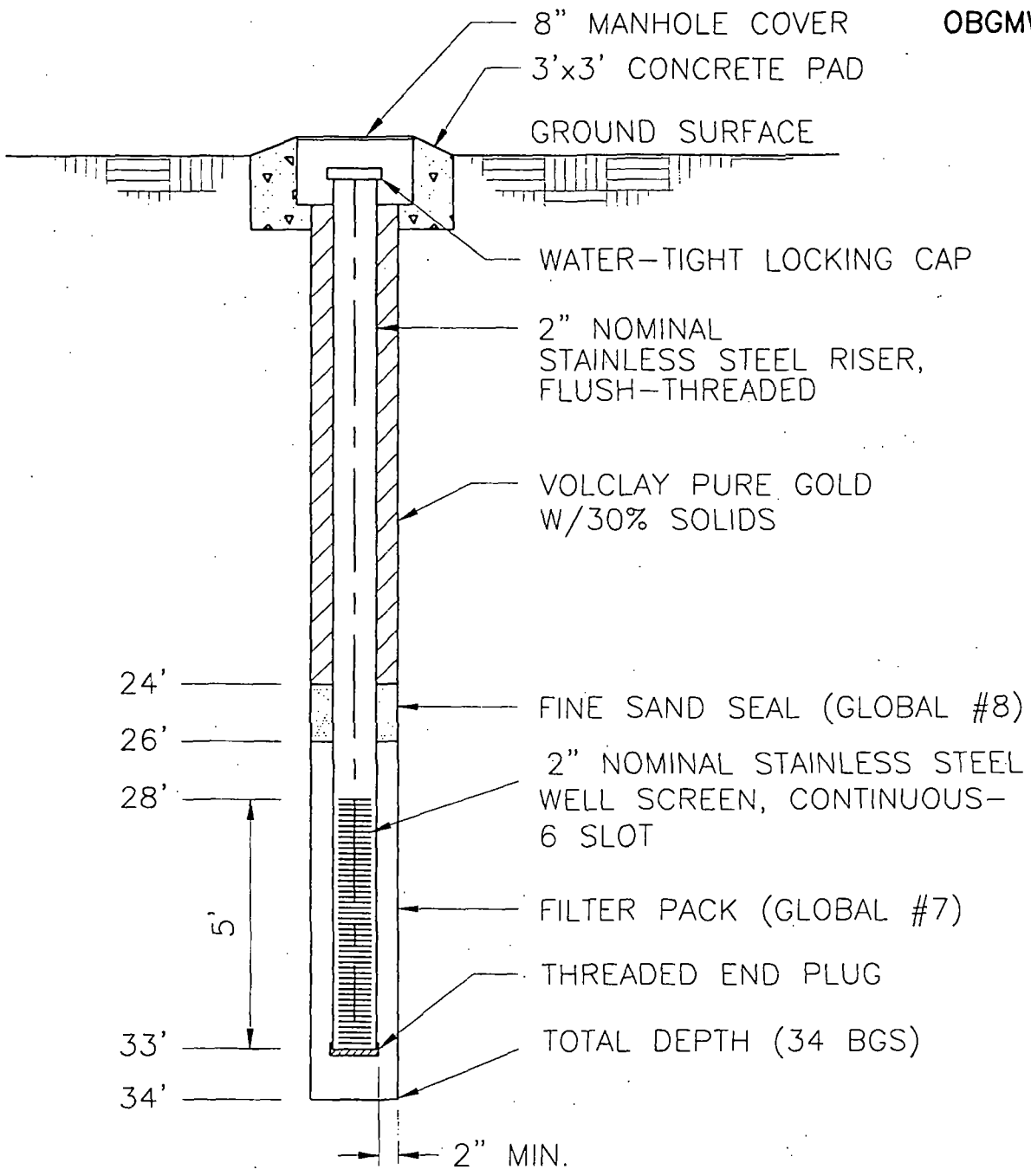


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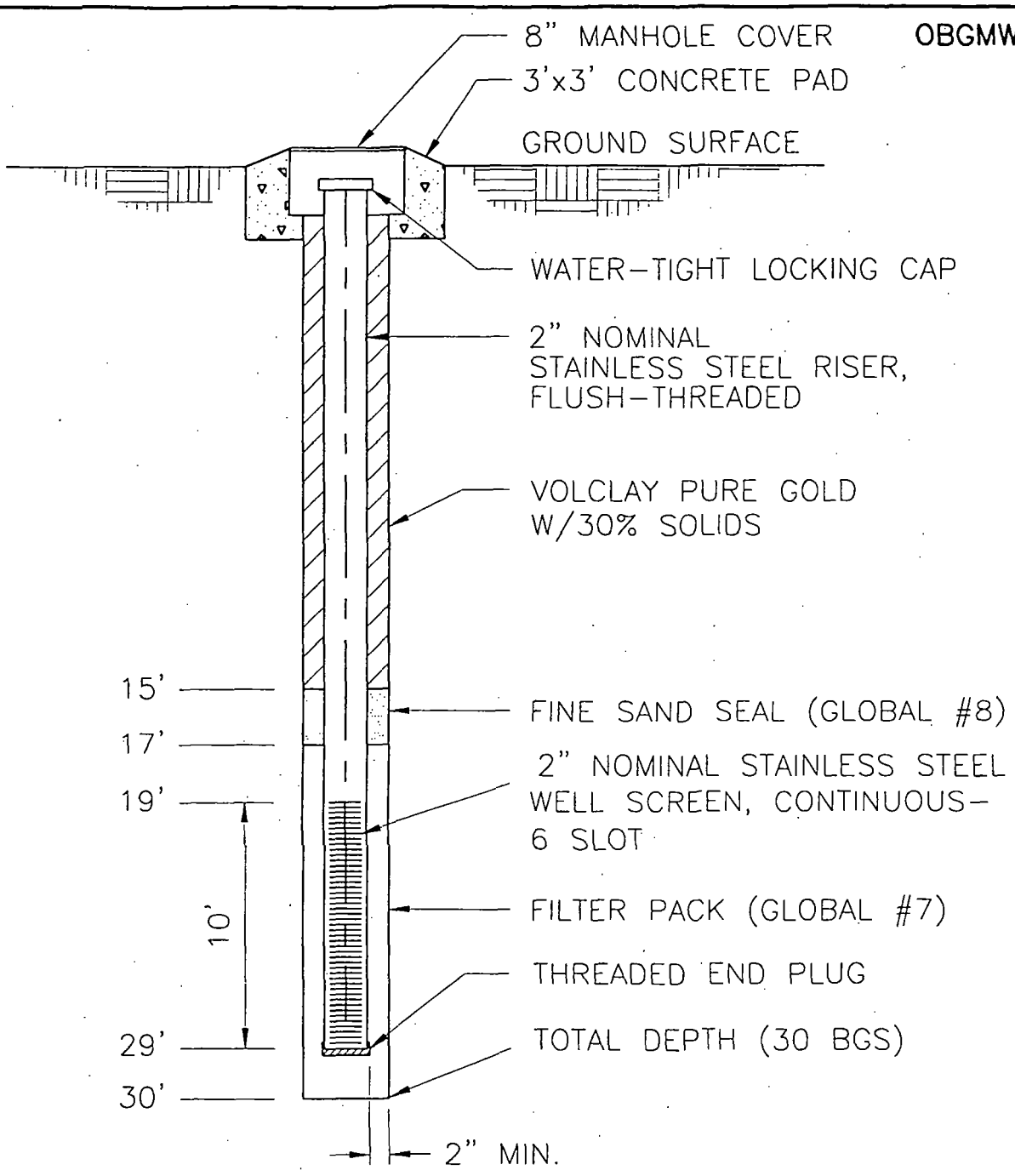


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PLOT DATE: 06/19/00

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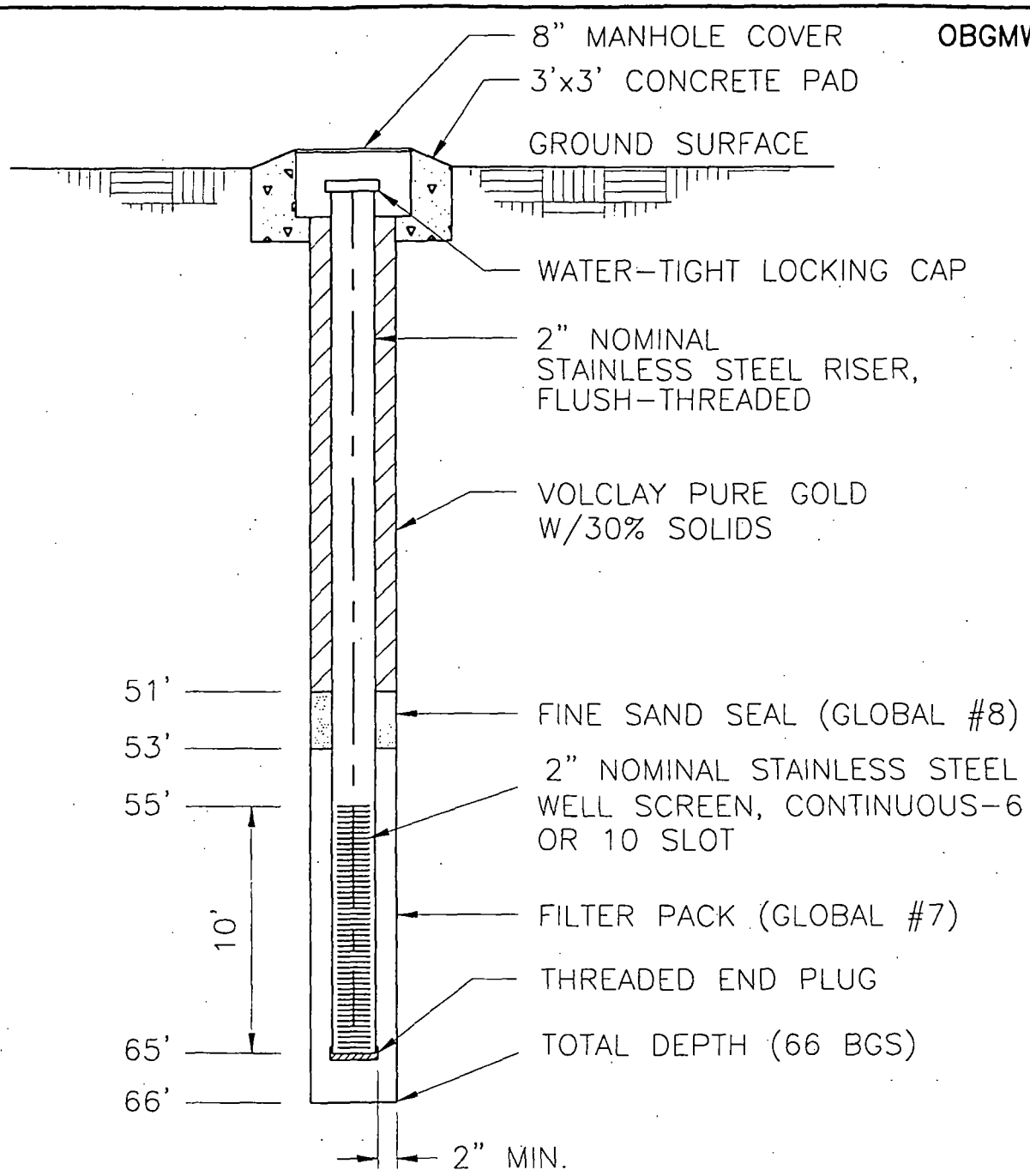


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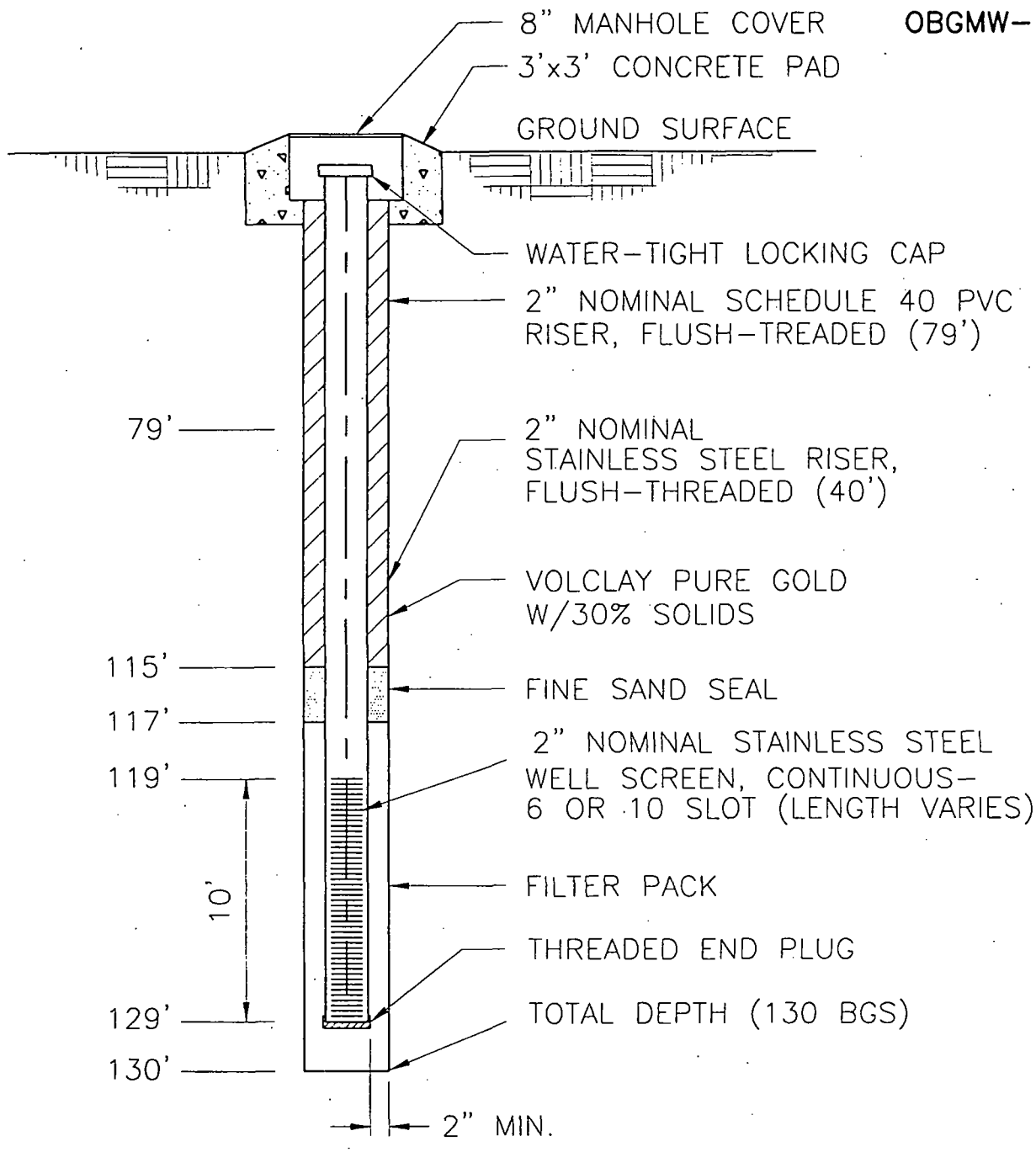


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INDUSTRIES SITE
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PLOT DATE: 06/19/00

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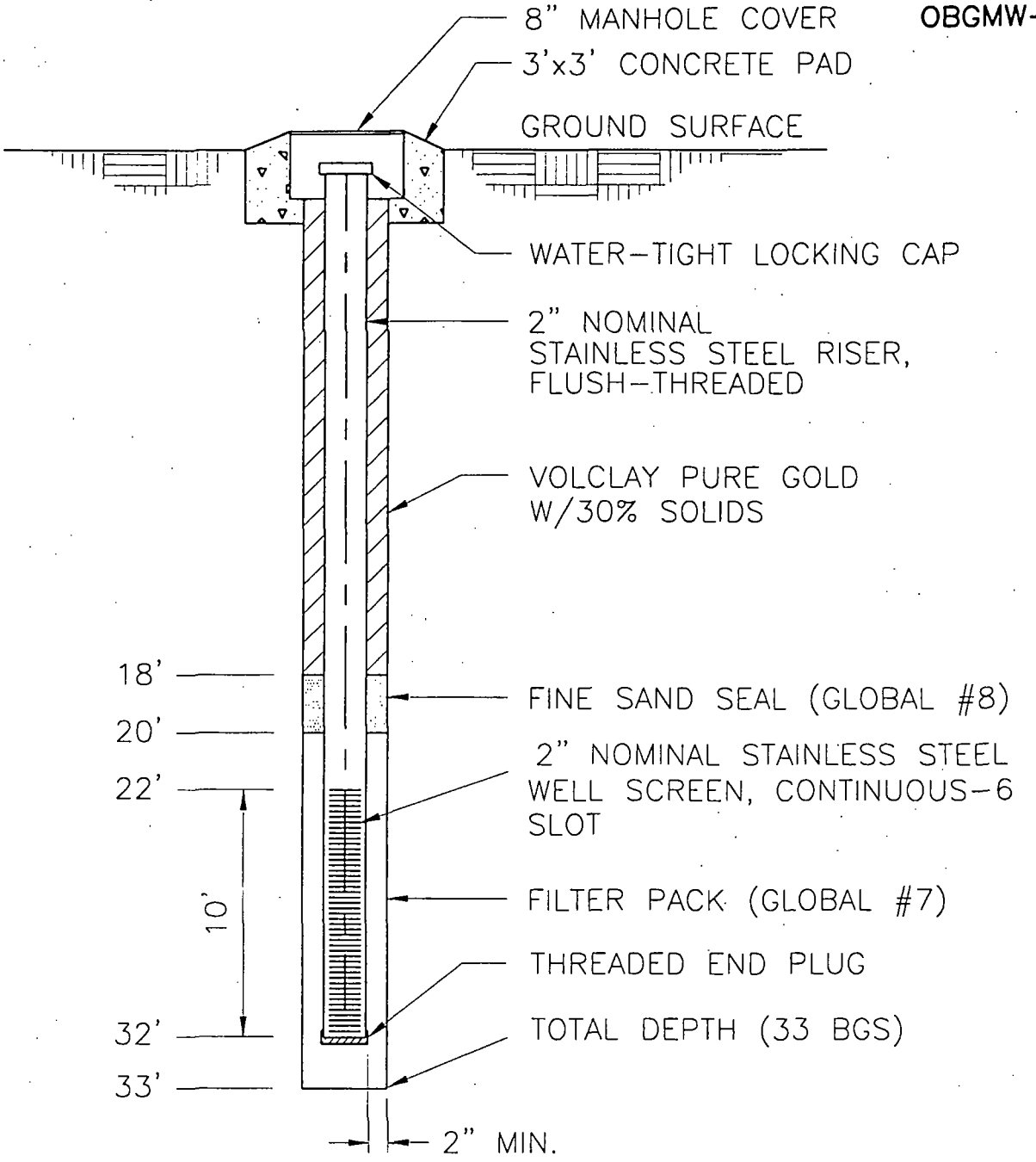


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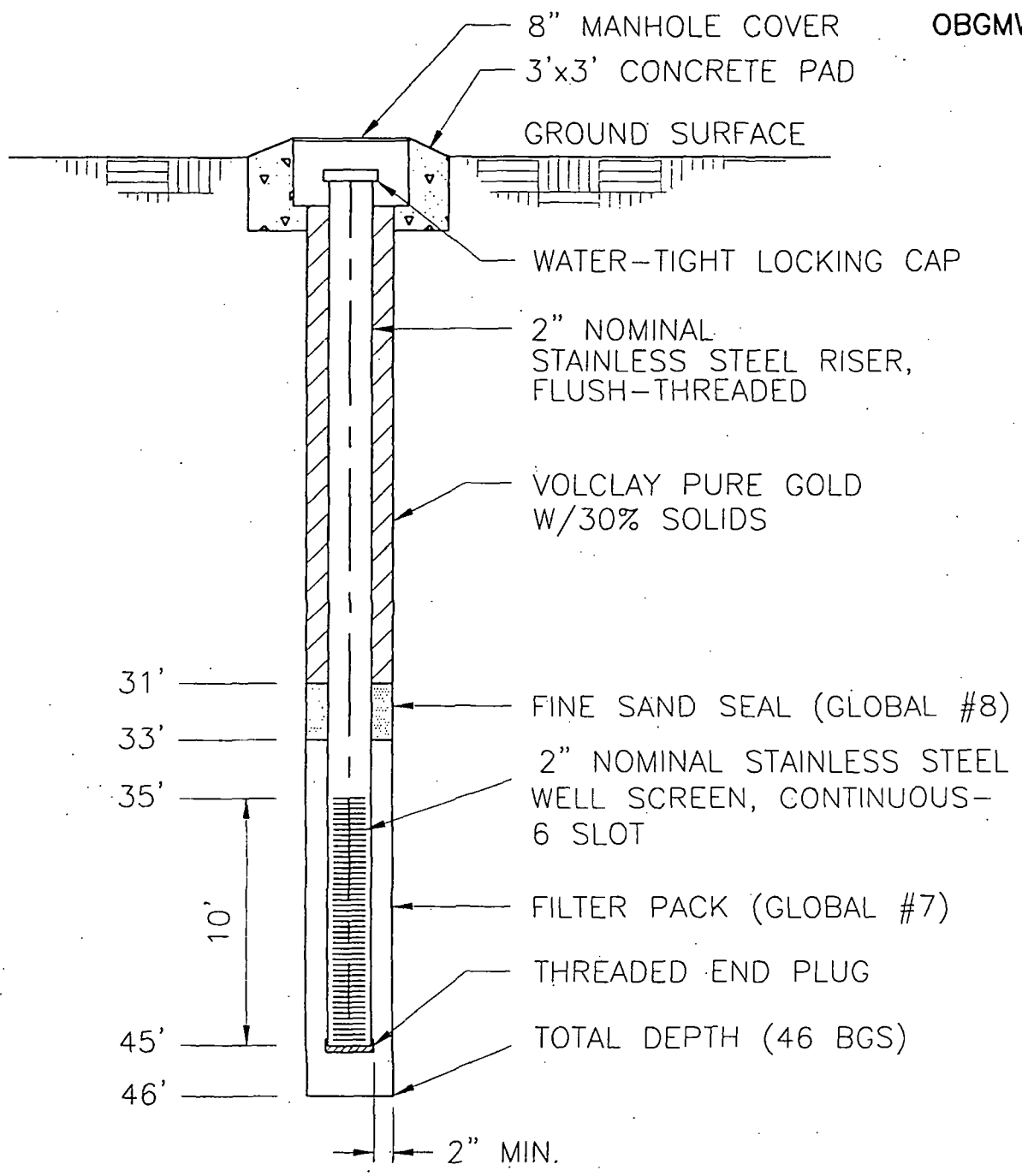


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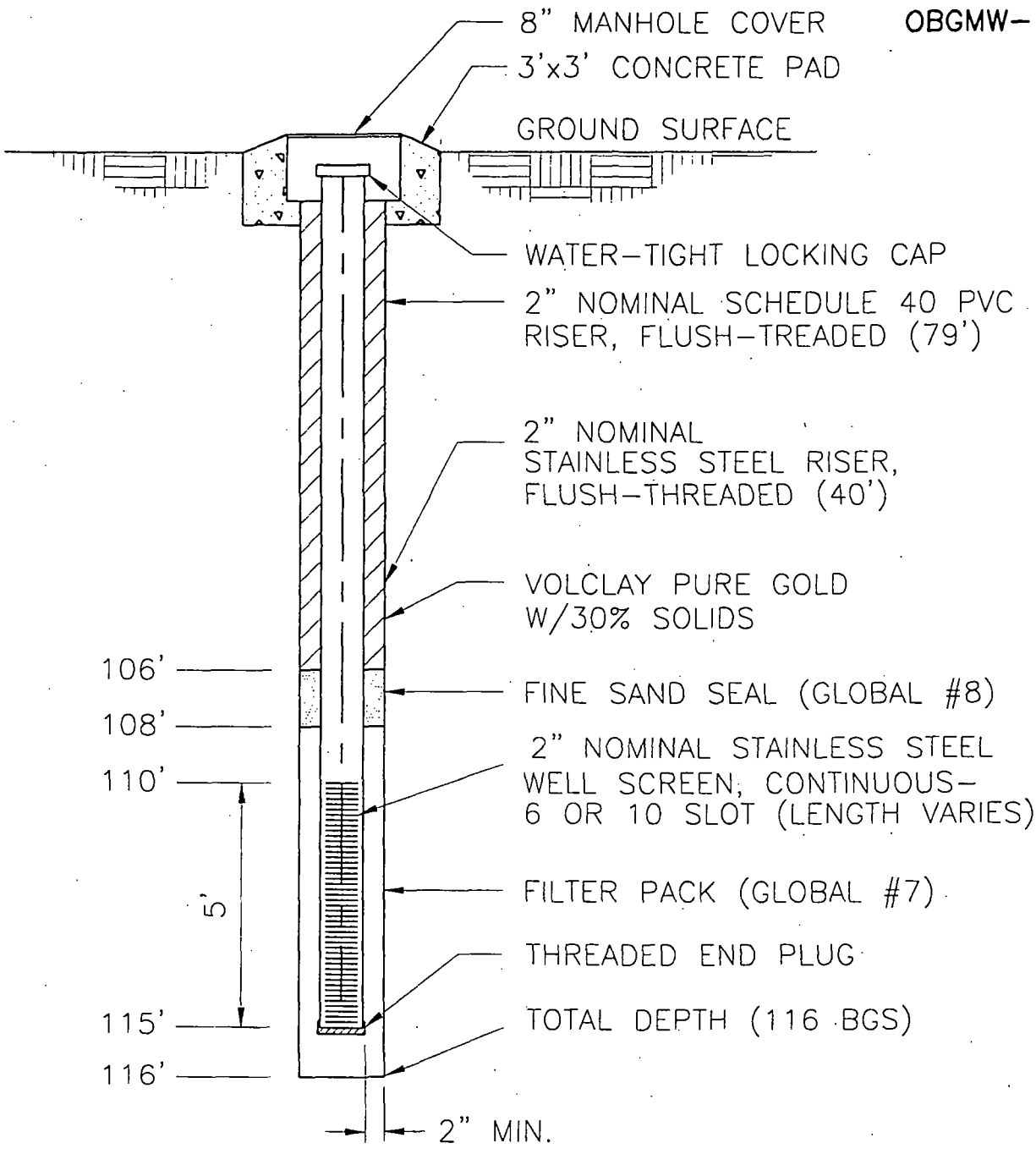


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## WELL CONSTRUCTION DETAIL

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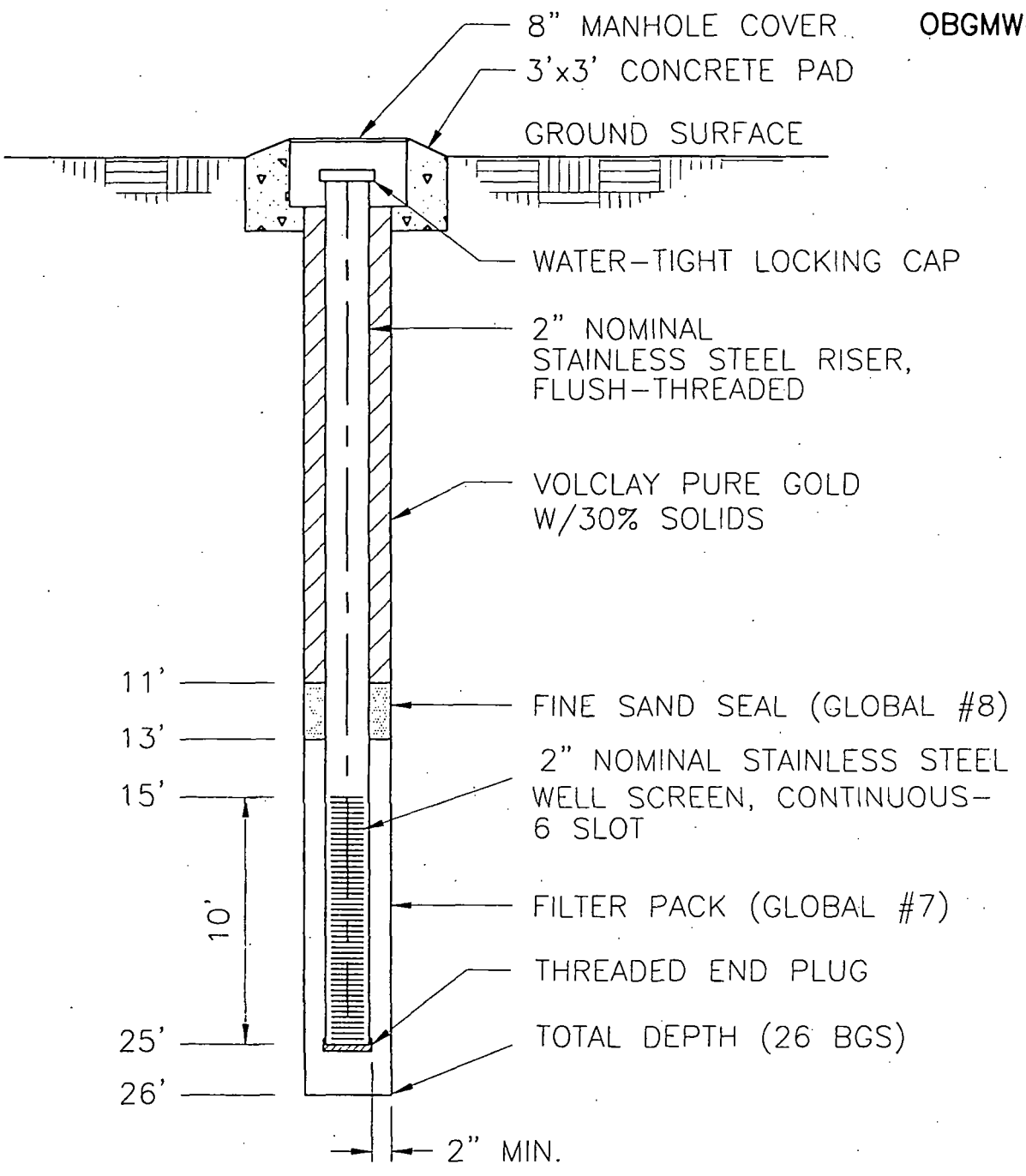


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MADISON, FL.

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PLOT DATE: 06/19/00

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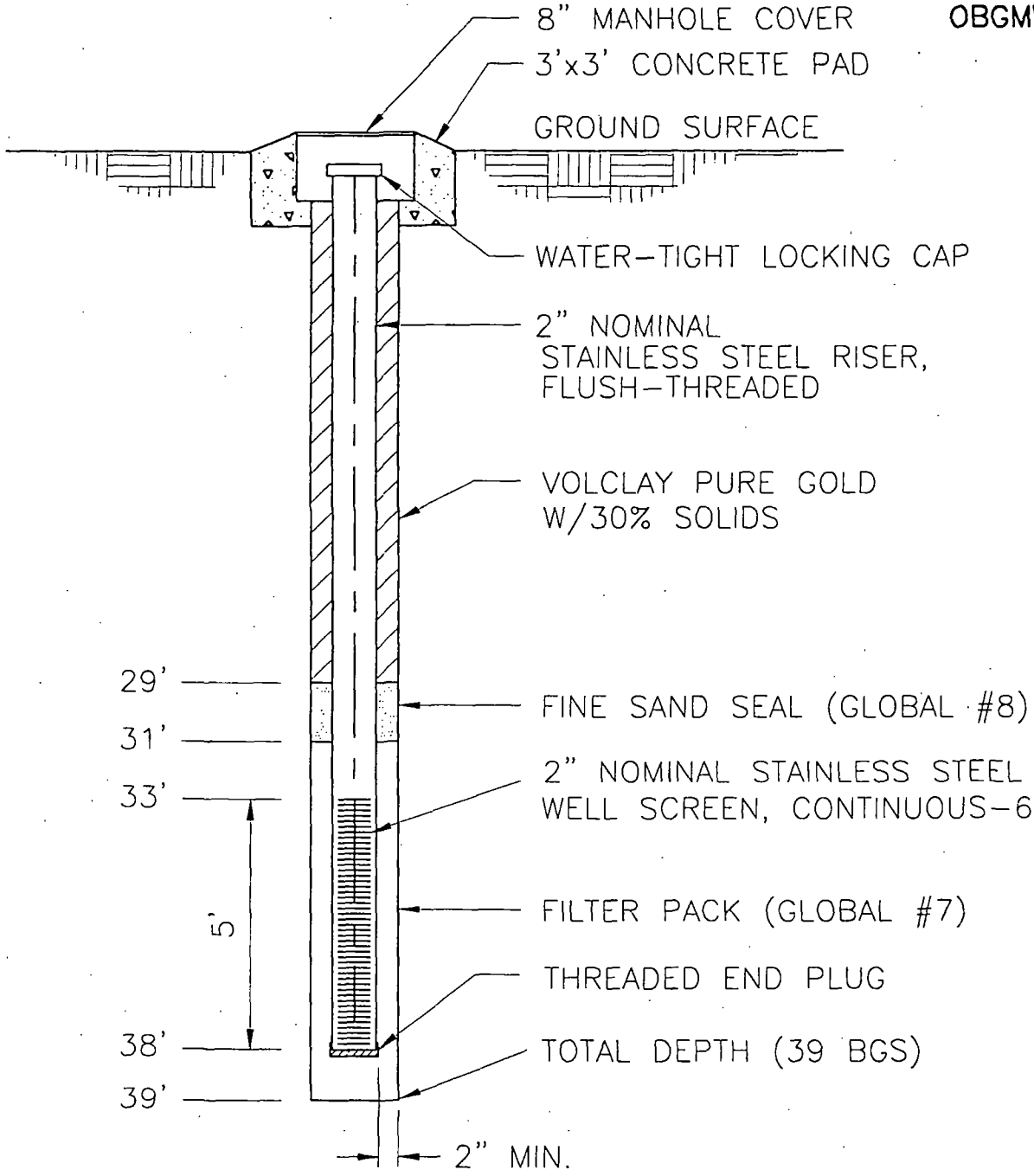


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MADISON, FL.

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PLOT DATE: 06/19/00

APPENDIX B

# Well Construction and Water Level Data
# Differences in Water Elevations
# Former Thompson Industries Site
# Madison, Florida

| WELL NO. | OBGMLP32(TFZ1) | OBGMLP32(TFZ2) | OBGMLP32(TFZ2a) | OBGMLP32(TFZ3) | OBGMLP33(TFZ1) |
|---|---|---|---|---|---|
| INSTALLATION DATE | 4/17/00 | 4/17/00 | 4/16/00 | 4/17/00 | 4/19/00 |
| DIAMETER | 1" PVC | 1" PVC | 1" PVC | 1" PVC | 1" PVC |
| WELL DEPTH (feet bgs[1]) | 13 | 40 | 100 | 145 | 13 |
| SCREEN LENGTH (feet) | 10 | 10 | 10 | 10 | 10 |
| ELEVATION (MIDDLE OF SCREEN) msl[2] | 144.37 | 117.24 | 57.26 | 12.04 | 146.24 |
| ELEVATION (TOP OF CASING) msl | 152.37 | 152.24 | 152.26 | 152.04 | 154.24 |

| DATE | DTW[3] | ELEV[4] | DTW | ELEV | DTW | ELEV | DTW | ELEV | DTW | ELEV |
|---|---|---|---|---|---|---|---|---|---|---|
| 5/6/00 | 7.24 | 145.13 | 7.24 | 145.00 | 21.29 | 130.97 | 41.00 | 111.04 | 9.05 | 145.19 |
| 6/6/00 | 7.86 | 144.51 | 7.82 | 144.42 | 22.16 | 130.10 | 41.96 | 110.08 | 9.85 | 144.39 |
| - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | | |
| | | | | | | | | | | |

x 5A
ın and Water Level Data
-level Piezometers
s Site, Madison, Florida
2000

| GMLP33(TFZ2) | OBGMLP33(TFZ2a) | OBGMLP33(TFZ3) | OBGMLP34(TFZ1) | OBGMLP34(TFZ2) | OBGMLP34(TFZ3) | | |
|---|---|---|---|---|---|---|---|
| )0 | 04/19/00 | 4/18/00 | 4/27/00 | 4/26/00 | 4/26/00 | | |
| C | 1" PVC | 1" PVC | 1" PVC | 1" PVC | 1" PVC | | |
| | 87 | 143 | 13 | 73 | 115 | | |
| | 10 | 10 | 10 | 10 | 10 | | |
| 4 | 58.90 | 16.20 | 143.53 | 83.54 | 41.53 | | |
| 4 | 154.24 | 154.20 | 151.53 | 151.54 | 151.53 | | |

| W | ELEV | DTW | ELEV | DTW | ELEV | DTW | ELEV | DTW | ELEV | DTW | ELEV | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 145.19 | 14.91 | 139.33 | 94.45 | 59.75 | 6.46 | 145.07 | 11.86 | 139.68 | 91.53 | 60.00 | | | | |
| 9 | 144.35 | 15.93 | 138.31 | 95.33 | 58.87 | 7.54 | 143.99 | 12.74 | 138.80 | 92.49 | 59.04 | | | | |
| | - | - | - | - | - | - | - | - | - | - | - | | | | |
| | - | - | - | - | - | - | - | - | - | - | - | | | | |
| | - | - | - | - | - | - | - | - | - | - | - | | | | |
| | - | - | - | - | - | - | - | - | - | - | - | | | | |
| | - | - | - | - | - | - | - | - | - | - | - | | | | |
| | - | - | - | - | - | | | - | - | - | - | | | | |
| | - | - | - | - | - | | | - | - | - | - | | | | |
| | | | | | | | | | | | | | | | |

| WELL NO. | OBGMLP35(TFZ1) | OBGMLP35(TFZ2) | OBGMLP35(TFZ2a) | OBGMLP35(TFZ3) | OBGMLP36(TFZ1) |
|---|---|---|---|---|---|
| INSTALLATION DATE | 5/2/00 | 4/27/00 | 5/4/00 | 06/06/00 | 5/2/00 |
| DIAMETER | 0.75" PVC | 0.75" PVC | 0.75" PVC | 1" PVC | 0.75" PVC |
| WELL DEPTH (feet bgs[1]) | 18 | 57 | 64 | 108 | 18 |
| SCREEN LENGTH (feet) | 10 | 10 | 10 | 10 | 10 |
| ELEVATION (MIDDLE OF SCREEN) msl[2] | 142.56 | 103.70 | 96.52 | 51.73 | 142.58 |
| ELEVATION (TOP OF CASING) msl | 155.56 | 155.70 | 155.52 | 154.73 | 155.58 |

| DATE | DTW[3] | ELEV[4] | DTW | ELEV | DTW | ELEV | DTW | ELEV | DTW | ELEV |
|---|---|---|---|---|---|---|---|---|---|---|
| 5/6/00 | 10.61 | 144.95 | 16.37 | 139.33 | 16.58 | 138.94 | n/a | n/a | 10.10 | 145.48 |
| 6/6/00 | 12.26 | 143.30 | 17.33 | 138.37 | 17.49 | 138.03 | 95.45 | 59.28 | 11.08 | 144.50 |
| - | - | - | - | - | - | - | | | - | - |
| - | - | - | - | - | - | - | | | - | - |
| - | - | - | - | - | - | - | | | - | - |
| - | - | - | - | - | - | - | | | - | - |
| - | - | - | - | - | - | - | | | - | - |
| - | - | - | - | - | - | - | | | - | - |
| - | - | - | - | - | - | - | | | | |
| | | | | | | | | | | |
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Notes:

(1) bgs = below ground surface

(2) msl = feet above/below mean sea level

(3) DTW = measured depth to water surface

(4) ELEV = elevation of water surface, feet above msl

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| GMLP36(TFZ2) | OBGMLP36(TFZ3) | OBGMLP37(TFZ1) | OBGMLP37(TFZ2) | OBGMLP37(TFZ3) | | | |
|---|---|---|---|---|---|---|---|
| 0 | 06/05/00 | 5/2/00 | 5/2/00 | 4/29/00 | | | |
| PVC | 1" PVC | 0.75" PVC | 0.75" PVC | 0.75" PVC | | | |
| | 98 | 17 | 55 | 86 | | | |
| | 10 | 10 | 10 | 10 | | | |
| | 58.90 | 143.51 | 105.52 | 74.60 | | | |
| 1 | 154.57 | 155.51 | 155.52 | 155.60 | | | |

| W | ELEV | DTW | ELEV | DTW | ELEV | DTW | ELEV | DTW | ELEV | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 90 | 138.71 | n/a | n/a | 10.61 | 144.90 | 17.81 | 137.71 | DRY | DRY | | | | | | |
| 94 | 137.67 | 96 | 58.57 | 11.42 | 144.09 | 18.81 | 136.71 | DRY | DRY | | | | | | |
| | - | | | - | - | - | - | - | - | | | | | | |
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| WELL NO. | OBGMW14s | OBGMW14I | OBGMW15s | OBGMW15i | OBGMW15d |
|---|---|---|---|---|---|
| CONSTRUCTION DATE | 4/1/00 | 4/1/00 | 3/23/00 | 3/22/00 | 3/29/00 |
| DIAMETER | 2" SS | 2" SS | 2" SS | 2" SS | 2" SS/PVC |
| WELL DEPTH (feet bgs[1]) | 13 | 33 | 29 | 65 | 129 |
| SCREEN LENGTH (feet) | 10.00 | 5.00 | 10.00 | 10.00 | 10.00 |
| ELEVATION (MIDDLE OF SCREEN) msl[2] | 141.36 | 118.49 | 138.11 | 102.13 | 38.09 |
| ELEVATION (TOP OF CASING) msl | 149.36 | 148.99 | 162.11 | 162.13 | 162.09 |

| DATE | DTW[3] | ELEV[4] | DTW | ELEV | DTW | ELEV | DTW | ELEV | DTW | ELEV |
|---|---|---|---|---|---|---|---|---|---|---|
| 4/2/00 | 2.82 | 146.54 | 8.98 | 140.01 | 20.97 | 141.14 | 21.27 | 140.86 | 101.20 | 60.89 |
| 5/6/00 | 4.38 | 144.98 | 9.77 | 139.22 | 21.25 | 140.86 | 21.76 | 140.37 | 102.02 | 60.07 |
| 6/6/00 | 5.88 | 143.48 | 10.70 | 138.29 | 22.02 | 140.09 | 22.43 | 139.70 | 103.18 | 58.91 |
| - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - |
| - | - | - | - | - | - | - | - | - | - | - |
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| BGMW16s | OBGMW16i | OBGMW16d | OBGMW17s | OBGMW17i | | | |
|---|---|---|---|---|---|---|---|
| 0 | 3/22/00 | 3/21/00 | 3/18/00 | 3/18/00 | | | |
| | 2" SS | 2" SS/PVC | 2" SS | 2" SS | | | |
| | 45 | 115 | 25 | 38 | | | |
| | 10.00 | 5.00 | 10.00 | 5.00 | | | |
| | 122.95 | 50.31 | 131.87 | 116.24 | | | |
| | 162.95 | 162.81 | 151.87 | 151.74 | | | |

| N | ELEV | DTW | ELEV | DTW | ELEV | DTW | ELEV | DTW | ELEV | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | - | 23.32 | 139.63 | 103.76 | 59.05 | 14.48 | 137.39 | 14.88 | 136.86 | | | | | | |
| 8 | 138.96 | 23.95 | 139.00 | 103.14 | 59.67 | 15.58 | 136.29 | 15.88 | 135.86 | | | | | | |
| 6 | 138.08 | 24.25 | 138.70 | 104 | 58.81 | 16.58 | 135.29 | 16.81 | 134.93 | | | | | | |
| | - | - | - | - | - | - | - | - | - | | | | | | |
| | - | - | - | - | - | - | - | - | - | | | | | | |
| | - | - | - | - | - | - | - | - | - | | | | | | |
| | - | - | - | - | - | - | - | - | - | | | | | | |
| | - | - | - | - | - | - | - | - | - | | | | | | |
| | - | - | - | - | - | - | - | - | - | | | | | | |
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| WELL NO. | WCMW1/A | WCMW2/A | WCMW2/B | WCMW3/A | WCMW4/A |
|---|---|---|---|---|---|
| INSTALLATION DATE | 8/95 | 8/95 | 8/95 | 8/95 | 8/95 |
| DIAMETER/MATERIAL | 2" PVC | 2" PVC | 2" PVC | 2" PVC | 2" PVC |
| WELL DEPTH (feet bgs[1]) | 29.62 | 16.75 | 37.75 | 14.26 | 19.54 |
| SCREEN LENGTH (feet) | 15.00 | 10.00 | 10.00 | 10.00 | 15.00 |
| ELEVATION (MIDDLE OF SCREEN) msl[2] | 140.07 | 139.02 | 117.91 | 140.89 | 138.26 |
| ELEVATION (TOP OF CASING) msl | 162.19 | 150.77 | 150.66 | 150.15 | 150.30 |

| DATE | DTW[3] | ELEV[4] | DTW | ELEV | DTW | ELEV | DTW | ELEV | DTW | ELEV |
|---|---|---|---|---|---|---|---|---|---|---|
| 8/27/99 | 20.55 | 141.64 | 7.98 | 142.79 | 11.76 | 138.90 | 6.79 | 143.36 | 3.76 | 146.54 |
| 9/30/99 | 20.53 | 141.66 | 6.58 | 144.19 | 10.97 | 139.69 | 5.57 | 144.58 | 3.31 | 146.99 |
| 10/19/99 | 20.36 | 141.83 | 8.05 | 142.72 | 11.72 | 138.94 | NM | NM | 4.39 | 145.91 |
| 11/18/99 | 20.25 | 141.94 | 8.05 | 142.72 | 11.54 | 139.12 | 7.06 | 143.09 | 4.24 | 146.06 |
| 12/27/99 | 20.98 | 141.21 | 9.50 | 141.27 | 12.40 | 138.26 | 10.71 | 139.44 | 4.90 | 145.40 |
| 1/28/00 | 21.62 | 140.57 | 9.52 | 141.25 | 12.64 | 138.02 | 10.75 | 139.40 | 4.82 | 145.48 |
| 3/9/00 | 21.01 | 141.18 | 10.49 | 140.28 | 12.15 | 138.51 | 7.27 | 142.88 | 4.00 | 146.30 |
| 4/2/00 | 21.10 | 141.09 | 6.93 | 143.84 | 11.46 | 139.20 | 5.92 | 144.23 | 3.4 | 146.90 |
| 5/6/00 | 21.28 | 140.91 | 9.23 | 141.54 | 12.68 | 137.98 | 7.96 | 142.19 | 5.16 | 145.14 |
| 6/6/00 | 21.96 | 140.23 | 11.05 | 139.72 | 13.36 | 137.30 | 9.60 | 140.55 | 5.87 | 144.43 |
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| VCMW4/B | WCMW5/A | WCMW5/B | WCMW6/A | WCMW7/A | WCPZ8/A | WCMW9/B | WCMW10/A |
|---|---|---|---|---|---|---|---|
| | 8/95 | 8/95 | 2/96 | 2/96 | 2/96 | 8/96 | 8/96 |
| C | 2" PVC | 2" PVC | 2" PVC | 2" PVC | 2" PVC | 2" PVC | 2" PVC |
| | 19.60 | 39.00 | 24.78 | 13.06 | 22.10 | 36.00 | 24.94 |
| | 15.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 | 10.00 |
| | 58.90 | 117.17 | 133.58 | 143.57 | 139.35 | 130.43 | 129.34 |
| | 151.28 | 151.17 | 153.36 | 151.63 | 156.45 | 161.43 | 149.28 |

| V | ELEV | DTW | ELEV | DTW | ELEV | DTW | ELEV | DTW | ELEV | DTW | ELEV | DTW | ELEV | DTW | ELEV |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 144.99 | 4.62 | 146.66 | 7.99 | 143.18 | 12.43 | 140.93 | 5.08 | 146.55 | 15.33 | 141.12 | 20.21 | 141.22 | 16.02 | 133.26 |
| | 146.29 | 4.07 | 147.21 | 7.00 | 144.17 | 12.09 | 141.27 | 4.70 | 146.93 | 15.17 | 141.28 | 19.73 | 141.70 | 15.62 | 133.66 |
| | 145.29 | 5.28 | 146.00 | 7.70 | 143.47 | 12.32 | 141.04 | 5.81 | 145.82 | 15.20 | 141.25 | 20.10 | 141.33 | 15.80 | 133.48 |
| | 143.13 | 5.26 | 146.02 | 7.60 | 143.57 | 12.18 | 141.18 | 5.60 | 146.03 | 15.06 | 141.39 | 20.02 | 141.41 | 17.92 | 131.36 |
| | 141.90 | 5.84 | 145.44 | 8.42 | 142.75 | 12.94 | 140.42 | 6.26 | 145.37 | 16.98 | 139.47 | 20.76 | 140.67 | 16.20 | 133.08 |
| | 141.69 | 6.00 | 145.28 | 11.08 | 140.09 | 13.54 | 139.82 | 6.12 | 145.51 | 18.0 | 138.45 | 21.44 | 139.99 | 16.5 | 132.78 |
| | 145.60 | 5.16 | 146.12 | 7.99 | 143.18 | 12.88 | 140.48 | 5.32 | 146.31 | 15.79 | 140.66 | 20.80 | 140.63 | 16.47 | 132.81 |
| | 145.37 | 4.42 | 146.86 | 7.55 | 143.62 | 12.64 | 140.72 | 4.73 | 146.90 | 15.68 | 140.77 | 20.58 | 140.85 | 15.25 | 134.03 |
| | 144.16 | 6.01 | 145.27 | 8.45 | 142.72 | 13.23 | 140.13 | 6.59 | 145.04 | 16.16 | 140.29 | 21.06 | 140.37 | 16.75 | 132.53 |
| | 143.34 | 7.05 | 144.23 | 9.10 | 142.07 | 14.11 | 139.25 | 7.13 | 144.50 | 16.87 | 139.58 | 21.96 | 139.47 | 17.75 | 131.53 |
| | | | | | | | | | | | | | | | |

| WELL NO. | WCMW11/A | WCPZ13/A | | | |
|---|---|---|---|---|---|
| INSTALLATION DATE | 8/96 | 8/96 | | | |
| DIAMETER/MATERIAL | 2" PVC | 2" PVC | | | |
| WELL DEPTH (feet bgs[1]) | 23.63 | 24.40 | | | |
| SCREEN LENGTH (feet) | 15.00 | 10.00 | | | |
| ELEVATION (MIDDLE OF SCREEN) msl[2] | 131.09 | 128.74 | | | |
| ELEVATION (TOP OF CASING) msl | 147.22 | 148.14 | | | |

| DATE | DTW[3] | ELEV[4] | DTW | ELEV | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 8/27/99 | 14.84 | 132.38 | 10.86 | 137.28 | | | | | | |
| 9/30/99 | 14.54 | 132.68 | 9.83 | 138.31 | | | | | | |
| 10/19/99 | 14.74 | 132.48 | 10.69 | 137.45 | | | | | | |
| 11/18/99 | 14.65 | 132.57 | n/a | n/a | | | | | | |
| 12/27/99 | 15.30 | 131.92 | 11.64 | 136.50 | | | | | | |
| 1/28/00 | 17.28 | 129.94 | 14.38 | 133.76 | | | | | | |
| 3/9/00 | 15.31 | 131.91 | 14.11 | 134.03 | | | | | | |
| 4/2/00 | 14.85 | 132.37 | 10.51 | 137.63 | | | | | | |
| 5/6/00 | 15.43 | 131.79 | 11.78 | 136.36 | | | | | | |
| 6/6/00 | 16.65 | 130.57 | 12.59 | 135.55 | | | | | | |

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**Appendix 5b**
**Difference In Water Levels Flow Zones 1 - 2 and 2 - 3**
Former Thompson Industries Site, Madison, Florida
June 30, 2000

| Ground Water Monitoring Station | Date | Depth to Water (ft)[1] | Top of Casing Elevation (ft msl) | Ground Water Elevation (ft msl) | Difference In Water Level Zone 1 and Zone 2 | Difference In Water Level Zone 2 and Zone 3 |
|---|---|---|---|---|---|---|
| | | | | | | |
| OBGMLP1(TFZ1) | 6/6/00 | 8.08 | 139.83 | 131.75 | | |
| OBGMLP1(TFZ2) | 6/6/00 | 8.16 | 139.88 | 131.72 | -0.03 | |
| OBGMLP1(TFZ3) | 6/6/00 | 81.60 | 139.77 | 58.17 | | -73.55 |
| | | | | | | |
| OBGMLP2(TFZ1) | 6/6/00 | 9.69 | 142.91 | 133.22 | | |
| OBGMLP2(TFZ2) | 6/6/00 | 9.69 | 142.85 | 133.16 | -0.06 | |
| OBGMLP2(TFZ3) | 6/6/00 | 84.53 | 142.88 | 58.35 | | -74.81 |
| | | | | | | |
| OBGMLP3(TFZ1) | 6/6/00 | 12.35 | 146.69 | 134.34 | | |
| OBGMLP3(TFZ2) | 6/6/00 | 12.32 | 146.71 | 134.39 | 0.05 | |
| OBGMLP3(TFZ3) | 6/6/00 | 88 | 146.73 | 58.73 | | -75.66 |
| | | | | | | |
| OBGMLP4(TFZ1) | 6/6/00 | Dry | 158.19 | Dry | | |
| OBGMLP4(TFZ2) | 6/6/00 | 22.17 | 158.19 | 136.02 | Dry | |
| OBGMLP4(TFZ3) | 6/6/00 | 98.28 | 158.24 | 59.96 | | -76.06 |
| | | | | | | |
| OBGMLP5(TFZ1) | 6/6/00 | 9.75 | 151.46 | 141.71 | | |
| OBGMLP5(TFZ2) | 6/6/00 | 15.11 | 151.45 | 136.34 | -5.37 | |
| OBGMLP5(TFZ3) | 6/6/00 | 92.33 | 151.47 | 59.14 | | -77.2 |
| | | | | | | |
| OBGMLP6(TFZ1) | 6/6/00 | Dry | 154.90 | Dry | | |
| OBGMLP6(TFZ2) | 6/6/00 | 19.01 | 154.88 | 135.87 | Dry | |
| OBGMLP6(TFZ3) | 6/6/00 | 95.82 | 154.88 | 59.06 | | -76.81 |
| | | | | | | |
| OBGMLP7(TFZ1) | 6/6/00 | 10.75 | 144.34 | 133.59 | | |
| OBGMLP7(TFZ2) | 6/6/00 | 10.71 | 144.31 | 133.60 | 0.01 | |
| OBGMLP7(TFZ3) | 6/6/00 | 85.95 | 144.42 | 58.47 | | -75.13 |
| | | | | | | |
| OBGMLP8(TFZ1) | 6/6/00 | 9.35 | 141.40 | 132.05 | | |
| OBGMLP8(TFZ2) | 6/6/00 | 9.21 | 141.29 | 132.08 | 0.03 | |
| OBGMLP8(TFZ3) | 6/6/00 | 82.63 | 141.20 | 58.57 | | -73.51 |
| | | | | | | |
| OBGMLP9(TFZ1) | 6/6/00 | 9.14 | 151.34 | 142.20 | | |
| OBGMLP9(TFZ2) | 6/6/00 | 14.76 | 151.36 | 136.60 | -5.6 | |
| OBGMLP9(TFZ3) | 6/6/00 | 91.46 | 151.37 | 59.91 | | -76.69 |
| | | | | | | |
| OBGMLP10(TFZ1) | 6/6/00 | Dry | 151.98 | Dry | | |
| OBGMLP10(TFZ2) | 6/6/00 | 19.90 | 152.00 | 132.10 | Dry | |
| OBGMLP10(TFZ3) | 6/6/00 | 93.88 | 151.99 | 58.11 | | -73.99 |
| | | | | | | |
| OBGMLP11(TFZ1) | 6/6/00 | 6.96 | 138.50 | 131.54 | | |
| OBGMLP11(TFZ2) | 6/6/00 | 6.92 | 138.50 | 131.58 | 0.04 | |
| OBGMLP11(TFZ2a) | 6/6/00 | 6.88 | 138.50 | 131.62 | | |
| OBGMLP11(TFZ3) | 6/6/00 | 80.09 | 138.50 | 58.41 | | -73.21 |
| | | | | | | |
| OBGMLP31(TFZ1) | 6/6/00 | 9.83 | 154.26 | 144.43 | | |
| OBGMLP31(TFZ2) | 6/6/00 | 17.40 | 154.27 | 136.87 | -7.56 | |
| OBGMLP31(TFZ3) | 6/6/00 | 95.37 | 154.29 | 58.92 | | -77.95 |

**Appendix 5b**
**Difference In Water Levels Flow Zones 1 - 2 and 2 - 3**
Former Thompson Industries Site, Madison, Florida
June 30, 2000

| Ground Water Monitoring Station | Date | Depth to Water (ft)[1] | Top of Casing Elevation (ft msl) | Ground Water Elevation (ft msl) | Difference in Water Level Zone 1 and Zone 2 | Difference in Water Level Zone 2 and Zone 3 |
|---|---|---|---|---|---|---|
| | | | | | | |
| OBGMLP32(TFZ1) | 6/6/00 | 7.86 | 152.37 | 144.51 | | |
| OBGMLP32(TFZ2) | 6/6/00 | 7.82 | 152.24 | 144.42 | | |
| OBGMLP32(TFZ2a) | 6/6/00 | 22.16 | 152.26 | 130.10 | -14.32 | |
| OBGMLP32(TFZ3) | 6/6/00 | 41.96 | 152.04 | 110.08 | | -20.02 |
| | | | | | | |
| OBGMLP33(TFZ1) | 6/6/00 | 9.85 | 154 | 144.39 | | |
| OBGMLP33(TFZ2) | 6/6/00 | 9.89 | 154.24 | 144.35 | | |
| OBGMLP33(TFZ2a) | 6/6/00 | 15.93 | 154.24 | 138.31 | -6.04 | |
| OBGMLP33(TFZ3) | 6/6/00 | 95.33 | 154.20 | 58.87 | | -79.44 |
| | | | | | | |
| OBGMLP34(TFZ1) | 6/6/00 | 7.54 | 151.53 | 143.99 | | |
| OBGMLP34(TFZ2) | 6/6/00 | 12.74 | 151.54 | 138.80 | -5.19 | |
| OBGMLP34(TFZ3) | 6/6/00 | 92.49 | 151.53 | 59.04 | | -79.76 |
| | | | | | | |
| OBGMLP35(TFZ1) | 6/6/00 | 12.26 | 155.56 | 143.30 | | |
| OBGMLP35(TFZ2) | 6/6/00 | 17.33 | 155.70 | 138.37 | -4.93 | |
| | | | | | | |
| OBGMLP36(TFZ1) | 6/6/00 | 11.08 | 155.58 | 144.50 | | |
| OBGMLP36(TFZ2) | 6/6/00 | 17.94 | 155.61 | 137.67 | -6.83 | |
| | | | | | | |
| OBGMLP37(TFZ1) | 6/6/00 | 11.42 | 155.51 | 144.09 | | |
| OBGMLP37(TFZ2) | 6/6/00 | 18.81 | 155.52 | 136.71 | -7.38 | |
| OBGMLP37(TFZ3) | 6/6/00 | Dry | 155.60 | Dry | | |
| | | | | | | |
| OBGMW14s | 6/6/00 | 5.88 | 149 | 143.48 | | |
| OBGMW14i | 6/6/00 | 10.70 | 149 | 138.29 | -5.19 | |
| | | | | | | |
| OBGMW15s | 6/6/00 | 22.02 | 162 | 140.09 | | |
| OBGMW15i | 6/6/00 | 22.43 | 162 | 139.70 | -0.39 | |
| OBGMW15d | 6/6/00 | 103.18 | 162 | 58.91 | | -80.79 |
| | | | | | | |
| OBGMW16s | 6/6/00 | 24.76 | 163 | 138.08 | | |
| OBGMW16i | 6/6/00 | 24.25 | 163 | 138.70 | 0.62 | |
| OBGMW16d | 6/6/00 | 104 | 163 | 58.81 | | -79.89 |
| | | | | | | |
| OBGMW17s | 6/6/00 | 16.58 | 152 | 135.29 | | |
| OBGMW17i | 6/6/00 | 16.81 | 152 | 134.93 | -0.36 | |

APPENDIX C

# Field Screening Summary Forms
# Former Thompson Industries Site
# Madison, Florida

Date: 4/12/00

Former Thompson Industries
Madison, Florida



Field Crew: RB, TJ, BK

DNAPL Source Characterization - Soil/Groundwater Sample Tracking Log

Sample ID #: OBGCB1

| COC # | Sample ID | Depth | Lab Sample - (Y/N) 8260b, 9060 (TDC), 410.4 (COD) | Geotech - (Y/N) SM, BD, WC, Perm, Porosity | PID (ppm) | FID (ppm) | Coloration (Y/N)[1] | Visible Sep. Phase DNAPL (Y/N)[2] | UV Reaction (Y/N)[3] | Dye Reaction (Y/N)[4] | Funnel/ Centrifuge Response (Y/N) | General Lithology | Comments/Matrix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34450 | OBGCB1 | 5' | Y | Y | 401 | 2800 | N | N | N | N | - | silty sand | |
| 34450 | OBGCB1 | 7' | Y | Y | 521 | 1800 | N | N | N | N | - | silty sand | |
| 34450 | OBGCB1 | 10.5' | Y | Y | 80 | 1588 | N | N | N | N | - | clayey silty sand | |
| 34450 | OBGCB1 | 13' | Y | Y | 106 | 1000 | N | N | N | N | - | sandy clay | |
| 34450 | OBGCB1 | 20' | Y | Y | 200 | 2300 | N | N | N | N | - | sand w/some clay | Contact |
| 34450 | OBGCB1 | 21' | Y | Y | 35 | 145 | N | N | N | N | - | clayey sand | Contact |
| 34450 | OBGCB1 | 21.5 | Y | Y | 100 | 335 | N | N | N | N | - | sandy clay | Contact |
| 34450 | OBGCB1 | 24' | Y | Y | 249 | 1000 | N | N | N | N | - | sandy clay | |
| 34450 | OBGCB1 | 30' | Y | Y | 300 | 1826 | N | N | N | N | - | clayey/sand | |
| 34450 | OBGCB1 | 35' | Y | Y | 260 | 2300 | N | N | N | N | - | clayey/sand | |
| 34451 | OBGCB1 | 37' | Y | Y | 14 | 387 | N | N | N | N | - | sand | Good contact |
| 34451 | OBGCB1 | 37.5' | Y | Y | 23 | 596 | N | N | N | N | - | clay | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
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* - Perimeter MLP only get sample if DNAPL is present

** - Source Well Borings Soil Sample Interval: 5 FEET

1 - Look for staining, discoloration, or visible DNAPL.

2 - Check core and soil sample for fluorescence using UV lamp.

3 - Put soil in jar, add DI water, shake, look for separation.

4 - Split Jar soil into 2 parts: Add half to funnel, rinse with DI water through filter paper, put rinseate/extract in cetrifuge, run, look for separtion.

4 - Add Dye to other half of soil sample, mix/shake with some DI water, look for Color change - try UV light.

Date: 4/11/00

Former Thompson Industries
Madison, Florida



Field Crew: RB, TJ, SC, BK

DNAPL Source Characterization - Soil/Groundwater Sample Tracking Log

Sample ID #: OBGCB2

| COC # | Sample ID | Depth | Lab Sample - (Y/N) 8260b, 9060 (TDC), 410.4 (COD) | Geotech - (Y/N) SM, BD, WC, Perm, Porosity | PID (ppm) | FID (ppm) | Coloration (Y/N)[1] | Visible Sep. Phase DNAPL (Y/N)[2] | UV Reaction (Y/N)[3] | Dye Reaction (Y/N)[4] | Funnel/ Centrifuge Response (Y/N) | General Lithology | Comments/Matrix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 34447 | OBGCB2 | (3.5')(3.6') | Y | Y | 27.5 | 7700 | N | N | N | N | - | sand | Odor |
| 34447 | OBGCB2 | 6.0' | Y | Y | 311 | 725 | N | N | N | N | - | sand | Wood Pulp at 9', Sheen |
| 34447 | OBGCB2 | 10.75' | Y | Y | 115 | 1831 | N | N | N | Y | N | sand/silt | Sheen |
| 34447 | OBGCB2 | 11' | Y | Y | 110 | 1744 | N | N | N | Y | N | sand/silt | Sheen |
| 34447 | OBGCB2 | 18.5' | Y | Y | 0.7 | 1700 | N | N | N | N | N | sand | Sheen moist |
| 34447 | OBGCB2 | 20.5' | Y | Y | - | 2400 | N | N | N | Y | N | sandy/clay | Moist |
| 34447 | OBGCB2 | 21.5 | Y | Y | 544 | 1740/2300 | N | N | N | Y | N | clayey/sand | " |
| 34447 | OBGCB2 | 28' | Y | Y | 24.2 | 245 | N | N | N | Y | N | clayey/sand | Tight, Firm, Moist |
| 34448 | OBGCB2 | 35' | Y | Y | 70.6 | 384 | N | N | N | N | - | clayey/sand | Dup |
| 34448 | OBGCB2 | 39.5' | Y | Y | 7.1 | 309 | N | N | N | N | - | clayey/sand | MS/MSD |
| 34448 | OBGCB2 | 40' | Y | Y | 11.5 | 420 | N | N | N | N | - | clay | |
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* - Perimeter MLP only get sample if DNAPL is present

** - Source Well Borings Soil Sample Interval: 5 FEET

1 - Look for staining, discoloration, or visible DNAPL.

2 - Check core and soil sample for fluorescence using UV lamp.

3 - Put soil in jar, add DI water, shake, look for separation.

4 - Split Jar soil into 2 parts: Add half to funnel, rinse with DI water through filter paper, put rinseate/extract in cetrifuge, run, look for separtion.

4 - Add Dye to other half of soil sample, mix/shake with some DI water, look for Color change - try UV light.

Date: 4/27/00

Former Thompson Industries Site



Field Crew: RB, TJ, SC, BK

Madison, Florida

DNAPL Source Characterization - Soil/Groundwater Sample Tracking Log

| Sample ID #: | OBGMLP31 |
|---|---|

| COC # | Sample ID | Depth | Lab Sample - (Y/N) 8260b, 9060 (TDC), | Geotech - (Y/N) SM, BD, WC, | PID (ppm) | FID (ppm) | Coloration (Y/N)[1] | Visible Sep. Phase | UV Reaction | Dye Reaction | Funnel/ Centrifuge | General Lithology | Comments/Matrix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | OBGMLP31 | 4-5' | N | N | 1900 | - | N | N | N | N | N | sand | 33% Recovery |
| - | OBGMLP31 | 7-8' | N | N | 650 | 73277 | N | N | N | N | N | sand | Had wood chips and possible minor reaction |
| - | OBGMLP31 | 14-15' | N | N | 100 | 1380 | N | N | N | N | N | sand/clay | Had wood chips and possible minor reaction |
| - | OBGMLP31 | 19-20' | N | N | 136 | 1821 | N | N | N | N | N | sand, and clayey | |
| - | OBGMLP31 | 23-25' | N | N | 20 | 585 | N | N | N | N | N | sand, and clayey | |
| - | OBGMLP31 | 27-29' | N | N | 29.4 | 1725 | N | N | N | N | N | sandy/clayey | |
| - | OBGMLP31 | 35' | N | N | 285 | 656 | N | N | N | N | N | clay with some sand | |
| - | OBGMLP31 | 40' | N | N | 354 | 863 | N | N | N | N | N | sand w/silt | |
| - | OBGMLP31 | 40-45' | N | N | 317 | 874 | N | N | N | N | N | sand w/silt | |
| | OBGMLP31 | 45-50' | N | N | 7.1 | 1.5 | N | N | N | N | N | Clay | Hawthorn |
| | OBGMLP31 | 50-55' | N | N | 8.5 | 9.7 | N | N | N | N | N | Clay | |
| | OBGMLP31 | 55-60' | N | N | 3.2 | 5.3 | N | N | N | N | N | clay | |
| | OBGMLP31 | 60-65' | N | N | 3.2 | 1.5 | N | N | N | N | N | clay | |
| | OBGMLP31 | 65-70' | N | N | 32 | 21 | N | N | N | N | N | clay w/ cemented sand | |
| | OBGMLP31 | 70-75' | N | N | 10.4 | 13.3 | N | N | N | N | N | clay/cemented sand | |
| | OBGMLP31 | 75-77' | N | N | 2.7 | 7.5 | N | N | N | N | N | clay w/ silt | |
| | OBGMLP31 | 78-81' | N | N | 1.7 | 2.1 | N | N | N | N | N | limestone | 70% recovery |
| | OBGMLP31 | 81-83' | N | N | 929.0 | 1899 | N | N | N | N | N | limestone | |
| | OBGMLP31 | 83-87 | - | - | - | - | - | - | - | - | - | no recovery | |
| | OBGMLP31 | 95-100 | N | N | 9.0 | 56 | N | N | N | N | N | limestone | boring terminated at |
| | | | | | | | | | | | | | 100 ft. bls. |

* - Perimeter MLP only get sample if DNAPL is present

** - Source Well Borings Soil Sample Interval: 5 FEET

1 - Look for staining, discoloration, or visible DNAPL.

2 - Check core and soil sample for fluorescence using UV lamp.

3 - Put soil in jar, add DI water, shake, look for separation.

4 - Split Jar soil into 2 parts: Add half to funnel, rinse with DI water through filter paper, put rinseate/extract in cetrifuge, run, look for separtion.

4 - Add Dye to other half of soil sample, mix/shake with some DI water, look for Color change - try UV light.

Date: 4/14/00

Former Thompson Industries S
Madison, Florida



Field Crew: RB, TJ, BK, SC

DNAPL Source Characterization - Soil/Groundwater Sample Tracking Log

Sample ID #: OBGMLP32

| COC # | Sample ID | Depth | Lab Sample - (Y/N) 8260b, 9060 (TDC), 410.4 (COD) | Geotech - (Y/N) SM, BD, WC, Perm, Porosity | PID (ppm) | FID (ppm) | Coloration (Y/N)[1] | Visible Sep. Phase DNAPL (Y/N)[2] | UV Reaction (Y/N)[3] | Dye Reaction (Y/N)[4] | Funnel/ Centrifuge Response (Y/N) | General Lithology | Comments/Matrix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | OBGMLP32 | 9-10' | N | N | 140 | 4638 | N | N | N | N | - | sand with silt | little clay |
| - | OBGMLP32 | 13-15' | N | N | 99 | 2 to 3000 | N | N | N | N | - | sand with silt | loose sediment |
| - | OBGMLP32 | 25' | N | N | 0 | 3320 | N | N | N | N | - | very loose snad | |
| - | OBGMLP32 | 38-39' | N | N | 13 | 500 | N | N | N | N | - | sand | |
| - | OBGMLP32 | 41' | N | N | 30 | 840 | N | N | N | N | - | sand | |
| - | OBGMLP32 | 47.5' | N | N | 70 | 2400 | N | N | N | N | - | sand | |
| - | OBGMLP32 | 51.5-53' | N | N | 91 | 1200 | N | N | N | N | - | sand with some silt | |
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* - Perimeter MLP only get sample if DNAPL is present

** - Source Well Borings Soil Sample Interval: 5 FEET

1 - Look for staining, discoloration, or visible DNAPL.

2 - Check core and soil sample for fluorescence using UV lamp.

3 - Put soil in jar, add DI water, shake, look for separation.

4 - Split Jar soil into 2 parts: Add half to funnel, rinse with DI water through filter paper, put rinseate/extract in cetrifuge, run, look for separtion.

4 - Add Dye to other half of soil sample, mix/shake with some DI water, look for Color change - try UV light.

Date: 4/15/00

Former Thompson Industries
Madison, Florida

Field Crew: RB, TJ, BK, SC

DNAPL Source Characterization - Soil/Groundwater Sample Tracking Log

Sample ID #: OBGMLP32

| COC # | Sample ID | Depth | Lab Sample - (Y/N) 8260b, 9060 (TDC), 410.4 (COD) | Geotech - (Y/N) SM, BD, WC, Perm, Porosity | PID (ppm) | FID (ppm) | Coloration (Y/N)[1] | Visible Sep. Phase DNAPL (Y/N)[2] | UV Reaction (Y/N)[3] | Dye Reaction (Y/N)[4] | Funnel/ Centrifuge Response (Y/N) | General Lithology | Comments/Matrix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | OBGMLP32 | 58-59' | N | N | 50 | - | N | N | N | N | - | | FID malfunctoning |
| - | OBGMLP32 | 64' | N | N | 45 | - | N | N | N | N | - | | " |
| - | OBGMLP32 | 68' | N | N | 20 | - | N | N | N | N | - | | " |
| - | OBGMLP32 | 72-73' | N | N | 5.2 | - | N | N | N | N | - | | " |
| - | OBGMLP32 | 79-80' | N | N | 5.0 | - | N | N | N | N | - | | " |
| - | OBGMLP32 | 83' | N | N | 5.5 | - | N | N | N | N | - | | " |
| - | OBGMLP32 | 89' | N | N | 26 | - | N | N | N | N | - | | " |
| - | OBGMLP32 | 91' | N | N | 54 | - | N | N | N | N | - | | " |
| - | OBGMLP32 | 94' | N | N | 44 | - | N | N | N | N | - | | " |
| - | OBGMLP32 | 99' | N | N | 61 | - | N | N | N | N | - | | " |
| - | OBGMLP32 | 104-105' | N | N | 55 | - | N | N | N | N | - | | " |
| - | OBGMLP32 | 106' | N | N | 45 | - | N | N | N | N | - | | " |
| - | OBGMLP32 | 109' | N | N | 52 | - | N | N | N | N | - | | " |
| - | OBGMLP32 | 113-115' | N | N | 133 | - | N | N | N | N | - | | " |
| - | OBGMLP32 | 117' | N | N | 49 | - | N | N | N | N | - | | " |
| - | OBGMLP32 | 122' | N | N | 89 | - | N | N | N | N | - | | " |
| - | OBGMLP32 | 125' | N | N | 91 | - | N | N | N | N | - | | " |
| - | OBGMLP32 | 135' | N | N | 6.0 | - | N | N | N | N | - | | " |
| - | OBGMLP32 | 135-140' | N | N | 0.0 | - | N | N | N | N | - | | Composite " |
| - | OBGMLP32 | 141' | N | N | 3.0 | - | N | N | N | N | - | | " |
| - | OBGMLP32 | 148-150' | N | N | 5.0 | - | N | N | N | N | - | | " |

* - Perimeter MLP only get sample if DNAPL is present

** - Source Well Borings Soil Sample Interval: 5 FEET

1 - Look for staining, discoloration, or visible DNAPL.

2 - Check core and soil sample for fluorescence using UV lamp.

3 - Put soil in jar, add DI water, shake, look for separation.

4 - Split Jar soil into 2 parts: Add half to funnel, rinse with DI water through filter paper, put rinseate/extract in cetrifuge, run, look for separtion.

4 - Add Dye to other half of soil sample, mix/shake with some DI water, look for Color change - try UV light.

Date: 4/17/00

Former Thompson Industries S[illegible]
Madison, Florida



Field Crew: RB, TJ, BK, SC

DNAPL Source Characterization - Soil/Groundwater Sample Tracking Log

Sample ID #: OBGMLP33

| COC # | Sample ID | Depth | Lab Sample - (Y/N) 8260b, 9060 (TDC), 410.4 (COD) | Geotech - (Y/N) SM, BD, WC, Perm, Porosity | PID (ppm) | FID (ppm) | Coloration (Y/N)[1] | Visible Sep. Phase DNAPL (Y/N)[2] | UV Reaction (Y/N)[3] | Dye Reaction (Y/N)[4] | Funnel/ Centrifuge Response (Y/N) | General Lithology | Comments/Matrix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | OBGMLP33 | 3' | N | N | 296 | 2100 | N | N | N | N | N | sand | |
| - | OBGMLP33 | 6-8' | N | N | 62 | 2194 | N | N | N | N | N | sandy clay | |
| - | OBGMLP33 | 14-15' | N | N | 94 | 1350 | N | N | N | N | N | silty sand | wet |
| - | OBGMLP33 | 19' | N | N | 37 | 800 | N | N | N | N | N | silty sand | wet |
| - | OBGMLP33 | 24-25' | N | N | 158 | 1890 | N | N | N | N | N | silty sand | |
| - | OBGMLP33 | 29-30' | N | N | 70 | 1466 | N | N | N | N | N | silty sand | |
| - | OBGMLP33 | 32-33.5' | N | N | 105 | 874 | N | N | N | N | N | sand w/clay | |
| - | OBGMLP33 | 37' | N | N | 456 | 189 | N | N | N | N | N | sandy clay | |
| - | OBGMLP33 | 39' | N | N | 260 | 66 | N | N | N | N | N | sandy clay | |
| - | OBGMLP33 | 43-45' | N | N | 438 | 205 | N | N | N | N | N | sandy clay | low $H_2$ (FID) |
| - | OBGMLP33 | 49' | N | N | 68 | 63 | N | N | N | N | N | sandy clay | low $H_2$ (FID) |
| - | OBGMLP33 | 52-53' | N | N | 44 | 80 | N | N | N | N | N | sandy clay | low $H_2$ (FID) |
| - | OBGMLP33 | 59' | N | N | 20.3 | 11 | N | N | N | N | N | clay w/sand | |
| - | OBGMLP33 | 63' | N | N | 8 | 10 | N | N | N | N | N | clay w/sand | |
| - | OBGMLP33 | 69-70' | N | N | 250 | 389 | N | N | N | N | N | same as above | |
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* - Perimeter MLP only get sample if DNAPL is present

** - Source Well Borings Soil Sample Interval: 5 FEET

1 - Look for staining, discoloration, or visible DNAPL.

2 - Check core and soil sample for fluorescence using UV lamp.

3 - Put soil in jar, add DI water, shake, look for separation.

4 - Split Jar soil into 2 parts: Add half to funnel, rinse with DI water through filter paper, put rinseate/extract in cetrifuge, run, look for separtion.

4 - Add Dye to other half of soil sample, mix/shake with some DI water, look for Color change - try UV light.

Date: 4/18/00

Former Thompson Industries
Madison, Florida



Field Crew: RB, TJ, BK, SC

DNAPL Source Characterization - Soil/Groundwater Sample Tracking Log

Sample ID #: OBGMLP33

| COC # | Sample ID | Depth | Lab Sample - (Y/N) 8260b, 9060 (TDC), 410.4 (COD) | Geotech - (Y/N) SM, BD, WC, Perm, Porosity | PID (ppm) | FID (ppm) | Coloration (Y/N)[1] | Visible Sep. Phase DNAPL (Y/N)[2] | UV Reaction (Y/N)[3] | Dye Reaction (Y/N)[4] | Funnel/ Centrifuge Response (Y/N) | General Lithology | Comments/Matrix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | OBGMLP33 | 72' | N | N | 123 | 439 | N | N | N | N | N | clay w/sand | |
| - | OBGMLP33 | 79' | N | N | 54 | 10 | N | N | N | N | N | same as above | |
| - | OBGMLP33 | 85' | N | N | 113 | 409 | N | N | N | N | N | clay w/ sand | poorly graded |
| - | OBGMLP33 | 87-89' | N | N | 34 | 267 | N | N | N | N | N | sand w/ clay | poorly graded |
| - | OBGMLP33 | 93' | N | N | 60 | 0 | N | N | N | N | N | clayey sand | Moist |
| - | OBGMLP33 | 99-100' | N | N | 25 | 61 | N | N | N | N | N | clay | Firm-clay |
| - | OBGMLP33 | 101' | N | N | 23 | 78 | N | N | N | N | N | clay pebbles | little gravel |
| - | OBGMLP33 | 106-110' | N | N | 1.0 | 5 | N | N | N | N | N | clay | |
| - | OBGMLP33 | 111-115' | N | N | 1.0 | 0 | N | N | N | N | N | clay | |
| - | OBGMLP33 | 116-120' | N | N | 0 | 0 | N | N | N | N | N | silty sand | |
| - | OBGMLP33 | 121-125' | N | N | 0 | 1 | N | N | N | N | N | clay w/sand | |
| - | OBGMLP33 | 126-130' | N | N | 5.4 | 0 | N | N | N | N | N | clay | |
| - | OBGMLP33 | 131-135' | N | N | 0 | 0 | N | N | N | N | N | clay | |
| - | OBGMLP33 | 136-140' | N | N | 0 | 0 | N | N | N | N | N | weathered clay | |
| - | OBGMLP33 | 141-145' | N | N | 0 | 0 | N | N | N | N | N | sand | |
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* - Perimeter MLP only get sample if DNAPL is present

** - Source Well Borings Soil Sample Interval: 5 FEET

1 - Look for staining, discoloration, or visible DNAPL.

2 - Check core and soil sample for fluorescence using UV lamp.

3 - Put soil in jar, add DI water, shake, look for separation.

4 - Split Jar soil into 2 parts: Add half to funnel, rinse with DI water through filter paper, put rinseate/extract in cetrifuge, run, look for separtion.

4 - Add Dye to other half of soil sample, mix/shake with some DI water, look for Color change - try UV light.

Date: 4/19/00

Former Thompson Industries
Madison, Florida



Field Crew: RB, TJ, BK, SC

DNAPL Source Characterization - Soil/Groundwater Sample Tracking Log

Sample ID #: OBGMLP34

| COC # | Sample ID | Depth | Lab Sample - (Y/N) 8260b, 9060 (TDC), 410.4 (COD) | Geotech - (Y/N) SM, BD, WC, Perm, Porosity | PID (ppm) | FID (ppm) | Coloration (Y/N)[1] | Visible Sep. Phase DNAPL (Y/N)[2] | UV Reaction (Y/N)[3] | Dye Reaction (Y/N)[4] | Funnel/ Centrifuge Response (Y/N) | General Lithology | Comments/Matrix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | OBGMLP34 | 4' | N | N | 47 | 76 | N | N | N | N | N | sand | |
| - | OBGMLP34 | 6' | N | N | 6.4 | 140 | N | N | N | N | N | sand | |
| - | OBGMLP34 | 8' | N | N | 0 | 550 | N | N | N | N | N | sand | |
| - | OBGMLP34 | 12' | N | N | 4 | 4 | N | N | N | N | N | clay | |
| - | OBGMLP34 | 14' | N | N | 0 | 60 | N | N | N | N | N | clay | |
| - | OBGMLP34 | 20' | N | N | 7.6 | 110 | N | N | N | N | N | sand w/clay | |
| - | OBGMLP34 | 25' | N | N | 43 | 700 | N | N | N | N | N | sand w/clay | |
| - | OBGMLP34 | 29' | N | N | 28.0 | 200 | N | N | N | N | N | sand w/clay | |
| | OBGMLP34 | 35 | N | N | 378.0 | - | N | N | N | N | N | sand w/clay | |
| | OBGMLP34 | 40 | N | N | 120 | 40 | N | N | N | N | N | clay w/ sand | |
| | OBGMLP34 | 45 | N | N | 100 | 450 | N | N | N | N | N | clay w/ sand | |
| | OBGMLP34 | 50 | N | N | 170 | 220 | N | N | N | N | N | sand w/silt | |
| | OBGMLP34 | 55 | N | N | 126 | 340 | N | N | N | N | N | clay w/ sand | |
| | OBGMLP34 | 60 | N | N | 66 | - | N | N | N | N | N | sand w/ silt&clay | |
| | OBGMLP34 | 65 | N | N | 131 | - | N | N | N | N | N | silt w/ sand & clay | |
| | OBGMLP34 | 70 | N | N | 1 | 20 | N | N | N | N | N | sand | |
| | OBGMLP34 | 75 | N | N | 3 | 6 | N | N | N | N | N | silt w/ sand | |
| | OBGMLP34 | 80 | N | N | 8.1 | 1 | N | N | N | N | N | sand w/ clay | |
| | OBGMLP34 | 85 | N | N | 0.0 | 0 | N | N | N | N | N | clay | |
| | OBGMLP34 | 90 | N | N | 0.0 | 0 | N | N | N | N | N | clay | |
| | OBGMLP34 | 95 | N | N | - | - | N | N | N | N | N | clay | |

* - Perimeter MLP only get sample if DNAPL is present

** - Source Well Borings Soil Sample Interval: 5 FEET

1 - Look for staining, discoloration, or visible DNAPL.

2 - Check core and soil sample for fluorescence using UV lamp.

3 - Put soil in jar, add DI water, shake, look for separation.

4 - Split Jar soil into 2 parts: Add half to funnel, rinse with DI water through filter paper, put rinseate/extract in cetrifuge, run, look for separtion.

4 - Add Dye to other half of soil sample, mix/shake with some DI water, look for Color change - try UV light.

Date: 4/26/00

Former Thompson Industries Site
Madison, Florida

Field Crew: RB, TJ, BK, SC

DNAPL Source Characterization - Soil/Groundwater Sample Tracking Log

Sample ID #: OBGMLP34

| COC # | Sample ID | Depth | Lab Sample - (Y/N) 8260b, 9060 (TDC), | Geotech - (Y/N) SM, BD, WC, | PID (ppm) | FID (ppm) | Coloration (Y/N)[1] | Visible Sep. Phase | UV Reaction | Dye Reaction | Funnel/ Centrifuge | General Lithology | Comments/Matrix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | OBGMLP34 | 100 | N | N | 0 | 0 | N | N | N | N | N | Clay | |
| - | OBGMLP34 | 105 | N | N | 0 | 0 | N | N | N | N | N | Limestone | |
| - | OBGMLP34 | 110 | N | N | 0 | 0 | N | N | N | N | N | Limestone | |
| - | OBGMLP34 | 115 | N | N | 0 | 0 | N | N | N | N | N | Limestone | boring terminated at |
| | | | | | | | | | | | | | 115 ft. bls. |
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* - Perimeter MLP only get sample if DNAPL is present

** - Source Well Borings Soil Sample Interval: 5 FEET

1 - Look for staining, discoloration, or visible DNAPL.

2 - Check core and soil sample for fluorescence using UV lamp.

3 - Put soil in jar, add DI water, shake, look for separation.

4 - Split Jar soil into 2 parts: Add half to funnel, rinse with DI water through filter paper, put rinseate/extract in cetrifuge, run, look for separtion.

4 - Add Dye to other half of soil sample, mix/shake with some DI water, look for Color change - try UV light.

Date: 5/3/00

Former Thompson Industries Site
Madison, Florida



Field Crew: RB, TJ, SC

DNAPL Source Characterization - Soil/Groundwater Sample Tracking Log

Sample ID #: OBGMLP35

| COC # | Sample ID | Depth | Lab Sample - (Y/N) 8260b, 9060 (TDC), 410.4 (COD) | Geotech - (Y/N) SM, BD, WC, Perm, Porosity | PID (ppm) | FID (ppm) | Coloration (Y/N)[1] | Visible Sep. Phase DNAPL (Y/N)[2] | UV Reaction (Y/N)[3] | Dye Reaction (Y/N)[4] | Funnel/ Centrifuge Response (Y/N) | General Lithology | Comments/Matrix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | OBGMLP35 | 4-7' | N | N | 50 | 35 | N | N | N | N | N | Sand | |
| - | OBGMLP35 | 7-10' | N | N | 3.8 | 150 | N | N | N | N | N | silt w/ sand | |
| - | OBGMLP35 | 10-13' | N | N | 0.7 | 120 | N | N | N | N | N | sand w/ clay | |
| - | OBGMLP35 | 13-16' | N | N | 0 | 47 | N | N | N | N | N | clay w/ sand | |
| - | OBGMLP35 | 16-19' | N | N | 0 | 45 | N | N | N | N | N | clay w/ sand | |
| - | OBGMLP35 | 19 -22' | N | N | 0 | 50 | N | N | N | N | N | sand w/ clay | |
| - | OBGMLP35 | 22-25' | N | N | 0.2 | 105 | N | N | N | N | N | clay w/ sand | |
| - | OBGMLP35 | 25-28' | N | N | 0 | 112 | N | N | N | N | N | clay w/ sand | |
| - | OBGMLP35 | 28-31' | N | N | 0 | 219 | N | N | N | N | N | clay w/ sand | |
| | OBGMLP35 | 31-34' | N | N | 1.6 | 31.4 | N | N | N | N | N | clay | |
| | OBGMLP35 | 34-37 | N | N | 0 | 12.1 | N | N | N | N | N | loose sand | fine to medium grain |
| | OBGMLP35 | 40-43' | N | N | 5.3 | 42 | N | N | N | N | N | sand w/ clay | |
| | OBGMLP35 | 43-46' | N | N | 0.9 | 28 | N | N | N | N | N | clay | |
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* - Perimeter MLP only get sample if DNAPL is present

** - Source Well Borings Soil Sample Interval: 5 FEET

1 - Look for staining, discoloration, or visible DNAPL.

2 - Check core and soil sample for fluorescence using UV lamp.

3 - Put soil in jar, add DI water, shake, look for separation.

4 - Split Jar soil into 2 parts: Add half to funnel, rinse with DI water through filter paper, put rinseate/extract in cetrifuge, run, look for separtion.

4 - Add Dye to other half of soil sample, mix/shake with some DI water, look for Color change - try UV light.

Date: 5/3/00

Former Thompson Industries Site
Madison, Florida



Field Crew: RB, TJ, SC

DNAPL Source Characterization - Soil/Groundwater Sample Tracking Log

Sample ID #: OBGMLP35

| COC # | Sample ID | Depth | Lab Sample - (Y/N) 8260b, 9060 (TDC), | Geotech - (Y/N) SM, BD, WC, | PID (ppm) | FID (ppm) | Coloration (Y/N)[1] | Visible Sep. Phase | UV Reaction | Dye Reaction | Funnel/ Centrifuge | General Lithology | Comments/Matrix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | OBGMLP35 | 44-48' | N | N | 18 | 76 | N | N | N | N | N | sand/clay | |
| - | OBGMLP35 | 48-52' | N | N | 2.2 | 91.8 | N | N | N | N | N | sand/clay | |
| - | OBGMLP35 | 52-56' | N | N | 0 | 1.3 | N | N | N | N | N | sand/silty clay | |
| - | OBGMLP35 | 56-60' | N | N | 0 | 0 | N | N | N | N | N | clay | |
| - | OBGMLP35 | 60-64' | N | N | 0 | 0 | N | N | N | N | N | clay | |
| - | OBGMLP35 | 66-68' | N | N | 0 | 0 | N | N | N | N | N | clay | |
| - | OBGMLP35 | 68-72' | N | N | 0 | 0 | N | N | N | N | N | clay | |
| - | OBGMLP35 | 72-76' | N | N | 0 | 0 | N | N | N | N | N | clay | |
| - | OBGMLP35 | 76-80' | N | N | 0 | 0 | N | N | N | N | N | clay | |
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* - Perimeter MLP only get sample if DNAPL is present

** - Source Well Borings Soil Sample Interval: 5 FEET

1 - Look for staining, discoloration, or visible DNAPL.

2 - Check core and soil sample for fluorescence using UV lamp.

3 - Put soil in jar, add DI water, shake, look for separation.

4 - Split Jar soil into 2 parts: Add half to funnel, rinse with DI water through filter paper, put rinseate/extract in cetrifuge, run, look for separtion.

4 - Add Dye to other half of soil sample, mix/shake with some DI water, look for Color change - try UV light.

Date: 6/6/00

Former Thompson Industries Site
Madison, Florida

Field Crew: RB, TJ, BK, SC

DNAPL Source Characterization - Soil/Groundwater Sample Tracking Log

Sample ID #: OBGMLP35 TFZ-3 ...

| COC # | Sample ID | Depth | Lab Sample - (Y/N) 8260b, 9060 (TDC), | Geotech - (Y/N) SM, BD, WC, | PID (ppm) | FID (ppm) | Coloration (Y/N)[1] | Visible Sep. Phase | UV Reaction | Dye Reaction | Funnel/ Centrifuge | General Lithology | Comments/Matrix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | OBGMLP35 | 0' | N | N | 32 | 1137 | N | N | N | N | N | sand w/ silt | loose |
| - | OBGMLP35 | 5' | N | N | 180 | 3051 | N | N | N | N | N | sand/silt | loose, wet |
| - | OBGMLP35 | 10' | N | N | 0 | 856 | N | N | N | N | N | sand/silt | |
| - | OBGMLP35 | 15' | N | N | 0 | 275 | N | N | N | N | N | sand/silt | |
| - | OBGMLP35 | 20' | N | N | 0 | 614 | N | N | N | N | N | clay | |
| - | OBGMLP35 | 25' | N | N | 18 | 227 | N | N | N | N | N | coarse sand w/ clay | |
| - | OBGMLP35 | 30' | N | N | 0 | 1060 | N | N | N | N | N | clay | |
| | OBGMLP35 | 35' | N | N | 2.5 | 91 | N | N | N | N | N | clay/sand/silt | loose, wet, medium grain |
| | OBGMLP35 | 40' | N | N | 0.0 | 28.3 | N | N | N | N | N | sand w/ clay | medium grain |
| | OBGMLP35 | 45' | N | N | 7.1 | 94 | N | N | N | N | N | clay w/silt & trace sand | |
| | OBGMLP35 | 50' | N | N | 0 | 6.5 | N | N | N | N | N | sand w/ silt | little s.s. |
| | OBGMLP35 | 55' | N | N | 0 | 10 | N | N | N | N | N | sand w/ silt | some s.s. |
| | OBGMLP35 | 60' | N | N | 0 | 0 | N | N | N | N | N | sand w/ silt | |
| | OBGMLP35 | 65' | N | N | 0 | 4.4 | N | N | N | N | N | sand w/ clay | Hawthorn |
| | OBGMLP35 | 70' | N | N | 0 | 0 | N | N | N | N | N | clay w/ silt | phosphate nodules |
| | OBGMLP35 | 75' | N | N | 0 | 7.3 | N | N | N | N | N | clay | |
| | OBGMLP35 | 80' | N | N | 0 | 0.9 | N | N | N | N | N | clay w/ trace silt | |
| | OBGMLP35 | 85' | N | N | 0.0 | 95 | N | N | N | N | N | clay w/ trace silt | |
| | OBGMLP35 | 90' | N | N | 0.0 | 98 | N | N | N | N | N | clay w/ silt | |
| | OBGMLP35 | 95' | N | N | 0.0 | 300 | N | N | N | N | N | silt/clay w/ trace sand | |
| | OBGMLP35 | 100' | N | N | 0.0 | 6.3 | N | N | N | N | N | dry weathered silt/clay | some limerock |

* - Perimeter MLP only get sample if DNAPL is present

** - Source Well Borings Soil Sample Interval: 5 FEET

*** - Replacement boring outside building

1 - Look for staining, discoloration, or visible DNAPL.

2 - Check core and soil sample for fluorescence using UV lamp.

3 - Put soil in jar, add DI water, shake, look for separation.

4 - Split Jar soil into 2 parts: Add half to funnel, rinse with DI water through filter paper, put rinseate/extract in cetrifuge, run, look for separtion.

5 - Add Dye to other half of soil sample, mix/shake with some DI water, look for Color change - try UV light.

Date: 6/6/00

Former Thompson Industries

Madison, Florida

Field Crew: RB, TJ, SC, BK

DNAPL Source Characterization - Soil/Groundwater Sample Tracking Log

Sample ID #: OBGMLP35 TFZ-3 ...

| COC # | Sample ID | Depth | Lab Sample - (Y/N) 8260b, 9060 (TDC), 410.4 (COD) | Geotech - (Y/N) SM, BD, WC, Perm, Porosity | PID (ppm) | FID (ppm) | Coloration (Y/N)[1] | Visible Sep. Phase DNAPL (Y/N)[2] | UV Reaction (Y/N)[3] | Dye Reaction (Y/N)[4] | Funnel/ Centrifuge Response (Y/N) | General Lithology | Comments/Matrix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | OBGMLP35 | 105' | N | N | 0.0 | 0 | N | N | N | N | N | clay w/ limestone | |
| - | OBGMLP35 | 110' | N | N | 0 | 0 | N | N | N | N | N | Limestone | boring terminated at 110 ft. bls. |
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* - Perimeter MLP only get sample if DNAPL is present

** - Source Well Borings Soil Sample Interval: 5 FEET

*** - Replacement Boring outside building

1 - Look for staining, discoloration, or visible DNAPL.

2 - Check core and soil sample for fluorescence using UV lamp.

3 - Put soil in jar, add DI water, shake, look for separation.

4 - Split Jar soil into 2 parts: Add half to funnel, rinse with DI water through filter paper, put rinseate/extract in cetrifuge, run, look for separtion.

5. - Add Dye to other half of soil sample, mix/shake with some DI water, look for Color change - try UV light.

Date: 4/30/00

Former Thompson Industries
Madison, Florida



Field Crew: RB, TJ, SC

DNAPL Source Characterization - Soil/Groundwater Sample Tracking Log

Sample ID #: OBGMLP36

| COC # | Sample ID | Depth | Lab Sample - (Y/N) 8260b, 9060 (TDC), 410.4 (COD) | Geotech - (Y/N) SM, BD, WC, Perm, Porosity | PID (ppm) | FID (ppm) | Coloration (Y/N)[1] | Visible Sep. Phase DNAPL (Y/N)[2] | UV Reaction (Y/N)[3] | Dye Reaction (Y/N)[4] | Funnel/ Centrifuge Response (Y/N) | General Lithology | Comments/Matrix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | OBGMLP36 | 0-4' | N | N | 0 | 0 | N | N | N | N | N | sand | |
| - | OBGMLP36 | 4-8' | N | N | 20 | 472 | N | N | N | N | N | sand | |
| - | OBGMLP36 | 8-12' | N | N | 26 | 623 | N | N | N | N | N | sand w/some silt | |
| - | OBGMLP36 | 12-16' | N | N | 1.0 | 200 | N | N | N | N | N | sand w/silt to sandy clay | |
| - | OBGMLP36 | 16-20' | N | N | 3.2 | 133 | N | N | N | N | N | sand w/silt to sand w/clay | Discolored, nasty odor @ 14-15' |
| - | OBGMLP36 | 20-24' | N | N | 12 | 143 | N | N | N | N | N | sand & silt/clay | |
| - | OBGMLP36 | 24-28' | N | N | 48 | 299 | N | N | N | N | N | sand & silt/clay | |
| - | OBGMLP36 | 28-32' | N | N | 20 | 90 | N | N | N | N | N | sand & silt/clay-more clay | |
| - | OBGMLP36 | 32-36' | N | N | 58.0 | 256 | N | N | N | N | N | sand & silt/clay-less clay | |
| - | OBGMLP36 | 36-40' | N | N | 63 | 349 | N | N | N | N | N | sand | |
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* - Perimeter MLP only get sample if DNAPL is present

** - Source Well Borings Soil Sample Interval: 5 FEET

1 - Look for staining, discoloration, or visible DNAPL.

2 - Check core and soil sample for fluorescence using UV lamp.

3 - Put soil in jar, add DI water, shake, look for separation.

4 - Split Jar soil into 2 parts: Add half to funnel, rinse with DI water through filter paper, put rinseate/extract in cetrifuge, run, look for separtion.

4 - Add Dye to other half of soil sample, mix/shake with some DI water, look for Color change - try UV light.

Date: 5/1/00

Field Crew: RB, TJ, SC

Former Thompson Industries
Madison, Florida



DNAPL Source Characterization - Soil/Groundwater Sample Tracking Log

Sample ID #: OBGMLP36

| COC # | Sample ID | Depth | Lab Sample - (Y/N) 8260b, 9060 (TDC), 410.4 (COD) | Geotech - (Y/N) SM, BD, WC, Perm, Porosity | PID (ppm) | FID (ppm) | Coloration (Y/N)[1] | Visible Sep. Phase DNAPL (Y/N)[2] | UV Reaction (Y/N)[3] | Dye Reaction (Y/N)[4] | Funnel/ Centrifuge Response (Y/N) | General Lithology | Comments/Matrix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | OBGMLP36 | 40-44' | N | N | 62 | 221 | N | N | N | N | N | sand/clay | |
| - | OBGMLP36 | 44-48' | N | N | 234 | 206 | N | N | N | N | N | clay/sand | |
| - | OBGMLP36 | 48-52' | N | N | 208 | 197 | N | N | N | N | N | clay | interbedded w/sand |
| - | OBGMLP36 | 52-56' | N | N | 262 | 679 | N | N | N | N | N | clay | |
| - | OBGMLP36 | 56-60' | N | N | - | 12.3 | N | N | N | N | N | clay/sand | |
| - | OBGMLP36 | 60-64' | N | N | 140 | 527 | N | N | N | N | N | sand | |
| - | OBGMLP36 | 64-68' | N | N | 14.8 | 38 | N | N | N | N | N | sand | |
| - | OBGMLP36 | 68-72' | N | N | 237 | 20 | N | N | N | N | N | sand/clay | transition Zn |
| - | OBGMLP36 | 72-76' | N | N | 768.0 | 14 | N | N | N | N | N | trans Zn | transition Zn-Hawthorn |
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* - Perimeter MLP only get sample if DNAPL is present

** - Source Well Borings Soil Sample Interval: 5 FEET

1 - Look for staining, discoloration, or visible DNAPL.

2 - Check core and soil sample for fluorescence using UV lamp.

3 - Put soil in jar, add DI water, shake, look for separation.

4 - Split Jar soil into 2 parts: Add half to funnel, rinse with DI water through filter paper, put rinseate/extract in cetrifuge, run, look for separtion.

4 - Add Dye to other half of soil sample, mix/shake with some DI water, look for Color change - try UV light.

Date: 6/5/00

Former Thompson Industries Site
Madison, Florida



Field Crew: TMJ, RAK, STC

DNAPL Source Characterization - Soil/Groundwater Sample Tracking Log

Sample ID #: OBGMLP36 TFZ-3

| COC # | Sample ID | Depth | Lab Sample - (Y/N) 8260b, 9060 (TDC), 410.4 (COD) | Geotech - (Y/N) SM, BD, WC, Perm, Porosity | PID (ppm) | FID (ppm) | Coloration (Y/N)[1] | Visible Sep. Phase DNAPL (Y/N)[2] | UV Reaction (Y/N)[3] | Dye Reaction (Y/N)[4] | Funnel/ Centrifuge Response (Y/N) | General Lithology | Comments/Matrix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | OBGMLP36 | 2-4' | N | N | 0.0 | 2799 | N | N | N | N | N | sand | NA |
| - | OBGMLP36 | 6-8' | N | N | 0.0 | 6663 | N | N | N | N | N | sand | trace silt, dark brown |
| - | OBGMLP36 | 12-14' | N | N | 170 | 6663 | N | N | N | N | N | sand | trace silt, light gray |
| - | OBGMLP36 | 16-18' | N | N | 589 | 657 | N | N | N | N | N | sand | trace silt, light brown |
| - | OBGMLP36 | 18-20' | N | N | 347 | 615 | N | N | N | N | N | sand | trace silt, light brown |
| - | OBGMLP36 | 26-28' | N | N | 882 | 582 | N | N | N | N | N | sand | some silt, orange oxd. |
| - | OBGMLP36 | 30-32' | N | N | 1184 | 1014 | N | N | N | N | N | sand | w/clay |
| - | OBGMLP36 | 34-36' | N | N | 707 | 292 | N | N | N | N | N | sand | w/silt |
| - | OBGMLP36 | 39-42' | N | N | 1097 | 682 | N | N | N | N | N | clay | |
| - | OBGMLP36 | 44-46' | N | N | 949 | 590 | N | N | N | N | N | clay | some sand, S.S. |
| - | OBGMLP36 | 48-50' | N | N | 58.6 | 41 | N | N | N | N | N | silt | w/sand |
| - | OBGMLP36 | 52-54' | N | N | 295 | 530 | N | N | N | N | N | sand | trace silt |
| - | OBGMLP36 | 56-58' | N | N | 109 | 101 | N | N | N | N | N | sand | S.S. nodules |
| - | OBGMLP36 | 62-64' | N | N | 8.8 | 0.0 | N | N | N | N | N | clay | top of Hawthorne |
| - | OBGMLP36 | 66-68' | N | N | 0.0 | 0.0 | N | N | N | N | N | clay | Hawthorne |
| - | OBGMLP36 | 70-72' | N | N | 0.0 | 0.0 | N | N | N | N | N | clay | Hawthorne |
| - | OBGMLP36 | 82-84' | N | N | 42 | 20 | N | N | N | N | N | clay | w/ silt, phos.nodules |
| - | OBGMLP36 | 86-88' | N | N | 11.5 | 0.0 | N | N | N | N | N | clay | w/silt, dry |
| - | OBGMLP36 | 90-92' | N | N | 4.5 | 0.0 | N | N | N | N | N | Limey | clay |
| - | OBGMLP36 | 94-96' | N | N | 83.7 | 56.1 | N | N | N | N | N | Limestone | dry |
| - | OBGMLP36 | 96-98' | N | N | 0.0 | 230 | N | N | N | N | N | Limestone | moist |

* - Perimeter MLP only get sample if DNAPL is present

** - Source Well Borings Soil Sample Interval: 5 FEET

1 - Look for staining, discoloration, or visible DNAPL.

2 - Check core and soil sample for fluorescence using UV lamp.

3 - Put soil in jar, add DI water, shake, look for separation.

4 - Split Jar soil into 2 parts: Add half to funnel, rinse with DI water through filter paper, put rinseate/extract in cetrifuge, run, look for separtion.

4 - Add Dye to other half of soil sample, mix/shake with some DI water, look for Color change - try UV light.

Field Crew: RB, TJ, BK, SC

DNAPL Source Characterization - Soil/Groundwater Sample Tracking Log

Sample ID #: OBGMLP37

| COC # | Sample ID | Depth | Lab Sample - (Y/N) 8260b, 9060 (TDC), 410.4 (COD) | Geotech - (Y/N) SM, BD, WC, Perm, Porosity | PID (ppm) | FID (ppm) | Coloration (Y/N)[1] | Visible Sep. Phase DNAPL (Y/N)[2] | UV Reaction (Y/N)[3] | Dye Reaction (Y/N)[4] | Funnel/ Centrifuge Response (Y/N) | General Lithology | Comments/Matrix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | OBGMLP37 | 4-7' | N | N | | | | | | | | | |
| - | OBGMLP37 | 7-10' | N | N | 0 | 0.5 | N | N | N | N | N | fill | |
| - | OBGMLP37 | 10-13' | N | N | 0 | 130 | N | N | N | N | N | | moist |
| - | OBGMLP37 | 13-16' | N | N | 0 | 133 | N | N | N | N | N | | wet |
| - | OBGMLP37 | 16-19' | N | N | 0 | 182 | N | N | N | N | N | | |
| - | OBGMLP37 | 19-22' | N | N | 0 | 75 | N | N | N | N | N | clayey/silty/sand | |
| - | OBGMLP37 | 22-25' | N | N | 0 | 237 | N | N | N | N | N | clayey/silty/sand | clay stringers |
| - | OBGMLP37 | 25-28' | N | N | 0 | 100 | N | N | N | N | N | clayey/silty/sand | grades to sandy, silty clay |
| - | OBGMLP37 | 28-31' | N | N | 0 | 0 | N | N | N | N | N | clay | wet, orange brown |
| - | OBGMLP37 | 31-35' | N | N | 28 | 140 | N | N | N | N | N | | |
| - | OBGMLP37 | 36-40' | N | N | 115 | 289 | N | N | N | N | N | sandy clay, clayey sand | |
| - | OBGMLP37 | 40-44' | N | N | 9.9 | 66.7 | N | N | N | N | N | clayey/sand | |
| - | OBGMLP37 | 44-48' | N | N | 3.7 | 35 | N | N | N | N | N | sand w/some silt & clay | |
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* - Perimeter MLP only get sample if DNAPL is present

** - Source Well Borings Soil Sample Interval: 5 FEET

1 - Look for staining, discoloration, or visible DNAPL.

2 - Check core and soil sample for fluorescence using UV lamp.

3 - Put soil in jar, add DI water, shake, look for separation.

4 - Split Jar soil into 2 parts: Add half to funnel, rinse with DI water through filter paper, put rinseate/extract in cetrifuge, run, look for separtion.

4 - Add Dye to other half of soil sample, mix/shake with some DI water, look for Color change - try UV light.

**Field Crew:** RB, TJ, SC

DNAPL Source Characterization - Soil/Groundwater Sample Tracking Log

**Sample ID #:** OBGMLP37

| COC # | Sample ID | Depth | Lab Sample - (Y/N) 8260b, 9060 (TDC), 410.4 (COD) | Geotech - (Y/N) SM, BD, WC, Perm, Porosity | PID (ppm) | FID (ppm) | Coloration (Y/N)[1] | Visible Sep. Phase DNAPL (Y/N)[2] | UV Reaction (Y/N)[3] | Dye Reaction (Y/N)[4] | Funnel/ Centrifuge Response (Y/N) | General Lithology | Comments/Matrix |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| - | OBGMLP37 | 48-52' | N | N | 41 | 92 | N | N | N | N | N | sand | moist to wet |
| - | OBGMLP37 | 52-56' | N | N | 90 | 191 | N | N | N | N | N | sand | wet |
| - | OBGMLP37 | 56-60' | N | N | 32 | 19 | N | N | N | N | N | sand to clay | grades to clay Hawthorne |
| - | OBGMLP37 | 60-64' | N | N | 5.9 | 13 | N | N | N | N | N | clay | Hawthorne |
| - | OBGMLP37 | 64-68' | N | N | 2.0 | 4.0 | N | N | N | N | N | clay | sand |
| - | OBGMLP37 | 68-72' | N | N | - | - | N | N | N | N | N | clay | sand |
| - | OBGMLP37 | 72-76' | N | N | 0 | 0 | N | N | N | N | N | sandy clay, clayey sand | sand |
| - | OBGMLP37 | 76-80' | N | N | 1.0 | 3.0 | N | N | N | N | N | clay, sandy/silt | sandy clay w/sandy silt Zn |
| - | OBGMLP37 | 80-84' | N | N | 1.0 | 0 | N | N | N | N | N | sandy silt | chert nodule |
| - | OBGMLP37 | 84-88' | N | N | 0 | 0 | N | N | N | N | N | LS | total depth 86 ft. bls |
| | | | | | | | | | | | | | |
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* - Perimeter MLP only get sample if DNAPL is present

** - Source Well Borings Soil Sample Interval: **5 FEET**

1 - Look for staining, discoloration, or visible DNAPL.

2 - Check core and soil sample for fluorescence using UV lamp.

3 - Put soil in jar, add DI water, shake, look for separation.

4 - Split Jar soil into 2 parts: Add half to funnel, rinse with DI water through filter paper, put rinseate/extract in cetrifuge, run, look for separtion.

4 - Add Dye to other half of soil sample, mix/shake with some DI water, look for Color change - try UV light.

APPENDIX D

# Geotechnical Testing Results
# Characterization Soil Borings
# OBGCB1 and OBGCB2
# Former Thompson Industries Site
# Madison, Florida

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Construction Materials Testing • Threshold Inspection

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(407) 638-0808 Fax (407) 638-0978

June 12, 2000

O'Brien & Gere Companies
7001 N. Atlantic Ave., Suite 202
Cape Canaveral, Fl 32920

Att: Mr. Steve Cook

Reference: Testing of Site Subsoils
ITT Madison Complex
Madison, Florida
Client No.: 32679-002-01C
Report No.: 45502

Dear Mr. Cook:

As requested, a series of laboratory tests were performed on twenty-one (21) bulk soil samples delivered to our laboratory from the above referenced project on April 12, 2000. These tests included sieve analysis, moisture content determination, and permeability testing.

The samples were tested for grain size distribution (classification testing) according to procedures for mechanical sieving as presented in ASTM D422 (Standard Method for Particle Size Analysis of Soils). In part, ASTM D422 requires passing each specimen over a standard set of nested sieves (3/4", 1/2", 3/8", No. 4, No. 10, No. 40, No. 60, No. 100, No. 200). The percentage of soil grains retained on each sieve size are then determined in order to provide the grain size distribution of the sample. This distribution determines the textural nature of the soil sample and aids in evaluating its engineering characteristics. The Soil Gradation Curves from these tests are attached herein.

In addition, the moisture content of each sample was determined according to ASTM D2216 (Test Method for Laboratory Determination of Water (Moisture) Content of Soil, Rock, and Soil Aggregate Mixtures). These moisture content results are shown on the attached Table No.1. Bulk specific gravity and porosity determinations were also requested to be performed; however, the soil samples delivered to our laboratory were too disturbed to obtain this information directly. We understand from discussions with the client that the samples obtained from below a depth of approximately 7 feet below grade should be in a saturated condition. Therefore, using this information and assuming a soil specific gravity of 2.65, the soil dry density and porosity can be approximated by calculation. This data is also included on the attached Table No. 1.

Soil permeability was determined by first remolding each soil sample in a steel tube and then subjecting it to a laboratory constant head permeability test according to the procedures of either ASTM D-2216 or D-5084. The results of these tests are also shown on the enclosed Table No.1.

| Boring Number | Designated Sampling Depth (Feet) | Soil Moisture Content 1) | Approximate Dry Density (Lbs/Cu. Ft.) 2) | Approximate Porosity 2) (%) | Permeability (Cm/sec) 3) |
|---|---|---|---|---|---|
| OBG-CB1 | 5 | 12.8 | - | - | $1.73 \times 10^{-4}$ |
| | 7 | 12.6 | - | - | $2.12 \times 10^{-4}$ |
| | 10.5 | 15 | 118.4 | 28.4 | $3.54 \times 10^{-7}$ |
| | 13 | 20.3 | 107.5 | 35.0 | $3.71 \times 10^{-8}$ |
| | 20 | 14.5 | 119.5 | 27.8 | $2.69 \times 10^{-7}$ |
| | 20.5 | 19.7 | 108.7 | 34.3 | $6.03 \times 10^{-7}$ |
| | 24 | 14.7 | 119.0 | 28.0 | $1.21 \times 10^{-8}$ |
| | 30 | 14.4 | 119.7 | 27.6 | $3.78 \times 10^{-8}$ |
| | 35 | 18.3 | 111.4 | 32.7 | $1.87 \times 10^{-6}$ |
| | 37 | 16.3 | 115.5 | 30.2 | $4.79 \times 10^{-5}$ |
| | 37.5 | 51.0 | 70.3 | 57.5 | $1.13 \times 10^{-8}$ |
| OBG-CB2 | 3.5 | 10.8 | - | - | $1.07 \times 10^{-2}$ |
| | 6 | 11.8 | - | - | $9.76 \times 10^{-5}$ |
| | 10.75 | 22.5 | 103.6 | 37.4 | $7.87 \times 10^{-7}$ |
| | 11 | 14.9 | 118.6 | 28.3 | $1.66 \times 10^{-7}$ |
| | 18.5 | 13.7 | 121.3 | 26.6 | $1.59 \times 10^{-5}$ |
| | 21 | 14.8 | 118.8 | 28.2 | $5.14 \times 10^{-4}$ |
| | 21.5 | 13.5 | 121.8 | 26.3 | $2.04 \times 10^{-7}$ |
| | 27 | 18.7 | 110.6 | 33.1 | $2.01 \times 10^{-8}$ |
| | 39.5 | 18.4 | 111.2 | 32.8 | $1.67 \times 10^{-7}$ |
| | 40 | 30.6 | 91.3 | 44.8 | $1.44 \times 10^{-8}$ |

1) Moisture content by dry weight (As delivered to the laboratory).
2) Assumes a saturated condition and a specific gravity of G=2.65.
3) Samples were remolded at existing moisture content prior to testing.

If any questions concerning this data, or if we can be of further assistance, please contact us.

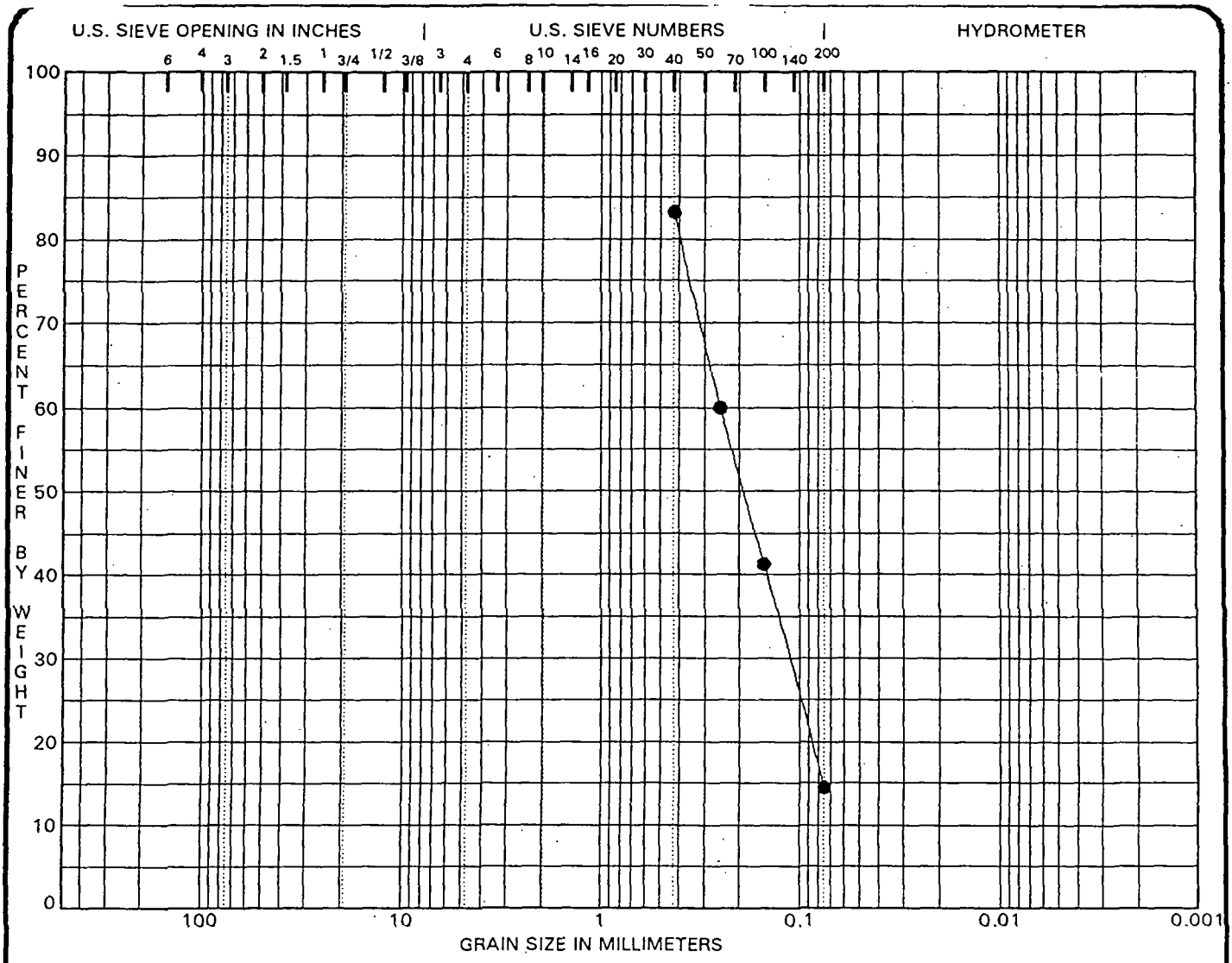
Sincerely,

**UNIVERSAL ENGINEERING SCIENCES, INC.**

Brad Faucett, P.E.
Regional Engineer
Florida Registration No. 32123

6-11-2000

2cc: Client
Attachments




| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| | Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|---|
| ● | P-1 | FINE BROWN CLAYEY SAND (5') SC | | | | | | |

| | Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|---|
| ● | P-1 | | 0.25 | 0.112 | | | | 14.4 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | | | 83.1 | 59.9 | 41.2 | 14.4 |

Client: O'BRIEN & GERE COMPANIES
775 E MERRITT ISLAND CSWY
MERRITT ISLAND FLORIDA 32952

Client No: 32679-002-01
Report No:
Date: 5/23/00

Project: ITT-MADISON
OBG-CB1
MADISON, FLORIDA

## SOIL GRADATION CURVES
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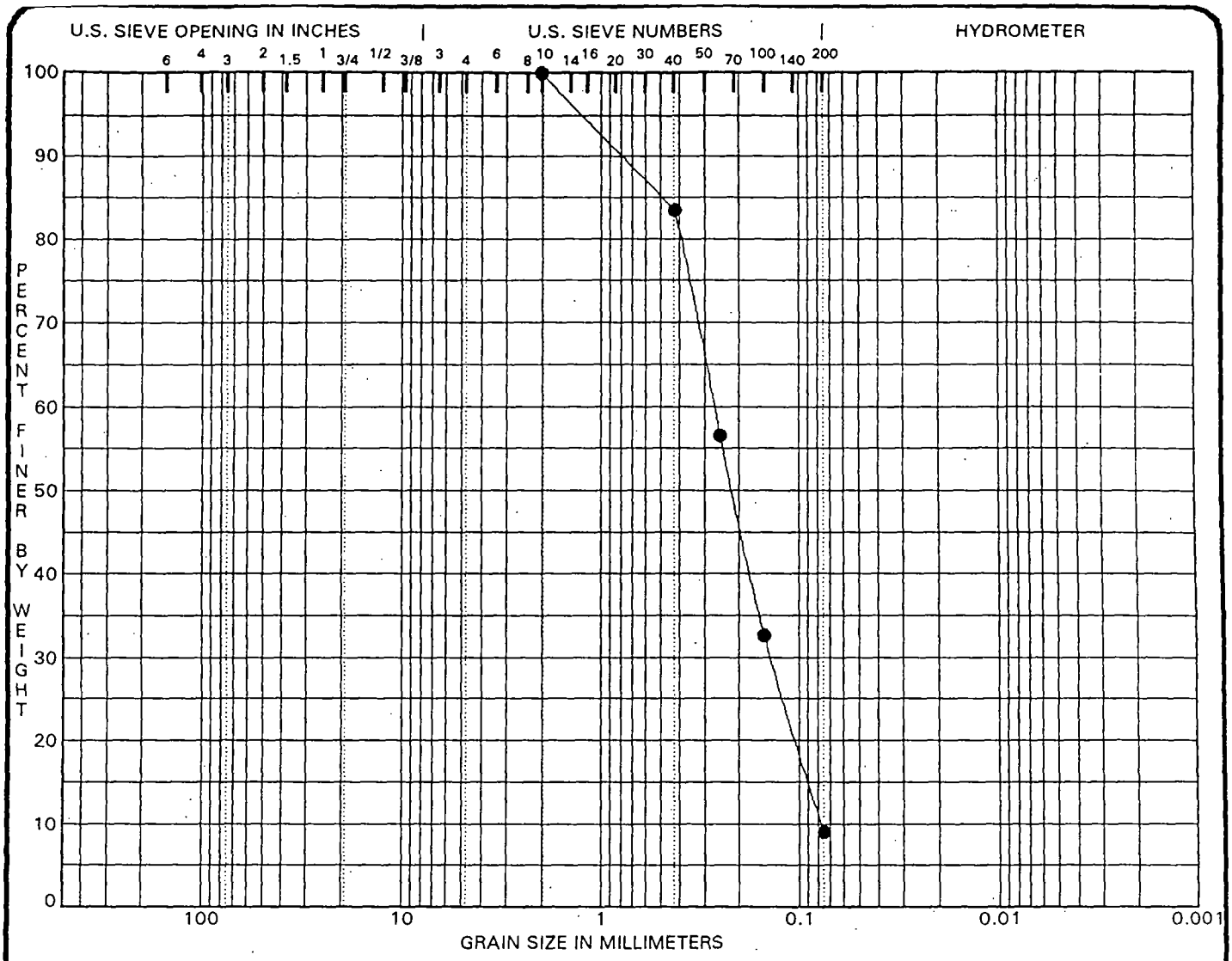
ROCKLEDGE, FLORIDA




| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|
| ● P-2 | FINE BROWN SAND WITH CLAY (7') SP-SC | | | | | 0.93 | 3.5 |

| Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|
| ● P-2 | | 0.27 | 0.139 | 0.0772 | | | 9.0 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | | 99.9 | 83.4 | 56.5 | 32.6 | 9.0 |

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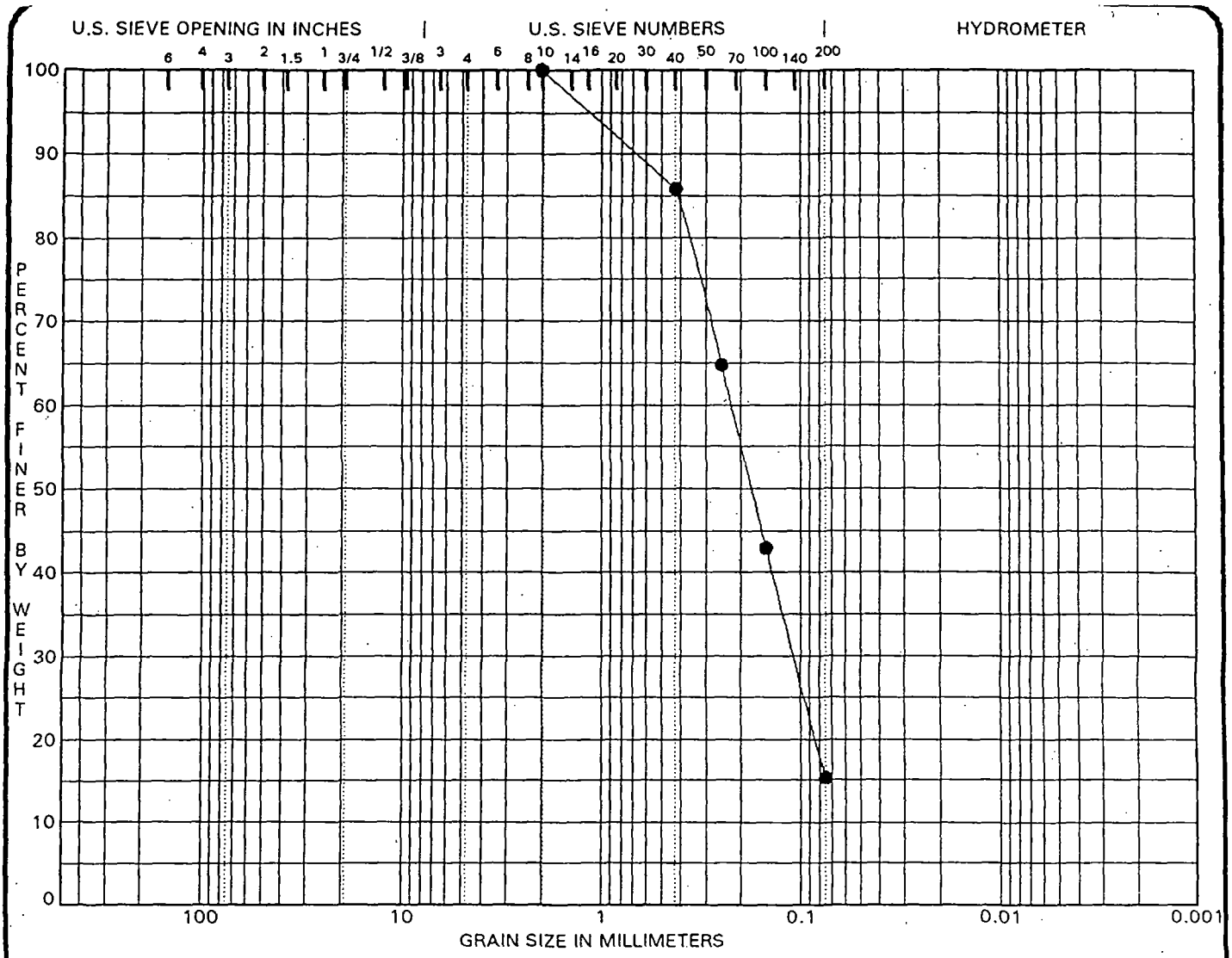


| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|
| ● P-3 | FINE YELLOW CLAYEY SAND (10.5') SC | | | | | | |

| Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|
| ● P-3 | 2.00 | 0.22 | 0.109 | | 0.0 | 84.8 | 15.2 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | | 100.0 | 85.8 | 64.7 | 42.9 | 15.2 |

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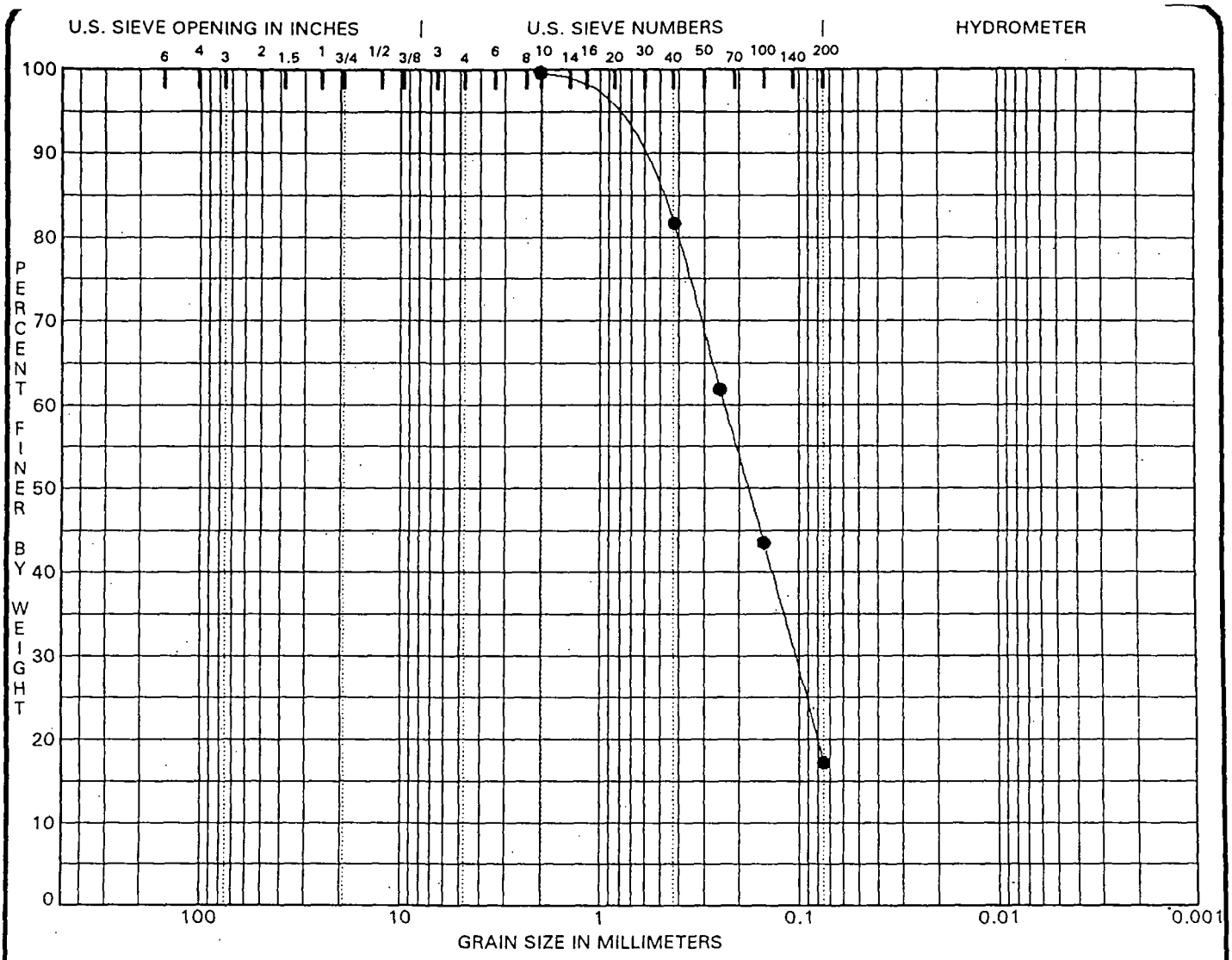


| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|
| ● P-4 | FINE YELLOW/PALE TAN CLAYEY SAND (13') SC | | | | | | |

| Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|
| ● P-4 | | 0.24 | 0.105 | | | | 17.2 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | | 99.6 | 81.6 | 61.8 | 43.5 | 17.2 |

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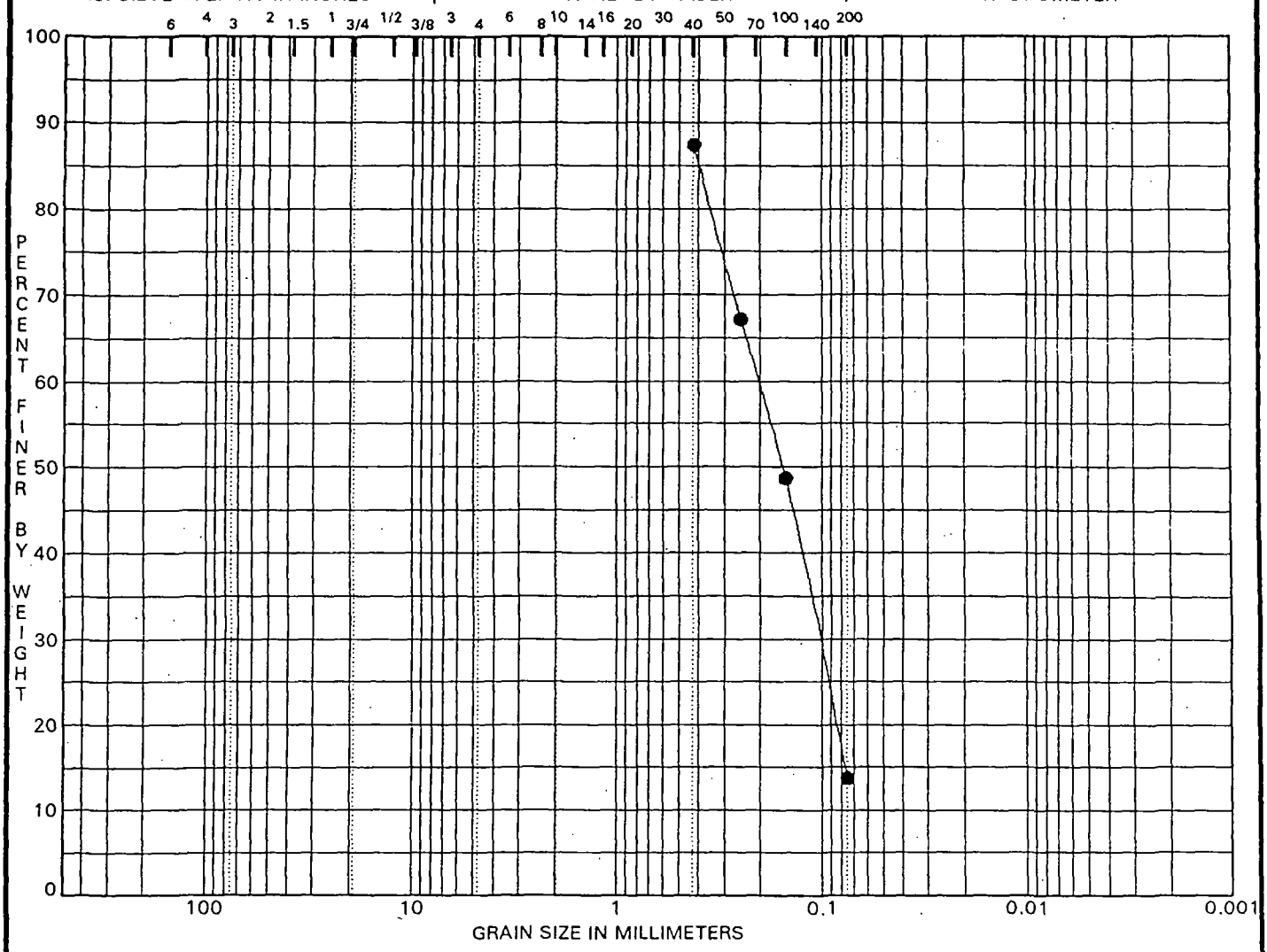


| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|
| ● P-5 | PALE TAN CLAYEY SAND (20') SC | | | | | | |

| Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|
| ● P-5 | | 0.21 | 0.104 | | | | 13.6 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | | | 87.4 | 67.1 | 48.6 | 13.6 |

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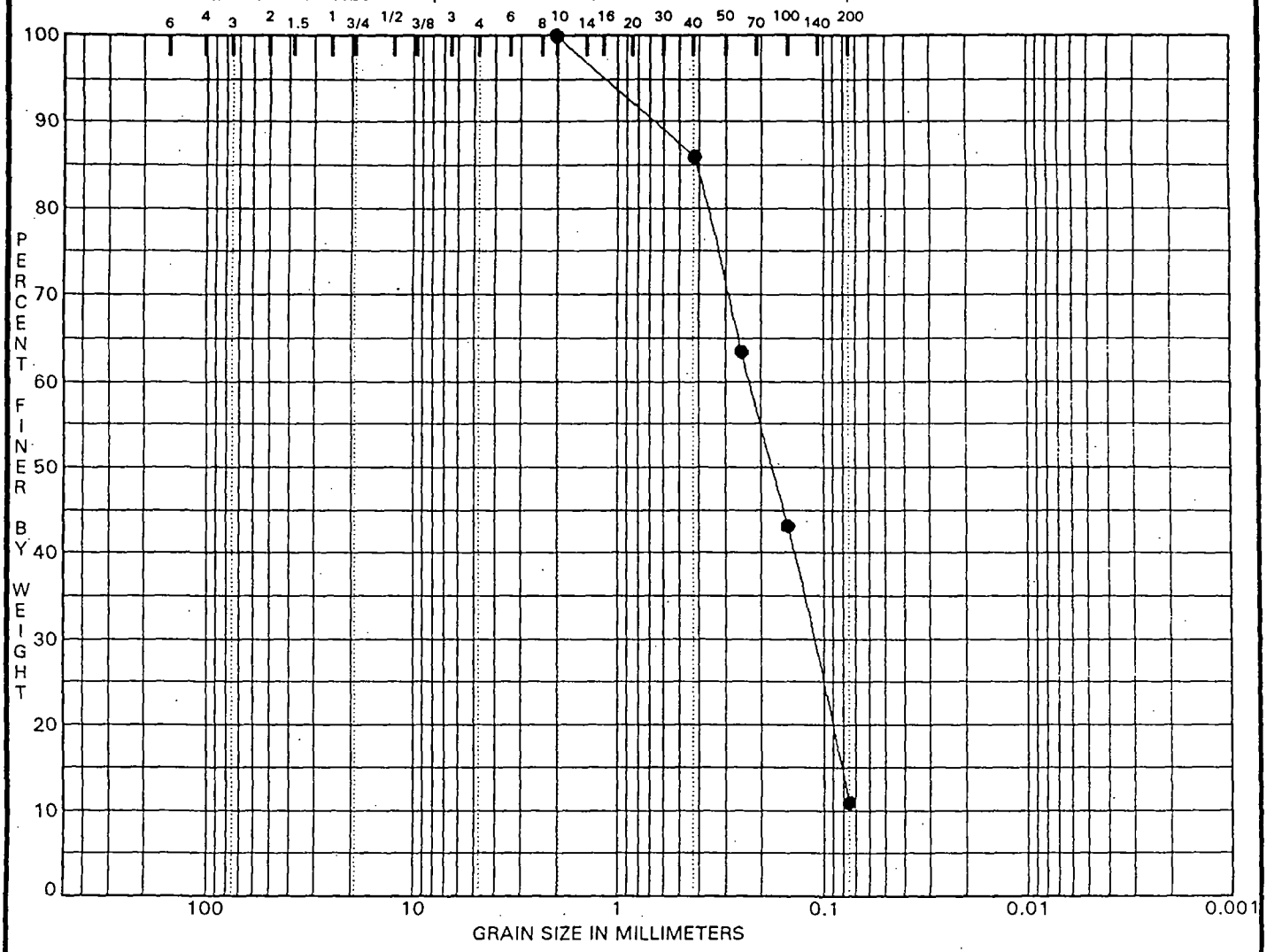


| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|
| ● P-6 | PALE TAN SAND WITH CLAY (20.5') SP-SC | | | | | 0.80 | 3.3 |

| Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|
| ● P-6 | | 0.23 | 0.113 | | | | 10.9 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | | 99.9 | 85.9 | 63.4 | 43.1 | 10.9 |

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## SOIL GRADATION CURVES

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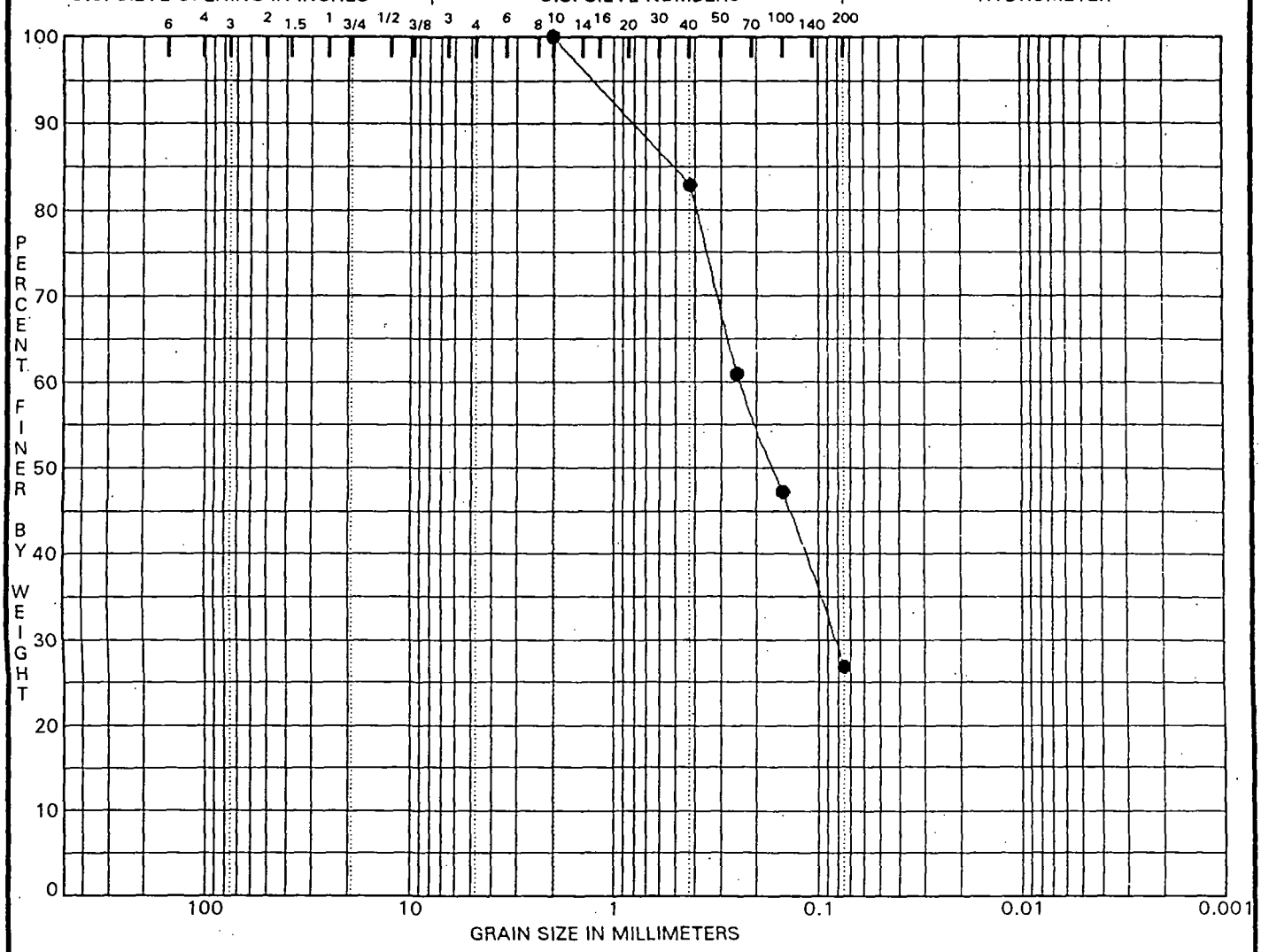


| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| | Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|---|
| ● | P-7 | PALE TAN CLAYEY SAND (24') SC | | | | | | |

| | Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|---|
| ● | P-7 | 2.00 | 0.24 | 0.084 | | 0.0 | 73.2 | 26.8 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | | 100.0 | 82.8 | 60.8 | 47.2 | 26.8 |

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## SOIL GRADATION CURVES

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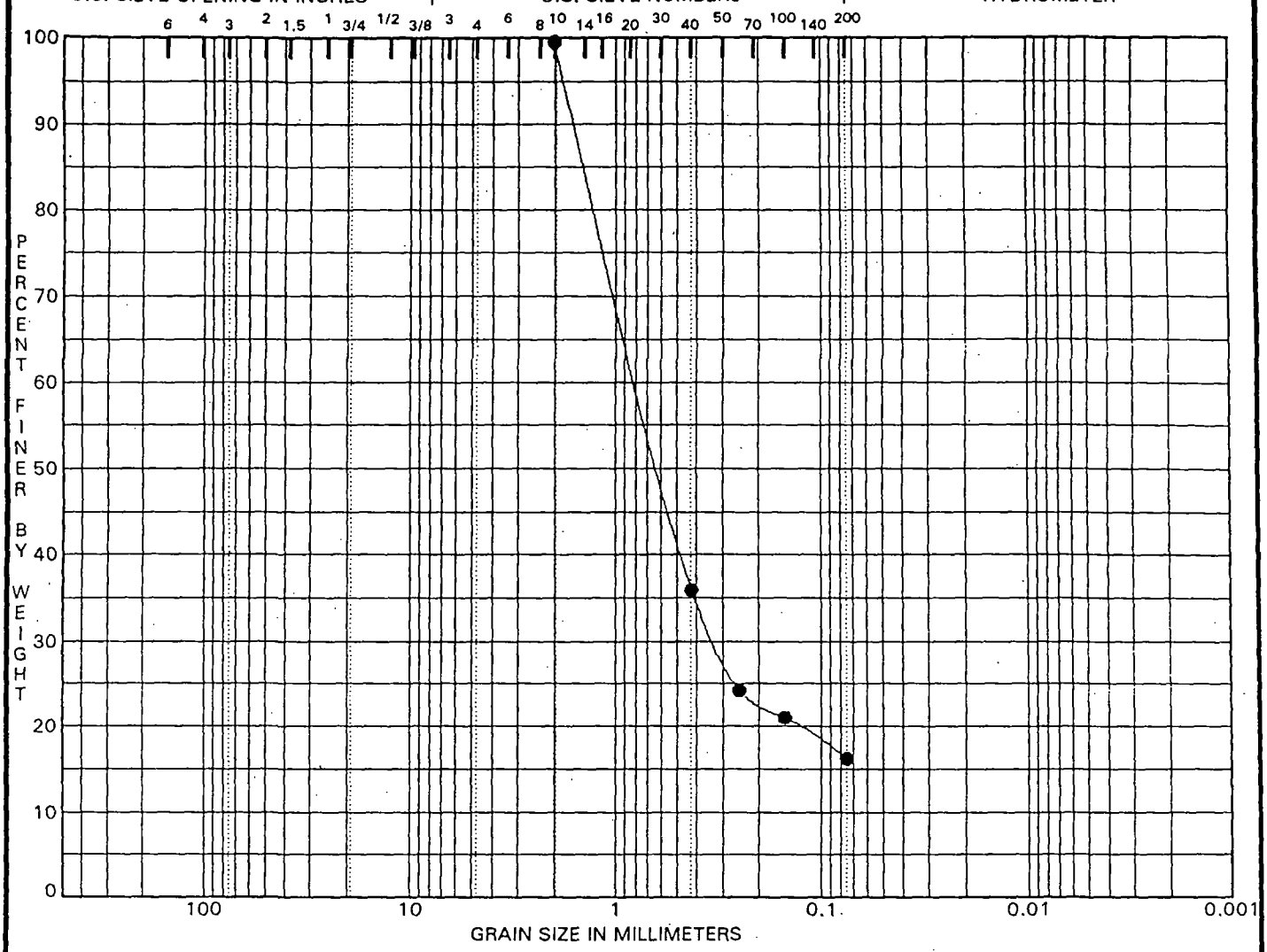


| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|
| ● P-8 | PALE TAN CLAYEY SAND (30') SC | | | | | | |

| Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|
| ● P-8 | | 0.76 | 0.325 | | | | 16.2 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | | 99.5 | 35.9 | 24.2 | 21.0 | 16.2 |

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## SOIL GRADATION CURVES

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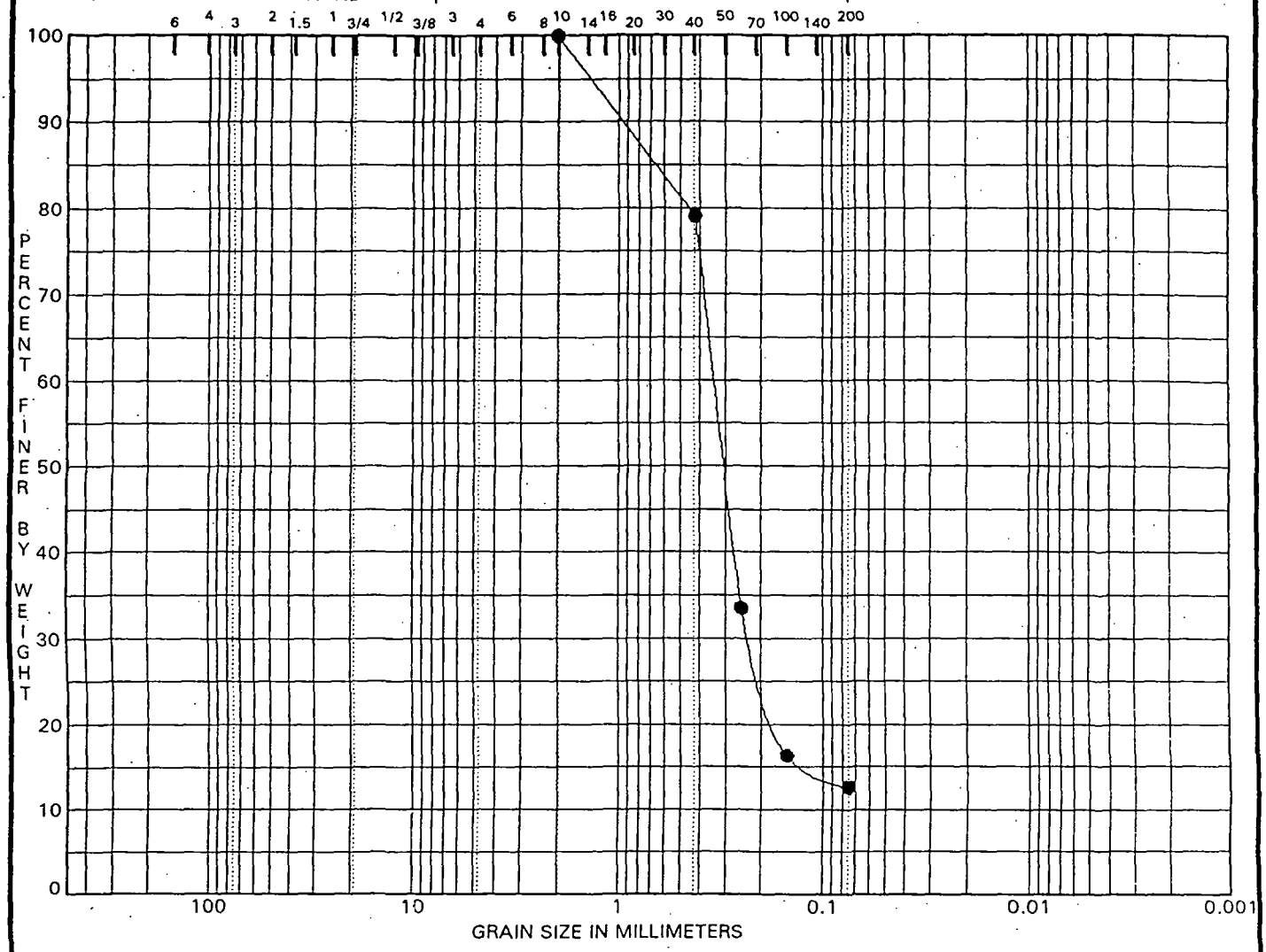


| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|
| ● P-9 | PALE TAN CLAYEY SAND (35') SC | | | | | | |

| Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|
| ● P-9 | | 0.34 | 0.225 | | | | 12.5 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | | 99.9 | 79.0 | 33.5 | 16.3 | 12.5 |

Client: O'BRIEN & GERE COMPANIES
775 E MERRITT ISLAND CSWY
MERRITT ISLAND FLORIDA 32952

Client No: 32679-002-01
Report No:
Date: 5/23/00

Project: ITT-MADISON
OBG-CB1
MADISON, FLORIDA

## SOIL GRADATION CURVES
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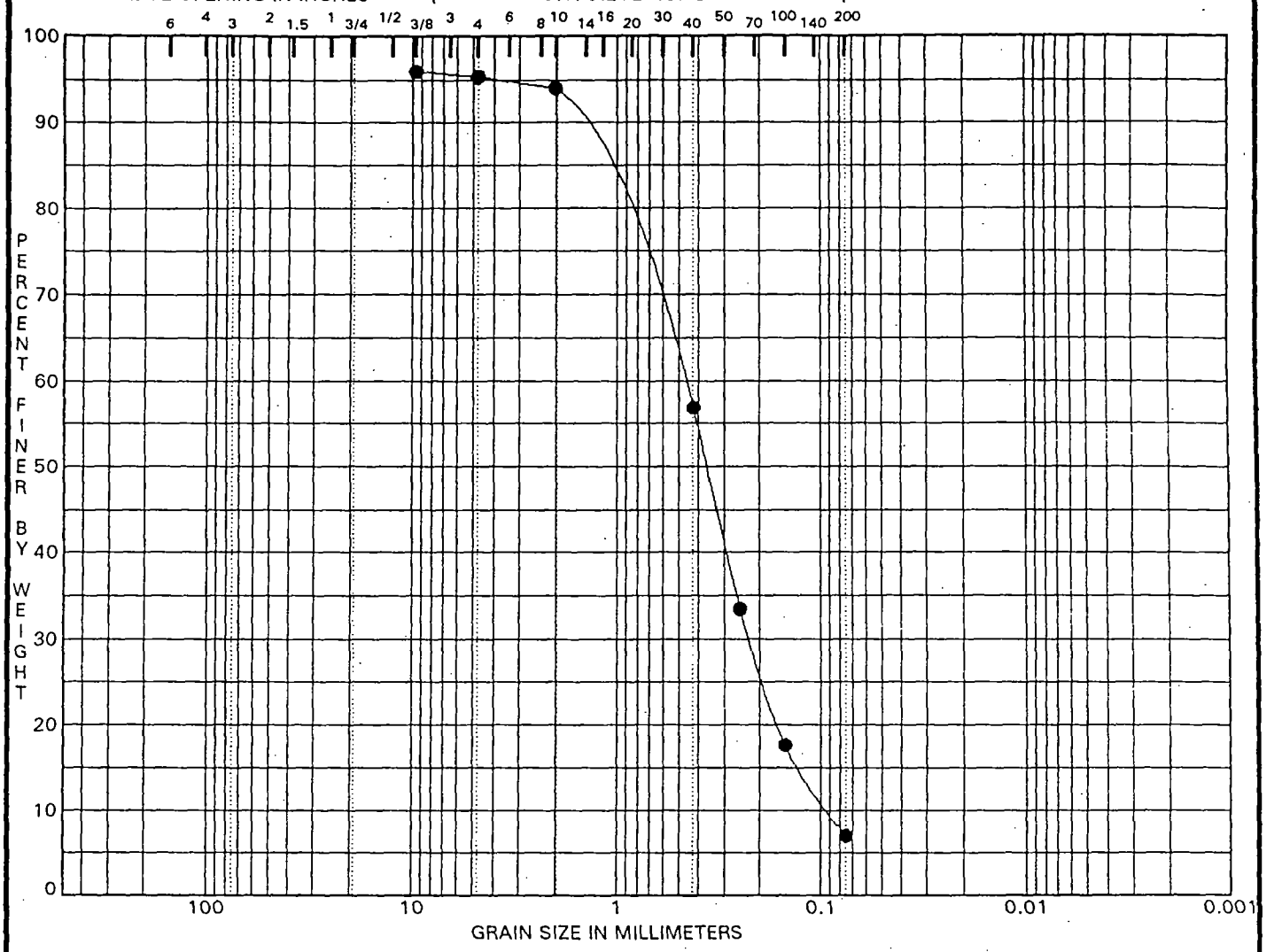
ROCKLEDGE, FLORIDA




| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|
| ● P-10 | PALE TAN SAND WITH CLAY (37') SP-SC | | | | | 1.13 | 5.3 |

| Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|
| ● P-10 | | 0.49 | 0.224 | 0.0913 | | 88.3 | 7.0 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | 95.3 | 94.0 | 56.8 | 33.4 | 17.6 | 7.0 |

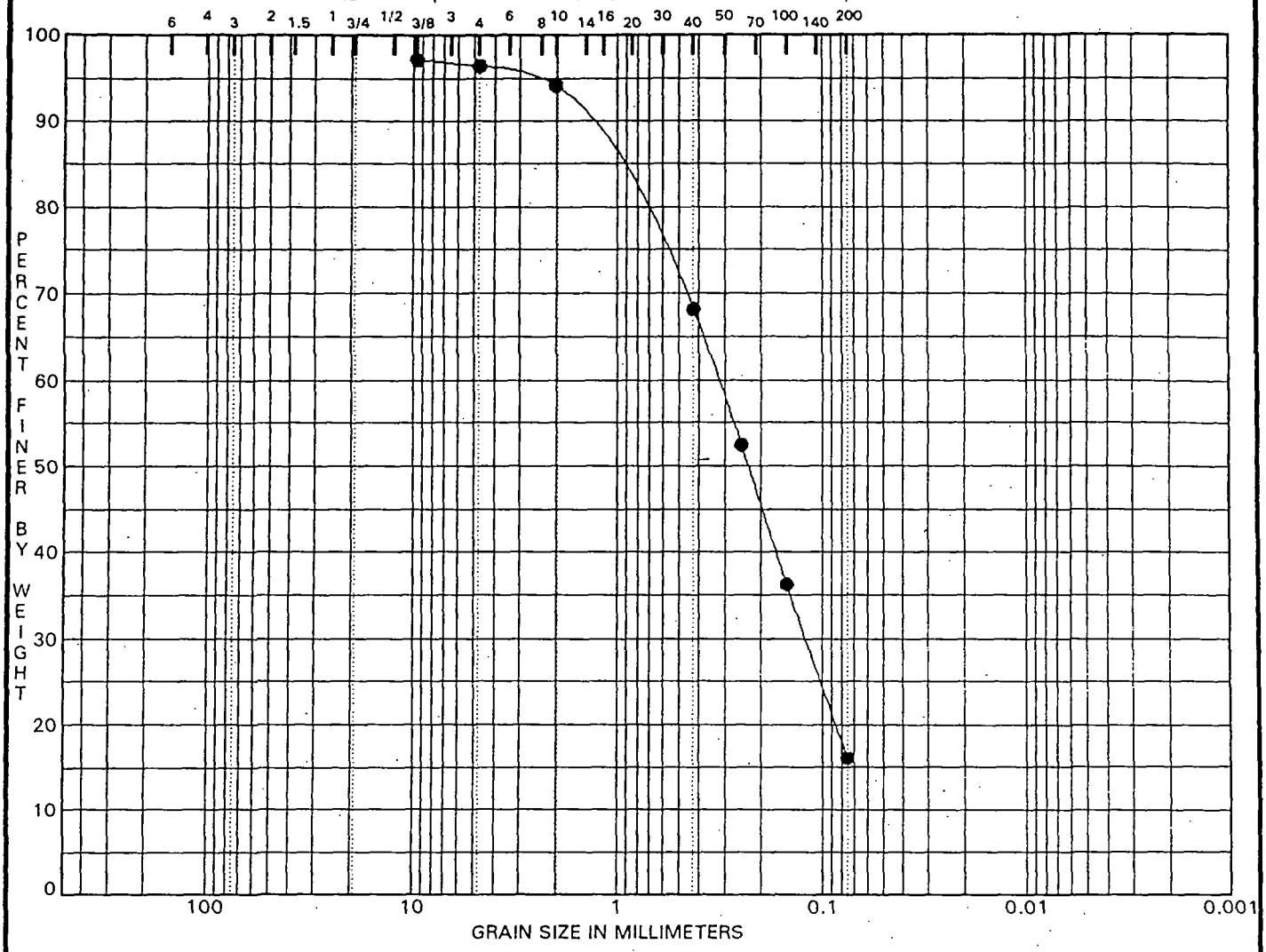
Client: O'BRIEN & GERE COMPANIES
775 E MERRITT ISLAND CSWY
MERRITT ISLAND FLORIDA 32952

Client No: 32679-002-01
Report No:
Date: 5/23/00

Project: ITT-MADISON
OBG-CB1
MADISON, FLORIDA

## SOIL GRADATION CURVES

UNIVERSAL ENGINEERING SCIENCES
ROCKLEDGE, FLORIDA




| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| | Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|---|
| ● | P-11 | FINE YELLOW/PALE TAN CLAYEY SAND (37.5') SC | | | | | | |

| | Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|---|
| ● | P-11 | | 0.32 | 0.121 | | | 80.3 | 16.1 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | 96.4 | 94.1 | 68.1 | 52.4 | 36.2 | 16.1 |

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MERRITT ISLAND FLORIDA 32952

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Project: ITT-MADISON
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## SOIL GRADATION CURVES

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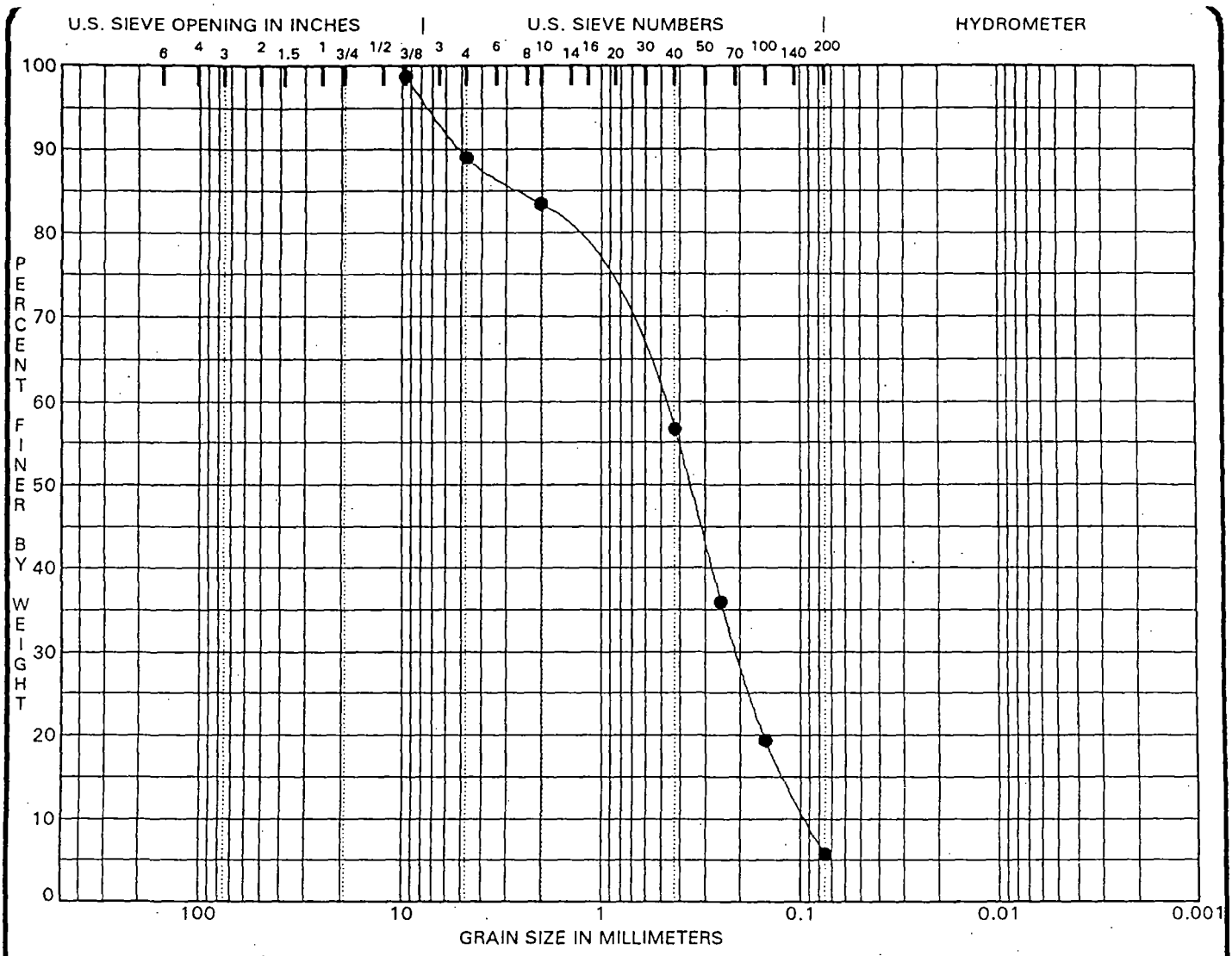


| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|
| ● P-1 | FINE MEDIUM BROWN SAND WITH CLAY, TRACE OF GRAVEL (3.5') SP-SC | | | | | 0.90 | 5.5 |

| Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|
| ● P-1 | | 0.52 | 0.208 | 0.0932 | | 83.3 | 5.7 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | 89.0 | 83.4 | 56.6 | 35.9 | 19.4 | 5.7 |

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MERRITT ISLAND FLORIDA 32952

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Date: 5/23/00

Project: ITT-MADISON
OBG-CB2
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## SOIL GRADATION CURVES

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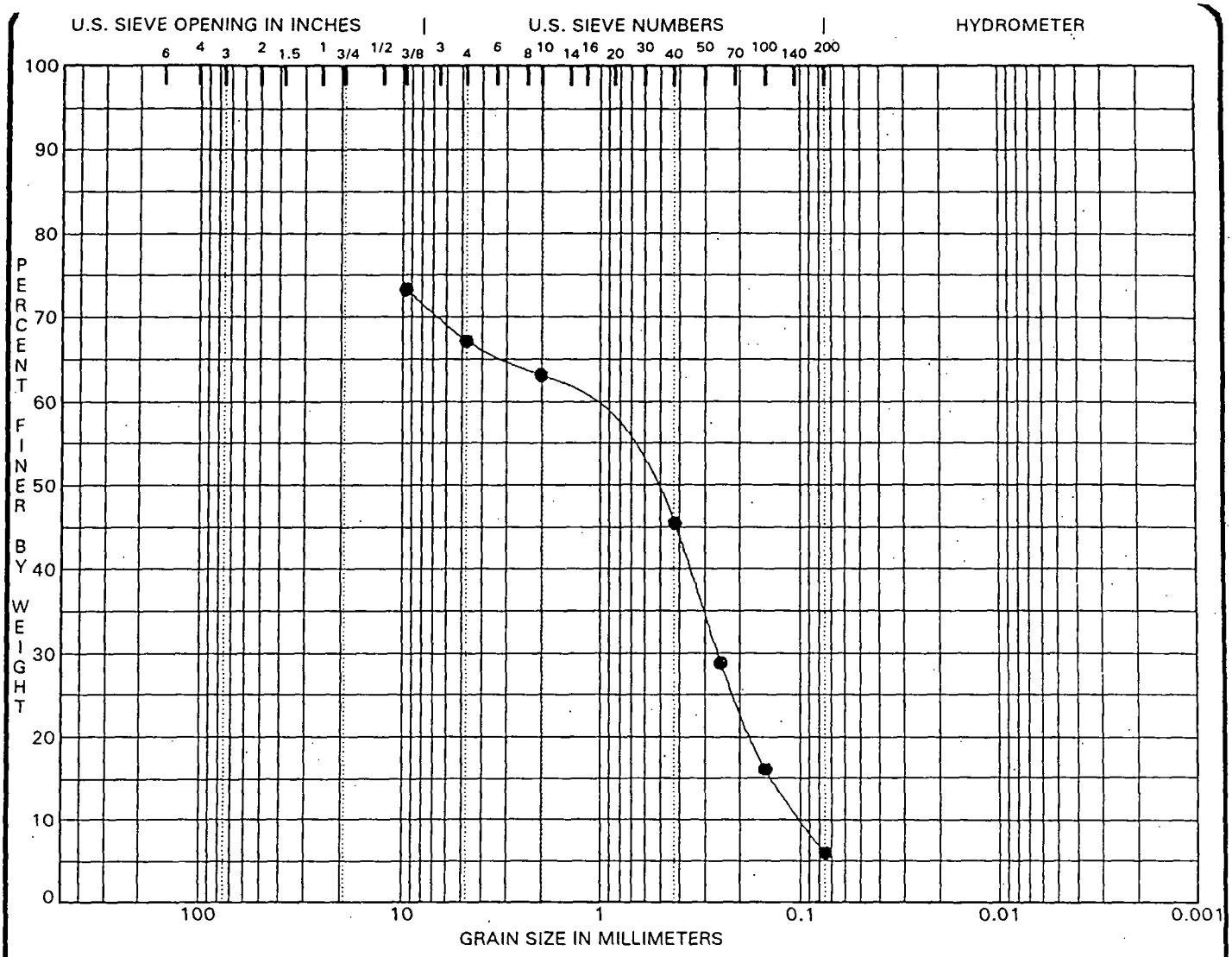


| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|
| ● P-2 | FINE MEDIUM BROWN SAND WITH CLAY, TRACE OF GRAVEL (6') SP-SC | | | | | 0.45 | 15.5 |

| Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|
| ● P-2 | | 1.53 | 0.260 | 0.0987 | | 61.1 | 6.0 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | 67.1 | 63.1 | 45.4 | 28.8 | 16.1 | 6.0 |

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MERRITT ISLAND FLORIDA 32952

Client No: 32679-002-01
Report No:
Date: 5/23/00

Project: ITT-MADISON
OBG-CB2
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## SOIL GRADATION CURVES

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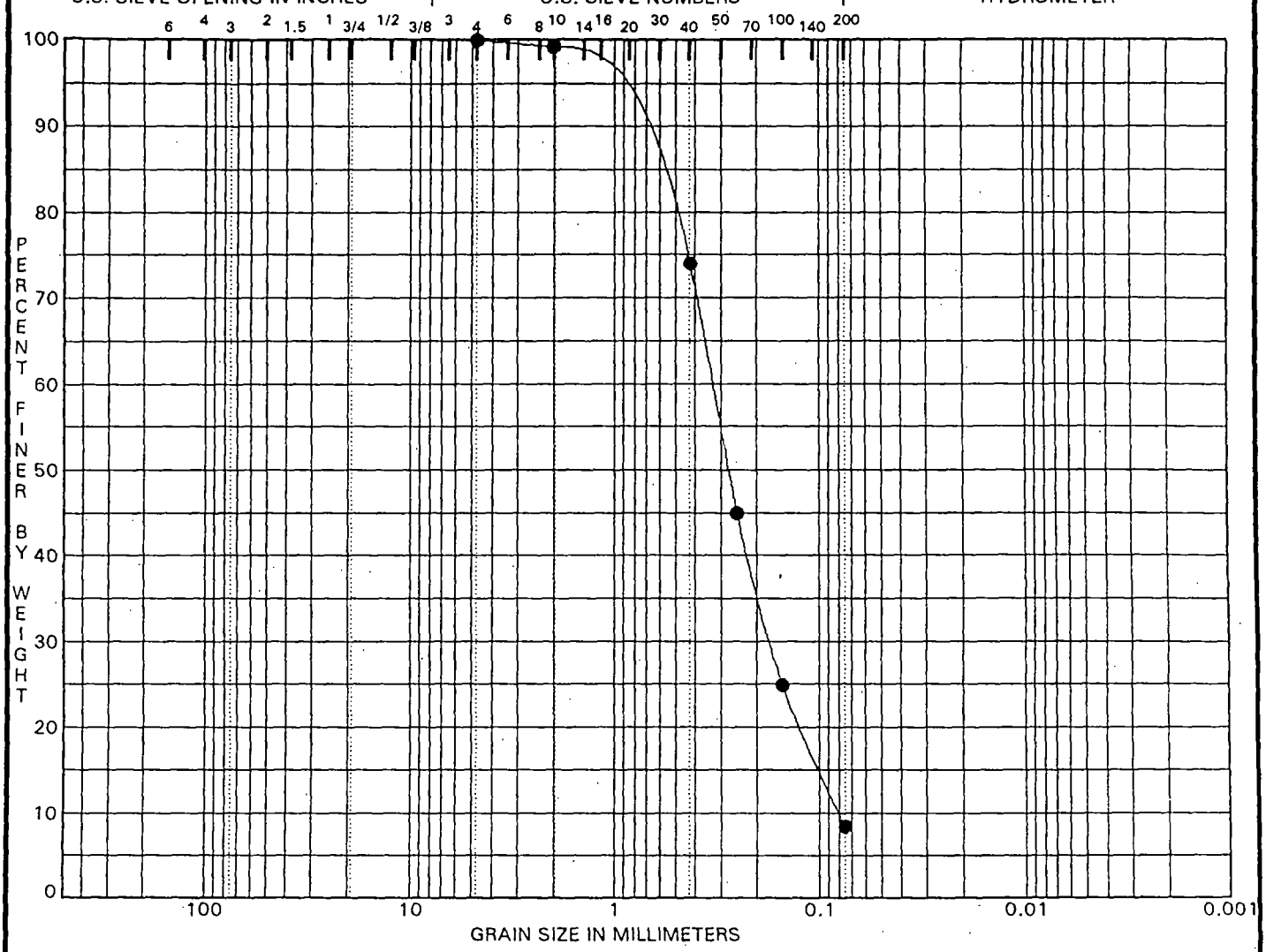
ROCKLEDGE, FLORIDA




| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|
| ● P-3 | FINE MEDIUM GREY SAND WITH CLAY (10.75') SP-SC | | | | | 1.11 | 4.1 |

| Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|
| ● P-3 | | 0.33 | 0.171 | 0.0802 | | 91.5 | 8.4 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | 99.9 | 99.2 | 74.0 | 44.9 | 24.9 | 8.4 |

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Report No:
Date: 5/23/00

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## SOIL GRADATION CURVES

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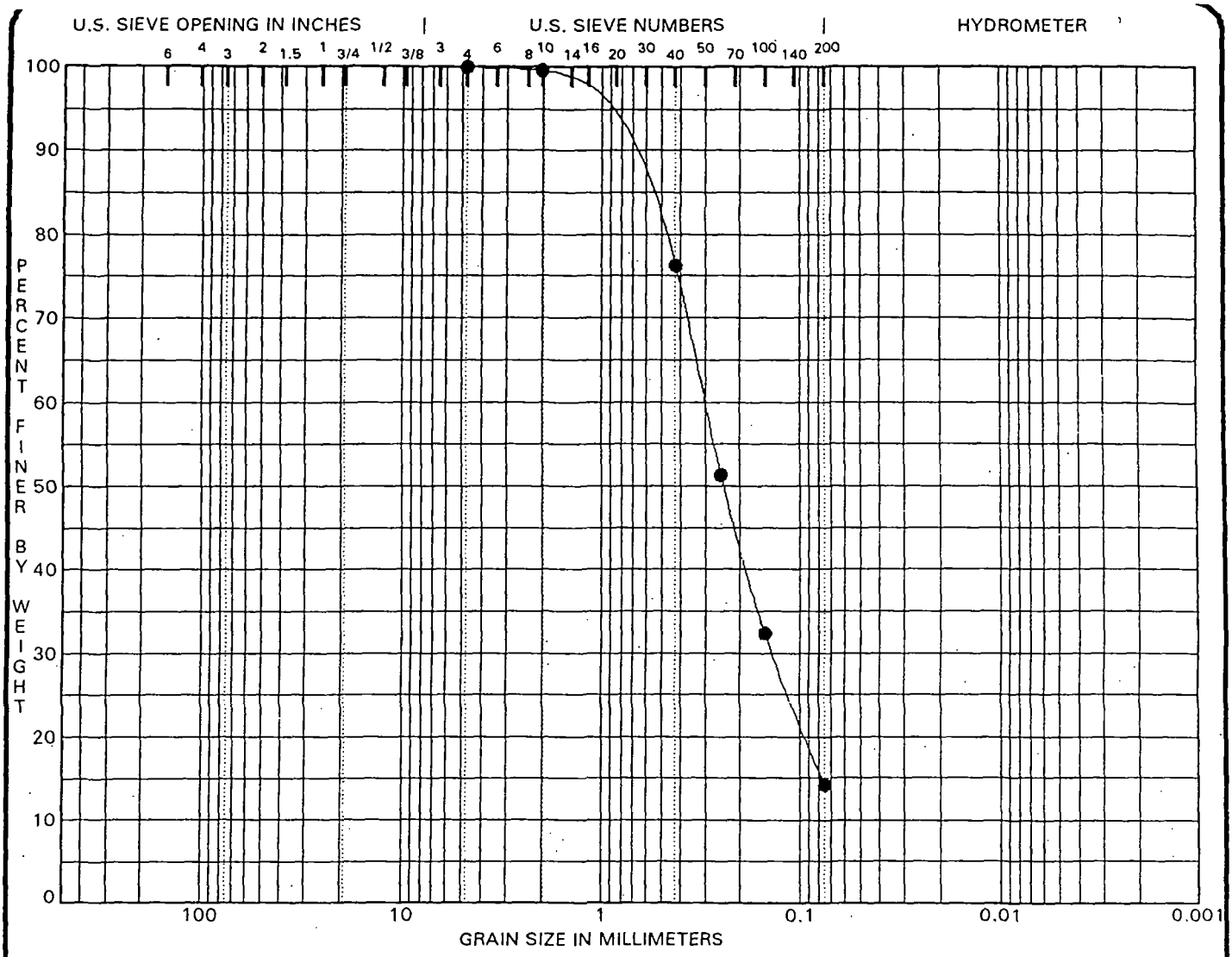


| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|
| ● P-4 | LIGHT GREY CLAYEY SAND (11') SC | | | | | | |

| Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|
| ● P-4 | | 0.30 | 0.137 | | | 85.8 | 14.1 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | 99.9 | 99.5 | 76.2 | 51.3 | 32.3 | 14.1 |

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MERRITT ISLAND FLORIDA 32952

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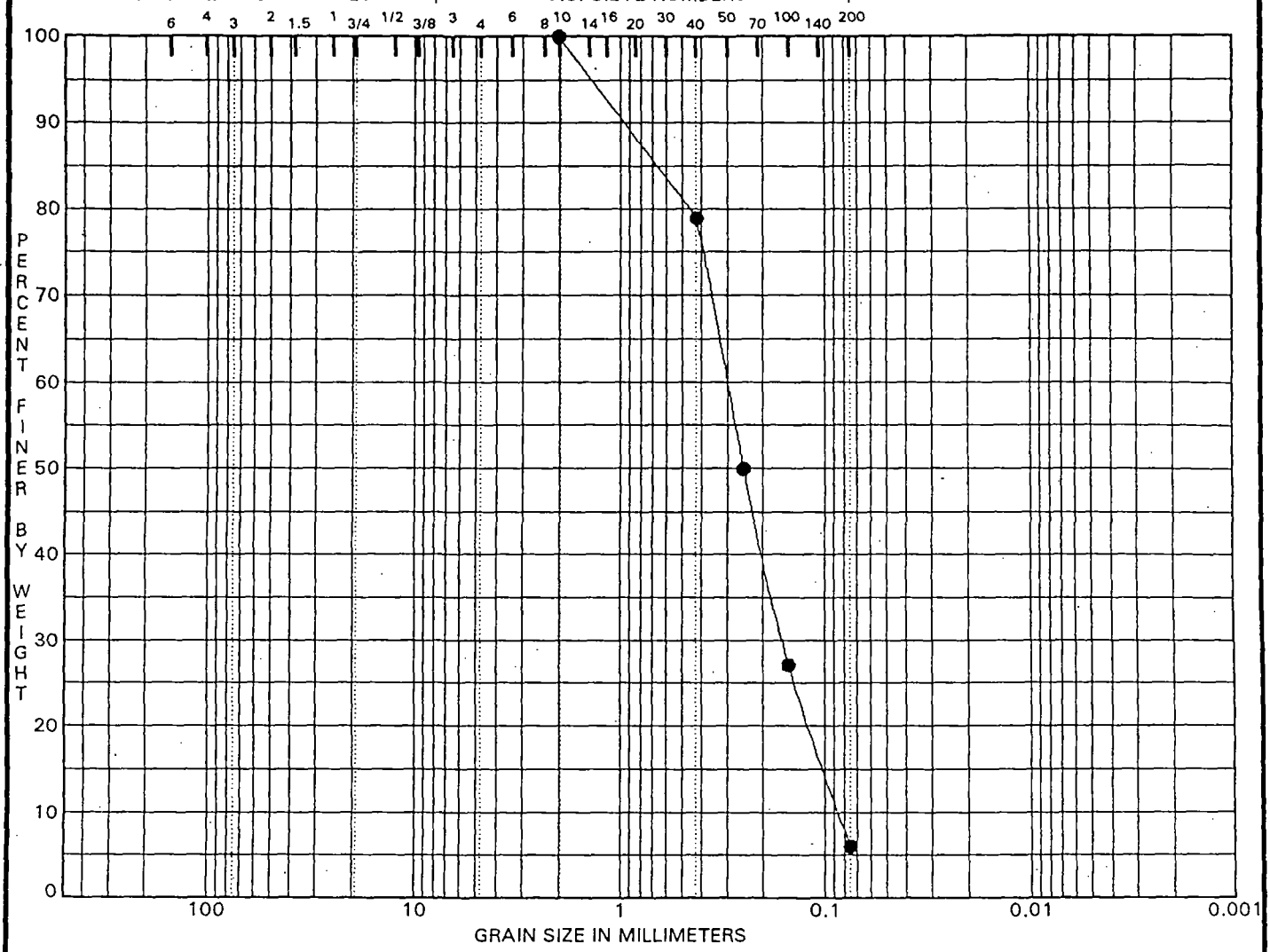
Report No:
Date: 5/23/00

Project: ITT-MADISON
OBG-CB2
*MADISON, FLORIDA*

## SOIL GRADATION CURVES
**UNIVERSAL ENGINEERING SCIENCES**
ROCKLEDGE, FLORIDA




| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|
| ● P-5 | LIGHT BROWN SAND WITH CLAY (18.5') SP-SC | | | | | 1.00 | 3.5 |

| Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|
| ● P-5 | | 0.30 | 0.160 | 0.0855 | | | 6.0 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | | 99.9 | 78.9 | 49.9 | 27.1 | 6.0 |

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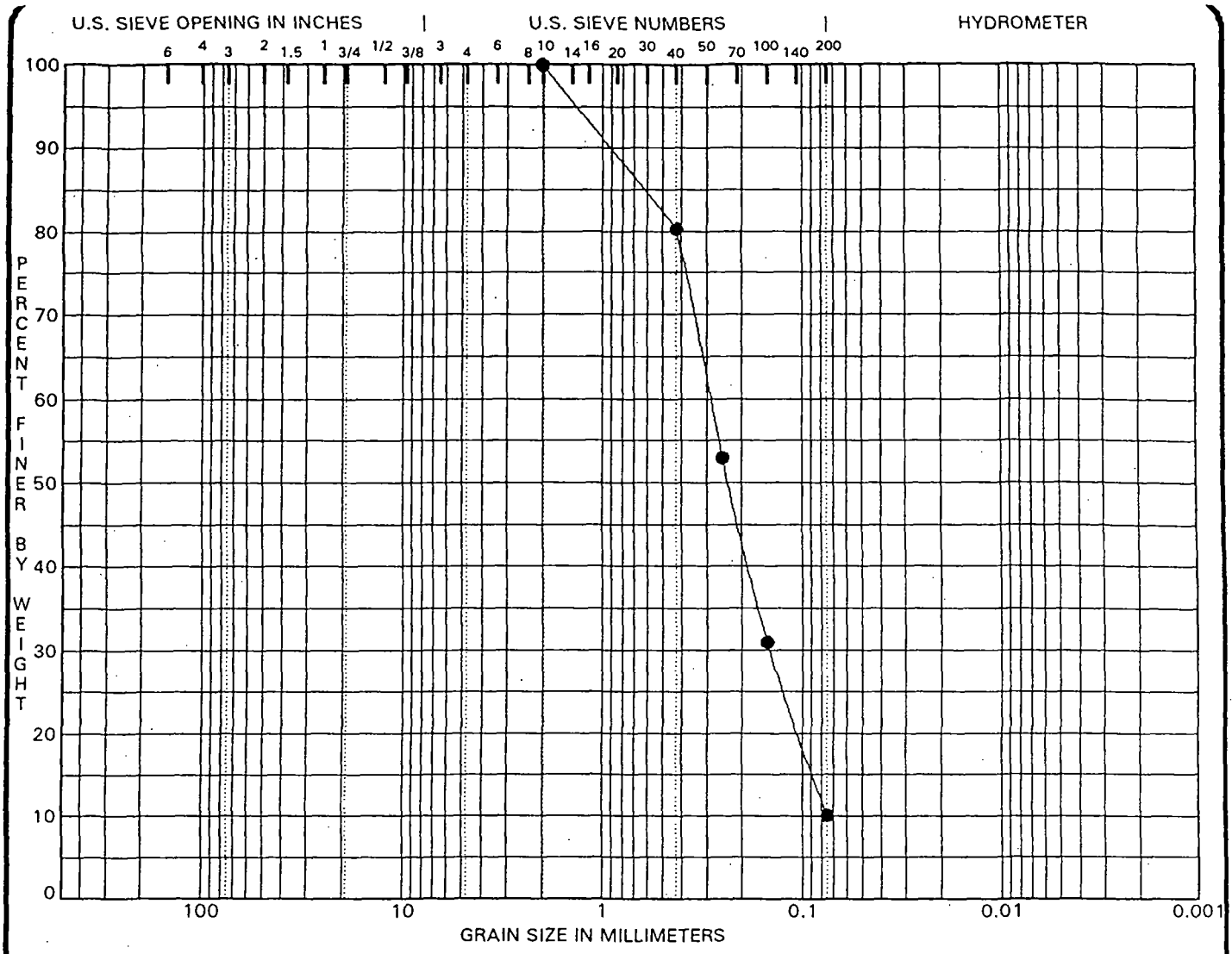
MERRITT ISLAND FLORIDA 32952

Client No: 32679-002-01
Report No:
Date: 5/23/00

Project: ITT-MADISON
OBG-CB2
MADISON, FLORIDA

## SOIL GRADATION CURVES

**UNIVERSAL ENGINEERING SCIENCES**
ROCKLEDGE, FLORIDA




| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|
| ● P-6 | PALE TAN SAND WITH CLAY (21') SP-SC | | | | | 0.98 | 3.8 |

| Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|
| ● P-6 | | 0.29 | 0.146 | 0.0750 | | | 10.0 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | | 99.9 | 80.2 | 52.9 | 30.9 | 10.0 |

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## SOIL GRADATION CURVES

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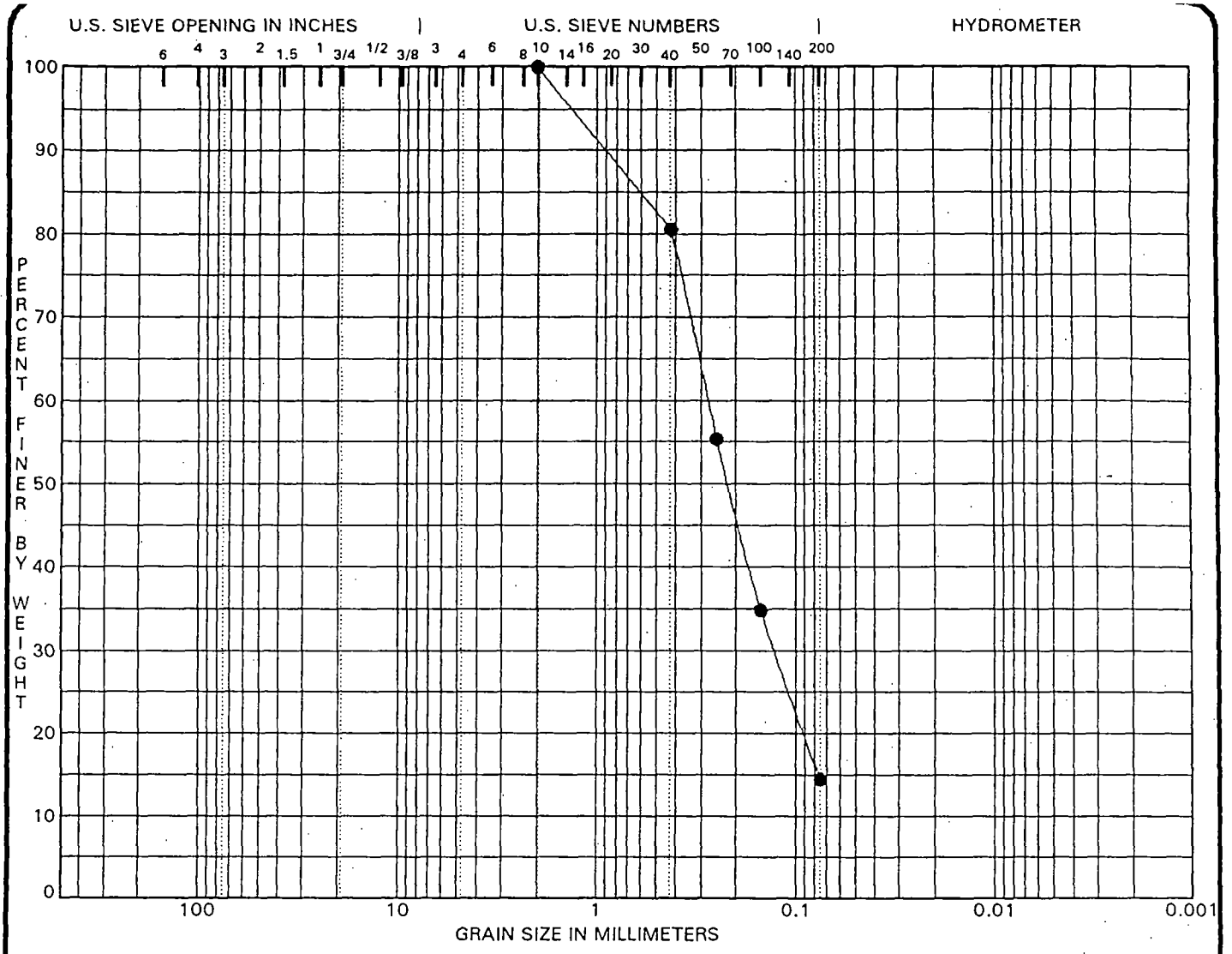


| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|
| ● P-7 | PALE TAN CLAYEY SAND (21.5') SC | | | | | | |

| Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|
| ● P-7 | | 0.28 | 0.127 | | | | 14.4 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | | 99.9 | 80.5 | 55.3 | 34.8 | 14.4 |

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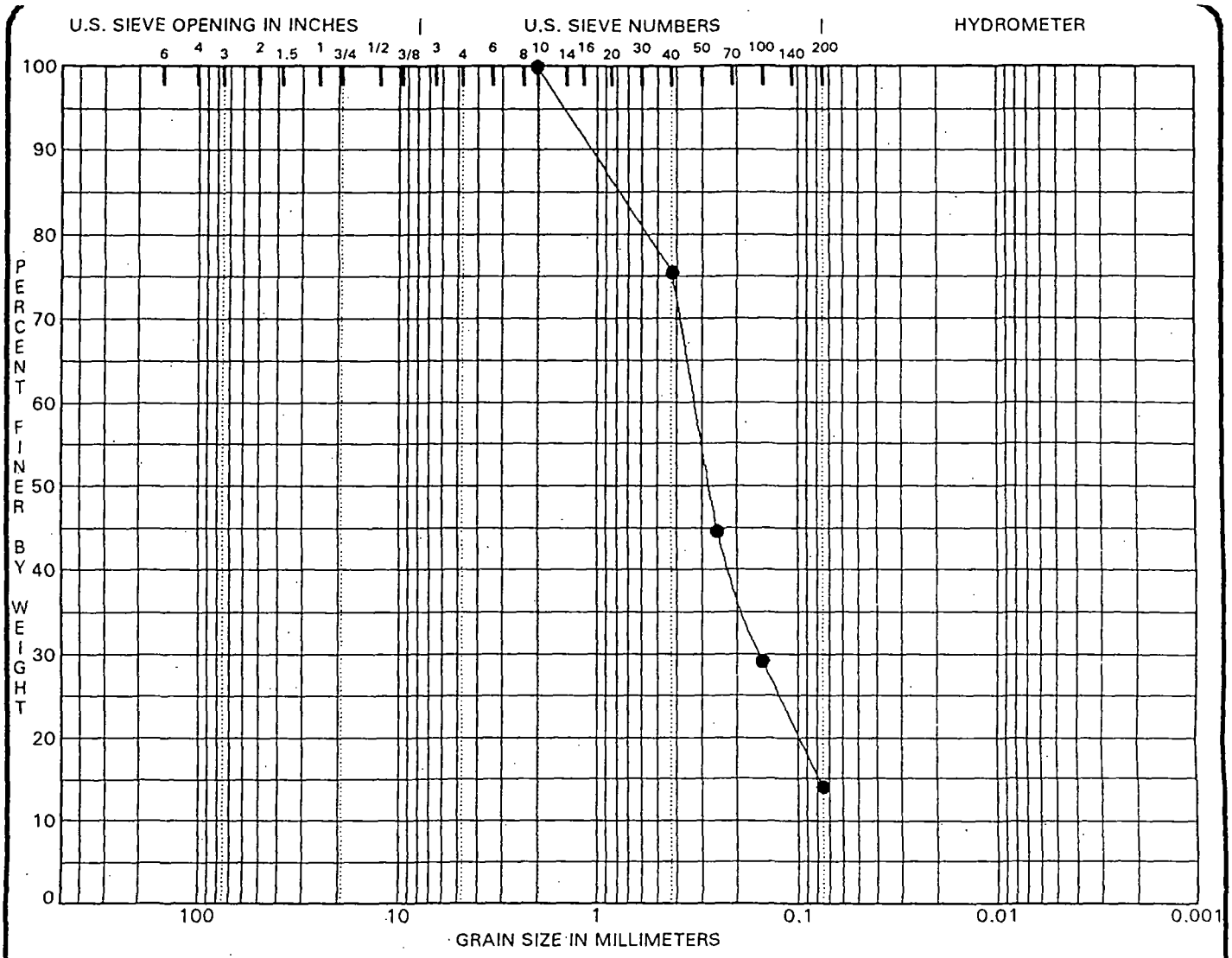


| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|
| ● P-8 | PALE TAN CLAYEY SAND (27') SC | | | | | | |

| Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|
| ● P-8 | | 0.33 | 0.155 | | | | 13.9 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | | 99.9 | 75.4 | 44.5 | 29.1 | 13.9 |

Client: O'BRIEN & GERE COMPANIES
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MERRITT ISLAND FLORIDA 32952

Client No: 32679-002-01
Report No:
Date: 5/23/00

Project: ITT-MADISON
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UNIVERSAL ENGINEERING SCIENCES
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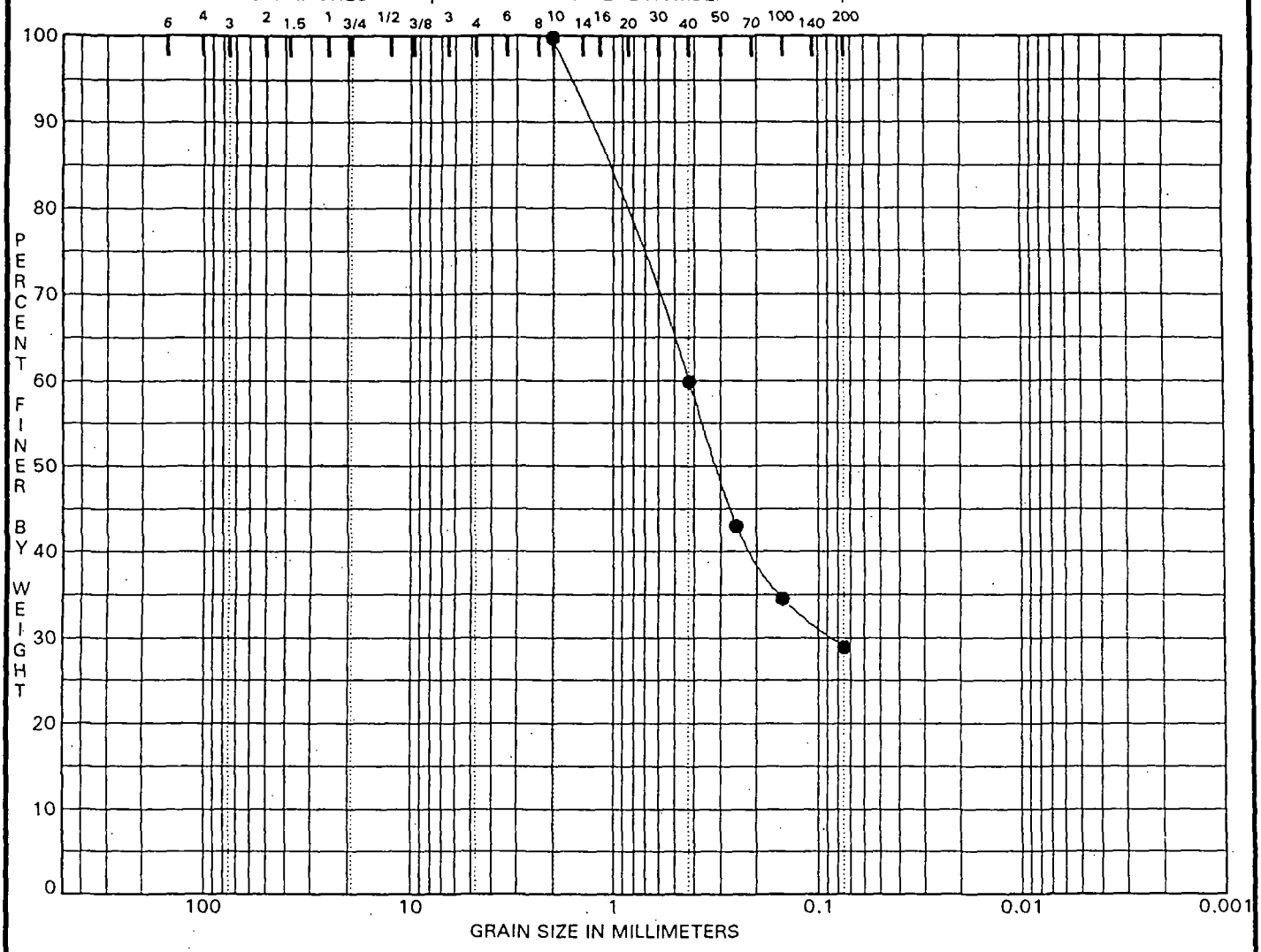


| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|
| ● P-9 | PALE TAN CLAYEY SAND (39.5') SC | | | | | | |

| Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|
| ● P-9 | | 0.43 | 0.086 | | | | 28.9 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | | 99.7 | 59.8 | 42.9 | 34.5 | 28.9 |

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MERRITT ISLAND FLORIDA 32952

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## SOIL GRADATION CURVES

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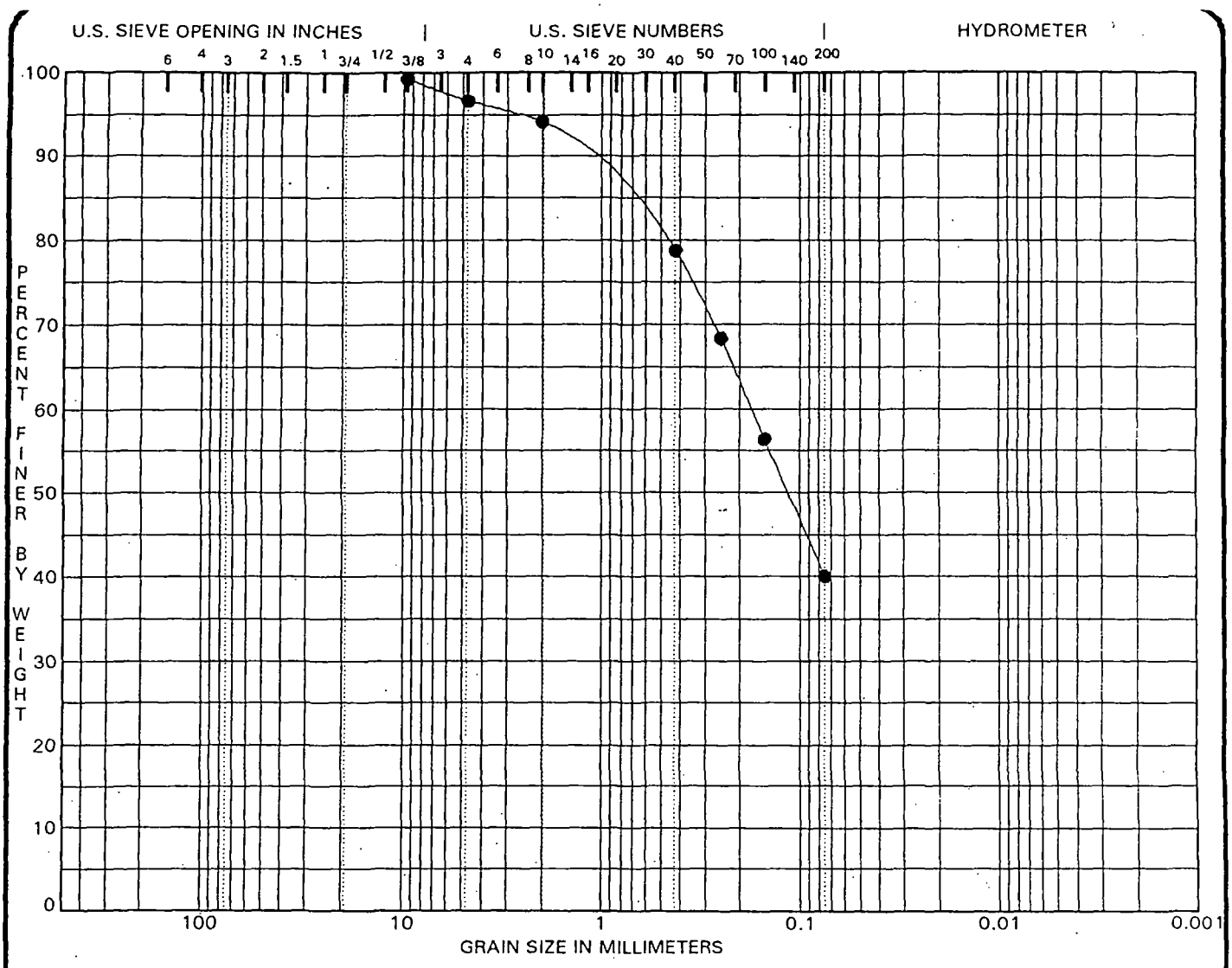


| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| Specimen Identification | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|
| ● P-10 | PALE TAN CLAYEY SAND (40') SC | | | | | | |

| Specimen Identification | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|
| ● P-10 | | 0.18 | | | | 56.6 | 40.0 | |

| 3/4" | 3/8" | NO. 4 | NO. 10 | NO. 40 | NO. 60 | NO. 100 | NO. 200 |
|---|---|---|---|---|---|---|---|
| | | 96.6 | 94.1 | 78.7 | 68.3 | 56.3 | 40.0 |

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MERRITT ISLAND FLORIDA 32952

Client No: 32679-002-01
Report No:
Date: 5/23/00

Project: ITT-MADISON
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MADISON, FLORIDA

## SOIL GRADATION CURVES
UNIVERSAL ENGINEERING SCIENCES
ROCKLEDGE, FLORIDA

APPENDIX E

# Data Validation Report
# Combined Expanded Site Investigation/ Remedial Investigation and Feasibility Studies
# Former Thompson Industries Site
# Madison, Florida

## Soil Samples Collected April 2000

DATA VALIDATION REPORT

# Combined Expanded Site Investigation/Remedial Investigation and Feasibility Studies Former Thompson Industries Site Madison, Florida

Soil Samples Collected April 2000

June 2000

O'BRIEN & GERE
ENGINEERS, INC.

3356/22992

# DATA VALIDATION REPORT

## Combined Expanded Site Investigation/ Remedial Investigation and Feasibility Study Madison, Florida Soil Samples collected April 2000

Swiatoslav W. Kaczmar, Ph.D., C.I.H.
Vice President, Environmental Toxicology
and Industrial Hygiene

O'BRIEN & GERE
ENGINEERS, INC.

**This data validation report was prepared by:**
Karen A. Storne - O'Brien & Gere Engineers, Inc.

**and reviewed by:**
Douglas R. Hahn, PhD - O'Brien & Gere Engineers, Inc.
Stuart J. Spiegel - O'Brien & Gere Engineers, Inc.
Swiatoslav W. Kaczmar, PhD, CIH - O'Brien & Gere Engineers, Inc.

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B. Laboratory case narratives
C. Chain-of-custody forms
D. Raw data. The raw data associated with the sample analysis preformed by STL Tampa East is too voluminous for inclusion in this data validation report. A copy of the raw data is maintained on file at the Offices of O'Brien & Gere Engineers, Inc. and is available for reproduction or for viewing if desired.
E. Letter dated April 7, 2000 from O'Brien & Gere Engineers, Inc. to the United States Environmental Protection Agency concerning chemical oxygen demand (COD) analysis.

# 1. Executive summary

This report addresses data quality for soil samples, field duplicates, and trip blanks collected at the Former Thompson Industries Site located in Madison, Florida as part of the source characterization activities of the Combined Expanded Site Investigation/Remedial Investigation and Feasibility Study (ESI/RI/FS). Sample collection activities were conducted by O'Brien & Gere Engineers, Inc. (O'Brien & Gere) on 4/11/00 and 4/12/00. This report represents a certain portion of the source characterization data collection at the Site. Since data collection tasks are still being conducted, validation reports addressing the additional data will be provided in the future.

The environmental samples, field duplicates, and trip blanks collected for this investigation were analyzed by STL Tampa East (formerly known as Quanterra, Inc.) of Tampa, Florida. Analyses included volatile organic compounds (VOCs) and total organic carbon (TOC) using United States Environmental Protection Agency (USEPA) Methods. The analytical data generated for this investigation were evaluated by O'Brien & Gere using the quality assurance/quality control (QA/QC) criteria established in the USEPA Methods and the Quality Assurance Project Plan for the Combined Expanded Site Investigation/Remedial Investigation and Feasibility Study, Former Thompson Industries Site, Madison, Florida, (O'Brien & Gere 1999) as guidance.

The raw data associated with the sample analysis performed by STL Tampa East is too voluminous for inclusion in this data validation report. A copy of the raw data is maintained on file at the Offices of O'Brien & Gere Engineers, Inc. and is available for reproduction or for viewing if desired.

Data affected by excursions from the QA/QC criteria were qualified based on guidance provided in the following documents:

*USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review (USEPA 1994a).*

*USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Inorganic Data Review (USEPA 1994b)*

# 1. Introduction

## 1.1. Program summary

This report addresses data quality for soil samples, field duplicates, and trip blanks collected at the Former Thompson Industries Site located in Madison, Florida as part of the Combined Expanded Site Investigation/Remedial Investigation and Feasibility Study (ESI/RI/FS). Sample collection activities were conducted by O'Brien & Gere Engineers, Inc. (O'Brien & Gere) on 4/11/00 and 4/12/00. The quantity and types of samples that were collected are presented in Table 1-1a and Table 1-1b below.

**Table 1-1a** *Sample cross reference list*

| Sample Identification | | | | |
|---|---|---|---|---|
| Package Number | Date Collected | Client ID | Laboratory ID | Analysis Requested |
| BOD120119 | 4/11/00 | FTIOBGCB2- 4/11/00-Trip Blank | BOD120119-001 | VOCs |
| BOD120119 | 4/11/00 | FTIOBGCB2-4/11/00-0816-3.5' | BOD120119-002 | TOC |
| BOD120119 | 4/11/00 | FTIOBGCB2-4/11/00-0815-3.5' | BOD120119-003 | VOCs, TOC * |
| BOD120119 | 4/11/00 | FTIOBGCB2-4/11/00-0821-3.6' | BOD120119-004 | TOC |
| BOD120119 | 4/11/00 | FTIOBGCB2-4/11/00-0820-3.6' | BOD120119-005 | VOCs, % Solids |
| BOD120119 | 4/11/00 | FTIOBGCB2-4/11/00-0900-6.0' | BOD120119-006 | VOCs, TOC, % Solids |
| BOD120119 | 4/11/00 | FTIOBGCB2-4/11/00-0940-10.75' | BOD120119-007 | VOCs, TOC, % Solids |
| BOD120119 | 4/11/00 | FTIOBGCB2-4/11/00-0945-11' | BOD120119-008 | VOCs, TOC, % Solids |
| BOD120119 | 4/11/00 | FTIOBGCB2-4/11/00-1020-18.5' | BOD120119-009 | VOCs, TOC, % Solids |
| BOD120119 | 4/11/00 | FTIOBGCB2-4/11/00-1015-20.5' | BOD120119-010 | VOCs, TOC, % Solids |
| BOD120119 | 4/11/00 | FTIOBGCB2-4/11/00-1050-21.5' | BOD120119-011 | VOCs, TOC, % Solids |
| BOD120119 | 4/11/00 | FTIOBGCB2-4/11/00-1130-28' | BOD120119-012 | VOCs, TOC, % Solids |
| BOD120119 | 4/11/00 | FTIOBGCB2-4/11/00-1310-35' | BOD120119-013 | VOCs, TOC, % Solids |
| BOD120119 | 4/11/00 | FTIOBGCB2-4/11/00-1345-39.5', MS, MSD | BOD120119-014 | VOCs, TOC, % Solids |
| BOD120119 | 4/11/00 | FTIOBGCB2-4/11/00-1340-40' | BOD120119-015 | VOCs, TOC, % Solids |
| BOD120119 | 4/11/00 | FTIOBGCB2-4/11/00-1000-DUP1 [FTIOBGCB2-4/11/00-1310-35'] | BOD120119-016 | VOCs, TOC, % Solids |
| BOD130124 | 4/12/00 | FTIOBGCB1-4/12/00-0830-5' | BOD130124-001 | VOCs, TOC, % Solids |
| BOD130124 | 4/12/00 | FTIOBGCB1-4/12/00-0800-DUP [FTIOBGCB1-4/12/00-0900-7'] | BOD130124-002 | VOCs, TOC, % Solids |
| BOD130124 | 4/12/00 | FTIOBGCB1-4/12/00-0900-7' | BOD130124-003 | VOCs, TOC, % Solids |
| BOD130124 | 4/12/00 | FTIOBGCB1-4/12/00-0930-13' | BOD130124-004 | VOCs, TOC, % Solids |
| BOD130124 | 4/12/00 | FTIOBGCB1-4/12/00-0945-10.5' | BOD130124-005 | VOCs, TOC, % Solids |
| BOD130124 | 4/12/00 | FTIOBGCB1-4/12/00-1000-20' | BOD130124-006 | VOCs, TOC, % Solids |
| BOD130124 | 4/12/00 | FTIOBGCB1-4/12/00-1040-24' | BOD130124-007 | VOCs, TOC, % Solids |
| BOD130124 | 4/12/00 | FTIOBGCB1-4/12/00-1045-21' | BOD130124-008 | VOCs, TOC, % Solids |
| BOD130124 | 4/12/00 | FTIOBGCB1-4/12/00-1055-21.5' | BOD130124-009 | VOCs, TOC, % Solids |
| BOD130124 | 4/12/00 | FTIOBGCB1-4/12/00-1140-30' | BOD130124-010 | VOCs, TOC, % Solids |
| BOD130124 | 4/12/00 | FTIOBGCB1-4/12/00-1150-26' | BOD130124-011 | VOCs, TOC, % Solids |
| BOD130124 | 4/12/00 | FTIOBGCB1-4/12/00-1246-35' | BOD130124-012 | VOCs, TOC, % Solids |
| BOD130124 | 4/12/00 | FTIOBGCB1-4/12/00-1315-37' | BOD130124-013 | VOCs, TOC, % Solids |
| BOD130124 | 4/12/00 | FTIOBGCB1-4/12/00-1325-37.5' | BOD130124-014 | VOCs, TOC, % Solids |
| BOD130124 | 4/12/00 | FTIOBGCB1-4/12/00-Trip Blank | BOD130124-015 | VOCs |

## 1.2. Data validated protocols

### 1.2.1. Definition

Validation is a process of determining the suitability of a measurement system for providing useful analytical data. Data validation is essentially a three-step process in which the analytical data's quality assurance/quality control (QA/QC) information is first compared to a series of QA/QC criteria. Based on the results of this comparison, the analytical data are then assigned qualifiers, which provide an indication of the data's usability. Finally, an overall evaluation of the data's usability is performed. These three steps are described in the following sections.

### 1.2.2. Comparison to QA/QC criteria

In this validation, the analytical data's QA/QC information was compared to the applicable QA/QC criteria provided in the following documents:

- USEPA. 1996. Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW-846), 3rd Edition. Washington, D.C., 1986 as updated through December 1996.

- USEPA. 1983. Methods for Chemical Analysis of Water and Wastes, Revised March 1983, EPA-600/4-79-020, Washington, D.C.

- O'Brien & Gere Engineers, Inc. 1999. Quality Assurance Project Plan for the Combined Expanded Site Investigation/Remedial Investigation and Feasibility Study, Former Thompson Industries Site, Madison, Florida (QAPP).

Full QA/QC information review was performed for 50% of the soil samples. Full review consists of a review of data summary forms and raw analytical data that were provided in the deliverables data packages. Partial QA/QC information review was performed for the remaining environmental samples. Partial review consists of a review of the data summary forms as described below. The following QA/QC information was included in the review for organic and inorganic analyses where applicable:

- holding times, sample preservation and percentage solids (full and partial validation)
- calibrations (full validation)
- blank analysis (full and partial validation)
- matrix spike/matrix spike duplicates (MS/MSDs) (full and partial validation)
- laboratory control sample (LCS) analysis (full and partial validation)
- field duplicate analysis (full and partial validation)
- surrogate recovery (organics) (full and partial validation)

method control procedures, including performing appropriate cleanup techniques.

In accordance with the USEPA guidance, and utilizing professional judgement, the following qualifiers are used in this data validation:

"U" Indicates that the analyte was analyzed for, but was not detected. The sample quantitation limit is presented. This qualifier is also used in the validation process to signify that the detection limit of an analyte was raised due to blank contamination.

"J" Indicates that the result should be considered approximate. This qualifier is used when the data validation process identifies a deficiency in the data generation process. This qualifier is also applied by the laboratory when the analyte concentration was greater than the method detection limit (MDL) but less than the reporting limit (RL). This qualifier indicates that the presence of the analyte is confirmed but that unqualified quantitation of the concentration was not achieved.

"UJ" Indicates that the analyte was analyzed for, but was not detected. The sample quantitation limit is presented, and should be considered approximate. This qualifier is used when the data validation process identifies a deficiency in the data generation process.

The following guidelines are used regarding the assignment of qualifiers and the use of qualified data:

- The data quality evaluation results in only one qualifier for each analyte; in a case when several qualifiers are applicable to the same analyte, the cumulative effect of the various QA/QC excursions is employed in assigning the final data qualifiers.

- QA/QC excursions which do not result in the qualification of an analyte, or which result in additional qualification of data previously qualified, are not discussed.

The table presented in Appendix A lists samples qualified as a result of the data validation process previously described. Footnotes applied to each qualifier define the type of excursion that affected the sample result, resulting in the qualification of the data. Footnotes are defined as follows:

*Table 1-2. Footnote definitions*

| *Footnote* | *Type of excursion* |
|---|---|
| 1 | target analyte identification |
| 4 | MS/MSDs |
| 5 | LCS analysis |
| 6 | blank analysis |
| 12 | target analyte quantitation |

Solid (soil) samples collected 4/11/00 and 4/12/00 were submitted to the laboratory for chemical oxygen demand (COD) analysis. The request for this analysis was cancelled by the Project Manager on 4/12/00. A copy of the letter dated April 7, 2000 from Steve Cook of O'Brien & Gere to Randa Chichakli of USEPA pertaining to the COD analysis is presented in Appendix E.

**Table 1-3.** *Analytical method references*

| Parameter | Method | Reference |
|---|---|---|
| VOCs | USEPA Methods 5020B/3035/8260B | 1 |
| TOC | USEPA Method 9060 | 1 |
| Percentage solids | USEPA Method 160.3 | 2 |

Note:
1 – USEPA. 1996 Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW-846), 3rd Edition. Washington, D.C. 1986 as updated through December 1996.
2 – USEPA. 1983. *Methods for Chemical Analysis Of Water and Wastes,* Revised March 1983, EPA-600/4-79-020, Washington, D.C.

VOC indicates volatile organic compounds
TOC indicates total organic carbon.

The following chapters of this document address distinctive aspects of the validation process. Specific QA/QC excursions and qualifications performed on the sample data are discussed in Section 2. Data completeness and usability are discussed in Section 3.

The qualified analytical results generated by this validation are presented in Appendix A. Footnotes describing the types of excursions detected during the validation process are included in the tables. Appendix B presents the laboratory case narratives. Appendix C presents the chain-of-custody forms. Appendix E presents a letter dated April 7, 2000 from O'Brien & Gere Engineers, Inc. to the United States Environmental Protection Agency concerning chemical oxygen demand (COD) analysis.

The raw data (Appendix D) associated with the sample analysis preformed by STL Tampa East is too voluminous for inclusion in this data validation report. A copy of the raw data is maintained on file at the Offices of O'Brien & Gere Engineers, Inc. and is available for reproduction or for viewing if desired.

# 2. Data quality evaluation

This section presents the results of the comparison of the analytical data to the QA/QC criteria specified in Section 1.2.2, and the qualifiers assigned to the data when the QA/QC criteria were not met. Samples that required qualifiers are described in the following sections, and the qualified analytical results are included as Appendix A.

## 2.1. Soil samples

### 2.1.1. Document completeness

Some data package deliverables submitted for data validation were incomplete or inaccurate. The laboratory was requested to provide the missing information and corrections so that the validation process could be completed. This information was provided during the data validation process.

### 2.1.2. VOC analysis

Criteria compliance

The following QA/QC parameters were found to meet validation criteria or did not result in additional qualification of sample results:

- holding times, sample preservation, and percentage solids
- calibrations
- field duplicate analysis
- surrogate recovery
- internal standards performance
- GC/MS instrument performance check
- laboratory duplicates, and
- overall data assessment.

Excursions from QA/QC criteria presented in Section 1.2.1 are summarized below.

Blank analysis

Blanks measure contamination that is introduced during sample collection, transportation, preparation, and analysis.

The percentage recoveries for bromodichloromethane and cis-1,3-dichloropropene in MS/MSD sample FTIOBGCB1-4/12/00-1150-26' and carbon disulfide, carbon tetrachloride, tetrachloroethene, and vinyl chloride in MS/MSD sample FTIOBGCB2-4/11/00-1345-39.5' analyzed for this investigation were below the lower laboratory control limit, indicating low responses for those analytes. As a result of the MS/MSD excursions, the results in the unspiked samples were qualified as approximate (J, UJ) to indicate minor recovery excursions. The following table presents the target analytes qualified as a result of the MS/MSD excursions:

**Table 2-5.** *MS/MSD excursions for VOC analyses of soil samples*

| MS/MSD ID | Analyte | Excursion | Affected Sample | Action |
|---|---|---|---|---|
| FTIOBGCSB2-4/11/00-1345-39.5' | carbon disulfide | 67 %R, 73 %R | FTIOBGCSB2-4/11/00-1345-39.5' | UJ |
| | carbon tetrachloride | 68 %R, 77 %R | | UJ |
| | tetrachloroethene | 65 %R, 70 %R | | UJ |
| | vinyl chloride | 69 %R, 71 %R | | J |
| FTIOBGCSB1-4/12/00-1150-26' | bromodichloromethane | 77 %R, 79 %R | FTIOBGCSB1-4/12/00-1150-26' | UJ |
| | cis-1,3-dichloropropene | 70 %R, 72 %R | | |

Note: %R indicates percentage recovery.

## LCS analysis

The LCS is a standard solution consisting of known concentrations of target analytes spiked into a clean matrix, which is used for independent verification of the calibration and to evaluate the efficiency of the sample preparation and analysis method independent of the sample matrix.

The percentage recoveries for target analytes in one LCS analysis were below the lower laboratory control limit, indicating biased low responses for that target analyte. The recovery of the LCS from the repeat analysis reflected the initial results, confirming the first response for that target analyte. As a result of the LCS recovery excursions, the results for target analytes in samples associated with the LCS analyses were qualified as approximate (UJ), indicating a minor recovery excursion. The LCS excursions are summarized in the following table:

**Table 2-6.** *LCS excursions for VOC analyses of soil samples*

| LCS ID | Analyte | Excursion | Affected Samples | Action |
|---|---|---|---|---|
| 0116145 | bromodichloromethane | 78 %R, 77 %R | FTIOBGCB1-4/12/00-1140-30' | UJ |
| | cis-1,3-dichloropropene | 72 %R, 72 %R | | |

Note:
%R indicates percentage recovery.

## Target analyte detection limits

The laboratory indicated in the data package case narrative that, for selected solid samples collected using the Encore® samplers, less than five grams of sample was available for analysis. As a result of the low amount of sample analyzed, detection limits for VOCs were elevated for the samples collected in this manner since laboratory detection limits were based on analysis of five grams.

**Table 2-9.** *Target analyte identification excursions for soil samples*

| Sample ID | Excursion | Correction |
|---|---|---|
| FTIOBGCB2-4/11/00-0815-3.5' | Retention time and mass spectrum for 1,2-dichloroethane misinterpreted | 1,2-dichloroethane qualified as undetected ("U") |
| FTIOBGCB2-4/11/00-0815-3.5' | Retention time and mass spectrum for trans-1,3-dichloropropene misinterpreted | trans-1,3-dichloropropene qualified as undetected ("U") |

Overall data assessment

- Toluene was detected in the trip blank associated with the soil samples collected 4/12/00. As a result of the contamination, toluene was qualified as undetected ("U") in the 12 associated soil samples.
- The results for bromodichloromethane and cis-1,3-dichloropropene in the MS/MSD sample (FTIOBGCB1-4/12/00-1150-26') and carbon disulfide, carbon tetrachloride, tetrachloroethene, and vinyl chloride in the MS/MSD sample (FTIOBGCB2-4/11/00-1345-39.5') were qualified as approximate due to low recoveries in the unspiked samples.
- Target analytes were qualified as approximate in one sample (FTOBGCB1-4/12/00-1140-30') due to low recovery for two target analytes in one LCS sample. Low LCS recoveries indicate biased low instrument responses and identify accuracy problems.
- Vinyl chloride was qualified as approximate ("UJ") in one sample (FTIOBGCB1-4/12/00-1140-30') since repeated analyses did not confirm the vinyl chloride concentration.
- Results in sample (FTIOBGCB2-4/11/00-0815-3.5') were qualified as undetected ("U") due to laboratory interpretation errors.

### 2.1.3. TOC analyses

Criteria

The following QA/QC parameters were found to meet validation criteria or did not result in additional qualifications of sample results:

- holding times
- calibrations
- blank analysis
- MS/MSDs
- LCS analysis
- field duplicate analysis
- laboratory duplicates
- target analyte quantitation
- documentation completeness, and
- overall data assessment.

Excursions from QA/QC criteria presented in Section 1.2.2. were not detected during the data validation process. Therefore, TOC data generated for this sampling event were not qualified.

# 3. Summary and data usability

The soil samples, field duplicates and trip blanks collected at the Former Thompson Industries Site as part of the source characterization activities of the Combined Expanded Site Investigation/Remedial Investigation and Feasibility Study (ESI/RI/FS) located in Madison, Florida were evaluated based on QA/QC criteria established by USEPA Methods as listed in Section 1.2.5. Data validation qualifiers were applied utilizing the USEPA data validation guidance as listed in Section 1.2.3. Major deficiencies in the data generation process were not detected during the validation process. Minor deficiencies in the data generation process resulted in sample data being characterized as approximate. Identification of a data point as approximate indicates uncertainty in the reported concentration of the chemical, but not its assigned identity. The quantitative use of approximated analytical data is consistent with the guidance presented in the USEPA Risk Assessment Guidance for Superfund (USEPA 1992).

Overall, 100 percent of the VOC and TOC soil data were determined to be usable for qualitative and quantitative purposes.

A discussion of the data quality with regard to the parameters follows:

Precision: Data usability with respect to precision is 100% for VOC and TOC data.

For the soil samples, none of the VOC and TOC data were qualified for precision excursions.

Sensitivity: Sensitivity requirements with respect to reported detection limits were acceptable for the sample data in this project. Dilutions were performed for several analyses due to high target analytes present in the samples or matrix affects.

Accuracy: Data usability with respect to accuracy is 100% for VOC and TOC data.

For the soil samples, a total of 0.9 percent of the VOC data were qualified as approximate due to MS/MSD (0.7 percent) and LCS (0.2 percent excursions.

Representativeness: Data usability with respect to representativeness is 100% for VOC and TOC data.

## References


O'Brien & Gere Engineers, Inc. 1999. Quality Assurance Project Plan for the Combined Expanded Site Investigation/Remedial Investigation and Feasibility Study, Former Thompson Industries Site, Madison, Florida.

U.S. Environmental Protection Agency (USEPA). 1983. Methods for Chemical Analysis of Water and Wastes, Revised March 1983, EPA-600/4-79-020, Washington, D.C.

U.S. Environmental Protection Agency (USEPA). 1992. USEPA Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual (Part A), EPA/540/1-89/002. Washington D.C.

U.S. Environmental Protection Agency (USEPA). 1994a. USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, EPA-540/R-94/012. Washington D.C.

U.S. Environmental Protection Agency (USEPA). 1994b. USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, EPA-540/R-94/013. Washington D.C.

U.S. Environmental Protection Agency (USEPA). 1996. Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW-846), 3rd Edition. Washington, D.C., 1986 as updated through December 1996.

APPENDIX A

# Summary of Validated Analytical Results
# STL Tampa East

| Analyte/Parameter | OBGCB1-5 Result (mg/kg) | OBGCB1-5 Qualifier[1] | OBGCB1-5 Reason | OBGCB1-7 Result (mg/kg) | OBGCB1-7 Qualifier[1] | OBGCB1-7 Reason | OBGCB1-10.5 Result (mg/kg) | OBGCB1-10.5 Qualifier[1] | OBGCB1-10.5 Reason | OBGCB1-13 Result (mg/kg) | OBGCB1-13 Qualifier[1] | OBGCB1-13 R |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOCs** | | | | | | | | | | | | |
| Acetone | 0.024 | J* | | 0.026 | J* | | 0.058 | | | 0.046 | | |
| Benzene | 0.0017 | J* | | ND | | | 0.0041 | J* | | 0.005 | J* | |
| Bromodichloromethane | ND | | | ND | | | ND | | | ND | | |
| Bromoform | ND | | | ND | | | ND | | | ND | | |
| Bromomethane | ND | | | ND | | | ND | | | ND | | |
| 2-Butanone | ND | | | ND | | | ND | | | ND | | |
| Carbon disulfide | ND | | | ND | | | ND | | | ND | | |
| Carbon tetrachloride | ND | | | ND | | | ND | | | ND | | |
| Chlorobenzene | ND | | | ND | | | ND | | | ND | | |
| Chloroethane | ND | | | ND | | | ND | | | ND | | |
| Chloroform | ND | | | ND | | | ND | | | ND | | |
| Chloromethane | ND | | | ND | | | ND | | | ND | | |
| Dibromochloromethane | ND | | | ND | | | ND | | | ND | | |
| 1,1-Dichloroethane | 0.002 | J* | | ND | | | 0.0012 | J* | | 0.0036 | J* | |
| 1,2-Dichloroethane | ND | | | ND | | | ND | | | ND | | |
| 1,1-Dichloroethene | ND | | | ND | | | ND | | | ND | | |
| cis-1,2-Dichloroethene | 0.058 | | | 0.093 | | | ND | | | 0.058 | | |
| trans-1,2-Dichloroethene | 0.0039 | J* | | 0.0016 | J* | | ND | | | ND | | |
| 1,2-Dichloropropane | ND | | | ND | | | ND | | | ND | | |
| cis-1,3-Dichloropropene | ND | | | ND | | | ND | | | ND | | |
| trans-1,3-Dichloropropene | ND | | | ND | | | ND | | | ND | | |
| Ethylbenzene | 0.0026 | J* | | 0.0041 | J* | | ND | | | 0.0029 | J* | |
| 2-Hexanone | ND | | | ND | | | ND | | | ND | | |
| Methylene chloride | ND | | | ND | | | ND | | | ND | | |
| 4-Methyl-2-pentanone | ND | | | ND | | | ND | | | ND | | |
| Styrene | ND | | | ND | | | ND | | | ND | | |
| 1,1,2,2-Tetrachloroethane | ND | | | ND | | | ND | | | ND | | |
| Tetrachloroethene | ND | | | ND | | | ND | | | ND | | |
| Toluene | ND | K | 6 | ND | K | 6 | ND | | | ND | K | |
| 1,1,1-Trichloroethane | ND | | | ND | | | ND | | | ND | | |
| 1,1,2-Trichloroethane | ND | | | ND | | | ND | | | ND | | |
| Trichloroethene | ND | | | ND | | | ND | | | ND | | |
| Vinyl chloride | 0.091 | | | 0.0012 | J* | | ND | | | 0.05 | | |
| Xylenes (total) | 0.0034 | J* | | 0.013 | | | ND | | | ND | | |
| **General Chemistry** | | | | | | | | | | | | |
| pH | | | | | | | | | | | | |
| Grain size | | | | | | | | | | | | |
| Percent solids | 88.1 | | | 89.2 | | | 87.8 | | | 84.8 | | |
| Total cyanide | | | | | | | | | | | | |
| Total organic carbon (TOC) | 8850 | | | 4450 | | | 780 | E | | 1410 | E | |
| Chemical oxygen demand (COD) | | | | | | | | | | | | |
| Total phosphorus | | | | | | | | | | | | |
| Nitrogen as nitrate/nitrite | | | | | | | | | | | | |
| Total Kjeldahl Nitrogen (TKN) | | | | | | | | | | | | |
| Standard plate count | | | | | | | | | | | | |

**Footnotes:**

[1] Data validation qualifiers based on the project Quality Assurance Project Plan (QAPP) and U.S. EPA Contract Laboratory Program (CLP) Fur
USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review. EPA-540/R-94/012. Washington, D.C. and
Laboratory Program National Functional Guidelines for Inorganic Data Review. EPA-540/R-94/013. Washington, D.C.)

Data qualifiers are as follows:

U (N.D.) - The analyte was analyzed for its potential presence but was not detected above the associated analytical quantitation reporting limit

J - The associated numerical value was an estimated quantity below the reporting limit for an organic analyte.

E - The associated numerical value was an estimated quantity below the reporting limit for an inorganic analyte.

E - Estimated result. Result concentration exceeds the calibration range.

R - The data were unusable. The presence or absence of the analyte could not be verified from the existing data. Resampling and reanalysis

- There was presumptive evidence to make a tentative identification.

NJ - There was presumptive evidence to make a tentative identification and the associated analytical reporting limit was an estimated quantity.

UJ - The analyte was analyzed for its presence, but was not detected above the analytical reporting limit. The associated reporting limit was ar

K - Due to blank contamination, the result was qualified as "undetected" (U), and the detection limit was raised to the preliminary reported co

* - Indicates that the data qualifier was assigned by the analytical laboratory, not by the data validator. A lab-assigned "J" qualifier indicates
limit was assigned. A lab-assigned "B" qualifier indicates that an inorganic analyte was identified, and an estimated concentration below
but the concentration is below quantitation limits and is uncertain.

l at Former Thompson Industries Site, Madison, Florida, April 11-12, 2000

| OBGCB1-20 | | | OBGCB1-21 | | | OBGCB1-21.5 | | | OBGCB1-24 | | | OBGCB1-26 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Result mg/kg) | Qualifier[1] | Reason | Result (mg/kg) | Qualifier[1] | Reason | Result (mg/kg) | Qualifier[1] | Reason | Result (mg/kg) | Qualifier[1] | Reason | Result (mg/kg) | Qualifier[1] | Reason |
| 0.029 | | | 0.047 | | | 0.028 | | | ND | | | ND | | |
| 0.0013 | J* | | 0.0015 | J* | | 0.0017 | J* | | 0.0016 | J* | | 0.0011 | J* | |
| ND | | | ND | | | ND | | | ND | | | ND | UJ | 4 |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| ND | | | 0.0023 | J* | | 0.005 | J* | | 0.0011 | J* | | 0.0032 | J* | |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| 0.0017 | J* | | 0.0025 | J* | | 0.0022 | J* | | 0.0032 | J* | | 0.0023 | J* | |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| 0.17 | | | 0.12 | | | 0.35 | | | 0.67 | | | 0.14 | | |
| ND | | | ND | | | 0.00088 | J* | | 0.0025 | J* | | 0.0018 | J* | |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| ND | | | ND | | | ND | | | ND | | | ND | UJ | 4 |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| 0.0014 | J* | | ND | | | 0.0013 | J* | | ND | | | ND | | |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| ND | K | 6 | ND | K | 6 | ND | K | 6 | ND | K | 6 | ND | K | 6 |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| ND | | | ND | | | ND | | | ND | | | ND | | |
| 0.16 | J* | | 0.087 | | | 0.34 | | | 0.36 | | | 0.029 | J* | |
| 0.0032 | J* | | 0.0015 | J* | | 0.0038 | J* | | 0.016 | | | 0.011 | | |
| | | | | | | | | | | | | | | |
| 87.6 | | | 85.5 | | | 88.3 | | | 87.5 | | | 87.7 | | |
| 550 | B | | 600 | B | | ND | | | 870 | B | | 760 | B | |

*idelines (U.S. EPA. 1994.*
1994. USEPA Contract

necessary for verification of the presence and/or concentration of the rejected analyte.

l value.
ı.
ıanic analyte was identified, and an estimated concentration below the reporting
ıg limit was assigned. These qualifiers indicate the definite presence of an analyte,

*Data Validation Codes:*
1- Target analyte identification
2- Holding times
3- Surrogate recovery
4- MS/MSDs
5- LCS analysis
6- Blank analysis
10- Internal standards performance
11- Field duplicate analysis
12- Target analyte quantitation
13- ICP interference check
14- ICP serial dilution
15- Percent solids
16- Laboratory duplicates

| Analyte/Parameter | OBGCB1-30 Result (mg/kg) | OBGCB1-30 Qualifier[1] | OBGCB1-30 Reason | OBGCB1-35 Result (mg/kg) | OBGCB1-35 Qualifier[1] | OBGCB1-35 Reason | OBGCB1-37 Result (mg/kg) | OBGCB1-37 Qualifier[1] | OBGCB1-37 Reason | OBGCB1-37.5 Result (mg/kg) | OBGCB1-37.5 Qualifier[1] | OBGCB1-37.5 Reas |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| □ VOCs | | | | | | | | | | | | |
| Acetone | ND | | | 0.03 | J* | | 0.03 | | | 0.021 | J* | |
| Benzene | ND | | | ND | | | ND | | | ND | | |
| Bromodichloromethane | ND | UJ | 5 | ND | | | ND | | | ND | | |
| Bromoform | ND | | | ND | | | ND | | | ND | | |
| Bromomethane | ND | | | ND | | | ND | | | ND | | |
| 2-Butanone | ND | | | ND | | | ND | | | ND | | |
| Carbon disulfide | ND | | | ND | | | ND | | | 0.029 | | |
| Carbon tetrachloride | ND | | | ND | | | ND | | | ND | | |
| Chlorobenzene | ND | | | ND | | | ND | | | 0.0018 | J* | |
| Chloroethane | ND | | | ND | | | ND | | | ND | | |
| Chloroform | ND | | | ND | | | ND | | | ND | | |
| Chloromethane | ND | | | ND | | | ND | | | ND | | |
| Dibromochloromethane | ND | | | ND | | | ND | | | ND | | |
| 1,1-Dichloroethane | 0.0027 | J* | | 0.0039 | J* | | ND | | | 0.0033 | J* | |
| 1,2-Dichloroethane | ND | | | ND | | | ND | | | 0.0038 | J* | |
| 1,1-Dichloroethene | ND | | | ND | | | ND | | | ND | | |
| cis-1,2-Dichloroethene | 0.18 | | | 0.95 | | | 0.017 | | | 0.38 | | |
| trans-1,2-Dichloroethene | 0.0031 | J* | | 0.002 | J* | | ND | | | ND | | |
| 1,2-Dichloropropane | ND | | | ND | | | ND | | | ND | | |
| cis-1,3-Dichloropropene | ND | UJ | 5 | ND | | | ND | | | ND | | |
| trans-1,3-Dichloropropene | ND | | | ND | | | ND | | | ND | | |
| Ethylbenzene | ND | | | 0.0015 | J* | | ND | | | ND | | |
| 2-Hexanone | ND | | | ND | | | ND | | | ND | | |
| Methylene chloride | ND | | | ND | | | ND | | | ND | | |
| 4-Methyl-2-pentanone | ND | | | ND | | | ND | | | ND | | |
| Styrene | ND | | | ND | | | ND | | | ND | | |
| 1,1,2,2-Tetrachloroethane | ND | | | ND | | | ND | | | ND | | |
| Tetrachloroethene | ND | | | ND | | | ND | | | ND | | |
| Toluene | ND | K | 6 | ND | K | 6 | ND | | | ND | K | 6 |
| 1,1,1-Trichloroethane | ND | | | ND | | | ND | | | ND | | |
| 1,1,2-Trichloroethane | ND | | | ND | | | ND | | | ND | | |
| Trichloroethene | ND | | | ND | | | ND | | | 0.018 | | |
| Vinyl chloride | ND | UJ | 12 | 0.64 | | | 0.0036 | J* | | 0.17 | J* | |
| Xylenes (total) | 0.041 | | | 0.019 | | | ND | | | 0.0052 | J* | |
| □ General Chemistry | | | | | | | | | | | | |
| pH | | | | | | | | | | | | |
| Grain size | | | | | | | | | | | | |
| Percent solids | 87.9 | | | 84.4 | | | 86.6 | | | 31.2 | | |
| Total cyanide | | | | | | | | | | | | |
| Total organic carbon (TOC) | 540 | B | | ND | | | ND | | | 1430 | B | |
| Chemical oxygen demand (COD) | | | | | | | | | | | | |
| Total phosphorus | | | | | | | | | | | | |
| Nitrogen as nitrate/nitrite | | | | | | | | | | | | |
| Total Kjeldahl Nitrogen (TKN) | | | | | | | | | | | | |
| Standard plate count | | | | | | | | | | | | |

**Footnotes:**

[1] Data validation qualifiers based on the project Quality Assurance Project Plan (QAPP) and U.S. EPA Contract Laboratory Program (CLP) Func
USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review. EPA-540/R-94/012. Washington, D.C. and U
Laboratory Program National Functional Guidelines for Inorganic Data Review. EPA-540/R-94/013. Washington, D.C.)

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J - The associated numerical value was an estimated quantity below the reporting limit for an organic analyte.

B - The associated numerical value was an estimated quantity below the reporting limit for an inorganic analyte.

E - Estimated result. Result concentration exceeds the calibration range.

R - The data were unusable. The presence or absence of the analyte could not be verified from the existing data. Resampling and reanalysis

- There was presumptive evidence to make a tentative identification.

NJ - There was presumptive evidence to make a tentative identification and the associated analytical reporting limit was an estimated quantity.

UJ - The analyte was analyzed for its presence, but was not detected above the analytical reporting limit. The associated reporting limit was an

K - Due to blank contamination, the result was qualified as "undetected" (U), and the detection limit was raised to the preliminary reported con

* - Indicates that the data qualifier was assigned by the analytical laboratory, not by the data validator. A lab-assigned "J" qualifier indicates t
limit was assigned. A lab-assigned "B" qualifier indicates that an inorganic analyte was identified, and an estimated concentration below t
but the concentration is below quantitation limits and is uncertain.

Table Y
rization, Collected at Former Thompson Industries Site, Madison, Florida, April 11-12, 2000

| OBGCB2-3.5 | | | OBGCB2-3.6 | | | OBGCB2-6.0 | | | OBGCB2-10.75 | | | OBGCB2-11 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| uit kg) | Qualifier[1] | Reason | Result (mg/kg) | Qualifier[1] | Reason | Result (mg/kg) | Qualifier[1] | Reason | Result (mg/kg) | Qualifier[1] | Reason | Result (mg/kg) | Qualifier[1] | Reason |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | 0.0014 | J* | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | 0.67 | | | 0.75 | | | 1 | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | K | 1 | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | K | 1 | ND | | | ND | | | ND | | | ND | | |
| ) | | | 0.25 | | | 1.2 | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | 0.22 | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| ) | | | ND | | | ND | | | ND | | | ND | | |
| 7 | J* | | ND | | | 0.5 | | | 1.3 | | | 0.0056 | J* | |
| | | | 83.9 | | | 86.5 | | | 70.1 | | | 86.2 | | |
| 10 | | | 30600 | | | 15200 | | | 40300 | | | 3560 | | |

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ecessary for verification of the presence and/or concentration of the rejected analyte.

value.

nic analyte was identified, and an estimated concentration below the reporting limit was assigned. These qualifiers indicate the definite presence of an analyte,

Data Validation Codes:
1- Target analyte identification
2- Holding times
3- Surrogate recovery
4- MS/MSDs
5- LCS analysis
6- Blank analysis
10- Internal standards performance
11- Field duplicate analysis
12- Target analyte quantitation
13- ICP interference check
14- ICP serial dilution
15- Percent solids
16- Laboratory duplicates

| Analyte/Parameter | OBGCB2-18.5 Result (mg/kg) | OBGCB2-18.5 Qualifier[1] | OBGCB2-18.5 Reason | OBGCB2-20.5 Result (mg/kg) | OBGCB2-20.5 Qualifier[1] | OBGCB2-20.5 Reason | OBGCB2-21.5 Result (mg/kg) | OBGCB2-21.5 Qualifier[1] | OBGCB2-21.5 Reason | OBGCB2-28 Result (mg/kg) | OBGCB2-28 Qualifier[1] | OBGCB2-28 Reas |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **VOCs** | | | | | | | | | | | | |
| Acetone | ND | | | ND | | | ND | | | 0.033 | | |
| Benzene | ND | | | ND | | | ND | | | ND | | |
| Bromodichloromethane | ND | | | ND | | | ND | | | ND | | |
| Bromoform | ND | | | ND | | | ND | | | ND | | |
| Bromomethane | ND | | | ND | | | ND | | | ND | | |
| 2-Butanone | ND | | | 0.58 | | | 0.74 | | | ND | | |
| Carbon disulfide | ND | | | ND | | | ND | | | ND | | |
| Carbon tetrachloride | ND | | | ND | | | ND | | | ND | | |
| Chlorobenzene | ND | | | ND | | | ND | | | ND | | |
| Chloroethane | ND | | | ND | | | ND | | | ND | | |
| Chloroform | ND | | | ND | | | ND | | | ND | | |
| Chloromethane | ND | | | ND | | | ND | | | ND | | |
| Dibromochloromethane | ND | | | ND | | | ND | | | ND | | |
| 1,1-Dichloroethane | ND | | | ND | | | ND | | | 0.0013 | J* | |
| 1,2-Dichloroethane | ND | | | ND | | | ND | | | ND | | |
| 1,1-Dichloroethene | ND | | | ND | | | ND | | | ND | | |
| cis-1,2-Dichloroethene | ND | | | 0.16 | | | 0.31 | | | 0.42 | | |
| trans-1,2-Dichloroethene | ND | | | ND | | | ND | | | ND | | |
| 1,2-Dichloropropane | ND | | | ND | | | ND | | | ND | | |
| cis-1,3-Dichloropropene | ND | | | ND | | | ND | | | ND | | |
| trans-1,3-Dichloropropene | ND | | | ND | | | ND | | | ND | | |
| Ethylbenzene | ND | | | 2.7 | | | 3.3 | | | 0.0073 | | |
| 2-Hexanone | ND | | | ND | | | ND | | | ND | | |
| Methylene chloride | ND | | | ND | | | ND | | | ND | | |
| 4-Methyl-2-pentanone | ND | | | ND | | | ND | | | ND | | |
| Styrene | ND | | | ND | | | ND | | | ND | | |
| 1,1,2,2-Tetrachloroethane | ND | | | ND | | | ND | | | ND | | |
| Tetrachloroethene | ND | | | ND | | | ND | | | ND | | |
| Toluene | ND | | | 8.2 | | | 8.2 | | | 0.064 | | |
| 1,1,1-Trichloroethane | ND | | | ND | | | ND | | | ND | | |
| 1,1,2-Trichloroethane | ND | | | ND | | | ND | | | ND | | |
| Trichloroethene | ND | | | ND | | | ND | | | ND | | |
| Vinyl chloride | ND | | | ND | | | ND | | | 0.046 | | |
| Xylenes (total) | ND | | | 12 | | | 15 | | | 0.031 | | |
| **General Chemistry** | | | | | | | | | | | | |
| pH | | | | | | | | | | | | |
| Grain size | | | | | | | | | | | | |
| Percent solids | 85.7 | | | 85.8 | | | 85.9 | | | 85.2 | | |
| Total cyanide | | | | | | | | | | | | |
| Total organic carbon (TOC) | [illegible] | R | | 2940 | | | 3160 | | | [illegible] | E | |
| Chemical oxygen demand (COD) | | | | | | | | | | | | |
| Total phosphorus | | | | | | | | | | | | |
| Nitrogen as nitrate/nitrite | | | | | | | | | | | | |
| Total Kjeldahl Nitrogen (TKN) | | | | | | | | | | | | |
| Standard plate count | | | | | | | | | | | | |

**Footnotes:**

[1] Data validation qualifiers based on the project Quality Assurance Project Plan (QAPP) and U.S. EPA Contract Laboratory Program (CLP) Func
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K - Due to blank contamination, the result was qualified as "undetected" (U), and the detection limit was raised to the preliminary reported con

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limit was assigned. A lab-assigned "B" qualifier indicates that an inorganic analyte was identified, and an estimated concentration below t
but the concentration is below quantitation limits and is uncertain.

ollected at Former Thompson Industries Site, Madison, Florida, April 11-12, 2000

| OBGCB2-35 | | | OBGCB2-39.5 | | | OBGCB2-40 | | |
|---|---|---|---|---|---|---|---|---|
| ;ult /kg) | Qualifier[1] | Reason | Result (mg/kg) | Qualifier[1] | Reason | Result (mg/kg) | Qualifier[1] | Reason |
| 33 | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| D | | | ND | UJ | 4 | ND | | |
| D | | | ND | UJ | 4 | ND | | |
| D | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| 55 | | | 0.057 | | | 0.75 | | |
| D | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| 44 | J* | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| D | | | ND | UJ | 4 | ND | | |
| 33 | | | 0.0014 | J* | | 0.0032 | J* | |
| D | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| D | | | ND | | | ND | | |
| D | | | 0.0033 | J | 4 | 0.011 | J* | |
| 18 | | | ND | | | ND | | |
| | | | | | | | | |
| 9 | | | 83.1 | | | 68.2 | | |
| D | | | 890 | B | | 1660 | B | |

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1994. USEPA Contract

ecessary for verification of the presence and/or concentration of the rejected analyte.

value.

nic analyte was identified, and an estimated concentration below the reporting
l limit was assigned. These qualifiers indicate the definite presence of an analyte,

Data Validation Codes:
1- Target analyte identification
2- Holding times
3- Surrogate recovery
4- MS/MSDs
5- LCS analysis
6- Blank analysis
10- Internal standards performance
11- Field duplicate analysis
12- Target analyte quantitation
13- ICP interference check
14- ICP serial dilution
15- Percent solids
16- Laboratory duplicates

Quanterra

LOT NUMBER B0D130124

**Affected Samples: ALL COD Soil Samples**

The C-O-C showed COD analysis for soil samples, they were canceled on 4-12-00 per Roger Baldwin.

**Affected Samples:**
6: FTIOBGCB1-12APR-00-1000-20'
7: FTIOBGCB1-12APR-00-1040-24'
8: FTIOBGCB1-12APR-00-1045-21'
9: FTIOBGCB1-12APR-00-1055-21.5'
10: FTIOBGCB1-12APR-00-1140-30'
11: FTIOBGCB1-12APR-00-1150-26'
12: FTIOBGCB1-12APR-00-1245-35'
14: FTIOBGCB1-12APR-00-1325-37.5

**Affected Methods:**
8260B

Method 8260B analyses for samples mentioned above, were reanalyzed due to "E" values. The "E" value indicates the concentration of that compound is out of the linear range of the calibration curve. A second run with a dilution factor was required for this compound only. Both sets of data are included in this report.

**Affected Samples:**
15: Trip Blank

**Affected Methods:**
8260B

The original analysis of the Trip Blank had a positive result for the target compound Toluene at 5.8 ug/L. The sample was re-analyzed from a separate vial in the same analytical batch with the result for Toluene at 6.5 ug/L, confirming the original analysis. Our laboratories trip blank seals were not on these vials and were therefore not from our lab. The original analysis only has been reported, but both sets of raw data have been included in the client data package.

**Affected Samples:**
10: FTIOBGCB1-12APR-00-1140-30'

**Affected Methods:**
8260B

The 8260B low level batch (#0116145) for the Laboratory Control Sample/Duplicate (LCS/LCSD) had non-control compound recoveries out of control limits for the following: Bromodichloromethane, Carbon disulfide, cis-1,2-Dichloroehtene and cis-1,3-Dichloropropene. The sample reported from this batch is the second low level preserved Encore vial, so the sample has been consumed. The original low level prep had similar results, but had internal standard responses low. The sample was also analyzed high level for "E" quantitations. The low level reprep and the high level prep have been reported and all raw data has been included in the data package.

**Affected Samples:**
8: FTIOBGCB1-12APR-00-1045-21'
12: FTIOBGCB1-12APR-00-1245-35'

**Affected Methods:**
8260B

The standard reporting limit for low level volatile organic compounds in soils (0.005 mg/kg) is based on a minimum sample amount of 5 grams in the EnCore sampling device. Since this sample contained less than that amount, the reporting limit had to be raised accordingly.

**Affected Samples:**
8: FTIOBGCB1-12APR-00-1045-21'
11: FTIOBGCB1-12APR-00-1150-26'

**Affected Methods:**
8260B

The standard reporting limit for high level methanol extracted volatile organic compounds in soils (0.100 mg/kg) is based on a minimum sample amount of 5 grams in the EnCore sampling device. Since this sample contained less than that amount, the reporting limit had to be raised accordingly.

LOT NUMBER B0D120119

**Affected Samples: All COD Soil Samples**

The C-O-C showed COD analysis for soil samples, they were canceled on 4-12-00 per Roger Baldwin

**Affected Samples:**
3: FTI-OBG-CB2-4/11/00-0815-3.5

**Affected Methods:**
8260B

This sample was received with 3 encore samplers only. No Dry weight sample was received, therefore, this sample is calculated as is basis.

**Affected Samples:**
10: FTI-OBG-CB2-4/11/00-1045-20.5
11: FTI-OBG-CB2-4/11/00-1050-21.5
12: FTI-OBG-CB2-4/11/00-1130-28
14: FTI-OBG-CB2-4/11/00-1345-39.5
154: FTI-OBG-CB2-4/11/00-1350-40

**Affected Methods:**
8260B

Method 8260B analyses for samples mentioned above, were reanalyzed due to "E" values. The "E" value indicates the concentration of that compound is out of the linear range of the calibration curve. A second run with a dilution factor was required for this compound only. Both sets of data are included in this report.

**Affected Samples:**
9: FTI-OBG-CB2-4/11/00-1020-18.5
13: FTI-OBG-CB2-4/11/00-1310-35
16: FTI-OBG-CB2-4/11/00-1000-DUP-1

**Affected Methods:**
8260B

**Case Narrative:**
The standard reporting limit for low level volatile organic compounds in soils (0.005 mg/kg) is based on a minimum sample amount of 5 grams in the EnCore sampling device. Since these samples contained less than that amount, the reporting limit had to be raised accordingly.

**Affected Samples:**
3: FTI-OBG-CB2-4/11/00-0815-3.5
6: FTI-OBG-CB2-4/11/00-0900-6.0
7: FTI-OBG-CB2-4/11/00-0940-10.75

11: FTI-OBG-CB2-4/11/00-1050-21.5

**Affected Methods:**
8260B

The standard reporting limit for high level methanol volatile organic compounds in soils (0.100 mg/kg) is based on a minimum sample amount of 5 grams in the EnCore sampling device. Since this sample contained less than that amount, the reporting limit had to be raised accordingly.

**Affected Samples:**
14: FTI-OBG-CB2-4/11/00-1345-39.5

**Affected Methods:**
8260B

The Matrix Spike/Matrix Spike Duplicate (MS/MSD) was performed on sample B0D120119-014 which had the internal standard response fail client criteria for the MSD only for Chlorobenzene-d5 ( +100.85%, criteria -50% - +100%.) The native sample and MS for Chlorobenzene-d5 recoveries were both on the high end, +83% and +76%. All MS/MSD RPDs were in control and less than 20%. All MS/MSD control compound recoveries are in control except for the MS recovery for 1,1-Dichloroethene (74%, 78-120.) The sample and the MS/MSD were reanalyzed for high level for cis--1,2-Dichloroethene.

APPENDIX C

# Chain-of-Custody Forms
# STL Tampa East

# Chain of Custody Record

Quanterra

QUA-4124 0797

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| OB-G | STEVE COOK | 4/12/00 | 34450 |

| Address | Telephone Number (Area Code)/Fax Number | Lab Number | Page |
|---|---|---|---|
| 7001 N. ATLANTIC AVE #202 | 321-799-2200 | | Page 1 of 2 |

| City | State | Zip Code | Site Contact | Lab Contact |
|---|---|---|---|---|
| CAPE CANAVERAL | FL | 32920 | R. BALDWIN | N. ROBERTSON |

| Project Name | Carrier/Waybill Number |
|---|---|
| FTI Madison FL. | 8145 6364 0430 Fedex |

Contract/Purchase Order/Quote No.: 22992.013.001

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/ NaOH | Analysis: 8260B | 9060 (TOC) | 410.4 (COD) | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FTIOBGCB1-12APR-00-0830-5' | 4/12/00 | 0830 | | | X | 5 | | | | | | X | X | X | |
| FTIOBGCB1 Dup-12APR-00-0800 | 4/12/00 | 0800 | | | X | 5 | | | | | | X | X | X | |
| FTIOBGCB1-12APR-00-0900-7' | 4/12/00 | 0900 | | | X | 5 | | | | | | X | X | X | |
| FTIOBGCB1-12APR-00-0930-13' | 4/12/00 | 0830 | | | X | 5 | | | | | | X | X | X | |
| FTIOBGCB1-12APR-00-0945-10.5' | 4/12/00 | 0945 | | | X | 5 | | | | | | X | X | X | |
| FTIOBGCB1-12APR-00-1000-20' | 4/12/00 | 1000 | | | X | 5 | | | | | | X | X | X | |
| FTIOBGCB1-12APR-00-1040-24' | 4/12/00 | 1040 | | | X | 5 | | | | | | X | X | X | |
| FTIOBGCB1-12APR-00-1045-21' | 4/12/00 | 1045 | | | X | 5 | | | | | | X | X | X | |
| FTIOBGCB1-12APR-00-1055-21.5' | 4/12/00 | 1055 | | | X | 5 | | | | | | X | X | X | |
| FTIOBGCB1-12APR-00-1140-30' | 4/12/00 | 1140 | | | X | 5 | | | | | | X | X | X | |
| FTIOBGCB1-12APR-00-1150-26' | 4/12/00 | 1150 | | | X | 15 | | | | | | X | X | X | MS, MSD |
| FTIOBGCB1-12APR-00-1245-35' | 4/12/00 | 1245 | | | X | 5 | | | | | | X | X | X | |

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☒ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other Normal

QC Requirements (Specify): Level 4

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished By | 4/12/00 | 1700 | 1. Received By | 4-13-00 | 10:00 |
| 2. Relinquished By | | | 2. Received By | | |
| 3. Relinquished By | | | 3. Received By | | |

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

# Custody Record

Quanterra

OUA-4124 079.

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| O'Brien & Gere Engineers | Steve Cook | 4/12/00 | 34451 |
| **Address** | **Telephone Number (Area Code)/Fax Number** | **Lab Number** | **Page 2 of 2** |
| 7001 N. Atlantic Suite 202 | (321) 799-2200 / (321) 799-8111 | | |
| **City** / **State** / **Zip Code** | **Site Contact** / **Lab Contact** | **Analysis (Attach list if more space is needed)** | |
| Cape Canaveral / FL / 32920 | Roger Baldwin / Mary Roberson | | |
| **Project Name** | **Carrier/Waybill Number** | | |
| FTI Madison FL. | 8145 6364 0430 Fedex | | |
| **Contract/Purchase Order/Quote No.** | | | |
| 22992.013.001 | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/ NaOH | 8260B | 8010 (TCL) | 410.4 (COD) | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FTIOBG CB1-12 APR-00-1315-37 | 4/12/00 | 1315 | | | X | 5 | | | | | | X | X | X | |
| FTIOBG CB1-12 APR-00-1325-37.5 | 4/12/00 | 1325 | | | X | 5 | | | | | | X | X | X | |
| trip Blank | — | — | X | | | | | | 3 | | | X | | | |

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☒ Skin Irritant ☐ Poison B ☒ Unknown

**Sample Disposal**
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

**Turn Around Time Required**
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

**QC Requirements (Specify)**
Level 4

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished By | 4/12/00 | 1700 | 1. Received By | 4-13-00 | 10:10 |
| 2. Relinquished By | | | 2. Received By | | |
| 3. Relinquished By | | | 3. Received By | | |

Comments

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Chain-of-Custody

[redacted]

# Chain of Custody Record

**Quanterra**

QUA-4124 0797

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| O Brien & Gere | STEVE COOK | 4/11/00 | 34447 |

| Address | Telephone Number (Area Code)/Fax Number | Lab Number | Page |
|---|---|---|---|
| 7001 N. Atlantic Ste. 202 | 321-799-2200 / 321-799-8111 | | 1 of 2 |

| City | State | Zip Code | Site Contact | Lab Contact |
|---|---|---|---|---|
| Cape Canaveral | FL | 32920 | Roger Baldwin | Nancy Robertson |

| Project Name | Carrier/Waybill Number |
|---|---|
| FTI Madison, FL | 8145 6364 0485 FedEx |

Contract/Purchase Order/Quote No.: 22992.013.001

Analysis (Attach list if more space is needed)

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Aqueous | Sed. | Soil | Containers & Preservatives: Unpres. | H2SO4 | HNO3 | HCl | NaOH | ZnAc/NaOH | 8260b | TOC (TOC) | 4/10.4 (Cu) | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TRIP BLANK | 4/11/00 | | X | | | | | | | | | X | | | |
| FTI-OBG-CB2-4/11/00-0816-3.5' | 4/11/00 | 0816 | | | X | X | | | | | | | X | X | |
| FTI-OBG-CB2-4/11/00-0815-3.5' | 4/11/00 | 0815 | | | X | X | | | | | | X | | | encores |
| FTI-OBG-CB2-4/11/00-0821-3.6' | 4/11/00 | 0821 | | | X | X | | | | | | | X | X | |
| FTI-OBG-CB2-4/11/00-0820-3.6' | 4/11/00 | 0820 | | | X | X | | | | | | X | | | encores |
| FTI-OBG-CB2-4/11/00-0900-6.0' | 4/11/00 | 0900 | | | X | X | | | | | | X | X | X | encores |
| FTI-OBG-CB2-4/11/00-0940-10.75' | 4/11/00 | 0940 | | | X | X | | | | | | X | X | X | encores |
| FTI-OBG-CB2-4/11/00-0945-11.' | 4/11/00 | 0945 | | | X | X | | | | | | X | X | X | encores |
| FTI-OBG-CB2-4/11/00-1020-18.5 | 4/11/00 | 1020 | | | X | X | | | | | | X | X | X | encores |
| FTI-OBG-CB2-4/11/00-1045-20.5 | 4/11/00 | 1045 | | | X | X | | | | | | X | X | X | encores |
| FTI-OBG-CB2-4/11/00-1050-21.5 | 4/11/00 | 1050 | | | X | X | | | | | | X | X | X | encores |
| FTI-OBG-CB2-4/11/00-1130-28 | 4/11/00 | 1130 | | | X | X | | | | | | X | X | X | encores |

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☒ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other ____

QC Requirements (Specify)

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished By: Tom Jullett | 4/11/00 | 1700 | 1. Received: [signature] | 4/12/00 | 1000 |
| 2. Relinquished By | | | 2. Received By | | |
| 3. Relinquished By | | | 3. Received By | | |

Comments: Data Package [illegible] 4-12-00

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

# Chain of Custody Record

Quanterra

OUA-4124 0797

| Client | Project Manager | Date | Chain of Custody Number |
|---|---|---|---|
| O'Brien & Gere Engineers | Steve Cook | 4/11/00 | 3444 |
| **Address** | **Telephone Number (Area Code)/Fax Number** | **Lab Number** | **Page 2 of 2** |
| 7001 N. Atlantic Ste 202 | (321) 799-2200 / (321) 799-8111 | | |
| **City** / **State** / **Zip Code** | **Site Contact** | **Lab Contact** | |
| Cape Canaveral / FL / 32920 | Roger Baldwin | Stacy Robertson | |
| **Project Name** | **Carrier/Waybill Number** | | |
| Foster Thompson Industries Madison FL. | 814563640485 FedEx | | |
| **Contract/Purchase Order/Quote No.** | | | |
| 22992.013.001 | | | |

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Aqueous | Matrix: Sed. | Matrix: Soil | Containers & Preservatives: Unpres. | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | ZnAc/NaOH | Analysis: 8260 B | Analysis: 9060 TOC | Analysis: 410.4 COD | Special Instructions/ Conditions of Receipt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OBGCB2 - 35' | 4/11/00 | 1310 | | | X | 5 | | | | | | X | X | X | |
| OBGCB2 - 39.5' | 4/11/00 | 1345 | | | X | 5 | | | | | | X | X | X | |
| OBGCB2 (TMJ) -39.5' | 4/11/00 | 1345 | | | X | 5 | | | | | | X | X | X | (MS) |
| OBGCB2 (TMJ) -39.5' | 4/11/00 | 1345 | | | X | 5 | | | | | | X | X | X | (MSD) |
| OBGCB2 - 40' | 4/11/00 | 1350 | | | X | 5 | | | | | | X | X | X | |
| OBGCB2-DUP-1 | 4/11/00 | 1000 | | | X | 5 | | | | | | X | X | X | |

**Possible Hazard Identification**
☐ Non-Hazard ☐ Flammable ☒ Skin Irritant ☐ Poison B ☒ Unknown

**Sample Disposal**
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

**Turn Around Time Required**
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

**QC Requirements (Specify)**

| | | | | | |
|---|---|---|---|---|---|
| 1. Relinquished By: Sam Gilbert | Date: 4/11/00 | Time: 1700 | 1. Received By: | Date: 4/12/00 | Time: 1000 |
| 2. Relinquished By | Date | Time | 2. Received By | Date | Time |
| 3. Relinquished By | Date | Time | 3. Received By | Date | Time |

Comments: Data Package Rev 4.12.00

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

APPENDIX D

# Characterization Soil Boring (OBGCB1 and OBGCB2) Analytical Results STL Tampa East

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-0830-5'

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D130124-001 | Work Order #...: | DATTK102 | Matrix.....: | SO |
| Date Sampled...: | 04/12/00 | Date Received..: | 04/13/00 | | |
| Prep Date.....: | 04/20/00 | Analysis Date..: | 04/20/00 | | |
| Prep Batch #...: | 0115212 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 6.16 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 12 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Trichloroethene | ND | 0.0057 | mg/kg | 0.00078 |
| Dibromochloromethane | ND | 0.0057 | mg/kg | 0.00075 |
| 1,1,2-Trichloroethane | ND | 0.0057 | mg/kg | 0.00099 |
| **Benzene** | **0.0017 J** | **0.0057** | **mg/kg** | **0.00056** |
| trans-1,3-Dichloropropene | ND | 0.0057 | mg/kg | 0.00082 |
| Bromoform | ND | 0.0057 | mg/kg | 0.0024 |
| 4-Methyl-2-pentanone | ND | 0.028 | mg/kg | 0.0044 |
| 2-Hexanone | ND | 0.028 | mg/kg | 0.0043 |
| Tetrachloroethene | ND | 0.0057 | mg/kg | 0.0015 |
| 1,1,2,2-Tetrachloroethane | ND | 0.0057 | mg/kg | 0.0011 |
| **Toluene** | **0.0033 J** | **0.0057** | **mg/kg** | **0.00059** |
| Chlorobenzene | ND | 0.0057 | mg/kg | 0.00060 |
| **Ethylbenzene** | **0.0026 J** | **0.0057** | **mg/kg** | **0.00060** |
| Chloromethane | ND | 0.011 | mg/kg | 0.0018 |
| ɔmomethane | ND | 0.011 | mg/kg | 0.0016 |
| .ıny1 chloride | 0.091 | 0.011 | mg/kg | 0.00053 |
| Chloroethane | ND | 0.011 | mg/kg | 0.00081 |
| Methylene chloride | ND | 0.0057 | mg/kg | 0.0017 |
| **Acetone** | **0.024 J** | **0.028** | **mg/kg** | **0.013** |
| Carbon disulfide | ND | 0.0057 | mg/kg | 0.00053 |
| 1,1-Dichloroethene | ND | 0.0057 | mg/kg | 0.00081 |
| **1,1-Dichloroethane** | **0.0020 J** | **0.0057** | **mg/kg** | **0.00068** |
| Chloroform | ND | 0.0057 | mg/kg | 0.00062 |
| 1,2-Dichloroethane | ND | 0.0057 | mg/kg | 0.0011 |
| 2-Butanone | ND | 0.028 | mg/kg | 0.0093 |
| 1,1,1-Trichloroethane | ND | 0.0057 | mg/kg | 0.00071 |
| Carbon tetrachloride | ND | 0.0057 | mg/kg | 0.00071 |
| Bromodichloromethane | ND | 0.0057 | mg/kg | 0.00090 |
| 1,2-Dichloropropane | ND | 0.0057 | mg/kg | 0.00068 |
| cis-1,3-Dichloropropene | ND | 0.0057 | mg/kg | 0.00090 |
| Styrene | ND | 0.0057 | mg/kg | 0.0012 |
| **Xylenes (total)** | **0.0034 J** | **0.0057** | **mg/kg** | **0.0014** |
| **cis-1,2-Dichloroethene** | **0.058** | **0.0057** | **mg/kg** | **0.00053** |
| **trans-1,2-Dichloroethene** | **0.0039 J** | **0.0057** | **mg/kg** | **0.00056** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 96 | (28 - 159) |
| 1,2-Dichloroethane-d4 | 103 | (51 - 168) |
| Toluene-d8 | 113 | (66 - 152) |
| ɔromofluoromethane | 104 | (73 - 151) |

(Continued on next page)

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-0830-5'

GC/MS Volatiles

Lot-Sample #...: B0D130124-001 Work Order #...: DATTK102 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-0830-5'

General Chemistry

Lot-Sample #...: B0D130124-001 Work Order #...: DATTK Matrix.....: SO
Date Sampled...: 04/12/00 Date Received..: 04/13/00
% Moisture.....: 12

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 88.1 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115303 |
| | Dilution Factor: 1 | | | Initial Wgt/Vol: 0 | Final Wgt/Vol..: 0 | |
| | MDL.....: 0.10 | | | | | |
| Total Organic Carbon | 8850 | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118349 |
| | Dilution Factor: 1 | | | Initial Wgt/Vol: 0 | Final Wgt/Vol..: 0 | |
| | MDL.....: 529 | | | | | |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-0900-7'

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D130124-003 | Work Order #...: | DATTQ102 | Matrix.....: | SO |
| Date Sampled...: | 04/12/00 | Date Received..: | 04/13/00 | | |
| Prep Date.....: | 04/20/00 | Analysis Date..: | 04/20/00 | | |
| Prep Batch #...: | 0115212 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 5.7 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 11 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Trichloroethene | ND | 0.0056 | mg/kg | 0.00077 |
| Dibromochloromethane | ND | 0.0056 | mg/kg | 0.00074 |
| 1,1,2-Trichloroethane | ND | 0.0056 | mg/kg | 0.00098 |
| Benzene | ND | 0.0056 | mg/kg | 0.00055 |
| trans-1,3-Dichloropropene | ND | 0.0056 | mg/kg | 0.00081 |
| Bromoform | ND | 0.0056 | mg/kg | 0.0024 |
| 4-Methyl-2-pentanone | ND | 0.028 | mg/kg | 0.0044 |
| 2-Hexanone | ND | 0.028 | mg/kg | 0.0042 |
| Tetrachloroethene | ND | 0.0056 | mg/kg | 0.0015 |
| 1,1,2,2-Tetrachloroethane | ND | 0.0056 | mg/kg | 0.0011 |
| **Toluene** | **0.022** | **0.0056** | **mg/kg** | **0.00058** |
| Chlorobenzene | ND | 0.0056 | mg/kg | 0.00059 |
| **Ethylbenzene** | **0.0041 J** | **0.0056** | **mg/kg** | **0.00059** |
| Chloromethane | ND | 0.011 | mg/kg | 0.0017 |
| omomethane | ND | 0.011 | mg/kg | 0.0016 |
| .inyl chloride | 0.0012 J | 0.011 | mg/kg | 0.00053 |
| Chloroethane | ND | 0.011 | mg/kg | 0.00080 |
| Methylene chloride | ND | 0.0056 | mg/kg | 0.0017 |
| **Acetone** | **0.026 J** | **0.028** | **mg/kg** | **0.013** |
| Carbon disulfide | ND | 0.0056 | mg/kg | 0.00053 |
| 1,1-Dichloroethene | ND | 0.0056 | mg/kg | 0.00080 |
| 1,1-Dichloroethane | ND | 0.0056 | mg/kg | 0.00067 |
| Chloroform | ND | 0.0056 | mg/kg | 0.00062 |
| 1,2-Dichloroethane | ND | 0.0056 | mg/kg | 0.0011 |
| 2-Butanone | ND | 0.028 | mg/kg | 0.0092 |
| 1,1,1-Trichloroethane | ND | 0.0056 | mg/kg | 0.00071 |
| Carbon tetrachloride | ND | 0.0056 | mg/kg | 0.00071 |
| Bromodichloromethane | ND | 0.0056 | mg/kg | 0.00089 |
| 1,2-Dichloropropane | ND | 0.0056 | mg/kg | 0.00067 |
| cis-1,3-Dichloropropene | ND | 0.0056 | mg/kg | 0.00089 |
| Styrene | ND | 0.0056 | mg/kg | 0.0012 |
| **trans-1,2-Dichloroethene** | **0.0016 J** | **0.0056** | **mg/kg** | **0.00055** |
| **Xylenes (total)** | **0.013** | **0.0056** | **mg/kg** | **0.0014** |
| **cis-1,2-Dichloroethene** | **0.093** | **0.0056** | **mg/kg** | **0.00053** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 109 | (28 - 159) |
| 1,2-Dichloroethane-d4 | 138 | (51 - 168) |
| Toluene-d8 | 104 | (66 - 152) |
| ɔromofluoromethane | 119 | (73 - 151) |

(Continued on next page)

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-0900-7'

GC/MS Volatiles

Lot-Sample #...: B0D130124-003 Work Order #...: DATTQ102 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-0900-7'

General Chemistry

Lot-Sample #...: B0D130124-003 Work Order #...: DATTQ Matrix.....: SO
Date Sampled...: 04/12/00 Date Received..: 04/13/00
% Moisture.....: 11

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 89.2 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115303 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon | 4450 | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118349 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-0945-10.5'

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D130124-005 | Work Order #...: | DATTW102 | Matrix.....: | SO |
| Date Sampled...: | 04/12/00 | Date Received..: | 04/13/00 | | |
| Prep Date.....: | 04/20/00 | Analysis Date..: | 04/20/00 | | |
| Prep Batch #...: | 0115212 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 5.28 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 12 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Trichloroethene | ND | 0.0057 | mg/kg | 0.00079 |
| Dibromochloromethane | ND | 0.0057 | mg/kg | 0.00075 |
| 1,1,2-Trichloroethane | ND | 0.0057 | mg/kg | 0.00099 |
| **Benzene** | **0.0041 J** | **0.0057** | **mg/kg** | **0.00056** |
| trans-1,3-Dichloropropene | ND | 0.0057 | mg/kg | 0.00082 |
| Bromoform | ND | 0.0057 | mg/kg | 0.0024 |
| 4-Methyl-2-pentanone | ND | 0.028 | mg/kg | 0.0045 |
| 2-Hexanone | ND | 0.028 | mg/kg | 0.0043 |
| Tetrachloroethene | ND | 0.0057 | mg/kg | 0.0015 |
| 1,1,2,2-Tetrachloroethane | ND | 0.0057 | mg/kg | 0.0011 |
| Toluene | ND | 0.0057 | mg/kg | 0.00059 |
| Chlorobenzene | ND | 0.0057 | mg/kg | 0.00060 |
| Ethylbenzene | ND | 0.0057 | mg/kg | 0.00060 |
| Chloromethane | ND | 0.011 | mg/kg | 0.0018 |
| ›momethane | ND | 0.011 | mg/kg | 0.0017 |
| ..nyl chloride | ND | 0.011 | mg/kg | 0.00054 |
| Chloroethane | ND | 0.011 | mg/kg | 0.00081 |
| Methylene chloride | ND | 0.0057 | mg/kg | 0.0017 |
| 1,1-Dichloroethene | ND | 0.0057 | mg/kg | 0.00081 |
| **1,1-Dichloroethane** | **0.0012 J** | **0.0057** | **mg/kg** | **0.00068** |
| Chloroform | ND | 0.0057 | mg/kg | 0.00063 |
| **Acetone** | **0.058** | **0.028** | **mg/kg** | **0.013** |
| Carbon disulfide | ND | 0.0057 | mg/kg | 0.00054 |
| 1,2-Dichloroethane | ND | 0.0057 | mg/kg | 0.0011 |
| 2-Butanone | ND | 0.028 | mg/kg | 0.0094 |
| 1,1,1-Trichloroethane | ND | 0.0057 | mg/kg | 0.00072 |
| Carbon tetrachloride | ND | 0.0057 | mg/kg | 0.00072 |
| Bromodichloromethane | ND | 0.0057 | mg/kg | 0.00090 |
| 1,2-Dichloropropane | ND | 0.0057 | mg/kg | 0.00068 |
| cis-1,3-Dichloropropene | ND | 0.0057 | mg/kg | 0.00090 |
| Styrene | ND | 0.0057 | mg/kg | 0.0013 |
| Xylenes (total) | ND | 0.0057 | mg/kg | 0.0014 |
| cis-1,2-Dichloroethene | ND | 0.0057 | mg/kg | 0.00054 |
| trans-1,2-Dichloroethene | ND | 0.0057 | mg/kg | 0.00056 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 104 | (28 - 159) |
| 1,2-Dichloroethane-d4 | 110 | (51 - 168) |
| Toluene-d8 | 103 | (66 - 152) |
| ›romofluoromethane | 105 | (73 - 151) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-0945-10.5'

GC/MS Volatiles

Lot-Sample #...: B0D130124-005 Work Order #...: DATTW102 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-0945-10.5'

General Chemistry

Lot-Sample #...: B0D130124-005 Work Order #...: DATTW Matrix.....: SO
Date Sampled...: 04/12/00 Date Received..: 04/13/00
% Moisture.....: 12

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 87.8 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115303 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon 780 B | | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118349 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-0930-13'

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0D130124-004 | **Work Order #...:** | DATTT102 | **Matrix.....:** | SO |
| **Date Sampled...:** | 04/12/00 | **Date Received..:** | 04/13/00 | | |
| **Prep Date.....:** | 04/20/00 | **Analysis Date..:** | 04/20/00 | | |
| **Prep Batch #...:** | 0115212 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 6.35 g | **Final Wgt/Vol..:** | 5 mL |
| **% Moisture.....:** | 15 | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Trichloroethene | ND | 0.0059 | mg/kg | 0.00081 |
| Dibromochloromethane | ND | 0.0059 | mg/kg | 0.00078 |
| 1,1,2-Trichloroethane | ND | 0.0059 | mg/kg | 0.0010 |
| **Benzene** | **0.0050 J** | **0.0059** | **mg/kg** | **0.00058** |
| trans-1,3-Dichloropropene | ND | 0.0059 | mg/kg | 0.00085 |
| Bromoform | ND | 0.0059 | mg/kg | 0.0025 |
| 4-Methyl-2-pentanone | ND | 0.029 | mg/kg | 0.0046 |
| 2-Hexanone | ND | 0.029 | mg/kg | 0.0044 |
| Tetrachloroethene | ND | 0.0059 | mg/kg | 0.0016 |
| 1,1,2,2-Tetrachloroethane | ND | 0.0059 | mg/kg | 0.0012 |
| **Toluene** | **0.0023 J** | **0.0059** | **mg/kg** | **0.00061** |
| Chlorobenzene | ND | 0.0059 | mg/kg | 0.00062 |
| **Ethylbenzene** | **0.0029 J** | **0.0059** | **mg/kg** | **0.00062** |
| Chloromethane | ND | 0.012 | mg/kg | 0.0018 |
| omomethane | ND | 0.012 | mg/kg | 0.0017 |
| inyl chloride | 0.050 | 0.012 | mg/kg | 0.00055 |
| Chloroethane | ND | 0.012 | mg/kg | 0.00084 |
| Methylene chloride | ND | 0.0059 | mg/kg | 0.0018 |
| **Acetone** | **0.046** | **0.029** | **mg/kg** | **0.013** |
| Carbon disulfide | ND | 0.0059 | mg/kg | 0.00055 |
| 1,1-Dichloroethene | ND | 0.0059 | mg/kg | 0.00084 |
| **1,1-Dichloroethane** | **0.0036 J** | **0.0059** | **mg/kg** | **0.00071** |
| Chloroform | ND | 0.0059 | mg/kg | 0.00065 |
| 1,2-Dichloroethane | ND | 0.0059 | mg/kg | 0.0011 |
| 2-Butanone | ND | 0.029 | mg/kg | 0.0097 |
| 1,1,1-Trichloroethane | ND | 0.0059 | mg/kg | 0.00074 |
| Carbon tetrachloride | ND | 0.0059 | mg/kg | 0.00074 |
| Bromodichloromethane | ND | 0.0059 | mg/kg | 0.00093 |
| 1,2-Dichloropropane | ND | 0.0059 | mg/kg | 0.00071 |
| cis-1,3-Dichloropropene | ND | 0.0059 | mg/kg | 0.00093 |
| Styrene | ND | 0.0059 | mg/kg | 0.0013 |
| Xylenes (total) | ND | 0.0059 | mg/kg | 0.0015 |
| **cis-1,2-Dichloroethene** | **0.058** | **0.0059** | **mg/kg** | **0.00055** |
| trans-1,2-Dichloroethene | ND | 0.0059 | mg/kg | 0.00058 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 101 | (28 - 159) |
| 1,2-Dichloroethane-d4 | 119 | (51 - 168) |
| Toluene-d8 | 103 | (66 - 152) |
| bromofluoromethane | 110 | (73 - 151) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-0930-13'

GC/MS Volatiles

Lot-Sample #...: B0D130124-004 Work Order #...: DATTT102 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-0930-13'

General Chemistry

Lot-Sample #...: B0D130124-004 Work Order #...: DATTT Matrix.....: SO
Date Sampled...: 04/12/00 Date Received..: 04/13/00
% Moisture.....: 15

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 84.8 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115303 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon | 1410 B | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118349 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1000-20'

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D130124-006 | Work Order #...: | DATV0202 | Matrix.....: | SO |
| Date Sampled...: | 04/12/00 | Date Received..: | 04/13/00 | | |
| Prep Date.....: | 04/20/00 | Analysis Date..: | 04/20/00 | | |
| Prep Batch #...: | 0115212 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 5.72 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 12 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| trans-1,2-Dichloroethene | ND | 0.0057 | mg/kg | 0.00056 |
| Carbon disulfide | ND | 0.0057 | mg/kg | 0.00054 |
| 1,1-Dichloroethene | ND | 0.0057 | mg/kg | 0.00081 |
| **1,1-Dichloroethane** | **0.0017 J** | **0.0057** | **mg/kg** | **0.00068** |
| Chloroform | ND | 0.0057 | mg/kg | 0.00063 |
| 1,2-Dichloroethane | ND | 0.0057 | mg/kg | 0.0011 |
| 2-Butanone | ND | 0.029 | mg/kg | 0.0094 |
| 1,1,1-Trichloroethane | ND | 0.0057 | mg/kg | 0.00072 |
| Carbon tetrachloride | ND | 0.0057 | mg/kg | 0.00072 |
| Bromodichloromethane | ND | 0.0057 | mg/kg | 0.00090 |
| 1,2-Dichloropropane | ND | 0.0057 | mg/kg | 0.00068 |
| cis-1,3-Dichloropropene | ND | 0.0057 | mg/kg | 0.00090 |
| Styrene | ND | 0.0057 | mg/kg | 0.0013 |
| **Xylenes (total)** | **0.0032 J** | **0.0057** | **mg/kg** | **0.0014** |
| **cis-1,2-Dichloroethene** | **0.14 E** | **0.0057** | **mg/kg** | **0.00054** |
| Trichloroethene | ND | 0.0057 | mg/kg | 0.00079 |
| Dibromochloromethane | ND | 0.0057 | mg/kg | 0.00075 |
| 1,1,2-Trichloroethane | ND | 0.0057 | mg/kg | 0.00099 |
| **Benzene** | **0.0013 J** | **0.0057** | **mg/kg** | **0.00056** |
| trans-1,3-Dichloropropene | ND | 0.0057 | mg/kg | 0.00082 |
| Bromoform | ND | 0.0057 | mg/kg | 0.0024 |
| 4-Methyl-2-pentanone | ND | 0.029 | mg/kg | 0.0045 |
| 2-Hexanone | ND | 0.029 | mg/kg | 0.0043 |
| Tetrachloroethene | ND | 0.0057 | mg/kg | 0.0015 |
| 1,1,2,2-Tetrachloroethane | ND | 0.0057 | mg/kg | 0.0011 |
| **Toluene** | **0.0022 J** | **0.0057** | **mg/kg** | **0.00059** |
| Chlorobenzene | ND | 0.0057 | mg/kg | 0.00061 |
| **Ethylbenzene** | **0.0014 J** | **0.0057** | **mg/kg** | **0.00061** |
| Chloromethane | ND | 0.011 | mg/kg | 0.0018 |
| Bromomethane | ND | 0.011 | mg/kg | 0.0017 |
| **Vinyl chloride** | **0.11 E** | **0.011** | **mg/kg** | **0.00054** |
| Chloroethane | ND | 0.011 | mg/kg | 0.00081 |
| Methylene chloride | ND | 0.0057 | mg/kg | 0.0017 |
| **Acetone** | **0.029** | **0.029** | **mg/kg** | **0.013** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 99 | (28 - 159) |
| 1,2-Dichloroethane-d4 | 92 | (51 - 168) |
| Toluene-d8 | 110 | (66 - 152) |
| bromofluoromethane | 94 | (73 - 151) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1000-20'

GC/MS Volatiles

Lot-Sample #...: B0D130124-006 Work Order #...: DATV0202 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1000-20'

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D130124-006 | Work Order #...: | DATV0302 | Matrix.....: | SO |
| Date Sampled...: | 04/12/00 | Date Received..: | 04/13/00 | | |
| Prep Date.....: | 04/13/00 | Analysis Date..: | 04/20/00 | | |
| Prep Batch #...: | 0115216 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 5.9 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 12 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Vinyl chloride | 0.16 J | 0.23 | mg/kg | 0.00054 |
| cis-1,2-Dichloroethene | 0.17 | 0.11 | mg/kg | 0.00054 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1,2-Dichloroethane-d4 | 103 | (57 - 132) |
| Bromofluorobenzene | 106 | (58 - 135) |
| Dibromofluoromethane | 92 | (57 - 130) |
| Toluene-d8 | 109 | (61 - 133) |

NOTE(S):

J Estimated result. Result is less than RL.

Results and reporting limits have been adjusted for dry weight.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1000-20'

General Chemistry

Lot-Sample #...: B0D130124-006 Work Order #...: DATV0 Matrix.....: SO
Date Sampled...: 04/12/00 Date Received..: 04/13/00
% Moisture.....: 12

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 87.6 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115303 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon | 650 B | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118349 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1045-21'

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D130124-008 | Work Order #...: | DATV3102 | Matrix.....: | SO |
| Date Sampled...: | 04/12/00 | Date Received..: | 04/13/00 | | |
| Prep Date.....: | 04/20/00 | Analysis Date..: | 04/20/00 | | |
| Prep Batch #...: | 0115212 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 4.8 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 15 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Trichloroethene | ND | 0.0061 | mg/kg | 0.00081 |
| Dibromochloromethane | ND | 0.0061 | mg/kg | 0.00077 |
| 1,1,2-Trichloroethane | ND | 0.0061 | mg/kg | 0.0010 |
| **Benzene** | **0.0015 J** | **0.0061** | **mg/kg** | **0.00057** |
| trans-1,3-Dichloropropene | ND | 0.0061 | mg/kg | 0.00084 |
| Bromoform | ND | 0.0061 | mg/kg | 0.0025 |
| 4-Methyl-2-pentanone | ND | 0.030 | mg/kg | 0.0046 |
| 2-Hexanone | ND | 0.030 | mg/kg | 0.0044 |
| Tetrachloroethene | ND | 0.0061 | mg/kg | 0.0015 |
| 1,1,2,2-Tetrachloroethane | ND | 0.0061 | mg/kg | 0.0011 |
| **Toluene** | **0.0024 J** | **0.0061** | **mg/kg** | **0.00061** |
| Chlorobenzene | ND | 0.0061 | mg/kg | 0.00062 |
| Ethylbenzene | ND | 0.0061 | mg/kg | 0.00062 |
| Chloromethane | ND | 0.012 | mg/kg | 0.0018 |
| Bromomethane | ND | 0.012 | mg/kg | 0.0017 |
| **Vinyl chloride** | **0.087** | **0.012** | **mg/kg** | **0.00055** |
| Chloroethane | ND | 0.012 | mg/kg | 0.00083 |
| Methylene chloride | ND | 0.0061 | mg/kg | 0.0018 |
| **Acetone** | **0.047** | **0.030** | **mg/kg** | **0.013** |
| **Carbon disulfide** | **0.0023 J** | **0.0061** | **mg/kg** | **0.00055** |
| 1,1-Dichloroethene | ND | 0.0061 | mg/kg | 0.00083 |
| **1,1-Dichloroethane** | **0.0025 J** | **0.0061** | **mg/kg** | **0.00070** |
| Chloroform | ND | 0.0061 | mg/kg | 0.00064 |
| 1,2-Dichloroethane | ND | 0.0061 | mg/kg | 0.0011 |
| 2-Butanone | ND | 0.030 | mg/kg | 0.0096 |
| 1,1,1-Trichloroethane | ND | 0.0061 | mg/kg | 0.00074 |
| Carbon tetrachloride | ND | 0.0061 | mg/kg | 0.00074 |
| Bromodichloromethane | ND | 0.0061 | mg/kg | 0.00092 |
| 1,2-Dichloropropane | ND | 0.0061 | mg/kg | 0.00070 |
| cis-1,3-Dichloropropene | ND | 0.0061 | mg/kg | 0.00092 |
| Styrene | ND | 0.0061 | mg/kg | 0.0013 |
| **Xylenes (total)** | **0.0015 J** | **0.0061** | **mg/kg** | **0.0014** |
| **cis-1,2-Dichloroethene** | **0.14 E** | **0.0061** | **mg/kg** | **0.00055** |
| trans-1,2-Dichloroethene | ND | 0.0061 | mg/kg | 0.00057 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 102 | (28 - 159) |
| 1,2-Dichloroethane-d4 | 120 | (51 - 168) |
| Toluene-d8 | 101 | (66 - 152) |
| Bromofluoromethane | 110 | (73 - 151) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1045-21'

GC/MS Volatiles

Lot-Sample #...: B0D130124-008 Work Order #...: DATV3102 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1045-21'

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D130124-008 | Work Order #...: | DATV3202 | Matrix.....: | SO |
| Date Sampled...: | 04/12/00 | Date Received..: | 04/13/00 | | |
| Prep Date.....: | 04/13/00 | Analysis Date..: | 04/20/00 | | |
| Prep Batch #...: | 0115216 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 4.86 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 15 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 0.12 | 0.12 | mg/kg | 0.028 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1,2-Dichloroethane-d4 | 110 | (57 - 132) |
| Bromofluorobenzene | 112 | (58 - 135) |
| Dibromofluoromethane | 92 | (57 - 130) |
| Toluene-d8 | 109 | (61 - 133) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1045-21'

General Chemistry

Lot-Sample #...: B0D130124-008 Work Order #...: DATV3 Matrix.....: SO
Date Sampled...: 04/12/00 Date Received..: 04/13/00
% Moisture.....: 15

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 85.5 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115303 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon | 600 B | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118349 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1055-21.5'

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0D130124-009 | **Work Order #...:** | DATV5102 | **Matrix.....:** | SO |
| **Date Sampled...:** | 04/12/00 | **Date Received..:** | 04/13/00 | | |
| **Prep Date.....:** | 04/20/00 | **Analysis Date..:** | 04/20/00 | | |
| **Prep Batch #...:** | 0115212 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 6.41 g | **Final Wgt/Vol..:** | 5 mL |
| **% Moisture.....:** | 12 | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Trichloroethene | ND | 0.0057 | mg/kg | 0.00078 |
| Dibromochloromethane | ND | 0.0057 | mg/kg | 0.00075 |
| 1,1,2-Trichloroethane | ND | 0.0057 | mg/kg | 0.00099 |
| **Benzene** | **0.0017 J** | **0.0057** | **mg/kg** | **0.00055** |
| trans-1,3-Dichloropropene | ND | 0.0057 | mg/kg | 0.00082 |
| Bromoform | ND | 0.0057 | mg/kg | 0.0024 |
| 4-Methyl-2-pentanone | ND | 0.028 | mg/kg | 0.0044 |
| 2-Hexanone | ND | 0.028 | mg/kg | 0.0043 |
| Tetrachloroethene | ND | 0.0057 | mg/kg | 0.0015 |
| 1,1,2,2-Tetrachloroethane | ND | 0.0057 | mg/kg | 0.0011 |
| **Toluene** | **0.0025 J** | **0.0057** | **mg/kg** | **0.00059** |
| Chlorobenzene | ND | 0.0057 | mg/kg | 0.00060 |
| **Ethylbenzene** | **0.0013 J** | **0.0057** | **mg/kg** | **0.00060** |
| Chloromethane | ND | 0.011 | mg/kg | 0.0018 |
| Bromomethane | ND | 0.011 | mg/kg | 0.0016 |
| **Vinyl chloride** | **0.17 E** | **0.011** | **mg/kg** | **0.00053** |
| Chloroethane | ND | 0.011 | mg/kg | 0.00080 |
| Methylene chloride | ND | 0.0057 | mg/kg | 0.0017 |
| **Acetone** | **0.028** | **0.028** | **mg/kg** | **0.013** |
| **Carbon disulfide** | **0.0050 J** | **0.0057** | **mg/kg** | **0.00053** |
| 1,1-Dichloroethene | ND | 0.0057 | mg/kg | 0.00080 |
| **1,1-Dichloroethane** | **0.0022 J** | **0.0057** | **mg/kg** | **0.00068** |
| Chloroform | ND | 0.0057 | mg/kg | 0.00062 |
| 1,2-Dichloroethane | ND | 0.0057 | mg/kg | 0.0011 |
| 2-Butanone | ND | 0.028 | mg/kg | 0.0093 |
| 1,1,1-Trichloroethane | ND | 0.0057 | mg/kg | 0.00071 |
| Carbon tetrachloride | ND | 0.0057 | mg/kg | 0.00071 |
| Bromodichloromethane | ND | 0.0057 | mg/kg | 0.00089 |
| 1,2-Dichloropropane | ND | 0.0057 | mg/kg | 0.00068 |
| cis-1,3-Dichloropropene | ND | 0.0057 | mg/kg | 0.00089 |
| Styrene | ND | 0.0057 | mg/kg | 0.0012 |
| **Xylenes (total)** | **0.0038 J** | **0.0057** | **mg/kg** | **0.0014** |
| **cis-1,2-Dichloroethene** | **0.19 E** | **0.0057** | **mg/kg** | **0.00053** |
| trans-1,2-Dichloroethene | 0.00088 J | 0.0057 | mg/kg | 0.00055 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 99 | (28 - 159) |
| 1,2-Dichloroethane-d4 | 112 | (51 - 168) |
| Toluene-d8 | 104 | (66 - 152) |
| Bromofluoromethane | 105 | (73 - 151) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1055-21.5'

GC/MS Volatiles

Lot-Sample #...: B0D130124-009 Work Order #...: DATV5102 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1055-21.5'

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0D130124-009 | **Work Order #...:** | DATV5202 | **Matrix.....:** | SO |
| **Date Sampled...:** | 04/12/00 | **Date Received..:** | 04/13/00 | | |
| **Prep Date.....:** | 04/13/00 | **Analysis Date..:** | 04/20/00 | | |
| **Prep Batch #...:** | 0115216 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 6.47 g | **Final Wgt/Vol..:** | 5 mL |
| **% Moisture.....:** | 12 | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **Vinyl chloride** | **0.34** | **0.23** | **mg/kg** | **0.027** |
| **cis-1,2-Dichloroethene** | **0.35** | **0.11** | **mg/kg** | **0.027** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | (57 - 132) |
| Bromofluorobenzene | 105 | (58 - 135) |
| Dibromofluoromethane | 90 | (57 - 130) |
| Toluene-d8 | 105 | (61 - 133) |

**NOTE(S):**

Results and reporting limits have been adjusted for dry weight.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1055-21.5'

General Chemistry

Lot-Sample #...: B0D130124-009 Work Order #...: DATV5 Matrix.....: SO
Date Sampled...: 04/12/00 Date Received..: 04/13/00
% Moisture.....: 12

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 88.3 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115303 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon | ND | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118349 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1040-24'

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0D130124-007 | **Work Order #...:** | DATV2102 | **Matrix.....:** | SO |
| **Date Sampled...:** | 04/12/00 | **Date Received..:** | 04/13/00 | | |
| **Prep Date.....:** | 04/20/00 | **Analysis Date..:** | 04/20/00 | | |
| **Prep Batch #...:** | 0115212 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 6.54 g | **Final Wgt/Vol..:** | 5 mL |
| **% Moisture.....:** | 13 | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Trichloroethene | ND | 0.0057 | mg/kg | 0.00079 |
| Dibromochloromethane | ND | 0.0057 | mg/kg | 0.00075 |
| 1,1,2-Trichloroethane | ND | 0.0057 | mg/kg | 0.00099 |
| **Benzene** | **0.0016 J** | **0.0057** | **mg/kg** | **0.00056** |
| trans-1,3-Dichloropropene | ND | 0.0057 | mg/kg | 0.00082 |
| Bromoform | ND | 0.0057 | mg/kg | 0.0024 |
| 4-Methyl-2-pentanone | ND | 0.029 | mg/kg | 0.0045 |
| 2-Hexanone | ND | 0.029 | mg/kg | 0.0043 |
| Tetrachloroethene | ND | 0.0057 | mg/kg | 0.0015 |
| 1,1,2,2-Tetrachloroethane | ND | 0.0057 | mg/kg | 0.0011 |
| **Toluene** | **0.012** | **0.0057** | **mg/kg** | **0.00059** |
| Chlorobenzene | ND | 0.0057 | mg/kg | 0.00061 |
| Ethylbenzene | ND | 0.0057 | mg/kg | 0.00061 |
| Chloromethane | ND | 0.011 | mg/kg | 0.0018 |
| omomethane | ND | 0.011 | mg/kg | 0.0017 |
| .inyl chloride | 0.39 E | 0.011 | mg/kg | 0.00054 |
| Chloroethane | ND | 0.011 | mg/kg | 0.00081 |
| Methylene chloride | ND | 0.0057 | mg/kg | 0.0017 |
| Acetone | ND | 0.029 | mg/kg | 0.013 |
| **Carbon disulfide** | **0.0011 J** | **0.0057** | **mg/kg** | **0.00054** |
| 1,1-Dichloroethene | ND | 0.0057 | mg/kg | 0.00081 |
| **1,1-Dichloroethane** | **0.0032 J** | **0.0057** | **mg/kg** | **0.00069** |
| Chloroform | ND | 0.0057 | mg/kg | 0.00063 |
| 1,2-Dichloroethane | ND | 0.0057 | mg/kg | 0.0011 |
| 2-Butanone | ND | 0.029 | mg/kg | 0.0094 |
| 1,1,1-Trichloroethane | ND | 0.0057 | mg/kg | 0.00072 |
| Carbon tetrachloride | ND | 0.0057 | mg/kg | 0.00072 |
| Bromodichloromethane | ND | 0.0057 | mg/kg | 0.00090 |
| 1,2-Dichloropropane | ND | 0.0057 | mg/kg | 0.00069 |
| cis-1,3-Dichloropropene | ND | 0.0057 | mg/kg | 0.00090 |
| Styrene | ND | 0.0057 | mg/kg | 0.0013 |
| Xylenes (total) | 0.016 | 0.0057 | mg/kg | 0.0014 |
| cis-1,2-Dichloroethene | 0.66 E | 0.0057 | mg/kg | 0.00054 |
| trans-1,2-Dichloroethene | 0.0025 J | 0.0057 | mg/kg | 0.00056 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 105 | (28 - 159) |
| 1,2-Dichloroethane-d4 | 134 | (51 - 168) |
| Toluene-d8 | 99 | (66 - 152) |
| bromofluoromethane | 116 | (73 - 151) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1040-24'

GC/MS Volatiles

Lot-Sample #...: B0D130124-007 Work Order #...: DATV2102 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1040-24'

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D130124-007 | Work Order #...: | DATV2202 | Matrix.....: | SO |
| Date Sampled...: | 04/12/00 | Date Received..: | 04/13/00 | | |
| Prep Date.....: | 04/13/00 | Analysis Date..: | 04/20/00 | | |
| Prep Batch #...: | 0115216 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 6.33 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 13 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Vinyl chloride | 0.36 | 0.23 | mg/kg | 0.027 |
| cis-1,2-Dichloroethene | 0.67 | 0.11 | mg/kg | 0.027 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1,2-Dichloroethane-d4 | 113 | (57 - 132) |
| Bromofluorobenzene | 107 | (58 - 135) |
| Dibromofluoromethane | 104 | (57 - 130) |
| Toluene-d8 | 111 | (61 - 133) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1040-24'

General Chemistry

Lot-Sample #...: B0D130124-007 Work Order #...: DATV2 Matrix.....: SO
Date Sampled...: 04/12/00 Date Received..: 04/13/00
% Moisture.....: 13

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 87.5 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115303 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon | 870 B | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118349 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1150-26'

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D130124-011 | Work Order #...: | DATV8102 | Matrix.....: | SO |
| Date Sampled...: | 04/12/00 | Date Received..: | 04/13/00 | | |
| Prep Date.....: | 04/20/00 | Analysis Date..: | 04/20/00 | | |
| Prep Batch #...: | 0115212 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 5.75 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 12 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Trichloroethene | ND | 0.0057 | mg/kg | 0.00079 |
| Dibromochloromethane | ND | 0.0057 | mg/kg | 0.00075 |
| 1,1,2-Trichloroethane | ND | 0.0057 | mg/kg | 0.00099 |
| **Benzene** | **0.0011 J** | **0.0057** | **mg/kg** | **0.00056** |
| trans-1,3-Dichloropropene | ND | 0.0057 | mg/kg | 0.00082 |
| Bromoform | ND | 0.0057 | mg/kg | 0.0024 |
| 4-Methyl-2-pentanone | ND | 0.029 | mg/kg | 0.0045 |
| 2-Hexanone | ND | 0.029 | mg/kg | 0.0043 |
| Tetrachloroethene | ND | 0.0057 | mg/kg | 0.0015 |
| 1,1,2,2-Tetrachloroethane | ND | 0.0057 | mg/kg | 0.0011 |
| **Toluene** | **0.0088** | **0.0057** | **mg/kg** | **0.00059** |
| Chlorobenzene | ND | 0.0057 | mg/kg | 0.00060 |
| Ethylbenzene | ND | 0.0057 | mg/kg | 0.00060 |
| Chloromethane | ND | 0.011 | mg/kg | 0.0018 |
| romomethane | ND | 0.011 | mg/kg | 0.0017 |
| **Vinyl chloride** | **0.35 E** | **0.011** | **mg/kg** | **0.00054** |
| Chloroethane | ND | 0.011 | mg/kg | 0.00081 |
| Methylene chloride | ND | 0.0057 | mg/kg | 0.0017 |
| Acetone | ND | 0.029 | mg/kg | 0.013 |
| **Carbon disulfide** | **0.0032 J** | **0.0057** | **mg/kg** | **0.00054** |
| 1,1-Dichloroethene | ND | 0.0057 | mg/kg | 0.00081 |
| **1,1-Dichloroethane** | **0.0023 J** | **0.0057** | **mg/kg** | **0.00068** |
| Chloroform | ND | 0.0057 | mg/kg | 0.00063 |
| 1,2-Dichloroethane | ND | 0.0057 | mg/kg | 0.0011 |
| 2-Butanone | ND | 0.029 | mg/kg | 0.0094 |
| 1,1,1-Trichloroethane | ND | 0.0057 | mg/kg | 0.00072 |
| Carbon tetrachloride | ND | 0.0057 | mg/kg | 0.00072 |
| Bromodichloromethane | ND | 0.0057 | mg/kg | 0.00090 |
| 1,2-Dichloropropane | ND | 0.0057 | mg/kg | 0.00068 |
| cis-1,3-Dichloropropene | ND | 0.0057 | mg/kg | 0.00090 |
| Styrene | ND | 0.0057 | mg/kg | 0.0013 |
| **Xylenes (total)** | **0.011** | **0.0057** | **mg/kg** | **0.0014** |
| **cis-1,2-Dichloroethene** | **0.45 E** | **0.0057** | **mg/kg** | **0.00054** |
| **trans-1,2-Dichloroethene** | **0.0018 J** | **0.0057** | **mg/kg** | **0.00056** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 97 | (28 - 159) |
| 1,2-Dichloroethane-d4 | 107 | (51 - 168) |
| Toluene-d8 | 105 | (66 - 152) |
| bromofluoromethane | 104 | (73 - 151) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1150-26'

GC/MS Volatiles

Lot-Sample #...: B0D130124-011 Work Order #...: DATV8102 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1150-26'

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D130124-011 | Work Order #...: | DATV8202 | Matrix.....: | SO |
| Date Sampled...: | 04/12/00 | Date Received..: | 04/13/00 | | |
| Prep Date.....: | 04/13/00 | Analysis Date..: | 04/20/00 | | |
| Prep Batch #...: | 0115216 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 4.98 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 12 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Vinyl chloride | 0.029 J | 0.23 | mg/kg | 0.027 |
| cis-1,2-Dichloroethene | 0.14 | 0.11 | mg/kg | 0.027 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1,2-Dichloroethane-d4 | 116 | (57 - 132) |
| Bromofluorobenzene | 120 | (58 - 135) |
| Dibromofluoromethane | 101 | (57 - 130) |
| Toluene-d8 | 121 | (61 - 133) |

NOTE(S):

J Estimated result. Result is less than RL.

Results and reporting limits have been adjusted for dry weight.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1150-26'

General Chemistry

Lot-Sample #...: B0D130124-011 Work Order #...: DATV8 Matrix.....: SO
Date Sampled...: 04/12/00 Date Received..: 04/13/00
% Moisture.....: 12

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 87.7 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115303 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon | 760 B | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118349 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1140-30'

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D130124-010 | Work Order #...: | DATV7402 | Matrix.....: | SO |
| Date Sampled...: | 04/12/00 | Date Received..: | 04/13/00 | | |
| Prep Date.....: | 04/20/00 | Analysis Date..: | 04/20/00 | | |
| Prep Batch #...: | 0116145 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 6.24 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 12 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Trichloroethene | ND | 0.0057 | mg/kg | 0.00079 |
| Dibromochloromethane | ND | 0.0057 | mg/kg | 0.00075 |
| 1,1,2-Trichloroethane | ND | 0.0057 | mg/kg | 0.00099 |
| Benzene | ND | 0.0057 | mg/kg | 0.00056 |
| trans-1,3-Dichloropropene | ND | 0.0057 | mg/kg | 0.00082 |
| Bromoform | ND | 0.0057 | mg/kg | 0.0024 |
| 4-Methyl-2-pentanone | ND | 0.028 | mg/kg | 0.0045 |
| 2-Hexanone | ND | 0.028 | mg/kg | 0.0043 |
| Tetrachloroethene | ND | 0.0057 | mg/kg | 0.0015 |
| 1,1,2,2-Tetrachloroethane | ND | 0.0057 | mg/kg | 0.0011 |
| **Toluene** | **0.032** | **0.0057** | **mg/kg** | **0.00059** |
| Chlorobenzene | ND | 0.0057 | mg/kg | 0.00060 |
| Ethylbenzene | ND | 0.0057 | mg/kg | 0.00060 |
| Chloromethane | ND | 0.011 | mg/kg | 0.0018 |
| omomethane | ND | 0.011 | mg/kg | 0.0017 |
| **.inyl chloride** | **0.61 E** | **0.011** | **mg/kg** | **0.00054** |
| Carbon disulfide | ND | 0.0057 | mg/kg | 0.00054 |
| 1,1-Dichloroethene | ND | 0.0057 | mg/kg | 0.00081 |
| Chloroethane | ND | 0.011 | mg/kg | 0.00081 |
| Methylene chloride | ND | 0.0057 | mg/kg | 0.0017 |
| Acetone | ND | 0.028 | mg/kg | 0.013 |
| **1,1-Dichloroethane** | **0.0027 J** | **0.0057** | **mg/kg** | **0.00068** |
| Chloroform | ND | 0.0057 | mg/kg | 0.00063 |
| 1,2-Dichloroethane | ND | 0.0057 | mg/kg | 0.0011 |
| 2-Butanone | ND | 0.028 | mg/kg | 0.0094 |
| 1,1,1-Trichloroethane | ND | 0.0057 | mg/kg | 0.00072 |
| Carbon tetrachloride | ND | 0.0057 | mg/kg | 0.00072 |
| Bromodichloromethane | ND | 0.0057 | mg/kg | 0.00090 |
| 1,2-Dichloropropane | ND | 0.0057 | mg/kg | 0.00068 |
| cis-1,3-Dichloropropene | ND | 0.0057 | mg/kg | 0.00090 |
| Styrene | ND | 0.0057 | mg/kg | 0.0013 |
| **Xylenes (total)** | **0.041** | **0.0057** | **mg/kg** | **0.0014** |
| **cis-1,2-Dichloroethene** | **0.77 E** | **0.0057** | **mg/kg** | **0.00054** |
| **trans-1,2-Dichloroethene** | **0.0031 J** | **0.0057** | **mg/kg** | **0.00056** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 97 | (28 - 159) |
| 1,2-Dichloroethane-d4 | 85 | (51 - 168) |
| Toluene-d8 | 109 | (66 - 152) |
| bromofluoromethane | 91 | (73 - 151) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1140-30'

GC/MS Volatiles

Lot-Sample #...: B0D130124-010 Work Order #...: DATV7402 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

E Estimated result. Result concentration exceeds the calibration range.

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1140-30'

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D130124-010 | Work Order #...: | DATV7202 | Matrix.....: | SO |
| Date Sampled...: | 04/12/00 | Date Received..: | 04/13/00 | | |
| Prep Date.....: | 04/13/00 | Analysis Date..: | 04/20/00 | | |
| Prep Batch #...: | 0115216 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 5.24 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 12 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Vinyl chloride | ND | 0.23 | mg/kg | 0.027 |
| cis-1,2-Dichloroethene | 0.18 | 0.11 | mg/kg | 0.027 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1,2-Dichloroethane-d4 | 104 | (57 - 132) |
| Bromofluorobenzene | 107 | (58 - 135) |
| Dibromofluoromethane | 94 | (57 - 130) |
| Toluene-d8 | 108 | (61 - 133) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Quanterra

O'BRIEN & GERR ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1140-30'

General Chemistry

Lot-Sample #...: B0D130124-010 Work Order #...: DATV7 Matrix.....: SO
Date Sampled...: 04/12/00 Date Received..: 04/13/00
% Moisture.....: 12

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 87.9 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115303 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon | 540 B | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118349 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1245-35'

General Chemistry

Lot-Sample #...: B0D130124-012 Work Order #...: DATVG Matrix.....: SO
Date Sampled...: 04/12/00 Date Received..: 04/13/00
% Moisture.....: 16

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 84.4 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115303 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon | ND | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118349 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1315-37'

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D130124-013 | Work Order #...: | DATVK102 | Matrix.....: | SO |
| Date Sampled...: | 04/12/00 | Date Received..: | 04/13/00 | | |
| Prep Date.....: | 04/20/00 | Analysis Date..: | 04/20/00 | | |
| Prep Batch #...: | 0115212 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 5.2 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 13 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Trichloroethene | ND | 0.0058 | mg/kg | 0.00080 |
| Dibromochloromethane | ND | 0.0058 | mg/kg | 0.00076 |
| 1,1,2-Trichloroethane | ND | 0.0058 | mg/kg | 0.0010 |
| Benzene | ND | 0.0058 | mg/kg | 0.00057 |
| trans-1,3-Dichloropropene | ND | 0.0058 | mg/kg | 0.00083 |
| Bromoform | ND | 0.0058 | mg/kg | 0.0024 |
| 4-Methyl-2-pentanone | ND | 0.029 | mg/kg | 0.0045 |
| 2-Hexanone | ND | 0.029 | mg/kg | 0.0044 |
| Tetrachloroethene | ND | 0.0058 | mg/kg | 0.0015 |
| 1,1,2,2-Tetrachloroethane | ND | 0.0058 | mg/kg | 0.0011 |
| Toluene | ND | 0.0058 | mg/kg | 0.00060 |
| Chlorobenzene | ND | 0.0058 | mg/kg | 0.00061 |
| Ethylbenzene | ND | 0.0058 | mg/kg | 0.00061 |
| Chloromethane | ND | 0.012 | mg/kg | 0.0018 |
| Bromomethane | ND | 0.012 | mg/kg | 0.0017 |
| **Vinyl chloride** | **0.0036 J** | **0.012** | **mg/kg** | **0.00054** |
| Chloroethane | ND | 0.012 | mg/kg | 0.00082 |
| Methylene chloride | ND | 0.0058 | mg/kg | 0.0018 |
| **Acetone** | **0.030** | **0.029** | **mg/kg** | **0.013** |
| Carbon disulfide | ND | 0.0058 | mg/kg | 0.00054 |
| 1,1-Dichloroethene | ND | 0.0058 | mg/kg | 0.00082 |
| 1,1-Dichloroethane | ND | 0.0058 | mg/kg | 0.00069 |
| Chloroform | ND | 0.0058 | mg/kg | 0.00063 |
| 1,2-Dichloroethane | ND | 0.0058 | mg/kg | 0.0011 |
| 2-Butanone | ND | 0.029 | mg/kg | 0.0095 |
| 1,1,1-Trichloroethane | ND | 0.0058 | mg/kg | 0.00073 |
| Carbon tetrachloride | ND | 0.0058 | mg/kg | 0.00073 |
| Bromodichloromethane | ND | 0.0058 | mg/kg | 0.00091 |
| 1,2-Dichloropropane | ND | 0.0058 | mg/kg | 0.00069 |
| cis-1,3-Dichloropropene | ND | 0.0058 | mg/kg | 0.00091 |
| Styrene | ND | 0.0058 | mg/kg | 0.0013 |
| Xylenes (total) | ND | 0.0058 | mg/kg | 0.0014 |
| **cis-1,2-Dichloroethene** | **0.017** | **0.0058** | **mg/kg** | **0.00054** |
| trans-1,2-Dichloroethene | ND | 0.0058 | mg/kg | 0.00057 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 94 | (28 - 159) |
| 1,2-Dichloroethane-d4 | 104 | (51 - 168) |
| Toluene-d8 | 107 | (66 - 152) |
| Bromofluoromethane | 104 | (73 - 151) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1315-37'

GC/MS Volatiles

Lot-Sample #...: B0D130124-013 Work Order #...: DATVK102 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1315-37'

General Chemistry

Lot-Sample #...: B0D130124-013 Work Order #...: DATVK Matrix.....: SO
Date Sampled...: 04/12/00 Date Received..: 04/13/00
% Moisture.....: 13

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 86.6 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115303 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon | ND | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118349 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1325-37.5'

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D130124-014 | Work Order #...: | DATVN102 | Matrix.....: | SO |
| Date Sampled...: | 04/12/00 | Date Received..: | 04/13/00 | | |
| Prep Date.....: | 04/20/00 | Analysis Date..: | 04/20/00 | | |
| Prep Batch #...: | 0115212 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 5.04 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 31 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **Trichloroethene** | **0.018** | **0.0073** | **mg/kg** | **0.0010** |
| Dibromochloromethane | ND | 0.0073 | mg/kg | 0.00096 |
| 1,1,2-Trichloroethane | ND | 0.0073 | mg/kg | 0.0013 |
| Benzene | ND | 0.0073 | mg/kg | 0.00071 |
| trans-1,3-Dichloropropene | ND | 0.0073 | mg/kg | 0.0010 |
| Bromoform | ND | 0.0073 | mg/kg | 0.0031 |
| 4-Methyl-2-pentanone | ND | 0.036 | mg/kg | 0.0057 |
| 2-Hexanone | ND | 0.036 | mg/kg | 0.0055 |
| Tetrachloroethene | ND | 0.0073 | mg/kg | 0.0019 |
| 1,1,2,2-Tetrachloroethane | ND | 0.0073 | mg/kg | 0.0014 |
| **Toluene** | **0.0037 J** | **0.0073** | **mg/kg** | **0.00076** |
| **Chlorobenzene** | **0.0018 J** | **0.0073** | **mg/kg** | **0.00077** |
| Ethylbenzene | ND | 0.0073 | mg/kg | 0.00077 |
| Chloromethane | ND | 0.015 | mg/kg | 0.0023 |
| omomethane | ND | 0.015 | mg/kg | 0.0021 |
| **Vinyl chloride** | **0.19 E** | **0.015** | **mg/kg** | **0.00068** |
| Chloroethane | ND | 0.015 | mg/kg | 0.0010 |
| Methylene chloride | ND | 0.0073 | mg/kg | 0.0022 |
| **Acetone** | **0.021 J** | **0.036** | **mg/kg** | **0.017** |
| **Carbon disulfide** | **0.029** | **0.0073** | **mg/kg** | **0.00068** |
| 1,1-Dichloroethene | ND | 0.0073 | mg/kg | 0.0010 |
| **1,1-Dichloroethane** | **0.0033 J** | **0.0073** | **mg/kg** | **0.00087** |
| Chloroform | ND | 0.0073 | mg/kg | 0.00080 |
| **1,2-Dichloroethane** | **0.0038 J** | **0.0073** | **mg/kg** | **0.0014** |
| 2-Butanone | ND | 0.036 | mg/kg | 0.012 |
| 1,1,1-Trichloroethane | ND | 0.0073 | mg/kg | 0.00092 |
| Carbon tetrachloride | ND | 0.0073 | mg/kg | 0.00092 |
| Bromodichloromethane | ND | 0.0073 | mg/kg | 0.0011 |
| 1,2-Dichloropropane | ND | 0.0073 | mg/kg | 0.00087 |
| cis-1,3-Dichloropropene | ND | 0.0073 | mg/kg | 0.0011 |
| Styrene | ND | 0.0073 | mg/kg | 0.0016 |
| **Xylenes (total)** | **0.0052 J** | **0.0073** | **mg/kg** | **0.0018** |
| **cis-1,2-Dichloroethene** | **0.24 E** | **0.0073** | **mg/kg** | **0.00068** |
| trans-1,2-Dichloroethene | ND | 0.0073 | mg/kg | 0.00071 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 94 | (28 - 159) |
| 1,2-Dichloroethane-d4 | 99 | (51 - 168) |
| Toluene-d8 | 108 | (66 - 152) |
| bromofluoromethane | 101 | (73 - 151) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1325-37.5'

GC/MS Volatiles

Lot-Sample #...: B0D130124-014 Work Order #...: DATVN102 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1325-37.5'

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D130124-014 | Work Order #...: | DATVN202 | Matrix.....: | SO |
| Date Sampled...: | 04/12/00 | Date Received..: | 04/13/00 | | |
| Prep Date.....: | 04/13/00 | Analysis Date..: | 04/20/00 | | |
| Prep Batch #...: | 0115216 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 5.29 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 31 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Vinyl chloride | 0.17 J | 0.29 | mg/kg | 0.035 |
| cis-1,2-Dichloroethene | 0.38 | 0.15 | mg/kg | 0.035 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1,2-Dichloroethane-d4 | 91 | (57 - 132) |
| Bromofluorobenzene | 97 | (58 - 135) |
| Dibromofluoromethane | 84 | (57 - 130) |
| Toluene-d8 | 94 | (61 - 133) |

NOTE(S):

J Estimated result. Result is less than RL.

Results and reporting limits have been adjusted for dry weight.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGCB1-12APR-00-1325-37.5'

General Chemistry

Lot-Sample #...: B0D130124-014 Work Order #...: DATVN Matrix.....: SO
Date Sampled...: 04/12/00 Date Received..: 04/13/00
% Moisture.....: 31

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Moisture | 31.2 | 0.10 | % | MCAWW 160.3 MOD | 04/28/00 | 0119322 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: 0 | Final Wgt/Vol..: 0 | |
| | | MDL.....: | | | | |
| Total Organic Carbon 1420 B | | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118349 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-0815-3.5

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D120119-003 | Work Order #...: | DAR09101 | Matrix.....: | SO |
| Date Sampled...: | 04/11/00 | Date Received..: | 04/12/00 | | |
| Prep Date.....: | 04/12/00 | Analysis Date..: | 04/18/00 | | |
| Prep Batch #...: | 0109260 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 4.51 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Chloromethane | ND | 0.22 | mg/kg | 0.078 |
| Bromomethane | ND | 0.22 | mg/kg | 0.18 |
| Vinyl chloride | ND | 0.22 | mg/kg | 0.024 |
| Chloroethane | ND | 0.22 | mg/kg | 0.036 |
| Methylene chloride | ND | 0.11 | mg/kg | 0.077 |
| Acetone | ND | 0.55 | mg/kg | 0.57 |
| Carbon disulfide | ND | 0.11 | mg/kg | 0.024 |
| 1,1-Dichloroethene | ND | 0.11 | mg/kg | 0.036 |
| 1,1-Dichloroethane | ND | 0.11 | mg/kg | 0.030 |
| Chloroform | ND | 0.11 | mg/kg | 0.028 |
| **1,2-Dichloroethane** | **0.15** | **0.11** | **mg/kg** | **0.048** |
| 2-Butanone | ND | 0.55 | mg/kg | 0.41 |
| 1,1,1-Trichloroethane | ND | 0.11 | mg/kg | 0.032 |
| rbon tetrachloride | ND | 0.11 | mg/kg | 0.032 |
| omodichloromethane | ND | 0.11 | mg/kg | 0.040 |
| 1,2-Dichloropropane | ND | 0.11 | mg/kg | 0.030 |
| cis-1,3-Dichloropropene | ND | 0.11 | mg/kg | 0.040 |
| Trichloroethene | ND | 0.11 | mg/kg | 0.035 |
| Dibromochloromethane | ND | 0.11 | mg/kg | 0.033 |
| 1,1,2-Trichloroethane | ND | 0.11 | mg/kg | 0.044 |
| Benzene | ND | 0.11 | mg/kg | 0.025 |
| **trans-1,3-Dichloropropene** | **0.15** | **0.11** | **mg/kg** | **0.036** |
| Bromoform | ND | 0.11 | mg/kg | 0.11 |
| 4-Methyl-2-pentanone | ND | 0.55 | mg/kg | 0.20 |
| 2-Hexanone | ND | 0.55 | mg/kg | 0.19 |
| Tetrachloroethene | ND | 0.11 | mg/kg | 0.066 |
| 1,1,2,2-Tetrachloroethane | ND | 0.11 | mg/kg | 0.049 |
| Toluene | ND | 0.11 | mg/kg | 0.026 |
| Chlorobenzene | ND | 0.11 | mg/kg | 0.027 |
| **Ethylbenzene** | **1.3** | **0.11** | **mg/kg** | **0.027** |
| Styrene | ND | 0.11 | mg/kg | 0.055 |
| **Xylenes (total)** | **0.067 J** | **0.11** | **mg/kg** | **0.062** |
| cis-1,2-Dichloroethene | ND | 0.11 | mg/kg | 0.024 |
| trans-1,2-Dichloroethene | ND | 0.11 | mg/kg | 0.025 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | (57 - 132) |
| Bromofluorobenzene | 105 | (58 - 135) |
| romofluoromethane | 95 | (57 - 130) |
| uene-d8 | 104 | (61 - 133) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-0815-3.5

GC/MS Volatiles

Lot-Sample #...: B0D120119-003 Work Order #...: DAR09101 Matrix.....: SO

NOTE(S):

J Estimated result. Result is less than RL.

Results and reporting limits have been adjusted for dry weight.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-0816-3.5

General Chemistry

Lot-Sample #...: B0D120119-002 Work Order #...: DAR01 Matrix.....: SO
Date Sampled...: 04/11/00 Date Received..: 04/12/00
% Moisture.....: 9.0

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 91.0 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115303 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon | 15300 | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118348 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: 0 | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-0820-3.6

GC/MS Volatiles

| | | | |
|---|---|---|---|
| **Lot-Sample #...:** B0D120119-005 | **Work Order #...:** DAR0E101 | **Matrix.....:** SO | |
| **Date Sampled...:** 04/11/00 | **Date Received..:** 04/12/00 | | |
| **Prep Date.....:** 04/12/00 | **Analysis Date..:** 04/18/00 | | |
| **Prep Batch #...:** 0109260 | | | |
| **Dilution Factor:** 1 | **Initial Wgt/Vol:** 5.62 g | **Final Wgt/Vol..:** 5 mL | |
| **% Moisture.....:** 16 | **Method.....:** SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Chloromethane | ND | 0.24 | mg/kg | 0.093 |
| Bromomethane | ND | 0.24 | mg/kg | 0.21 |
| Vinyl chloride | ND | 0.24 | mg/kg | 0.029 |
| Chloroethane | ND | 0.24 | mg/kg | 0.043 |
| 1,1-Dichloroethene | ND | 0.12 | mg/kg | 0.043 |
| Methylene chloride | ND | 0.12 | mg/kg | 0.092 |
| Acetone | ND | 0.60 | mg/kg | 0.68 |
| Carbon disulfide | ND | 0.12 | mg/kg | 0.029 |
| 1,1-Dichloroethane | ND | 0.12 | mg/kg | 0.036 |
| Chloroform | ND | 0.12 | mg/kg | 0.033 |
| 1,2-Dichloroethane | ND | 0.12 | mg/kg | 0.057 |
| **2-Butanone** | **0.67** | **0.60** | **mg/kg** | **0.49** |
| 1,1,1-Trichloroethane | ND | 0.12 | mg/kg | 0.038 |
| rbon tetrachloride | ND | 0.12 | mg/kg | 0.038 |
| omodichloromethane | ND | 0.12 | mg/kg | 0.048 |
| 1,2-Dichloropropane | ND | 0.12 | mg/kg | 0.036 |
| cis-1,3-Dichloropropene | ND | 0.12 | mg/kg | 0.048 |
| Benzene | ND | 0.12 | mg/kg | 0.030 |
| trans-1,3-Dichloropropene | ND | 0.12 | mg/kg | 0.043 |
| Bromoform | ND | 0.12 | mg/kg | 0.13 |
| 1,1,2,2-Tetrachloroethane | ND | 0.12 | mg/kg | 0.058 |
| **Toluene** | **0.22** | **0.12** | **mg/kg** | **0.031** |
| Trichloroethene | ND | 0.12 | mg/kg | 0.042 |
| Dibromochloromethane | ND | 0.12 | mg/kg | 0.039 |
| 1,1,2-Trichloroethane | ND | 0.12 | mg/kg | 0.052 |
| 4-Methyl-2-pentanone | ND | 0.60 | mg/kg | 0.24 |
| 2-Hexanone | ND | 0.60 | mg/kg | 0.23 |
| Tetrachloroethene | ND | 0.12 | mg/kg | 0.079 |
| Chlorobenzene | ND | 0.12 | mg/kg | 0.032 |
| **Ethylbenzene** | **0.25** | **0.12** | **mg/kg** | **0.032** |
| Styrene | ND | 0.12 | mg/kg | 0.066 |
| Xylenes (total) | ND | 0.12 | mg/kg | 0.074 |
| cis-1,2-Dichloroethene | ND | 0.12 | mg/kg | 0.029 |
| trans-1,2-Dichloroethene | ND | 0.12 | mg/kg | 0.030 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | (57 - 132) |
| Bromofluorobenzene | 78 | (58 - 135) |
| bromofluoromethane | 97 | (57 - 130) |
| oluene-d8 | 104 | (61 - 133) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-0820-3.6

GC/MS Volatiles

Lot-Sample #...: B0D120119-005 Work Order #...: DAR0E101 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-0820-3.6

General Chemistry

Lot-Sample #...: B0D120119-005 Work Order #...: DAR0E Matrix.....: SO
Date Sampled...: 04/11/00 Date Received..: 04/12/00
% Moisture.....: 16

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 83.9 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115303 |
| | Dilution Factor: 1 | | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | MDL.....: 0.10 | | | | | |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-0821-3.6

General Chemistry

Lot-Sample #...: B0D120119-004 Work Order #...: DAR0D Matrix.....: SO
Date Sampled...: 04/11/00 Date Received..: 04/12/00
% Moisture.....: 15

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Moisture | 15.4 | 0.10 | % | MCAWW 160.3 MOD | 04/28/00 | 0119322 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: 0 | Final Wgt/Vol..: 0 | |
| | | MDL.....: | | | | |
| Total Organic Carbon | 30600 | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118348 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-0900-6.0

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D120119-006 | Work Order #...: | DAR0F102 | Matrix.....: | SO |
| Date Sampled...: | 04/11/00 | Date Received..: | 04/12/00 | | |
| Prep Date.....: | 04/12/00 | Analysis Date..: | 04/18/00 | | |
| Prep Batch #...: | 0109260 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 4.61 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 14 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Styrene | ND | 0.13 | mg/kg | 0.064 |
| **Xylenes (total)** | **0.50** | **0.13** | **mg/kg** | **0.072** |
| cis-1,2-Dichloroethene | ND | 0.13 | mg/kg | 0.028 |
| Chlorobenzene | ND | 0.13 | mg/kg | 0.031 |
| **Ethylbenzene** | **1.2** | **0.13** | **mg/kg** | **0.031** |
| trans-1,2-Dichloroethene | ND | 0.13 | mg/kg | 0.029 |
| Chloromethane | ND | 0.25 | mg/kg | 0.090 |
| Bromomethane | ND | 0.25 | mg/kg | 0.21 |
| Vinyl chloride | ND | 0.25 | mg/kg | 0.028 |
| Chloroethane | ND | 0.25 | mg/kg | 0.042 |
| Methylene chloride | ND | 0.13 | mg/kg | 0.089 |
| Acetone | ND | 0.63 | mg/kg | 0.66 |
| Carbon disulfide | ND | 0.13 | mg/kg | 0.028 |
| 1-Dichloroethene | ND | 0.13 | mg/kg | 0.042 |
| 1-Dichloroethane | ND | 0.13 | mg/kg | 0.035 |
| Chloroform | ND | 0.13 | mg/kg | 0.032 |
| 1,2-Dichloroethane | ND | 0.13 | mg/kg | 0.056 |
| **2-Butanone** | **0.75** | **0.63** | **mg/kg** | **0.47** |
| 1,1,1-Trichloroethane | ND | 0.13 | mg/kg | 0.037 |
| Carbon tetrachloride | ND | 0.13 | mg/kg | 0.037 |
| Bromodichloromethane | ND | 0.13 | mg/kg | 0.046 |
| 1,2-Dichloropropane | ND | 0.13 | mg/kg | 0.035 |
| cis-1,3-Dichloropropene | ND | 0.13 | mg/kg | 0.046 |
| Trichloroethene | ND | 0.13 | mg/kg | 0.040 |
| Dibromochloromethane | ND | 0.13 | mg/kg | 0.038 |
| 1,1,2-Trichloroethane | ND | 0.13 | mg/kg | 0.051 |
| Benzene | ND | 0.13 | mg/kg | 0.029 |
| trans-1,3-Dichloropropene | ND | 0.13 | mg/kg | 0.042 |
| Bromoform | ND | 0.13 | mg/kg | 0.13 |
| 4-Methyl-2-pentanone | ND | 0.63 | mg/kg | 0.23 |
| 2-Hexanone | ND | 0.63 | mg/kg | 0.22 |
| Tetrachloroethene | ND | 0.13 | mg/kg | 0.076 |
| 1,1,2,2-Tetrachloroethane | ND | 0.13 | mg/kg | 0.057 |
| Toluene | ND | 0.13 | mg/kg | 0.030 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | (57 - 132) |
| Bromofluorobenzene | 99 | (58 - 135) |
| Bromofluoromethane | 99 | (57 - 130) |
| Toluene-d8 | 105 | (61 - 133) |

(Continued on next page)

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-0900-6.0

GC/MS Volatiles

Lot-Sample #...: B0D120119-006 Work Order #...: DAR0F102 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-0900-6.0

General Chemistry

Lot-Sample #...: B0D120119-006 Work Order #...: DAR0F Matrix.....: SO
Date Sampled...: 04/11/00 Date Received..: 04/12/00
% Moisture.....: 14

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 86.5 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115303 |
| | Dilution Factor: 1 | | | Initial Wgt/Vol: 0 | Final Wgt/Vol..: 0 | |
| | MDL.....: 0.10 | | | | | |
| Total Organic Carbon | 15200 | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118348 |
| | Dilution Factor: 1 | | | Initial Wgt/Vol: 0 | Final Wgt/Vol..: 0 | |
| | MDL.....: 529 | | | | | |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-0940-10.75

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0D120119-007 | **Work Order #...:** | DAR0G102 | **Matrix.....:** | SO |
| **Date Sampled...:** | 04/11/00 | **Date Received..:** | 04/12/00 | | |
| **Prep Date.....:** | 04/12/00 | **Analysis Date..:** | 04/18/00 | | |
| **Prep Batch #...:** | 0109260 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 4.17 g | **Final Wgt/Vol..:** | 5 mL |
| **% Moisture.....:** | 30 | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Chloromethane | ND | 0.34 | mg/kg | 0.11 |
| Bromomethane | ND | 0.34 | mg/kg | 0.26 |
| Vinyl chloride | ND | 0.34 | mg/kg | 0.034 |
| Chloroethane | ND | 0.34 | mg/kg | 0.051 |
| Methylene chloride | ND | 0.17 | mg/kg | 0.11 |
| Acetone | ND | 0.86 | mg/kg | 0.81 |
| Carbon disulfide | ND | 0.17 | mg/kg | 0.034 |
| 1,1-Dichloroethene | ND | 0.17 | mg/kg | 0.051 |
| 1,1-Dichloroethane | ND | 0.17 | mg/kg | 0.043 |
| Chloroform | ND | 0.17 | mg/kg | 0.040 |
| 1,2-Dichloroethane | ND | 0.17 | mg/kg | 0.068 |
| Carbon tetrachloride | ND | 0.17 | mg/kg | 0.046 |
| Bromodichloromethane | ND | 0.17 | mg/kg | 0.057 |
| 2-Dichloropropane | ND | 0.17 | mg/kg | 0.043 |
| cis-1,3-Dichloropropene | ND | 0.17 | mg/kg | 0.057 |
| **2-Butanone** | **1.0** | **0.86** | **mg/kg** | **0.58** |
| 1,1,1-Trichloroethane | ND | 0.17 | mg/kg | 0.046 |
| Trichloroethene | ND | 0.17 | mg/kg | 0.050 |
| Dibromochloromethane | ND | 0.17 | mg/kg | 0.047 |
| 1,1,2-Trichloroethane | ND | 0.17 | mg/kg | 0.063 |
| Benzene | ND | 0.17 | mg/kg | 0.036 |
| trans-1,3-Dichloropropene | ND | 0.17 | mg/kg | 0.051 |
| Bromoform | ND | 0.17 | mg/kg | 0.16 |
| 4-Methyl-2-pentanone | ND | 0.86 | mg/kg | 0.29 |
| 2-Hexanone | ND | 0.86 | mg/kg | 0.27 |
| Tetrachloroethene | ND | 0.17 | mg/kg | 0.094 |
| 1,1,2,2-Tetrachloroethane | ND | 0.17 | mg/kg | 0.070 |
| Toluene | ND | 0.17 | mg/kg | 0.037 |
| Chlorobenzene | ND | 0.17 | mg/kg | 0.038 |
| **Xylenes (total)** | **1.3** | **0.17** | **mg/kg** | **0.088** |
| Ethylbenzene | ND | 0.17 | mg/kg | 0.038 |
| Styrene | ND | 0.17 | mg/kg | 0.078 |
| cis-1,2-Dichloroethene | ND | 0.17 | mg/kg | 0.034 |
| trans-1,2-Dichloroethene | ND | 0.17 | mg/kg | 0.036 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | (57 - 132) |
| Bromofluorobenzene | 97 | (58 - 135) |
| bromofluoromethane | 97 | (57 - 130) |
| Toluene-d8 | 107 | (61 - 133) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-0940-10.75

GC/MS Volatiles

Lot-Sample #...: B0D120119-007 Work Order #...: DAR0G102 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-0940-10.75

General Chemistry

Lot-Sample #...: B0D120119-007 Work Order #...: DAR0G Matrix.....: SO
Date Sampled...: 04/11/00 Date Received..: 04/12/00
% Moisture.....: 30

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 70.1 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115303 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon | 40300 | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118348 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-0945-11

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0D120119-008 | **Work Order #...:** | DAR0H102 | **Matrix.....:** | SO |
| **Date Sampled...:** | 04/11/00 | **Date Received..:** | 04/12/00 | | |
| **Prep Date.....:** | 04/14/00 | **Analysis Date..:** | 04/15/00 | | |
| **Prep Batch #...:** | 0108180 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 5.33 g | **Final Wgt/Vol..:** | 5 mL |
| **% Moisture.....:** | 14 | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Chloromethane | ND | 0.012 | mg/kg | 0.0018 |
| Bromomethane | ND | 0.012 | mg/kg | 0.0017 |
| Vinyl chloride | ND | 0.012 | mg/kg | 0.00055 |
| Chloroethane | ND | 0.012 | mg/kg | 0.00082 |
| Methylene chloride | ND | 0.0058 | mg/kg | 0.0018 |
| Acetone | ND | 0.029 | mg/kg | 0.013 |
| Carbon disulfide | ND | 0.0058 | mg/kg | 0.00055 |
| 1,1-Dichloroethene | ND | 0.0058 | mg/kg | 0.00082 |
| 1,1-Dichloroethane | ND | 0.0058 | mg/kg | 0.00070 |
| Chloroform | ND | 0.0058 | mg/kg | 0.00064 |
| 1,2-Dichloroethane | ND | 0.0058 | mg/kg | 0.0011 |
| 2-Butanone | ND | 0.029 | mg/kg | 0.0096 |
| 1,1,1-Trichloroethane | ND | 0.0058 | mg/kg | 0.00073 |
| `rbon tetrachloride | ND | 0.0058 | mg/kg | 0.00073 |
| ɔmodichloromethane | ND | 0.0058 | mg/kg | 0.00092 |
| 1,2-Dichloropropane | ND | 0.0058 | mg/kg | 0.00070 |
| cis-1,3-Dichloropropene | ND | 0.0058 | mg/kg | 0.00092 |
| Trichloroethene | ND | 0.0058 | mg/kg | 0.00080 |
| Dibromochloromethane | ND | 0.0058 | mg/kg | 0.00077 |
| 1,1,2-Trichloroethane | ND | 0.0058 | mg/kg | 0.0010 |
| **Benzene** | **0.0014 J** | **0.0058** | **mg/kg** | **0.00057** |
| 4-Methyl-2-pentanone | ND | 0.029 | mg/kg | 0.0045 |
| 2-Hexanone | ND | 0.029 | mg/kg | 0.0044 |
| Tetrachloroethene | ND | 0.0058 | mg/kg | 0.0015 |
| trans-1,3-Dichloropropene | ND | 0.0058 | mg/kg | 0.00084 |
| Bromoform | ND | 0.0058 | mg/kg | 0.0024 |
| 1,1,2,2-Tetrachloroethane | ND | 0.0058 | mg/kg | 0.0011 |
| Toluene | ND | 0.0058 | mg/kg | 0.00060 |
| Chlorobenzene | ND | 0.0058 | mg/kg | 0.00062 |
| Ethylbenzene | ND | 0.0058 | mg/kg | 0.00062 |
| Styrene | ND | 0.0058 | mg/kg | 0.0013 |
| **Xylenes (total)** | **0.0056 J** | **0.0058** | **mg/kg** | **0.0014** |
| cis-1,2-Dichloroethene | ND | 0.0058 | mg/kg | 0.00055 |
| trans-1,2-Dichloroethene | ND | 0.0058 | mg/kg | 0.00057 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 84 | (28 - 159) |
| 1,2-Dichloroethane-d4 | 121 | (51 - 168) |
| luene-d8 | 101 | (66 - 152) |
| ɔromofluoromethane | 110 | (73 - 151) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-0945-11

GC/MS Volatiles

Lot-Sample #...: B0D120119-008 Work Order #...: DAR0H102 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-0945-11

General Chemistry

Lot-Sample #...: B0D120119-008 Work Order #...: DAR0H Matrix.....: SO
Date Sampled...: 04/11/00 Date Received..: 04/12/00
% Moisture.....: 14

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 86.2 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115303 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon | 3560 | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118348 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1020-18.5

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0D120119-009 | **Work Order #...:** | DAR0J102 | **Matrix.....:** | SO |
| **Date Sampled...:** | 04/11/00 | **Date Received..:** | 04/12/00 | | |
| **Prep Date.....:** | 04/14/00 | **Analysis Date..:** | 04/15/00 | | |
| **Prep Batch #...:** | 0108180 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 3.92 g | **Final Wgt/Vol..:** | 5 mL |
| **% Moisture.....:** | 14 | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Chloromethane | ND | 0.015 | mg/kg | 0.0018 |
| Bromomethane | ND | 0.015 | mg/kg | 0.0017 |
| Vinyl chloride | ND | 0.015 | mg/kg | 0.00055 |
| Chloroethane | ND | 0.015 | mg/kg | 0.00083 |
| Methylene chloride | ND | 0.0074 | mg/kg | 0.0018 |
| Acetone | ND | 0.037 | mg/kg | 0.013 |
| Carbon disulfide | ND | 0.0074 | mg/kg | 0.00055 |
| 1,1-Dichloroethene | ND | 0.0074 | mg/kg | 0.00083 |
| 1,1-Dichloroethane | ND | 0.0074 | mg/kg | 0.00070 |
| Chloroform | ND | 0.0074 | mg/kg | 0.00064 |
| 1,2-Dichloroethane | ND | 0.0074 | mg/kg | 0.0011 |
| 2-Butanone | ND | 0.037 | mg/kg | 0.0096 |
| 1,1,1-Trichloroethane | ND | 0.0074 | mg/kg | 0.00074 |
| Carbon tetrachloride | ND | 0.0074 | mg/kg | 0.00074 |
| Bromodichloromethane | ND | 0.0074 | mg/kg | 0.00092 |
| 1,2-Dichloropropane | ND | 0.0074 | mg/kg | 0.00070 |
| cis-1,3-Dichloropropene | ND | 0.0074 | mg/kg | 0.00092 |
| Dibromochloromethane | ND | 0.0074 | mg/kg | 0.00077 |
| Trichloroethene | ND | 0.0074 | mg/kg | 0.00081 |
| 1,1,2-Trichloroethane | ND | 0.0074 | mg/kg | 0.0010 |
| Benzene | ND | 0.0074 | mg/kg | 0.00057 |
| trans-1,3-Dichloropropene | ND | 0.0074 | mg/kg | 0.00084 |
| Bromoform | ND | 0.0074 | mg/kg | 0.0025 |
| 4-Methyl-2-pentanone | ND | 0.037 | mg/kg | 0.0046 |
| Tetrachloroethene | ND | 0.0074 | mg/kg | 0.0015 |
| 1,1,2,2-Tetrachloroethane | ND | 0.0074 | mg/kg | 0.0011 |
| 2-Hexanone | ND | 0.037 | mg/kg | 0.0044 |
| Toluene | ND | 0.0074 | mg/kg | 0.00061 |
| Chlorobenzene | ND | 0.0074 | mg/kg | 0.00062 |
| Ethylbenzene | ND | 0.0074 | mg/kg | 0.00062 |
| Styrene | ND | 0.0074 | mg/kg | 0.0013 |
| Xylenes (total) | ND | 0.0074 | mg/kg | 0.0014 |
| cis-1,2-Dichloroethene | ND | 0.0074 | mg/kg | 0.00055 |
| trans-1,2-Dichloroethene | ND | 0.0074 | mg/kg | 0.00057 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 105 | (28 - 159) |
| 1,2-Dichloroethane-d4 | 131 | (51 - 168) |
| Toluene-d8 | 96 | (66 - 152) |
| Dibromofluoromethane | 113 | (73 - 151) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1020-18.5

GC/MS Volatiles

Lot-Sample #...: B0D120119-009 Work Order #...: DAR0J102 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1020-18.5

General Chemistry

Lot-Sample #...: B0D120119-009 Work Order #...: DAR0J Matrix.....: SO
Date Sampled...: 04/11/00 Date Received..: 04/12/00
% Moisture.....: 14

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 85.7 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115303 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon 1080 B | | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118348 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1045-20.5

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0D120119-010 | **Work Order #...:** | DAR0L102 | **Matrix.....:** | SO |
| **Date Sampled...:** | 04/11/00 | **Date Received..:** | 04/12/00 | | |
| **Prep Date.....:** | 04/12/00 | **Analysis Date..:** | 04/18/00 | | |
| **Prep Batch #...:** | 0109260 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 5.52 g | **Final Wgt/Vol..:** | 5 mL |
| **% Moisture.....:** | 14 | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Chloromethane | ND | 0.23 | mg/kg | 0.091 |
| Bromomethane | ND | 0.23 | mg/kg | 0.21 |
| Vinyl chloride | ND | 0.23 | mg/kg | 0.028 |
| Chloroethane | ND | 0.23 | mg/kg | 0.042 |
| Methylene chloride | ND | 0.12 | mg/kg | 0.090 |
| 1,1-Dichloroethane | ND | 0.12 | mg/kg | 0.035 |
| Chloroform | ND | 0.12 | mg/kg | 0.033 |
| Acetone | ND | 0.58 | mg/kg | 0.66 |
| Carbon disulfide | ND | 0.12 | mg/kg | 0.028 |
| 1,1-Dichloroethene | ND | 0.12 | mg/kg | 0.042 |
| 1,2-Dichloroethane | ND | 0.12 | mg/kg | 0.056 |
| **2-Butanone** | **0.58** | **0.58** | **mg/kg** | **0.48** |
| 1,1,1-Trichloroethane | ND | 0.12 | mg/kg | 0.037 |
| arbon tetrachloride | ND | 0.12 | mg/kg | 0.037 |
| romodichloromethane | ND | 0.12 | mg/kg | 0.047 |
| 1,2-Dichloropropane | ND | 0.12 | mg/kg | 0.035 |
| cis-1,3-Dichloropropene | ND | 0.12 | mg/kg | 0.047 |
| Trichloroethene | ND | 0.12 | mg/kg | 0.041 |
| Dibromochloromethane | ND | 0.12 | mg/kg | 0.038 |
| 1,1,2-Trichloroethane | ND | 0.12 | mg/kg | 0.051 |
| Benzene | ND | 0.12 | mg/kg | 0.029 |
| trans-1,3-Dichloropropene | ND | 0.12 | mg/kg | 0.042 |
| Bromoform | ND | 0.12 | mg/kg | 0.13 |
| 4-Methyl-2-pentanone | ND | 0.58 | mg/kg | 0.23 |
| 2-Hexanone | ND | 0.58 | mg/kg | 0.22 |
| Tetrachloroethene | ND | 0.12 | mg/kg | 0.077 |
| 1,1,2,2-Tetrachloroethane | ND | 0.12 | mg/kg | 0.057 |
| **Toluene** | **8.1 E** | **0.12** | **mg/kg** | **0.030** |
| Chlorobenzene | ND | 0.12 | mg/kg | 0.031 |
| **Ethylbenzene** | **2.7** | **0.12** | **mg/kg** | **0.031** |
| Styrene | ND | 0.12 | mg/kg | 0.064 |
| **Xylenes (total)** | **12** | **0.12** | **mg/kg** | **0.072** |
| **cis-1,2-Dichloroethene** | **0.16** | **0.12** | **mg/kg** | **0.028** |
| trans-1,2-Dichloroethene | ND | 0.12 | mg/kg | 0.029 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | (57 - 132) |
| Bromofluorobenzene | 99 | (58 - 135) |
| bromofluoromethane | 98 | (57 - 130) |
| oluene-d8 | 107 | (61 - 133) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1045-20.5

GC/MS Volatiles

Lot-Sample #...: B0D120119-010 Work Order #...: DAR0L102 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1045-20.5

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D120119-010 | Work Order #...: | DAR0L202 | Matrix.....: | SO |
| Date Sampled...: | 04/11/00 | Date Received..: | 04/12/00 | | |
| Prep Date.....: | 04/12/00 | Analysis Date..: | 04/19/00 | | |
| Prep Batch #...: | 0109260 | | | | |
| Dilution Factor: | 2 | Initial Wgt/Vol: | 5.52 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 14 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Toluene | 8.2 | 0.23 | mg/kg | 0.061 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1,2-Dichloroethane-d4 | 111 | (57 - 132) |
| Bromofluorobenzene | 109 | (58 - 135) |
| Dibromofluoromethane | 99 | (57 - 130) |
| Toluene-d8 | 102 | (61 - 133) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1045-20.5

General Chemistry

Lot-Sample #...: B0D120119-010 Work Order #...: DAR0L Matrix.....: SO
Date Sampled...: 04/11/00 Date Received..: 04/12/00
% Moisture.....: 14

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 85.8 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115303 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon | 2940 | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118348 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1050-21.5

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0D120119-011 | **Work Order #...:** | DAR0M102 | **Matrix.....:** | SO |
| **Date Sampled...:** | 04/11/00 | **Date Received..:** | 04/12/00 | | |
| **Prep Date.....:** | 04/12/00 | **Analysis Date..:** | 04/18/00 | | |
| **Prep Batch #...:** | 0109260 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 4.5 g | **Final Wgt/Vol..:** | 5 mL |
| **% Moisture.....:** | 14 | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Chloroethane | ND | 0.26 | mg/kg | 0.042 |
| Methylene chloride | ND | 0.13 | mg/kg | 0.090 |
| Chloromethane | ND | 0.26 | mg/kg | 0.091 |
| Bromomethane | ND | 0.26 | mg/kg | 0.21 |
| Vinyl chloride | ND | 0.26 | mg/kg | 0.028 |
| Acetone | ND | 0.65 | mg/kg | 0.66 |
| Carbon disulfide | ND | 0.13 | mg/kg | 0.028 |
| 1,1-Dichloroethene | ND | 0.13 | mg/kg | 0.042 |
| 1,1-Dichloroethane | ND | 0.13 | mg/kg | 0.035 |
| Chloroform | ND | 0.13 | mg/kg | 0.033 |
| 1,2-Dichloroethane | ND | 0.13 | mg/kg | 0.056 |
| **2-Butanone** | **0.74** | **0.65** | **mg/kg** | **0.48** |
| Carbon tetrachloride | ND | 0.13 | mg/kg | 0.037 |
| omodichloromethane | ND | 0.13 | mg/kg | 0.047 |
| 1,1-Trichloroethane | ND | 0.13 | mg/kg | 0.037 |
| 1,2-Dichloropropane | ND | 0.13 | mg/kg | 0.035 |
| cis-1,3-Dichloropropene | ND | 0.13 | mg/kg | 0.047 |
| Trichloroethene | ND | 0.13 | mg/kg | 0.041 |
| Dibromochloromethane | ND | 0.13 | mg/kg | 0.038 |
| 1,1,2-Trichloroethane | ND | 0.13 | mg/kg | 0.051 |
| Benzene | ND | 0.13 | mg/kg | 0.029 |
| trans-1,3-Dichloropropene | ND | 0.13 | mg/kg | 0.042 |
| Bromoform | ND | 0.13 | mg/kg | 0.13 |
| 4-Methyl-2-pentanone | ND | 0.65 | mg/kg | 0.23 |
| 2-Hexanone | ND | 0.65 | mg/kg | 0.22 |
| Tetrachloroethene | ND | 0.13 | mg/kg | 0.077 |
| 1,1,2,2-Tetrachloroethane | ND | 0.13 | mg/kg | 0.057 |
| **Toluene** | **11 E** | **0.13** | **mg/kg** | **0.030** |
| Chlorobenzene | ND | 0.13 | mg/kg | 0.031 |
| **Ethylbenzene** | **3.3** | **0.13** | **mg/kg** | **0.031** |
| Styrene | ND | 0.13 | mg/kg | 0.064 |
| **Xylenes (total)** | **15** | **0.13** | **mg/kg** | **0.072** |
| **cis-1,2-Dichloroethene** | **0.31** | **0.13** | **mg/kg** | **0.028** |
| trans-1,2-Dichloroethene | ND | 0.13 | mg/kg | 0.029 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | (57 - 132) |
| Bromofluorobenzene | 100 | (58 - 135) |
| bromofluoromethane | 97 | (57 - 130) |
| luene-d8 | 108 | (61 - 133) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1050-21.5

GC/MS Volatiles

Lot-Sample #...: B0D120119-011 Work Order #...: DAR0M102 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1050-21.5

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D120119-011 | Work Order #...: | DAR0M202 | Matrix.....: | SO |
| Date Sampled...: | 04/11/00 | Date Received..: | 04/12/00 | | |
| Prep Date.....: | 04/12/00 | Analysis Date..: | 04/19/00 | | |
| Prep Batch #...: | 0109260 | | | | |
| Dilution Factor: | 2 | Initial Wgt/Vol: | 4.5 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 14 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Toluene | 12 | 0.26 | mg/kg | 0.061 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1,2-Dichloroethane-d4 | 117 | (57 - 132) |
| Bromofluorobenzene | 120 | (58 - 135) |
| Dibromofluoromethane | 105 | (57 - 130) |
| Toluene-d8 | 109 | (61 - 133) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1050-21.5

General Chemistry

Lot-Sample #...: B0D120119-011 Work Order #...: DAR0M Matrix.....: SO
Date Sampled...: 04/11/00 Date Received..: 04/12/00
% Moisture.....: 14

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 85.9 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115308 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon | 3160 | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118348 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1130-28

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D120119-012 | Work Order #...: | DAR0N102 | Matrix.....: | SO |
| Date Sampled...: | 04/11/00 | Date Received..: | 04/12/00 | | |
| Prep Date.....: | 04/14/00 | Analysis Date..: | 04/15/00 | | |
| Prep Batch #...: | 0108180 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 5.84 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 15 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Bromomethane | ND | 0.012 | mg/kg | 0.0017 |
| Chloromethane | ND | 0.012 | mg/kg | 0.0018 |
| **Vinyl chloride** | **0.046** | **0.012** | **mg/kg** | **0.00055** |
| Chloroethane | ND | 0.012 | mg/kg | 0.00083 |
| Methylene chloride | ND | 0.0059 | mg/kg | 0.0018 |
| **Acetone** | **0.033** | **0.029** | **mg/kg** | **0.013** |
| Carbon disulfide | ND | 0.0059 | mg/kg | 0.00055 |
| 1,1-Dichloroethene | ND | 0.0059 | mg/kg | 0.00083 |
| **1,1-Dichloroethane** | **0.0013 J** | **0.0059** | **mg/kg** | **0.00070** |
| Chloroform | ND | 0.0059 | mg/kg | 0.00065 |
| 1,2-Dichloroethane | ND | 0.0059 | mg/kg | 0.0011 |
| 2-Butanone | ND | 0.029 | mg/kg | 0.0097 |
| 1,1,1-Trichloroethane | ND | 0.0059 | mg/kg | 0.00074 |
| Carbon tetrachloride | ND | 0.0059 | mg/kg | 0.00074 |
| Bromodichloromethane | ND | 0.0059 | mg/kg | 0.00093 |
| 1,2-Dichloropropane | ND | 0.0059 | mg/kg | 0.00070 |
| cis-1,3-Dichloropropene | ND | 0.0059 | mg/kg | 0.00093 |
| Trichloroethene | ND | 0.0059 | mg/kg | 0.00081 |
| Dibromochloromethane | ND | 0.0059 | mg/kg | 0.00077 |
| 1,1,2-Trichloroethane | ND | 0.0059 | mg/kg | 0.0010 |
| Benzene | ND | 0.0059 | mg/kg | 0.00058 |
| trans-1,3-Dichloropropene | ND | 0.0059 | mg/kg | 0.00085 |
| Bromoform | ND | 0.0059 | mg/kg | 0.0025 |
| 4-Methyl-2-pentanone | ND | 0.029 | mg/kg | 0.0046 |
| 2-Hexanone | ND | 0.029 | mg/kg | 0.0044 |
| Tetrachloroethene | ND | 0.0059 | mg/kg | 0.0015 |
| 1,1,2,2-Tetrachloroethane | ND | 0.0059 | mg/kg | 0.0012 |
| **Toluene** | **0.064** | **0.0059** | **mg/kg** | **0.00061** |
| Chlorobenzene | ND | 0.0059 | mg/kg | 0.00062 |
| **Ethylbenzene** | **0.0073** | **0.0059** | **mg/kg** | **0.00062** |
| Styrene | ND | 0.0059 | mg/kg | 0.0013 |
| **Xylenes (total)** | **0.031** | **0.0059** | **mg/kg** | **0.0014** |
| **cis-1,2-Dichloroethene** | **0.72 E** | **0.0059** | **mg/kg** | **0.00055** |
| trans-1,2-Dichloroethene | ND | 0.0059 | mg/kg | 0.00058 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 105 | (28 - 159) |
| 1,2-Dichloroethane-d4 | 130 | (51 - 168) |
| Toluene-d8 | 97 | (66 - 152) |
| Bromofluoromethane | 114 | (73 - 151) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1130-28

GC/MS Volatiles

Lot-Sample #...: B0D120119-012 Work Order #...: DAR0N102 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1130-28

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D120119-012 | Work Order #...: | DAR0N202 | Matrix.....: | SO |
| Date Sampled...: | 04/11/00 | Date Received..: | 04/12/00 | | |
| Prep Date.....: | 04/12/00 | Analysis Date..: | 04/18/00 | | |
| Prep Batch #...: | 0109260 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 6.1 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 15 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 0.42 | 0.12 | mg/kg | 0.028 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1,2-Dichloroethane-d4 | 97 | (57 - 132) |
| Bromofluorobenzene | 102 | (58 - 135) |
| Dibromofluoromethane | 97 | (57 - 130) |
| Toluene-d8 | 110 | (61 - 133) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1130-28

General Chemistry

Lot-Sample #...: B0D120119-012 Work Order #...: DAR0N Matrix.....: SO
Date Sampled...: 04/11/00 Date Received..: 04/12/00
% Moisture.....: 15

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 85.2 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115308 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon | 1050 B | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118348 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1310-35

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D120119-013 | Work Order #...: | DAR0R102 | Matrix.....: | SO |
| Date Sampled...: | 04/11/00 | Date Received..: | 04/12/00 | | |
| Prep Date.....: | 04/14/00 | Analysis Date..: | 04/15/00 | | |
| Prep Batch #...: | 0108180 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 4.72 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 12 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Chloromethane | ND | 0.012 | mg/kg | 0.0018 |
| Bromomethane | ND | 0.012 | mg/kg | 0.0017 |
| Vinyl chloride | ND | 0.012 | mg/kg | 0.00054 |
| Chloroethane | ND | 0.012 | mg/kg | 0.00081 |
| Methylene chloride | ND | 0.0060 | mg/kg | 0.0017 |
| **Acetone** | **0.033** | **0.030** | **mg/kg** | **0.013** |
| Carbon disulfide | ND | 0.0060 | mg/kg | 0.00054 |
| 1,1-Dichloroethene | ND | 0.0060 | mg/kg | 0.00081 |
| 1,1-Dichloroethane | ND | 0.0060 | mg/kg | 0.00068 |
| Chloroform | ND | 0.0060 | mg/kg | 0.00063 |
| 1,2-Dichloroethane | ND | 0.0060 | mg/kg | 0.0011 |
| 2-Butanone | ND | 0.030 | mg/kg | 0.0094 |
| 1,1,1-Trichloroethane | ND | 0.0060 | mg/kg | 0.00072 |
| arbon tetrachloride | ND | 0.0060 | mg/kg | 0.00072 |
| omodichloromethane | ND | 0.0060 | mg/kg | 0.00090 |
| 1,2-Dichloropropane | ND | 0.0060 | mg/kg | 0.00068 |
| cis-1,3-Dichloropropene | ND | 0.0060 | mg/kg | 0.00090 |
| Trichloroethene | ND | 0.0060 | mg/kg | 0.00079 |
| Dibromochloromethane | ND | 0.0060 | mg/kg | 0.00075 |
| 1,1,2-Trichloroethane | ND | 0.0060 | mg/kg | 0.00099 |
| Benzene | ND | 0.0060 | mg/kg | 0.00056 |
| trans-1,3-Dichloropropene | ND | 0.0060 | mg/kg | 0.00082 |
| Bromoform | ND | 0.0060 | mg/kg | 0.0024 |
| 4-Methyl-2-pentanone | ND | 0.030 | mg/kg | 0.0045 |
| 2-Hexanone | ND | 0.030 | mg/kg | 0.0043 |
| Tetrachloroethene | ND | 0.0060 | mg/kg | 0.0015 |
| 1,1,2,2-Tetrachloroethane | ND | 0.0060 | mg/kg | 0.0011 |
| **Toluene** | **0.033** | **0.0060** | **mg/kg** | **0.00059** |
| Chlorobenzene | ND | 0.0060 | mg/kg | 0.00060 |
| **Ethylbenzene** | **0.0044 J** | **0.0060** | **mg/kg** | **0.00060** |
| Styrene | ND | 0.0060 | mg/kg | 0.0013 |
| **Xylenes (total)** | **0.018** | **0.0060** | **mg/kg** | **0.0014** |
| **cis-1,2-Dichloroethene** | **0.055** | **0.0060** | **mg/kg** | **0.00054** |
| trans-1,2-Dichloroethene | ND | 0.0060 | mg/kg | 0.00056 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 108 | (28 - 159) |
| 1,2-Dichloroethane-d4 | 135 | (51 - 168) |
| luene-d8 | 95 | (66 - 152) |
| bromofluoromethane | 115 | (73 - 151) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1310-35

GC/MS Volatiles

Lot-Sample #...: B0D120119-013 Work Order #...: DAR0R102 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1310-35

General Chemistry

Lot-Sample #...: B0D120119-013 Work Order #...: DAR0R Matrix.....: SO
Date Sampled...: 04/11/00 Date Received..: 04/12/00
% Moisture.....: 12

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 87.9 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115308 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon | ND | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118348 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1345-39.5

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0D120119-014 | **Work Order #...:** | DAR0V102 | **Matrix.....:** | SO |
| **Date Sampled...:** | 04/11/00 | **Date Received..:** | 04/12/00 | | |
| **Prep Date.....:** | 04/14/00 | **Analysis Date..:** | 04/15/00 | | |
| **Prep Batch #...:** | 0108180 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 5.28 g | **Final Wgt/Vol..:** | 5 mL |
| **% Moisture.....:** | 17 | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Chloromethane | ND | 0.012 | mg/kg | 0.0019 |
| Bromomethane | ND | 0.012 | mg/kg | 0.0017 |
| **Vinyl chloride** | **0.0033 J** | **0.012** | **mg/kg** | **0.00057** |
| Chloroethane | ND | 0.012 | mg/kg | 0.00085 |
| Methylene chloride | ND | 0.0060 | mg/kg | 0.0018 |
| Acetone | ND | 0.030 | mg/kg | 0.014 |
| Carbon disulfide | ND | 0.0060 | mg/kg | 0.00057 |
| 1,1-Dichloroethene | ND | 0.0060 | mg/kg | 0.00085 |
| 1,1-Dichloroethane | ND | 0.0060 | mg/kg | 0.00072 |
| Chloroform | ND | 0.0060 | mg/kg | 0.00066 |
| 1,2-Dichloroethane | ND | 0.0060 | mg/kg | 0.0011 |
| 2-Butanone | ND | 0.030 | mg/kg | 0.0099 |
| 1,1,1-Trichloroethane | ND | 0.0060 | mg/kg | 0.00076 |
| rbon tetrachloride | ND | 0.0060 | mg/kg | 0.00076 |
| omodichloromethane | ND | 0.0060 | mg/kg | 0.00095 |
| 1,2-Dichloropropane | ND | 0.0060 | mg/kg | 0.00072 |
| cis-1,3-Dichloropropene | ND | 0.0060 | mg/kg | 0.00095 |
| Trichloroethene | ND | 0.0060 | mg/kg | 0.00083 |
| Dibromochloromethane | ND | 0.0060 | mg/kg | 0.00079 |
| 1,1,2-Trichloroethane | ND | 0.0060 | mg/kg | 0.0010 |
| Benzene | ND | 0.0060 | mg/kg | 0.00059 |
| trans-1,3-Dichloropropene | ND | 0.0060 | mg/kg | 0.00087 |
| Bromoform | ND | 0.0060 | mg/kg | 0.0025 |
| 4-Methyl-2-pentanone | ND | 0.030 | mg/kg | 0.0047 |
| 2-Hexanone | ND | 0.030 | mg/kg | 0.0045 |
| Tetrachloroethene | ND | 0.0060 | mg/kg | 0.0016 |
| 1,1,2,2-Tetrachloroethane | ND | 0.0060 | mg/kg | 0.0012 |
| **Toluene** | **0.0014 J** | **0.0060** | **mg/kg** | **0.00063** |
| Chlorobenzene | ND | 0.0060 | mg/kg | 0.00064 |
| Ethylbenzene | ND | 0.0060 | mg/kg | 0.00064 |
| Styrene | ND | 0.0060 | mg/kg | 0.0013 |
| Xylenes (total) | ND | 0.0060 | mg/kg | 0.0015 |
| **cis-1,2-Dichloroethene** | **0.30 E** | **0.0060** | **mg/kg** | **0.00057** |
| trans-1,2-Dichloroethene | ND | 0.0060 | mg/kg | 0.00059 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 104 | (28 - 159) |
| 1,2-Dichloroethane-d4 | 129 | (51 - 168) |
| uene-d8 | 95 | (66 - 152) |
| romofluoromethane | 115 | (73 - 151) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1345-39.5

GC/MS Volatiles

Lot-Sample #...: B0D120119-014 Work Order #...: DAR0V102 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1345-39.5

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D120119-014 | Work Order #...: | DAR0V202 | Matrix.....: | SO |
| Date Sampled...: | 04/11/00 | Date Received..: | 04/12/00 | | |
| Prep Date.....: | 04/12/00 | Analysis Date..: | 04/18/00 | | |
| Prep Batch #...: | 0109260 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 6.06 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 17 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 0.057 J | 0.12 | mg/kg | 0.029 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1,2-Dichloroethane-d4 | 96 | (57 - 132) |
| Bromofluorobenzene | 99 | (58 - 135) |
| Dibromofluoromethane | 95 | (57 - 130) |
| Toluene-d8 | 104 | (61 - 133) |

NOTE(S):

J Estimated result. Result is less than RL.

Results and reporting limits have been adjusted for dry weight.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1345-39.5

General Chemistry

Lot-Sample #...: B0D120119-014 Work Order #...: DAR0V Matrix.....: SO
Date Sampled...: 04/11/00 Date Received..: 04/12/00
% Moisture.....: 17

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 83.1 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115308 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon 890 B | | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118348 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1350-40

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0D120119-015 | **Work Order #...:** | DAR0X102 | **Matrix.....:** | SO |
| **Date Sampled...:** | 04/11/00 | **Date Received..:** | 04/12/00 | | |
| **Prep Date.....:** | 04/14/00 | **Analysis Date..:** | 04/15/00 | | |
| **Prep Batch #...:** | 0108180 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 5.69 g | **Final Wgt/Vol..:** | 5 mL |
| **% Moisture.....:** | 32 | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Chloromethane | ND | 0.015 | mg/kg | 0.0023 |
| Bromomethane | ND | 0.015 | mg/kg | 0.0021 |
| **Vinyl chloride** | **0.011 J** | **0.015** | **mg/kg** | **0.00069** |
| Chloroethane | ND | 0.015 | mg/kg | 0.0010 |
| Methylene chloride | ND | 0.0073 | mg/kg | 0.0022 |
| Acetone | ND | 0.037 | mg/kg | 0.017 |
| Carbon disulfide | ND | 0.0073 | mg/kg | 0.00069 |
| 1,1-Dichloroethene | ND | 0.0073 | mg/kg | 0.0010 |
| 1,1-Dichloroethane | ND | 0.0073 | mg/kg | 0.00088 |
| Chloroform | ND | 0.0073 | mg/kg | 0.00081 |
| 1,2-Dichloroethane | ND | 0.0073 | mg/kg | 0.0014 |
| 2-Butanone | ND | 0.037 | mg/kg | 0.012 |
| 1,1,1-Trichloroethane | ND | 0.0073 | mg/kg | 0.00092 |
| arbon tetrachloride | ND | 0.0073 | mg/kg | 0.00092 |
| omodichloromethane | ND | 0.0073 | mg/kg | 0.0012 |
| 1,2-Dichloropropane | ND | 0.0073 | mg/kg | 0.00088 |
| cis-1,3-Dichloropropene | ND | 0.0073 | mg/kg | 0.0012 |
| Trichloroethene | ND | 0.0073 | mg/kg | 0.0010 |
| Dibromochloromethane | ND | 0.0073 | mg/kg | 0.00097 |
| 1,1,2-Trichloroethane | ND | 0.0073 | mg/kg | 0.0013 |
| Benzene | ND | 0.0073 | mg/kg | 0.00072 |
| 4-Methyl-2-pentanone | ND | 0.037 | mg/kg | 0.0057 |
| 2-Hexanone | ND | 0.037 | mg/kg | 0.0055 |
| Tetrachloroethene | ND | 0.0073 | mg/kg | 0.0019 |
| trans-1,3-Dichloropropene | ND | 0.0073 | mg/kg | 0.0011 |
| Bromoform | ND | 0.0073 | mg/kg | 0.0031 |
| 1,1,2,2-Tetrachloroethane | ND | 0.0073 | mg/kg | 0.0014 |
| **Toluene** | **0.0032 J** | **0.0073** | **mg/kg** | **0.00076** |
| Chlorobenzene | ND | 0.0073 | mg/kg | 0.00078 |
| Ethylbenzene | ND | 0.0073 | mg/kg | 0.00078 |
| Styrene | ND | 0.0073 | mg/kg | 0.0016 |
| Xylenes (total) | ND | 0.0073 | mg/kg | 0.0018 |
| **cis-1,2-Dichloroethene** | **0.67 E** | **0.0073** | **mg/kg** | **0.00069** |
| trans-1,2-Dichloroethene | ND | 0.0073 | mg/kg | 0.00072 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 103 | (28 - 159) |
| 1,2-Dichloroethane-d4 | 120 | (51 - 168) |
| luene-d8 | 96 | (66 - 152) |
| promofluoromethane | 110 | (73 - 151) |

(Continued on next page)

Quanterra

O'BRIEN & GERR ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1350-40

GC/MS Volatiles

Lot-Sample #...: B0D120119-015 Work Order #...: DAR0X102 Matrix.....: SO

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1350-40

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D120119-015 | Work Order #...: | DAR0X202 | Matrix.....: | SO |
| Date Sampled...: | 04/11/00 | Date Received..: | 04/12/00 | | |
| Prep Date.....: | 04/12/00 | Analysis Date..: | 04/18/00 | | |
| Prep Batch #...: | 0109260 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 5.38 g | Final Wgt/Vol..: | 5 mL |
| % Moisture.....: | 32 | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 0.75 | 0.15 | mg/kg | 0.035 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| 1,2-Dichloroethane-d4 | 88 | (57 - 132) |
| Bromofluorobenzene | 101 | (58 - 135) |
| Dibromofluoromethane | 93 | (57 - 130) |
| Toluene-d8 | 103 | (61 - 133) |

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTI-OBG-CB2-4/11/00-1350-40

General Chemistry

Lot-Sample #...: B0D120119-015 Work Order #...: DAR0X Matrix.....: SO
Date Sampled...: 04/11/00 Date Received..: 04/12/00
% Moisture.....: 32

| PARAMETER | RESULT | RL | UNITS | METHOD | PREPARATION-ANALYSIS DATE | PREP BATCH # |
|---|---|---|---|---|---|---|
| Percent Solids | 68.2 | 0.10 | % | MCAWW 160.3 MOD | 04/24-04/25/00 | 0115308 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 0.10 | | | | |
| Total Organic Carbon | 1660 B | 2000 | mg/kg | SW846 9060 | 04/26-04/27/00 | 0118348 |
| | | Dilution Factor: 1 | | Initial Wgt/Vol: | Final Wgt/Vol..: 0 | |
| | | MDL.....: 529 | | | | |

NOTE(S):

RL Reporting Limit

B Estimated result. Result is less than RL.

APPENDIX E

# Letter dated April 7, 2000 from O'Brien & Gere Engineers, Inc. to the United States Environmental Protection Agency concerning chemical oxygen demand (COD) analysis

O'BRIEN & GERE
ENGINEERS, INC.

April 7, 2000

VIA FACSIMILE
Ms. Randa Chichakli
Remedial Project Manager
EPA - Region 4
Waste Management Division
61 Forsyth Street
Atlanta, Georgia 30303

Re: Chemical Oxygen Demand (COD) Analyses
Former Thompson Industries Site
Madison, Florida
EPA Site Identification Number A4E7
Source Characterization Scope of Work

Dear Ms. Chichakli:

The EPA approved source characterization activities scheduled to commence at the Former Thompson Industries Site on Monday, April 10, 2000. As part of the approved scope of work for the source characterization activity, the laboratory suite of analytes for soil includes chemical oxygen demand (COD). The analytical laboratory (STL Quanterra) previously attempted such testing during 1999 soil characterization sampling at the Site, which resulted in nondetectable COD values. The issues related to this method are explained in the attached facsimile from the laboratory. As a result, we respectfully request your consent to delete COD analysis from the list of analytes for soil samples in the upcoming field activities. Please advise us of your decision as soon as possible. Your attention to our request is most appreciated.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

Stephen T. Cook, P.G. For
Senior Project Scientist

Attachment: facsimile from Andres Romeu to Nancy Robertson dated November 22, 1999

cc:
Mr. Don Rigger, EPA Region 4
Mr. Jim McCarthy, FDEP
Mr. Gary Hunter, Hopping Green Sams & Smith
Ms. Teresa Olmsted, ITT Industries, Inc.
Mr. Paul Seavy, O'Brien & Gere Engineers, Inc.



O'Brien & Gere Engineers, Inc., an O'Brien & Gere company
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(407) 799-2200/ FAX (407) 799-8111 • http:// www.obg.com
... and offices in major U.S. cities

**From:** Romeu, Andres
**Sent:** Monday, November 22, 1999 2:45 PM
**To:** Robertson, Nancy
**Subject:** FW: COD soil

Quanterra Tampa has tried to develop a method to measure Chemical Oxygen Demand (COD) in solid samples. Two approaches were used:

1. Water samples are normally prepared for the analysis by digesting 2.5 mL of sample. In our test procedure, we combined 0.1 g of solid sample with 2.5 mL deionized water. Upon addition of the Potassium dichromate and Sulfuric acid reagents, a green color was immediately detected indicating a need for a dilution. We feel that 0.1 g is the smallest feasible sample size, and thus determined that this approach wasn't suitable.
2. For the second approach, 20 g of soil was leached with 100 mL of deionized water and acidified to a pH<4. The sample was tumbled for ½ hour and allowed to settle for 1 hour. The leachate was digested as a typical water sample for COD using EPA method 410.1. The recoveries of the LCS/LCSD and MS/MSD were between 30-50%. In addition, all the samples had a negative result, which was contradictory to the over range results indicated by the first procedure.

In addition to the technical issues, we feel that analysis for COD in solid samples will not generate meaningful results, because chemical oxygen demand by definition requires the presence of water. In the absence of sufficient water in soils to support such reactions, the results of any tests that as may be developed represent only the potential for chemical oxygen demand, and as demonstrated above, may yield contradictory results.

Andres Romeu
*Quanterra - Tampa, FL*
*(813)621-0784*
romeua@quanterra.com

APPENDIX F

# Ground Water Sampling Tracking Logs
# Former Thompson Industries Site
# Madison, Florida

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 4/30/00 | Depth to Bottom: | 15.60 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 8.80 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 6.8 ft |
| Well ID: | OBGDP31TF2-1 | Volume of Water in Well: | 0.27 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 0.81 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 12 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1400 5/00 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | Brown |
| Odor: | none |
| Sheen: | none |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | clear |
| Odor: | none |
| Sheen: | none |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 1.5 | - | - | - | - | - | - | - |
| 2.5 | 5.85 | 20.3 | 61 | 623 | 0938 | - | - |
| 8 | 6.32 | 19.8 | 59 | 668 | 1017 | - | - |
| 12 | 6.70 | 21.4 | 71 | 18 | 1040 | - | - |
| - | - | - | - | - | 1400 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 4/30/00 | Depth to Bottom: | 48.44 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 16.19 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 32.25 ft |
| Well ID: | OBGDP3ITEZ-2 | Volume of Water in Well: | 1.29 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 3.87 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 8.5 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | | | |
|---|---|---|---|
| Time Collected: | 1405 5/1/00 | Opening Well: | NA ppm |
| Analysis/Method: | VOCs 8260 | Purging: | NA ppm |
| pH: | NA | Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | clear |
| Odor: | none |
| Sheen: | none |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | clear |
| Odor: | none |
| Sheen: | none |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 2.5 | 5.18 | 20.5 | 52 | 13 | 0935 | - | - |
| 6.5 | 6.60 | 24 | 52 | 100 | 1115 | - | - |
| 8.5 | 6.56 | 23.7 | 49 | 17.9 | 1125 | - | - |
| - | - | - | - | - | 1405 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**O'BRIEN & GERE ENGINEERS, INC.**
**GROUND WATER SAMPLING LOG**

| | | | |
|---|---|---|---|
| Date: | 5/1/00 | Depth to Bottom: | 100 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 91.07 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 8.93 ft |
| Well ID: | OBGDP3ITFZ-3 | Volume of Water in Well: | 0.35 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 1.07 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 2.5 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1430 5/1/00 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | Brown |
| Odor: | none |
| Sheen: | none |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | Brown |
| Odor: | none |
| Sheen: | none |

**Ground Water Quality**

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 1.5 | – | – | – | NA | 1200 | – | – |
| 2.5 | – | – | – | – | 1330 | – | – |
| – | – | – | – | – | 1430 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 4/17/00 | Depth to Bottom: | 13 ft |
| Site: | Former Thompson Inc. | Depth to Water: | 7.24 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 5.76 ft |
| Well ID: | OBGDP32 TFZ-1 | Volume of Water in Well: | 0.23 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 0.70 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 20 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 0845 4/19/00 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | cloudy |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | clear |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 15 | 5.82 | ~~0.113~~ | 0.113 | 21.2 | 1610 | - | - |
| 17 | 6.12 | 21.6 | 92 | 22.1 | 1620 | - | - |
| 20 | 6.15 | 22.4 | 92.7 | 0.0 | 1630 | - | - |
| - | - | - | - | - | 0845 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**O'BRIEN & GERE ENGINEERS, INC.**
**GROUND WATER SAMPLING LOG**

| | | | |
|---|---|---|---|
| Date: | 4/17/00 | Depth to Bottom: | 40 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 7.24 ft 5/6/00 |
| Project # : | 22992.013.001 | Length of Water Column: | 32.76 ft |
| Well ID: | OBGDP32TFZ-2 | Volume of Water in Well: | 1.31 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 3.9 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 25 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 0835 4/19/00 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | cloudy |
| Odor: | none |
| Sheen: | none |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | clear |
| Odor: | none |
| Sheen: | none |

## Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 15 | 5.89 | 21.6 | 63.2 | 512 | 1612 | - | - |
| 18 | 5.80 | 23.5 | 55.6 | 55 | 1630 | - | - |
| 20 | 5.68 | 24.1 | 56.2 | 129 | 1650 | - | - |
| 22 | 5.63 | 24.2 | 52.4 | 15 | 1705 | - | - |
| 25 | 5.62 | 23.4 | 51.7 | 0.0 | 1718 | - | - |
| - | - | - | - | - | 0835 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 4/17/00 | Depth to Bottom: | 100 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 21.29 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 78.71 ft |
| Well ID: | OBGDP32TFZ-2A | Volume of Water in Well: | 3.15 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 9.45 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 3 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 0915 4/19/00 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | clear |
| Odor: | None |
| Sheen: | none |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | clear |
| Odor: | None |
| Sheen: | None |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 1 | 7.11 | 22 | 34 | 55 | 1600 | – | - |
| 2 | 7.04 | 21.5 | 33 | 48 | 1700 | – | - |
| 3 | 7.00 | 22 | 33 | 60 | 0800 | – | - |
| – | – | – | – | – | 0915 | 3 | HCl |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**O'BRIEN & GERE ENGINEERS, INC.**
**GROUND WATER SAMPLING LOG**

| | | | |
|---|---|---|---|
| Date: | 4/17/00 | Depth to Bottom: | 145 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 41.00 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 104 ft |
| Well ID: | OBGDP32TFF-3 | Volume of Water in Well: | 4.16 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 12.48 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 4 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 0830 4/19/00 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | clear |
| Odor: | NA |
| Sheen: | NA |

**Ground Water Quality**

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0.5 | 7.01 | 22.1 | 33.5 | 46.3 | 0900 | – | – |
| 1.0 | 7.10 | 22.1 | 32.2 | 114 | 1030 | – | – |
| 1.5 | 6.70 | 21.8 | 32 | 46 | 1130 | – | – |
| 3 | 6.71 | 21.8 | 33 | 59 | 1400 | – | – |
| 4 | 6.93 | 21.5 | 32.4 | 66 | 1530 | – | – |
| – | – | – | – | – | 0830 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 4/27/00 | Depth to Bottom: | 16.51 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 8.53 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 7.98 ft |
| Well ID: | OBGDP33TFZ-1 | Volume of Water in Well: | 0.32 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 0.96 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 14.0 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 0835 4/28/00 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | Brown turbid |
| Odor: | none |
| Sheen: | none |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | clear |
| Odor: | none |
| Sheen: | none |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 8 | NA | NA | NA | very 999 | 1608 | – | – |
| 11 | NA | NA | NA | clear | 1623 | – | – |
| 14 | NA | NA | NA | clear | 1647 | – | – |
| – | – | – | – | – | 0835 | 3 | HCL |
| | | | | | | | |
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## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 4/28/00 | Depth to Bottom: | 37.40 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 8.55 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 28.85 ft |
| Well ID: | OBGDP33TFZ-2 | Volume of Water in Well: | 1.15 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 3.45 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 1.0 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | | | |
|---|---|---|---|
| Time Collected: | 0845 4/28/00 | Opening Well: | NA ppm |
| Analysis/Method: | VOCs 8260 | Purging: | NA ppm |
| pH: | NA | Sampling: | NA ppm |

**PID Readings:**

**Physical Appearance at start:**

| | |
|---|---|
| Color: | well went dry |
| Odor: | after 0.9 gall. |
| Sheen: | recharging. |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 1.0 | - | - | - | - | 0845 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |
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## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 4/27/00 | Depth to Bottom: | 86.22 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 14.29 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 71.93 ft |
| Well ID: | OBGDP33TFZ-2A | Volume of Water in Well: | 2.9 gal |
| Personnel: | Tim Jelleff | 3X Vol. Of Water in Well: | 8.63 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 16 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 0855 4/28/00 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | slightly cloudy |
| Odor: | none |
| Sheen: | none |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | clear |
| Odor: | none |
| Sheen: | none. |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 7 | 5.39 | 22.7 | 48 | 89 | 1045 | - | - |
| 10 | 5.76 | 23.2 | 27 | 10 | 1117 | - | - |
| 12 | 5.78 | 23.4 | 27 | 12 | 1300 | - | - |
| 14 | 5.84 | 23 | 26 | 35 | 1327 | - | - |
| 16 | 5.80 | 23.1 | 25 | 50 | 1350 | - | - |
| - | - | - | - | - | - | 0855 (3) | HCL |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 4/27/00 | Depth to Bottom: | 143 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 94.39 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 48.61 ft |
| Well ID: | OBGDP33TFZ-3 | Volume of Water in Well: | 1.94 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 5.83 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 5 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 0915 4/28/00 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | cloudy |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | clear |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 1.5 | 6.64 | 22 | 35 | 33.5 | 1122 | - | - |
| 2 | 6.45 | 22.5 | 38 | 41.2 | 1317 | - | - |
| 3.5 | 6.70 | 22.6 | 39 | 140 | 1412 | - | - |
| 4 | 7.40 | 22.9 | 39 | 113 | 1500 | - | - |
| 5 | 7.42 | 22.8 | 39 | 40 | 1520 | - | - |
| - | - | - | - | - | 0915 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 4/23/00 | Depth to Bottom: | 16.33 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 9.39 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 6.94 ft |
| Well ID: | 036DP34TF7-1 | Volume of Water in Well: | 0.27 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 0.83 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 15 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | | | |
|---|---|---|---|
| Time Collected: | 1340 5/1/00 | Opening Well: | NA ppm |
| Analysis/Method: | VOCs 8260 | Purging: | NA ppm |
| pH: | NA | Sampling: | NA ppm |

**PID Readings:**

**Physical Appearance at start:**

| | |
|---|---|
| Color: | brown very turbid |
| Odor: | none |
| Sheen: | none |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | clear |
| Odor: | none |
| Sheen: | none |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 9.5 | – | – | – | – | 0823 | – | – |
| 14.5 | 6.66 | 21.4 | 50 | 9.7 | 0920 | – | – |
| 15 | 6.75 | 21.2 | 60 | 13.6 | 0935 | – | – |
| – | – | – | – | – | 1340 | 3 | HCL |
| | | | | | | | |
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## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 4/27/00 | Depth to Bottom: | 76.55 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 14.84 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 61.71 ft |
| Well ID: | OBGDP34TFZ-2 | Volume of Water in Well: | 2.5 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 7.5 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 13 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1345 5/1/00 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | Light brown |
| Odor: | none |
| Sheen: | none |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 7 | 6.50 | 22.6 | 40 | 235 | 1742 | – | – |
| 9 | 5.49 | 21.4 | 65 | 45 | 0820 | – | – |
| 11 | 6.01 | 21.8 | 44 | 14 | 0838 | – | – |
| 13 | 6.07 | 22 | 40 | 10 | 0852 | – | – |
| – | – | – | – | – | 1345 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 4/28/00 | Depth to Bottom: | 115 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 94.75 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 20.25 ft |
| Well ID: | OBGDP34TFZ-3 | Volume of Water in Well: | 0.81 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 2.43 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 5.5 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1100 5/1/00 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | brn |
| Odor: | none |
| Sheen: | none |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | brn |
| Odor: | none |
| Sheen: | none |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 5.5 | NA | NA | NA | NA | 1100 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |
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## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 5/5/00 | Depth to Bottom: | 17.7 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 14.37 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 3.33 ft |
| Well ID: | OBGDP35TFZ-1 | Volume of Water in Well: | 0.13 gal |
| Personnel: | Tim Jelleff | 3X Vol. Of Water in Well: | 0.39 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 0.2 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1600 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | cloudy |
| Odor: | none |
| Sheen: | None |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | cloudy |
| Odor: | none |
| Sheen: | none |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0.1 went dry | – | – | – | – | – | – | |
| 0.2 went dry | – | – | – | – | 1600 | 2 | HCL |
| | | | | | | | |
| | | | | | | | |
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**O'BRIEN AND GERE ENGINEERS, INC.**
**GROUND WATER SAMPLING LOG**

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| | | | |
|---|---|---|---|
| Date: | 5/5/00 | Depth to Bottom: | 57.93 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 17.38 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 40.55 ft |
| Well ID: | OBGDP35TFZ-2 | Volume of Water in Well: | 1.62 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 4.86 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 4.8 gal |
| Method: | VOCs 8260 | | |

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**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1435 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | clear |
| Odor: | none |
| Sheen: | none |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | clear |
| Odor: | none |
| Sheen: | none |

---

## Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0.0 | 5.69 | 24 | 19 | 83.1 | 1346 | - | - |
| 1.0 | 5.35 | 23.5 | 19 | 147 | 1354 | - | - |
| 2.0 | 5.30 | 23.3 | 18 | 59.4 | 1403 | - | - |
| 3.0 | 5.22 | 23.1 | 17 | 60.9 | 1412 | - | - |
| 4.0 | 5.17 | 22.9 | 16 | 32.4 | 1420 | - | - |
| 4.8 | 5.18 | 23 | 16 | 26.5 | 1427 | - | - |
| - | - | - | - | - | 1435 | 3 | HCL |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 5/5/00 | Depth to Bottom: | 63.75 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 16.64 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 47.11 ft |
| Well ID: | OBGDP35TFZ-2A | Volume of Water in Well: | 1.88 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 5.65 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 4 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1545 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | clear |
| Odor: | none |
| Sheen: | none |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | slightly cloudy |
| Odor: | none |
| Sheen: | none |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0.0 | 6.17 | 23.1 | 5 | 26.7 | 1449 | – | – |
| 1.0 | 6.50 | 23.2 | 6 | 37.5 | 1459 | – | – |
| 2.0 | 6.27 | 22.9 | 19 | 180 | 1510 | – | – |
| 3.5 | 6.18 | 23.1 | 18 | 31.8 | 1530 | – | – |
| 4.0 | 6.18 | 23.2 | 18 | 19.5 | 1533 | – | – |
| – | – | – | – | – | 1545 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |

**O'BRIEN & GERE ENGINEERS, INC.**
**GROUND WATER SAMPLING LOG**

| | | | |
|---|---|---|---|
| Date: | 5/4/00 | Depth to Bottom: | 103 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 97.2 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 5.8 ft |
| Well ID: | OBGDP35TFZ-3 | Volume of Water in Well: | 0.23 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 0.69 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 0.3 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1730 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | Brown |
| Odor: | none |
| Sheen: | none |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | Brown |
| Odor: | none |
| Sheen: | none |

**Ground Water Quality**

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0.3 | — | — | — | — | 1730 | 2 | HCL |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
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## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 5/5/00 | Depth to Bottom: | 17.75 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 10.14 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 7.61 ft |
| Well ID: | OBGDP36TFZ-1 | Volume of Water in Well: | 0.3 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 0.91 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 3 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 0945 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | Light Brown |
| Odor: | slight |
| Sheen: | none |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | clear |
| Odor: | slight |
| Sheen: | none |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0.0 | 5.88 | 20.3 | 88 | 259 | 0923 | - | - |
| 1.0 | 6.46 | 20.2 | 91 | 33.7 | 0929 | - | - |
| 2.0 | 6.57 | 20.2 | 92 | 24 | 0934 | - | - |
| 3.0 | 6.62 | 20.1 | 92 | 0.0 | 0940 | - | - |
| - | - | - | - | - | 0945 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 5/6/00 | Depth to Bottom: | 66.91 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 16.90 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 50.01 ft |
| Well ID: | OBGDP36TFZ-Z | Volume of Water in Well: | 2 gal |
| Personnel: | | 3X Vol. Of Water in Well: | 6 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 4.5 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1000 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | clear |
| Odor: | moderate |
| Sheen: | none |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | clear |
| Odor: | moderate |
| Sheen: | none |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0.0 | 5.70 | 21.3 | 45 | 101 | 0842 | - | - |
| 1.0 | 5.65 | 21.8 | 41 | 71.2 | 0850 | - | - |
| 2.0 | 5.46 | 21.9 | 55 | 51.7 | 0900 | - | - |
| 3.0 | 5.46 | 22. | 58 | 37.3 | 0918 | - | - |
| 4.0 | 5.56 | 22.1 | 58 | 16.6 | 0935 | - | - |
| 4.25 | 5.56 | 22.1 | 58 | 17.2 | 0940 | - | - |
| 4.5 | 5.56 | 22.1 | 59 | 15.1 | 0946 | - | - |
| - | - | - | - | - | 1050 | 3 | HCL |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 5/3/00 | Depth to Bottom: | 16.8 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 10.55 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 6.25 ft |
| Well ID: | OBGDP37TFZ-1 | Volume of Water in Well: | 0.25 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 0.75 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 4.5 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1410 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | cloudy gray |
| Odor: | moderate |
| Sheen: | none |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | none |
| Odor: | moderate |
| Sheen: | none |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0.5 | 5.90 | 21.8 | 56 | 797 | 1320 | – | – |
| 1.5 | 6.32 | 21.2 | 59 | 188 | 1325 | – | – |
| 2.5 | 6.34 | 21.2 | 59 | 58.8 | 1335 | – | – |
| 3.5 | 6.34 | 21.2 | 58 | 75.2 | 1345 | – | – |
| 4.5 | 6.39 | 21.2 | 58 | 17.1 | 1355 | – | – |
| – | – | – | – | – | 1410 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 5/3/00 | Depth to Bottom: | 54.70 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 17.76 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 36.94 ft |
| Well ID: | OBGDP37TFZ-2 | Volume of Water in Well: | 1.47 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 4.43 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 4.5 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1300 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | none |
| Odor: | none |
| Sheen: | none |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | none |
| Odor: | none |
| Sheen: | none |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0.0 | 4.57 | 21.5 | 43 | 90.9 | 1019 | - | - |
| 1.0 | 5.49 | 22.1 | 35 | 42.5 | 1030 | - | - |
| 2.0 | 5.77 | 22.3 | 35 | 73.9 | 1040 | - | - |
| 3.5 | 5.80 | 22.4 | 34 | 29 | 1053 | - | - |
| 4.5 | 5.83 | 22.4 | 34 | 27.2 | 1105 | - | - |
| - | - | - | - | - | 1300 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |

**O'BRIEN & GERE ENGINEERS, INC.**
**GROUND WATER SAMPLING LOG**

| | | | |
|---|---|---|---|
| Date: | 4/25/00 | Depth to Bottom: | 19.85 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 4.40 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 15.45 ft |
| Well ID: | WCMW4A | Volume of Water in Well: | 0.67 (TMJ) gal 2.52 |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 1.86 (TMJ) gal 7.55 |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 38 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 0900 4/26/00 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | moderate |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | clear |
| Odor: | moderate |
| Sheen: | NA |

**Ground Water Quality**

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 20 | 6.45 | 24.7 | 0.19 | 320 | 1537 | - | - |
| 34 | 6.52 | 23.2 | 0.17 | 22 | 1625 | - | - |
| 36 | 6.53 | 23.0 | 0.16 | 15 | 1630 | - | - |
| 38 | 6.54 | 22 | 0.17 | 16 | 1635 | - | - |
| — | — | — | — | — | 0900 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 4/26/00 | Depth to Bottom: | 19.60 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 5.51 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 14.09 ft |
| Well ID: | WCMW5A | Volume of Water in Well: | 2.3 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 6.9 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 25 gal |
| Method: | VOCs 8260 | | |

| | | | |
|---|---|---|---|
| Ground Water Sample: | | PID Readings: | |
| Time Collected: | 1450 | Opening Well: | NA ppm |
| Analysis/Method: | VOCs 8260 | Purging: | NA ppm |
| pH: | NA | Sampling: | NA ppm |
| Physical Appearance at start: | | Physical Appearance at sampling: | |
| Color: | NA | Color: | NA |
| Odor: | moderate | Odor: | moderate |
| Sheen: | no | Sheen: | no |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 5 | 6.42 | 22.9 | 0.14 | 140 | 1347 | - | - |
| 12 | 6.47 | 22.5 | 0.13 | 20 | 1403 | - | - |
| 17 | 6.49 | 22.6 | 0.12 | 39 | 1415 | - | - |
| 25 | 6.50 | 21.7 | 0.12 | 100 | 1430 | - | - |
| - | - | - | - | - | 1450 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 4/26/00 | Depth to Bottom: | 39.42 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 7.86 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 31.56 ft |
| Well ID: | WCMW5B | Volume of Water in Well: | 5.14 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 15.43 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 25 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1440 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | moderate |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | moderate |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 5 | 6.46 | 21.6 | 68 | 52 | 1053 | - | - |
| 10 | 6.60 | 23 | 68 | 90 | 1107 | - | - |
| 13 | 6.52 | 24 | 71 | 44 | 1125 | - | - |
| 17 | 6.50 | 23.5 | 69 | 62 | 1245 | - | - |
| 21 | 6.47 | 23.3 | 68 | 28 | 1300 | - | - |
| 25 | 6.47 | 23.0 | 68 | 25 | 1310 | - | - |
| - | - | - | - | - | 1440 | 3 | HCL |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 4/25/00 | Depth to Bottom: | 40.61 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 6.65 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 33.96 ft |
| Well ID: | WCMW 4B | Volume of Water in Well: | ~~1.36~~ TMJ gal 5.5 |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | ~~4.08~~ TMJ gal 16.6 |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 59 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 0910 4/26/00 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | slight |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | slight |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 15 | 6.00 | 22.3 | 53 | 980 | 1715 | - | - |
| 20 | 5.79 | 22.5 | 50 | 770 | 1727 | - | - |
| 25 | 5.71 | 22.1 | 49 | 220 | 1741 | - | - |
| 35 | 5.64 | 22.0 | 50 | 170 | 1755 | - | - |
| 40 | 5.68 | 22.2 | 51 | 55 | 1810 | - | - |
| 59 | 5.69 | 22.0 | 53 | 72 | 1846 | - | - |
| | - | - | - | - | 0910 | 3 | HCL |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 4/2/00 | Depth to Bottom: | 13 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 2.82 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 10.18 ft |
| Well ID: | OBGMW14S | Volume of Water in Well: | 1.66 gal |
| Personnel: | Bill Katzers | 3X Vol. Of Water in Well: | 4.98 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 17 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | | | |
|---|---|---|---|
| Time Collected: | Not Sampled | Opening Well: | NA ppm |
| Analysis/Method: | VOCs 8260 | Purging: | NA ppm |
| pH: | NA | Sampling: | NA ppm |

**PID Readings:**

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 7 | 6.14 | 22.3 | 23.2 | 999 | 1436 | - | - |
| 8 | 6.22 | 22.4 | 20 | 999 | 1440 | - | - |
| 9 | 6.25 | 22.8 | 20.8 | 87.2 | 1446 | - | - |
| 11 | 6.36 | 21.2 | 31.6 | 357 | 1455 | - | - |
| 14 | 6.39 | 22.1 | 29.4 | 20.9 | 1508 | - | - |
| 15 | 6.42 | 22. | 31.2 | 0 | 1514 | - | - |
| 16 | 6.56 | 21.8 | 32.9 | 0 | 1520 | - | - |
| 17 | 6.49 | 21.6 | 32.8 | 0 | 1526 | - | - |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 4/2/00 | Depth to Bottom: | 33 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 8.98 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 24.02 ft |
| Well ID: | OBGMW14I | Volume of Water in Well: | 3.92 gal |
| Personnel: | Bill Kotzias | 3X Vol. Of Water in Well: | 11.76 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 44 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | Not sampled |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 10 | 5.32 | 24.3 | 29.9 | 90.4 | 1425 | - | - |
| 16 | 5.83 | 23.6 | 11.3 | 0 | 1432 | - | - |
| 21 | 5.72 | 23.4 | 10.7 | 0 | 1438 | - | - |
| 26 | 5.87 | 23.4 | 9.9 | 0 | 1443 | - | - |
| 34 | 6.06 | 23.2 | 10 | 0 | 1449 | - | - |
| 41 | 5.53 | 23.4 | 9.9 | 0 | 1458 | - | - |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 4/1/00 | Depth to Bottom: | 29 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 21.4 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 7.6 ft |
| Well ID: | OBGMW15S | Volume of Water in Well: | 1.23 gal |
| Personnel: | Bill Katziers | 3X Vol. Of Water in Well: | 3.69 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 4.5 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | Not Sampled |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 4.5 | 5.47 | 27.3 | 26.4 | 279 | 1546 | – | – |
| went dry | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 4/1/00 | Depth to Bottom: | 65 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 21.4 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 43.6 ft |
| Well ID: | OBGMW15 I | Volume of Water in Well: | 7.1 gal |
| Personnel: | Bill Katziers | 3X Vol. Of Water in Well: | 21.3 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 110 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | Not Sampled |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 18 | 5.08 | 24 | 49.5 | 999 | 1044 | - | - |
| 63 | 5.35 | 23.9 | 12.9 | 66 | 1151 | - | - |
| 79 | 5.44 | 23.4 | 11.8 | 133 | 1230 | - | - |
| 92 | 5.30 | 23.7 | 10.8 | 66.9 | 1245 | - | - |
| 107 | 5.31 | 23.4 | 9.9 | 19.1 | 1304 | - | - |
| 110 | 5.24 | 23.4 | 9.8 | 12.5 | 1308 | - | - |
| | | | | | | | |
| | | | | | | | |

**O'BRIEN & GERE ENGINEERS, INC.**
**GROUND WATER SAMPLING LOG**

| | | | |
|---|---|---|---|
| Date: | 4/3/00 | Depth to Bottom: | 129 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 101.2 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 27.8 ft |
| Well ID: | OBGMW15D | Volume of Water in Well: | 4.53 gal |
| Personnel: | Bill Katzkers | 3X Vol. Of Water in Well: | 13.59 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 125 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | Not Sampled |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Ground Water Quality**

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 90 | 7.84 | 23 | 32.9 | 999 | 2010 | - | |
| 105 | 5.99 | 22.2 | 72 | 34.2 | 0920 | - | |
| 115 | 7.28 | 23.6 | 34.7 | 0 | 0942 | - | |
| 117 | 7.22 | 23.8 | 35.5 | 0 | 0949 | - | |
| 121 | 7.20 | 24 | 33.7 | 0 | 0957 | - | |
| 125 | 7.23 | 24.1 | 33.8 | 0 | 1006 | - | |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 4/15/00 | Depth to Bottom: | 31.95 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 23.46 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 8.49 ft |
| Well ID: | OBGMW216S | Volume of Water in Well: | 1.38 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 4.15 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 30 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | | | |
|---|---|---|---|
| Time Collected: | Not Sampled | Opening Well: | NA ppm |
| Analysis/Method: | VOCs 8260 | Purging: | NA ppm |
| pH: | NA | Sampling: | NA ppm |

**PID Readings:**

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 16 | 4.72 | 22.6 | 11.5 | 19.4 | 1525 | - | - |
| 20 | 5.06 | 23.9 | 9.3 | 3.8 | 1545 | - | - |
| 25 | 5.08 | 23.9 | 8.8 | 0.0 | 1605 | - | - |
| 30 | 4.99 | 24 | 9.0 | 0.0 | 1625 | - | - |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**O'BRIEN & GERE ENGINEERS, INC.**
**GROUND WATER SAMPLING LOG**

| | | | |
|---|---|---|---|
| Date: | 3/29/00 | Depth to Bottom: | 45 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 23.65 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 21.35 ft |
| Well ID: | OBGMW16I | Volume of Water in Well: | 3.48 gal |
| Personnel: | | 3X Vol. Of Water in Well: | 10.44 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 70 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | Not Sampled |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | Turbid |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

## Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 25 | 5.3 | 23.2 | 33.3 | 999 | ~~1686~~ 1627 | – | – |
| 34 | 5.78 | 22.4 | 16 | 999 | 1646 | – | – |
| 47 | 5.75 | 23.2 | 14 | 999 | 1702 | – | – |
| 55 | 5.78 | 22.3 | 13.6 | 999 | 1712 | – | – |
| 70 | 5.74 | 22.1 | 12.6 | 999 | 1737 | – | – |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 4/3/00 | Depth to Bottom: | 115 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 103.76 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 11.24 ft |
| Well ID: | OBGMW 16D | Volume of Water in Well: | 1.83 gal |
| Personnel: | Bill Katziers | 3X Vol. Of Water in Well: | 5.49 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 82 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | | | |
|---|---|---|---|
| Time Collected: | Not Samples | Opening Well: | NA ppm |
| Analysis/Method: | VOCs 8260 | Purging: | NA ppm |
| pH: | Na | Sampling: | NA ppm |

**PID Readings:**

**Physical Appearance at start:**

| | |
|---|---|
| Color: | Na |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 55 | 6.61 | 23.4 | 36.3 | 22.3 | 1702 | - | - |
| 61 | 6.93 | 23.3 | 34.5 | 19.4 | 1710 | - | - |
| - | 6.89 | 23. | 35.1 | 18.6 | 1716 | - | - |
| 72 | 6.44 | 23 | 34.5 | 6.0 | 1725 | - | - |
| 75 | 6.42 | 23 | 35.8 | 6.3 | 1728 | - | - |
| 82 | 7.20 | 23 | 36.1 | 3.0 | 1734 | - | - |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 3/23/00 | Depth to Bottom: | 25.5 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 15.40 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 10.1 ft |
| Well ID: | OBGMW17 S | Volume of Water in Well: | 1.65 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 5.0 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 20.5 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | Not Sampled |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 12 | 5.98 | 23.6 | 3.6 | 186 | 1120 | – | – |
| 16 | 5.55 | 22.3 | 3.3 | 0.0 | 1135 | – | – |
| 18 | 5.42 | 21.9 | 3.1 | 59.2 | 1145 | – | – |
| 20 | 5.28 | 22.5 | 3.1 | 13.0 | 1200 | – | – |
| 20.5 | 5.22 | 22.8 | 3.0 | 9.3 | 1205 | – | – |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 3/23/00 | Depth to Bottom: | 38 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 15.64 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 22.36 ft |
| Well ID: | OBGMW17-I | Volume of Water in Well: | 3.64 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 11 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 40 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | Not Sampled |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 16 | 5.77 | 25.2 | 12.2 | 999 | 1500 | - | - |
| 30 | 6.84 | 24.9 | 10.4 | 94. | 1735 | - | - |
| 36 | 5.51 | 22.2 | 11 | 34.5 | 1815 | - | - |
| 38 | 5.69 | 22.3 | 10.6 | 30.1 | 1823 | - | - |
| 40 | 5.70 | 22.2 | 10.4 | 8.5 | 1828 | - | - |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**O'BRIEN & GERE ENGINEERS, INC.**
**GROUND WATER SAMPLING LOG**

| | | | |
|---|---|---|---|
| Date: | 3/6/00 | Depth to Bottom: | 27 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 6.31 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 20.69 ft |
| Well ID: | OBGDP20TFZ-1 | Volume of Water in Well: | 0.83 gal |
| Personnel: | Bill Kotziers | 3X Vol. Of Water in Well: | 2.48 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 12 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1008 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | ~~NA~~ Dark Brn. |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | ~~NA~~ Lt. Brn |
| Odor: | NA |
| Sheen: | NA |

## Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0.5 | 5.29 | 20.8 | 51.9 | 999 | 1136 | | |
| 2 | 5.83 | 20.6 | 16.4 | 999 | 1150 | | |
| 2.5 | 6.12 | 20.3 | 14.9 | 999 | 1155 | | |
| 8.5 | 5.82 | 21.6 | 9.2 | 460 | 1315 | | |
| 10 | 5.79 | 21.2 | 8.4 | 349 | 1330 | | |
| 11 | 5.74 | 20.4 | 8.1 | 336 | 1340 | | |
| 12 | 5.76 | 21. | 8.4 | 334 | 1350 | | |
| | | | | | 1008 | 3 | HCL |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 3/6/00 | Depth to Bottom: | 47 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 5.85 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 41.15 ft |
| Well ID: | OBGDP20TFZ-2 | Volume of Water in Well: | 1.65 gal |
| Personnel: | Bill Kotzias | 3X Vol. Of Water in Well: | 4.95 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 7 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1000 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | Lt Brown |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | Lt Brown |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0.5 | 6.13 | 20.9 | 22.9 | 999 | 1410 | - | - |
| 2.5 | 6.04 | 20.9 | 17.7 | 144 | 1430 | - | - |
| 3.5 | 5.96 | 21.5 | 17.2 | 9.3 | 1440 | - | - |
| 5 | 5.91 | 21.5 | 16.5 | 80.6 | 1455 | - | - |
| 5.5 | 5.82 | 20.9 | 16.2 | 60.3 | 1500 | - | - |
| 7 | 5.82 | 21.1 | 16.3 | 32.8 | 1515 | - | - |
| - | - | - | - | - | 1000 | 3 | HCL |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 3/6/00 | Depth to Bottom: | 90 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 78.24 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 11.76 ft |
| Well ID: | OBGDP20TFZ-3 | Volume of Water in Well: | 0.47 gal |
| Personnel: | Bill Kotziers | 3X Vol. Of Water in Well: | 1.41 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 3 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | | | |
|---|---|---|---|
| Time Collected: | ~~1600~~ 1239 | Opening Well: | NA ppm |
| Analysis/Method: | VOCs 8260 | Purging: | NA ppm |
| pH: | NA | Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | orange Brown |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | orange Brown |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0.75 | 6.64 | 22.4 | 74.4 | 999 | 1103 | – | – |
| 1.5 | 7.31 | 27 | 53.2 | 999 | 1201 | – | – |
| 2.5 | 7.95 | 23 | 41.6 | 999 | 1230 | – | – |
| 3 | 7.78 | 22.2 | 41.8 | 999 | 1235 | – | – |
| – | – | – | – | – | 1239 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 2/22/00 | Depth to Bottom: | 30 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 4.55 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 25.45 ft |
| Well ID: | OBGDP21TFZ-1 | Volume of Water in Well: | 1.04 gal |
| Personnel: | Heidi Ferrell | 3X Vol. Of Water in Well: | 3.12 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 3 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 0910 2/23/00 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 1.0 | 6.23 | 21 | 93.8 | 999 | 0820 | - | |
| 2.0 | 7.41 | 29 | 57.7 | 999 | 0835 | - | |
| 3.0 | 7.16 | 16.5 | 50.9 | 999 | 0905 | - | |
| - | - | - | - | - | 0910 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 2/22/00 | Depth to Bottom: | 50 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 10 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 40 ft |
| Well ID: | OBGDP2/TF2-2 | Volume of Water in Well: | 1.6 gal |
| Personnel: | Heidi Ferrell | 3X Vol. Of Water in Well: | 4.8 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 23 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1200 2/23/00 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | cloudy |
| Odor: | none |
| Sheen: | none |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | clear |
| Odor: | none |
| Sheen: | none |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 9 | 7.83 | 20.5 | 22.3 | 708 | 1600 | - | |
| 15 | 7.03 | 20 | 16.3 | 276 | 1615 | - | |
| 20 | 6.71 | 19.6 | 13.7 | 202 | 1640 | - | |
| 23 | 6.20 | 19.9 | 12.1 | 143 | 1650 | - | |
| ← | - | - | - | - | 1200 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 2/22/00 | Depth to Bottom: | 150 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 82.2 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 67.8 ft |
| Well ID: | OBGDP2ITF2-3 | Volume of Water in Well: | 2.7 gal |
| Personnel: | Heidi Ferrell | 3X Vol. Of Water in Well: | 8.1 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 6 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | ~~0917~~ TAT 1115 2/23/00 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0 | 7.53 | 20.3 | 49.1 | 85.1 | 0954 | | |
| 3 | 8.14 | 21.2 | 0.7 | 78.5 | 1030 | | |
| 6 | 8.07 | 21.7 | 52.1 | 107 | 1100 | | |
| – | – | – | – | – | 1115 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 2/20/00 | Depth to Bottom: | 28.00 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 10.72 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 9.28 ft |
| Well ID: | OBGDP22TFZ-1 | Volume of Water in Well: | 0.37 gal |
| Personnel: | Bill Katziers | 3X Vol. Of Water in Well: | 1.11 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 12 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1420 2/22/00 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0 | - | - | - | - | - | - | |
| 5 | 6.78 | 20.2 | 6.3 | 999 | 1640 | - | |
| 8 | 6.21 | 19.5 | 5.4 | 58.2 | 1647 | - | |
| 9 | 6.16 | 19.8 | 5.2 | 29 | 1651 | - | |
| 10 | 5.73 | 19.8 | 4.9 | 20.9 | 1653 | - | |
| 12 | 5.44 | 19.8 | 4.9 | 58.6 | 1700 | - | |
| - | - | - | - | - | 1420 | 3 | HCL |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 2/20/00 | Depth to Bottom: | 30 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 13.50 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 16.5 ft |
| Well ID: | OBGDP22TFZ-2 | Volume of Water in Well: | 0.66 gal |
| Personnel: | Bill Katzicrs | 3X Vol. Of Water in Well: | 1.98 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 13 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1400 2/22/00 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0 | - | - | - | - | 1708 | - | - |
| 6 | 5.63 | 20 | 11.5 | 236 | 1723 | - | |
| 9 | 5.44 | 19.5 | 11.2 | 17.5 | 1730 | - | |
| 11 | 5.46 | 20.2 | 9.9 | 3.3 | 1735 | - | |
| 13 | 5.40 | 20.4 | 9.9 | 0.6 | 1739 | - | |
| - | - | - | - | - | 1400 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 2/22/00 | Depth to Bottom: | 106 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 91 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 15 ft |
| Well ID: | OBGDP22TFZ-3 | Volume of Water in Well: | 0.6 gal |
| Personnel: | Heidi Ferrell | 3X Vol. Of Water in Well: | 1.8 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 3.15 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1500 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0.02 | 6.84 | 19.6 | 66.5 | 999 | 1000 | - | - |
| 0.65 | 7.51 | 23.0 | 45.4 | 899 | 1130 | - | - |
| 1.30 | 7.82 | 24.5 | 45.3 | 999 | 1300 | - | - |
| 1.95 | 7.89 | 23.9 | 46.8 | 483 | 1440 | - | - |
| 2.50 | 7.94 | 23 | 43 | 450 | 1450 | - | - |
| 3.15 | 7.75 | 21.3 | 37.9 | 367 | 1500 | 3 | HCl |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 3/8/00 | Depth to Bottom: | 30 ft |
| Site: | Former Thompson Rd. | Depth to Water: | 19.73 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 10.27 ft |
| Well ID: | OBGDP23TFZ-2 | Volume of Water in Well: | 0.41 gal |
| Personnel: | Bill Katzieras | 3X Vol. Of Water in Well: | 1.23 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 14 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1715 |
| Analysis/Method: | VOCs 8260 |
| pH: | 6.46 |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0 | – | – | – | 999 | 1443 | – | – |
| 2 | 7.37 | 26.6 | 35.6 | 999 | 1503 | – | – |
| 3.5 | 6.41 | 26.2 | 32.4 | 999 | 1518 | – | – |
| 6 | 6.55 | 26. | 26.3 | 999 | 1543 | – | – |
| 8 | 6.46 | 25.9 | 22.7 | 999 | 1603 | – | – |
| 10.5 | 6.82 | 25.4 | 28.6 | 999 | 1628 | – | – |
| 14 | 6.46 | 25.0 | 31.3 | 999 | 1703 | – | – |
| – | – | – | – | – | 1715 | 3 | HCL |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 3/8/00 | Depth to Bottom: | 10.5 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 97.33 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 7.67 ft |
| Well ID: | OBGDP23TFZ-3 | Volume of Water in Well: | 0.30 gal |
| Personnel: | Bill Kotziers | 3X Vol. Of Water in Well: | 0.90 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 2 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1650 |
| Analysis/Method: | VOCs 8260 |
| pH: | ~7.66 |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | Light Brown |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | Light Brown |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 1 | 7.44 | 24.2 | 0.113 | 999 | 1611 | - | - |
| 1.5 | 7.91 | 24.1 | 0.118 | 999 | 1626 | - | - |
| 2.0 | 7.66 | 23.3 | 0.102 | 999 | 1640 | - | - |
| - | 7.66 | - | - | - | 1650 | 3 | HCL |
| | | | | | | | |
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## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 2/24/00 | Depth to Bottom: | 14 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 7.80 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 6.2 ft |
| Well ID: | OBGDP24TFZ-1 | Volume of Water in Well: | 0.25 gal |
| Personnel: | Heidi Ferrell | 3X Vol. Of Water in Well: | 0.75 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 0.6 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | Not sampled |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0 | 5.69 | 23.0 | 11.6 | 183 | 1450 | — | — |
| 0.3 | 5.55 | 22.6 | 11.1 | 37.6 | 1505 | — | — |
| 0.6 | 5.50 | 22.7 | 10.2 | 15.9 | 1515 | — | — |
| | | | | | | | |
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## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 2/24/00 | Depth to Bottom: | 29 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 13.52 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 15.48 ft |
| Well ID: | OBGDPZ4TFZ-2 | Volume of Water in Well: | 0.62 gal |
| Personnel: | Heidi Ferrell | 3X Vol. Of Water in Well: | 1.86 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 1.8 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | Not Sampled |
| Analysis/Method: | VOCs 8260 |
| pH: | — |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0.6 | 7.11 | 24.5 | 25.5 | 919 | 1408 | — | — |
| 1.2 | 5.43 | 24.3 | 32.2 | 291 | 1435 | — | — |
| 1.8 | 5.59 | 23.7 | 19.7 | 43.9 | 1445 | — | — |
| | | | | | | | |
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## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 2/24/00 | Depth to Bottom: | 11.5 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 92.85 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 22.15 ft |
| Well ID: | OBGDP24TFZ-3 | Volume of Water in Well: | 0.89 gal |
| Personnel: | Heidi Ferrell | 3X Vol. Of Water in Well: | 2.66 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 1.5 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 0730 2/25/00 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0.25 | 6.76 | 24.6 | 34.5 | 999 | 1553 | - | - |
| 1.0 | 7.62 | 23.1 | 34.6 | 999 | 1653 | - | - |
| 1.5 | 7.73 | 23.3 | 34.8 | 999 | 1718 | - | - |
| - | - | - | - | - | - | 3 | HCL |
| | | | | | | | |
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## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 2/25/00 | Depth to Bottom: | 17 ft |
| Site: | Former Thompson Ind. | Depth to Water: | dry ft |
| Project # : | 22992.013.001 | Length of Water Column: | — ft |
| Well ID: | OBGDP25TFZ-1 | Volume of Water in Well: | — gal |
| Personnel: | Heidi Ferrel | 3X Vol. Of Water in Well: | — gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | — gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | Not sampled |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | |
| Odor: | |
| Sheen: | |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | |
| Odor: | |
| Sheen: | |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
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## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 2/25/00 | Depth to Bottom: | 30 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 17.39 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 12.61 ft |
| Well ID: | OBGDP25TFZ-2 | Volume of Water in Well: | 0.50 gal |
| Personnel: | Heidi Ferrell | 3X Vol. Of Water in Well: | 1.5 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 1.5 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | Not Sampled |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0 | 6.30 | 18.7 | 75.0 | 999 | 0808 | – | – |
| 0.5 | 6.51 | 18.9 | 66.3 | 960 | 0815 | – | – |
| 1.0 | 6.55 | 19.6 | 53.6 | 85.9 | 0831 | – | – |
| 1.5 | 6.14 | 19.9 | 47.8 | 68.1 | 0900 | NA | – |
| | | | | | | | |
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## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 2/25/00 | Depth to Bottom: | 117 ft |
| Site: | Former Thompson Rd. | Depth to Water: | 95.9 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 21.1 ft |
| Well ID: | OBGDP25TFZ-3 | Volume of Water in Well: | 0.84 gal |
| Personnel: | Heidi Ferrell | 3X Vol. Of Water in Well: | 2.53 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 1.0 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1045 |
| Analysis/Method: | VOCs 8260 |
| pH: | 7.33 |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0.0 | 7.12 | 18.5 | 41.4 | 309 | 0828 | – | – |
| 0.5 | 6.99 | 20.5 | 40.8 | 550 | 0905 | – | – |
| 1.0 | 7.71 | 21.3 | 41.4 | 999 | 0955 | – | – |
| ~~1.1~~ TMS | ~~7.33~~ TMS | ~~21.8~~ TMS | ~~41.7~~ TMS | ~~53.1~~ TMS | ~~1045~~ TMS | ~~3~~ TMS | ~~HCL~~ TMS |
| 1.1 | 7.58 | 22.4 | 42.3 | 999 | 1045 | 3 | HCL |
| | | | | | | | |
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## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 2/25/00 | Depth to Bottom: | - ft |
| Site: | Former Thompson Ind. | Depth to Water: | - ft |
| Project # : | 22992.013.001 | Length of Water Column: | - ft |
| Well ID: | OBGDP26TFZ-3 | Volume of Water in Well: | - gal |
| Personnel: | Heidi Ferrel | 3X Vol. Of Water in Well: | - gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | - gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | Not sampled |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| NA | 7.33 | 21.8 | 41.7 | 53.1 | 1015 | - | - |
| | | | | | | | |
| | | | | | | | |
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## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 2/14/00 | Depth to Bottom: | 20 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 8.56 ft 7.83 |
| Project # : | 22992.013.001 | Length of Water Column: | 11.44 ft 12.17 |
| Well ID: | OBGDP27TF2-1 | Volume of Water in Well: | 0.46 gal 0.49 |
| Personnel: | Bill Kotzlers | 3X Vol. Of Water in Well: | 1.37 gal 1.46 |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 30 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1055 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | cloudy |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 5 | 6.56 | 23.5 | 23 | 999 | 1008 | – | – |
| 10 | 7.20 | 24.8 | 11 | 885 | 1027 | – | – |
| 15 | 7.07 | 25.7 | 9.9 | 572 | 1054 | – | – |
| 20 | 7.17 | 27.7 | 9.6 | 553 | 1110 | – | – |
| 25 | 6.80 | 25.1 | 8.3 | 407 | 1141 | – | – |
| 30 | 6.90 | 25.0 | 8.4 | 376 | 1155 | – | – |
| – | – | – | – | – | 1055 | 3 | HCL |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 2/14/00 | Depth to Bottom: | 72 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 8.56 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 63.44 ft |
| Well ID: | OB6DP27TFZ-2 | Volume of Water in Well: | 2.54 gal |
| Personnel: | Steve Cook | 3X Vol. Of Water in Well: | 7.62 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 29 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1105 2/15/00 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | cloudy |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | clear |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 10 | 6.15 | 22 | 45.7 | 38 | 1000 | – | – |
| 15 | 6.79 | 23 | 24.1 | 77.3 | 1200 | – | – |
| 20 | 6.84 | 22.8 | 22.8 | 30 | 1205 | – | – |
| 25 | 6.72 | 22.5 | 22.5 | 33.8 | 1210 | – | – |
| 29 | 6.79 | 22.3 | 20 | 34 | 1220 | – | – |
| – | – | – | – | – | 1105 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 2/15/00 | Depth to Bottom: | 125 ft |
| Site: | Former Thompson | Depth to Water: | 83.24 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 41.76 ft |
| Well ID: | OBGDP27TFZ-3 | Volume of Water in Well: | 1.67 gal |
| Personnel: | Bill Kotziers | 3X Vol. Of Water in Well: | 5.01 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 1.5 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1515 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 1/8 | 6.62 | 23.2 | 57 | 75.2 | 1355 | - | - |
| 1/4 | 7.40 | 21.6 | 39.2 | 85.9 | 1408 | - | - |
| 3/4 | 7.73 | 21.6 | 39.6 | 124 | 1425 | - | - |
| 1.0 | 7.50 | 21.4 | 39.4 | 71. | 1435 | - | - |
| 1.5 | 7.43 | 21.0 | 39.8 | 132 | 1515 | 3 | HCl |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 3/7/00 | Depth to Bottom: | 10 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 6.70 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 3.3 ft |
| Well ID: | OBGDP28TFZ-1 | Volume of Water in Well: | 0.13 gal |
| Personnel: | Bill Kotziers | 3X Vol. Of Water in Well: | 0.39 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 9 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | | | |
|---|---|---|---|
| Time Collected: | 1545 | Opening Well: | NA ppm |
| Analysis/Method: | VOCs 8260 | Purging: | NA ppm |
| pH: | NA | Sampling: | NA ppm |

**Physical Appearance at start:**

| | | | |
|---|---|---|---|
| Color: | NA | Color: | NA |
| Odor: | NA | Odor: | NA |
| Sheen: | NA | Sheen: | NA |

**PID Readings:**

**Physical Appearance at sampling:**

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 3 | 5.52 | 22.7 | 26 | 648 | 0906 | - | - |
| 5 | 5.81 | 22.6 | 17.5 | 58.9 | 0929 | - | - |
| 7 | 5.81 | 23.0 | 15 | 16.7 | 1012 | - | - |
| 9 | 5.71 | 23.2 | 15.6 | 18.3 | 1026 | - | - |
| - | - | - | - | - | 1545 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 3/7/00 | Depth to Bottom: | 30 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 13.39 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 16.61 ft |
| Well ID: | OBGDP28TFZ-2 | Volume of Water in Well: | 0.66 gal |
| Personnel: | Bill Kotziers | 3X Vol. Of Water in Well: | 1.99 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 9 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1555 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 3 | 4.97 | 21.3 | 40.5 | 25.8 | 0903 | - | - |
| 5 | 5.83 | 23.1 | 18.6 | 39.5 | 0927 | - | - |
| 7 | 5.69 | 23.9 | 13.9 | 21.3 | 1010 | - | - |
| 9 | 5.53 | 23.9 | 12.8 | 19.9 | 1024 | - | - |
| - | - | - | - | - | 1555 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 3/7/00 | Depth to Bottom: | 114 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 91.40 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 22.6 ft |
| Well ID: | OBGDP28TFZ-3 | Volume of Water in Well: | 0.9 gal |
| Personnel: | Bill Kotziers | 3X Vol. Of Water in Well: | 2.7 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 3 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1805 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | milky white |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | milky white |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0 | 7.05 | 25.8 | 45.4 | 135 | 1610 | -- | -- |
| 1 | 7.57 | 24.1 | 50.9 | 999 | 1650 | - | - |
| 2 | 7.74 | 22.7 | 47.3 | 999 | 1709 | - | - |
| 3 | 7.81 | 22.4 | 44.5 | 999 | 1800 | - | - |
| - | - | - | - | - | 1805 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 3/3/00 | Depth to Bottom: | 30 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 16.00 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 14.00 ft |
| Well ID: | OBGDP29TF2-2 | Volume of Water in Well: | 0.56 gal |
| Personnel: | Bill Kotzicrs | 3X Vol. Of Water in Well: | 1.68 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 4 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | | | |
|---|---|---|---|
| Time Collected: | 1615 3/6/00 | Opening Well: | NA ppm |
| Analysis/Method: | VOCs 8260 | Purging: | NA ppm |
| pH: | NA | Sampling: | NA ppm |

**PID Readings:**

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 2 | 5.01 | 23.2 | 25.6 | 0 | 1328 | - | - |
| 2.9 | 5.41 | 23.1 | 10.8 | 0 | 1336 | - | - |
| 3.0 | 5.46 | 22.7 | 8.2 | 0 | 1340 | - | - |
| 4 | 5.43 | 22.0 | 5.5 | 0 | 1350 | - | - |
| - | - | - | - | - | 1615 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 3/6/00 | Depth to Bottom: | 105 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 93.73 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 11.27 ft |
| Well ID: | OB6DP29TFZ-3 | Volume of Water in Well: | 0.45 gal |
| Personnel: | Bill Katziers | 3X Vol. Of Water in Well: | 1.35 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 2.5 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1600 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | grayish ~~Orange~~ Brown |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | grayish ~~Orange~~ Brn |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Temperature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0.5 | 7.87 | 23 | 52 | 999 | 1500 | - | - |
| 1.0 | 7.78 | 22 | 47.8 | 999 | 1527 | - | - |
| 2.5 | 7.80 | 22.1 | 42.4 | 999 | 1600 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 3/18/00 | Depth to Bottom: | 27.41 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 5.9 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 21.51 ft |
| Well ID: | OBGDP30TFZ-1 | Volume of Water in Well: | 0.86 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 2.6 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 24 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1540 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0.0 | 7.05 | 19 | 33.2 | 342 | 0925 | - | - |
| 10 | 5.79 | 19.8 | 12.4 | 5.5 | 1045 | - | - |
| 16 | 5.82 | 20 | 11.3 | 94.6 | 1125 | - | - |
| 18 | 5.82 | 19.9 | 10.4 | 109 | 1141 | - | - |
| 20 | 5.69 | 19.9 | 9.9 | 100 | 1155 | - | - |
| 22 | 5.56 | 19.9 | 9.9 | 98.7 | 1208 | - | - |
| 24 | 5.58 | 19.9 | 9.9 | 84.4 | 1220 | - | - |
| - | - | - | - | - | - | 3 | HCL |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 3/18/00 | Depth to Bottom: | 45.04 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 5.94 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 39.1 ft |
| Well ID: | OBGDP30TFZ-Z | Volume of Water in Well: | 1.6 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 4.7 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 13 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1530 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | |
|---|---|
| Opening Well: | NA ppm |
| Purging: | NA ppm |
| Sampling: | NA ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 1 | 5.86 | 20 | 38 | 264 | 1255 | - | - |
| 7 | 6.14 | 19.9 | 22.2 | 55 | 1405 | - | - |
| 10 | 5.97 | 19.8 | 19.9 | 47.4 | 1435 | - | - |
| 11 | 6.03 | 19.6 | 19.1 | 53.5 | 1455 | - | - |
| 12 | 5.98 | 19.5 | 18.2 | 36 | 1510 | - | - |
| 13 | 5.97 | 19.1 | 17.5 | 31.3 | 1525 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |

**O'BRIEN & GERE ENGINEERS, INC.**
**GROUND WATER SAMPLING LOG**

| | | | |
|---|---|---|---|
| Date: | 3/18/00 | Depth to Bottom: | 60.1 ft |
| Site: | Former Thompson Ind. | Depth to Water: | 5.94 ft |
| Project # : | 22992.013.001 | Length of Water Column: | ~~2.16~~ 54.16 ft |
| Well ID: | OBGDP30TFZ-2A | Volume of Water in Well: | 2.16 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 6.50 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 25 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1555 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | NA |
| Odor: | NA |
| Sheen: | NA |

**Ground Water Quality**

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| 0 | 6.21 | 20 | 23.9 | 999 | 1032 | - | - |
| 5 | 5.98 | 20.1 | 20.3 | 765 | 1102 | - | - |
| 10 | 5.99 | 20.2 | 21.9 | 647 | 1117 | - | - |
| 15 | 5.81 | 20.2 | 17.7 | 999 | 1130 | - | - |
| 20 | 5.73 | 20.3 | 14.4 | 999 | 1158 | - | - |
| 25 | 5.37 | 20.5 | 13.1 | 552 | 1235 | - | - |
| - | - | - | - | - | 1555 | 3 | HCL |
| | | | | | | | |

## O'BRIEN & GERE ENGINEERS, INC.
## GROUND WATER SAMPLING LOG

| | | | |
|---|---|---|---|
| Date: | 3/18/00 | Depth to Bottom: | 90.3 ft |
| Site: | Former Thompson Rd. | Depth to Water: | 80.65 ft |
| Project # : | 22992.013.001 | Length of Water Column: | 9.65 ft |
| Well ID: | OBGDP30TFZ-3 | Volume of Water in Well: | 0.38 gal |
| Personnel: | Tim Jellett | 3X Vol. Of Water in Well: | 1.16 gal |
| Weather: | 80's clear | Total Volume of Water Removed Before Sampling: | 4 gal |
| Method: | VOCs 8260 | | |

**Ground Water Sample:**

| | |
|---|---|
| Time Collected: | 1605 |
| Analysis/Method: | VOCs 8260 |
| pH: | NA |

**PID Readings:**

| | | |
|---|---|---|
| Opening Well: | NA | ppm |
| Purging: | NA | ppm |
| Sampling: | NA | ppm |

**Physical Appearance at start:**

| | |
|---|---|
| Color: | orangish Brn |
| Odor: | none |
| Sheen: | none |

**Physical Appearance at sampling:**

| | |
|---|---|
| Color: | orangish Brn. |
| Odor: | none |
| Sheen: | none |

### Ground Water Quality

| Volume (gal) | pH (SUs) | Tempetature (°C) | Specific Conductance (mS/cm) | Turbidity (NTUs) | Time | Samples Collected | Preservative |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 4 | NA | NA | NA | NA | 1605 | 3 | HCL |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

APPENDIX G

# Ground Water Analytical Results
# OBGDP20 – OBGDP30 (OBGMLP1 – 11)
# OBGMLP31 – OBGMLP37
# WCMW4/A and B, WCMW5/A and B
# Former Thompson Industries Site
# Madison, Florida

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP27 (TFZ-3)

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0B160122-003 | **Work Order #...:** | D8L8J101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 02/15/00 | **Date Received..:** | 02/16/00 | | |
| **Prep Date.....:** | 02/16/00 | **Analysis Date..:** | 02/17/00 | | |
| **Prep Batch #...:** | 0048139 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.7 |
| Benzene | ND | 1.0 | ug/L | 0.14 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.17 |
| Bromoform | ND | 1.0 | ug/L | 0.14 |
| Bromomethane | ND | 1.0 | ug/L | 0.14 |
| 2-Butanone | ND | 10 | ug/L | 0.89 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.17 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.14 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.18 |
| Chloroethane | ND | 1.0 | ug/L | 0.17 |
| Chloroform | ND | 1.0 | ug/L | 0.17 |
| Chloromethane | ND | 1.0 | ug/L | 0.16 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.15 |
| 1,1-Dichloroethane | ND | 1.0 | ug/L | 0.16 |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.19 |
| **cis-1,2-Dichloroethene** | **44 E** | **1.0** | **ug/L** | **0.18** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.18 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.17 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.17 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.16 |
| 2-Hexanone | ND | 10 | ug/L | 0.53 |
| Methylene chloride | ND | 1.0 | ug/L | 0.22 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.46 |
| Styrene | ND | 1.0 | ug/L | 0.16 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.18 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.14 |
| Toluene | ND | 1.0 | ug/L | 0.19 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.17 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.20 |
| **Trichloroethene** | **42 E** | **1.0** | **ug/L** | **0.20** |
| Vinyl chloride | ND | 1.0 | ug/L | 0.18 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.14 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 91 | (80 - 120) |
| 2-Dichloroethane-d4 | 106 | (77 - 131) |
| luene-d8 | 105 | (80 - 120) |
| Dibromofluoromethane | 97 | (80 - 125) |

(Continued on next page)

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP27 (TFZ-3)

GC/MS Volatiles

Lot-Sample #...: B0B160122-003 Work Order #...: D8L8J101 Matrix.....: WG

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP27 (TFZ-3)

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0B160122-003 | Work Order #...: | D8L8J201 | Matrix.....: | WG |
| Date Sampled...: | 02/15/00 | Date Received..: | 02/16/00 | | |
| Prep Date.....: | 02/16/00 | Analysis Date..: | 02/17/00 | | |
| Prep Batch #...: | 0048139 | | | | |
| Dilution Factor: | 5 | Initial Wgt/Vol: | 5 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 44 | 5.0 | ug/L | 0.90 |
| Trichloroethene | 41 | 5.0 | ug/L | 1.0 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 89 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 105 | (77 - 131) |
| Toluene-d8 | 99 | (80 - 120) |
| Dibromofluoromethane | 100 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-28-TFZ1

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0C100121-001 | Work Order #...: | D9G4P101 | Matrix.....: | WG |
| Date Sampled...: | 03/07/00 | Date Received..: | 03/10/00 | | |
| Prep Date.....: | 03/10/00 | Analysis Date..: | 03/11/00 | | |
| Prep Batch #...: | 0073154 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| Benzene | ND | 1.0 | ug/L | 0.080 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| ,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| cis-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.12 |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.090 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| Toluene | ND | 1.0 | ug/L | 0.12 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| Trichloroethene | ND | 1.0 | ug/L | 0.080 |
| Vinyl chloride | ND | 1.0 | ug/L | 0.090 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 92 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 103 | (77 - 131) |
| luene-d8 | 105 | (80 - 120) |
| ibromofluoromethane | 101 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-28-TFZ2

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0C100121-002 | **Work Order #...:** | D9G4T101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 03/07/00 | **Date Received..:** | 03/10/00 | | |
| **Prep Date.....:** | 03/10/00 | **Analysis Date..:** | 03/11/00 | | |
| **Prep Batch #...:** | 0073154 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| Benzene | ND | 1.0 | ug/L | 0.080 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| **Carbon disulfide** | **11** | **1.0** | **ug/L** | **0.080** |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| ,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| cis-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.12 |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.090 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| Toluene | ND | 1.0 | ug/L | 0.12 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| Trichloroethene | ND | 1.0 | ug/L | 0.080 |
| Vinyl chloride | ND | 1.0 | ug/L | 0.090 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| *SURROGATE* | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 99 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 100 | (77 - 131) |
| oluene-d8 | 104 | (80 - 120) |
| ibromofluoromethane | 100 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-28-TFZ3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0C100121-003 | Work Order #...: | D9G54101 | Matrix.....: | WG |
| Date Sampled...: | 03/07/00 | Date Received..: | 03/10/00 | | |
| Prep Date.....: | 03/10/00 | Analysis Date..: | 03/11/00 | | |
| Prep Batch #...: | 0073154 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| Benzene | ND | 1.0 | ug/L | 0.080 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| 2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| cis-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.12 |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.090 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| Toluene | ND | 1.0 | ug/L | 0.12 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| Trichloroethene | ND | 1.0 | ug/L | 0.080 |
| Vinyl chloride | ND | 1.0 | ug/L | 0.090 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 96 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 100 | (77 - 131) |
| luene-d8 | 101 | (80 - 120) |
| bromofluoromethane | 100 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-29-TFZ2

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0C070162-004 | **Work Order #...:** | D9AQH101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 03/06/00 | **Date Received..:** | 03/07/00 | | |
| **Prep Date.....:** | 03/07/00 | **Analysis Date..:** | 03/07/00 | | |
| **Prep Batch #...:** | 0068167 | | | | |
| ***Dilution Factor:*** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.7 |
| Benzene | ND | 1.0 | ug/L | 0.14 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.17 |
| Bromoform | ND | 1.0 | ug/L | 0.14 |
| Bromomethane | ND | 1.0 | ug/L | 0.14 |
| 2-Butanone | ND | 10 | ug/L | 0.89 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.17 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.14 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.18 |
| Chloroethane | ND | 1.0 | ug/L | 0.17 |
| Chloroform | ND | 1.0 | ug/L | 0.17 |
| Chloromethane | ND | 1.0 | ug/L | 0.16 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.15 |
| 1,1-Dichloroethane | ND | 1.0 | ug/L | 0.16 |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.19 |
| cis-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.18 |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.18 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.17 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.17 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.16 |
| 2-Hexanone | ND | 10 | ug/L | 0.53 |
| Methylene chloride | ND | 1.0 | ug/L | 0.22 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.46 |
| Styrene | ND | 1.0 | ug/L | 0.16 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.18 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.14 |
| Toluene | ND | 1.0 | ug/L | 0.19 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.17 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.20 |
| **Trichloroethene** | **2.0** | **1.0** | **ug/L** | **0.20** |
| Vinyl chloride | ND | 1.0 | ug/L | 0.18 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.14 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 103 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 109 | (77 - 131) |
| Toluene-d8 | 108 | (80 - 120) |
| Dibromofluoromethane | 105 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-29-TPZ3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0C070162-005 | Work Order #...: | D9AQJ101 | Matrix.....: | WG |
| Date Sampled...: | 03/06/00 | Date Received..: | 03/07/00 | | |
| Prep Date.....: | 03/07/00 | Analysis Date..: | 03/07/00 | | |
| Prep Batch #...: | 0068167 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.7 |
| Benzene | ND | 1.0 | ug/L | 0.14 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.17 |
| Bromoform | ND | 1.0 | ug/L | 0.14 |
| Bromomethane | ND | 1.0 | ug/L | 0.14 |
| 2-Butanone | ND | 10 | ug/L | 0.89 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.17 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.14 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.18 |
| Chloroethane | ND | 1.0 | ug/L | 0.17 |
| Chloroform | ND | 1.0 | ug/L | 0.17 |
| Chloromethane | ND | 1.0 | ug/L | 0.16 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.15 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.16 |
| 2-Dichloroethane | ND | 1.0 | ug/L | 0.19 |
| **cis-1,2-Dichloroethene** | **96 E** | **1.0** | **ug/L** | **0.18** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.18 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.17 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.17 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.16 |
| 2-Hexanone | ND | 10 | ug/L | 0.53 |
| Methylene chloride | ND | 1.0 | ug/L | 0.22 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.46 |
| Styrene | ND | 1.0 | ug/L | 0.16 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.18 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.14 |
| Toluene | ND | 1.0 | ug/L | 0.19 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.17 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.20 |
| **Trichloroethene** | **96 E** | **1.0** | **ug/L** | **0.20** |
| Vinyl chloride | ND | 1.0 | ug/L | 0.18 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.14 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 102 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 108 | (77 - 131) |
| luene-d8 | 108 | (80 - 120) |
| bromofluoromethane | 105 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-29-TFZ3

GC/MS Volatiles

Lot-Sample #...: B0C070162-005 Work Order #...: D9AQJ101 Matrix.....: WG

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-29-TFZ3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0C070162-005 | Work Order #...: | D9AQJ201 | Matrix.....: | WG |
| Date Sampled...: | 03/06/00 | Date Received..: | 03/07/00 | | |
| Prep Date.....: | 03/07/00 | Analysis Date..: | 03/07/00 | | |
| Prep Batch #...: | 0068167 | | | | |
| Dilution Factor: | 10 | Initial Wgt/Vol: | 2.5 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 90 | 10 | ug/L | 1.8 |
| Trichloroethene | 96 | 10 | ug/L | 2.0 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 101 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 106 | (77 - 131) |
| Toluene-d8 | 109 | (80 - 120) |
| Dibromofluoromethane | 106 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP30TFZ-1

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0C210117-002 | Work Order #...: | D9VKV101 | Matrix.....: | WG |
| Date Sampled...: | 03/18/00 | Date Received..: | 03/21/00 | | |
| Prep Date.....: | 03/21/00 | Analysis Date..: | 03/22/00 | | |
| Prep Batch #...: | 0082148 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| Benzene | ND | 1.0 | ug/L | 0.080 |
| **Bromodichloromethane** | **1.8** | **1.0** | **ug/L** | **0.10** |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| **Carbon disulfide** | **23** | **1.0** | **ug/L** | **0.080** |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| **Chloroform** | **1.9** | **1.0** | **ug/L** | **0.090** |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| **Dibromochloromethane** | **1.6** | **1.0** | **ug/L** | **0.10** |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| ,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **5.5** | **1.0** | **ug/L** | **0.12** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.090 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| **Toluene** | **7.2** | **1.0** | **ug/L** | **0.12** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **8.4** | **1.0** | **ug/L** | **0.080** |
| Vinyl chloride | ND | 1.0 | ug/L | 0.090 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 86 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 102 | (77 - 131) |
| luene-d8 | 102 | (80 - 120) |
| ibromofluoromethane | 105 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP30TFZ-2

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0C210117-001 | **Work Order #...:** | D9VKF101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 03/18/00 | **Date Received..:** | 03/21/00 | | |
| **Prep Date.....:** | 03/21/00 | **Analysis Date..:** | 03/22/00 | | |
| **Prep Batch #...:** | 0082148 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| Benzene | ND | 1.0 | ug/L | 0.080 |
| **Bromodichloromethane** | **2.8** | **1.0** | **ug/L** | **0.10** |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| **Chloroform** | **3.0** | **1.0** | **ug/L** | **0.090** |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| **Dibromochloromethane** | **2.3** | **1.0** | **ug/L** | **0.10** |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **1.9** | **1.0** | **ug/L** | **0.12** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.090 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| Toluene | ND | 1.0 | ug/L | 0.12 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| Trichloroethene | ND | 1.0 | ug/L | 0.080 |
| Vinyl chloride | ND | 1.0 | ug/L | 0.090 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 92 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 98 | (77 - 131) |
| Toluene-d8 | 105 | (80 - 120) |
| Dibromofluoromethane | 105 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP30TFZ-2A

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0C210117-003 | Work Order #...: | D9VL0101 | Matrix.....: | WG |
| Date Sampled...: | 03/18/00 | Date Received..: | 03/21/00 | | |
| Prep Date.....: | 03/21/00 | Analysis Date..: | 03/22/00 | | |
| Prep Batch #...: | 0082148 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| Benzene | ND | 1.0 | ug/L | 0.080 |
| **Bromodichloromethane** | **1.5** | **1.0** | **ug/L** | **0.10** |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| **Chloroform** | **1.5** | **1.0** | **ug/L** | **0.090** |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| **Dibromochloromethane** | **1.4** | **1.0** | **ug/L** | **0.10** |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| ,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **340 E** | **1.0** | **ug/L** | **0.12** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| **1,1-Dichloroethene** | **1.3** | **1.0** | **ug/L** | **0.090** |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| Toluene | ND | 1.0 | ug/L | 0.12 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **170 E** | **1.0** | **ug/L** | **0.080** |
| **Vinyl chloride** | **71 E** | **1.0** | **ug/L** | **0.090** |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 92 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 101 | (77 - 131) |
| luene-d8 | 107 | (80 - 120) |
| ibromofluoromethane | 105 | (80 - 125) |

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Quanterra

O'BRIEN & GERB ENGINEERS, INC.

Client Sample ID: OBGDP30TFZ-2A

GC/MS Volatiles

Lot-Sample #...: B0C210117-003 Work Order #...: D9VL0101 Matrix.....: WG

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP30TFZ-2A

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0C210117-003 | Work Order #...: | D9VL0201 | Matrix.....: | WG |
| Date Sampled...: | 03/18/00 | Date Received..: | 03/21/00 | | |
| Prep Date.....: | 03/21/00 | Analysis Date..: | 03/22/00 | | |
| Prep Batch #...: | 0082148 | | | | |
| Dilution Factor: | 20 | Initial Wgt/Vol: | 1.25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 300 | 20 | ug/L | 2.4 |
| Trichloroethene | 140 | 20 | ug/L | 1.6 |
| Vinyl chloride | 66 | 20 | ug/L | 1.8 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 88 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 100 | (77 - 131) |
| Toluene-d8 | 103 | (80 - 120) |
| Dibromofluoromethane | 101 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP30TFZ-3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0C210117-004 | **Work Order #...:** | D9VL1101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 03/18/00 | **Date Received..:** | 03/21/00 | | |
| **Prep Date.....:** | 03/21/00 | **Analysis Date..:** | 03/22/00 | | |
| **Prep Batch #...:** | 0082148 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| Benzene | ND | 1.0 | ug/L | 0.080 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| 1,1-Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **360 E** | **1.0** | **ug/L** | **0.12** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| **1,1-Dichloroethene** | **1.7** | **1.0** | **ug/L** | **0.090** |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| Toluene | ND | 1.0 | ug/L | 0.12 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **420 E** | **1.0** | **ug/L** | **0.080** |
| **Vinyl chloride** | **39 E** | **1.0** | **ug/L** | **0.090** |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 88 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 96 | (77 - 131) |
| Toluene-d8 | 101 | (80 - 120) |
| Dibromofluoromethane | 103 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP30TFZ-3

GC/MS Volatiles

Lot-Sample #...: B0C210117-004 Work Order #...: D9VL1101 Matrix.....: WG

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP30TFZ-3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0C210117-004 | Work Order #...: | D9VL1201 | Matrix.....: | WG |
| Date Sampled...: | 03/18/00 | Date Received..: | 03/21/00 | | |
| Prep Date.....: | 03/21/00 | Analysis Date..: | 03/22/00 | | |
| Prep Batch #...: | 0082148 | | | | |
| Dilution Factor: | 20 | Initial Wgt/Vol: | 1.25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 320 | 20 | ug/L | 2.4 |
| Trichloroethene | 490 | 20 | ug/L | 1.6 |
| Vinyl chloride | 36 | 20 | ug/L | 1.8 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 89 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 97 | (77 - 131) |
| Toluene-d8 | 100 | (80 - 120) |
| Dibromofluoromethane | 103 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP31TFZ-1

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0E020135-004 | Work Order #...: | DCLXH101 | Matrix.....: | WG |
| Date Sampled...: | 05/01/00 | Date Received..: | 05/02/00 | | |
| Prep Date.....: | 05/10/00 | Analysis Date..: | 05/11/00 | | |
| Prep Batch #...: | 0132358 | | | | |
| Dilution Factor: | 5 | Initial Wgt/Vol: | 5 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **Acetone** | **360** | **50** | **ug/L** | **7.0** |
| **Benzene** | **52** | **5.0** | **ug/L** | **0.40** |
| Bromodichloromethane | ND | 5.0 | ug/L | 0.50 |
| Bromoform | ND | 5.0 | ug/L | 0.75 |
| Bromomethane | ND | 5.0 | ug/L | 0.50 |
| **2-Butanone** | **380** | **50** | **ug/L** | **6.3** |
| Carbon disulfide | ND | 5.0 | ug/L | 0.40 |
| Carbon tetrachloride | ND | 5.0 | ug/L | 0.40 |
| Chlorobenzene | ND | 5.0 | ug/L | 0.40 |
| Dibromochloromethane | ND | 5.0 | ug/L | 0.50 |
| Chloroethane | ND | 5.0 | ug/L | 0.75 |
| Chloroform | ND | 5.0 | ug/L | 0.45 |
| Chloromethane | ND | 5.0 | ug/L | 0.50 |
| 1-Dichloroethane | ND | 5.0 | ug/L | 0.50 |
| ,2-Dichloroethane | ND | 5.0 | ug/L | 0.55 |
| **cis-1,2-Dichloroethene** | **16** | **5.0** | **ug/L** | **0.60** |
| trans-1,2-Dichloroethene | ND | 5.0 | ug/L | 0.40 |
| 1,1-Dichloroethene | ND | 5.0 | ug/L | 0.45 |
| 1,2-Dichloropropane | ND | 5.0 | ug/L | 0.55 |
| cis-1,3-Dichloropropene | ND | 5.0 | ug/L | 0.45 |
| trans-1,3-Dichloropropene | ND | 5.0 | ug/L | 0.50 |
| **Ethylbenzene** | **96** | **5.0** | **ug/L** | **0.55** |
| 2-Hexanone | ND | 50 | ug/L | 3.1 |
| Methylene chloride | ND | 5.0 | ug/L | 0.55 |
| **4-Methyl-2-pentanone** | **23 J** | **50** | **ug/L** | **2.2** |
| Styrene | ND | 5.0 | ug/L | 0.50 |
| 1,1,2,2-Tetrachloroethane | ND | 5.0 | ug/L | 0.55 |
| Tetrachloroethene | ND | 5.0 | ug/L | 1.2 |
| **Toluene** | **710 E** | **5.0** | **ug/L** | **0.60** |
| 1,1,1-Trichloroethane | ND | 5.0 | ug/L | 0.35 |
| 1,1,2-Trichloroethane | ND | 5.0 | ug/L | 0.90 |
| **Trichloroethene** | **46** | **5.0** | **ug/L** | **0.40** |
| **Vinyl chloride** | **1.9 J** | **5.0** | **ug/L** | **0.45** |
| **Xylenes (total)** | **2700 E** | **5.0** | **ug/L** | **1.1** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 107 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 94 | (77 - 131) |
| luene-d8 | 106 | (80 - 120) |
| bromofluoromethane | 100 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP31TFZ-1

GC/MS Volatiles

Lot-Sample #...: B0E020135-004 Work Order #...: DCLXH101 Matrix.....: WG

NOTE(S):

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP31TFZ-1

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0E020135-004 | Work Order #...: | DCLXH201 | Matrix.....: | WG |
| Date Sampled...: | 05/01/00 | Date Received..: | 05/02/00 | | |
| Prep Date.....: | 05/10/00 | Analysis Date..: | 05/11/00 | | |
| Prep Batch #...: | 0132358 | | | | |
| Dilution Factor: | 100 | Initial Wgt/Vol: | 0.25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Toluene | 950 | 100 | ug/L | 12 |
| Xylenes (total) | 5000 | 100 | ug/L | 22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 100 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 94 | (77 - 131) |
| Toluene-d8 | 105 | (80 - 120) |
| Dibromofluoromethane | 99 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP31TFZ-2

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0E020135-005 | **Work Order #...:** | DCLXK101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 05/01/00 | **Date Received..:** | 05/02/00 | | |
| **Prep Date.....:** | 05/10/00 | **Analysis Date..:** | 05/11/00 | | |
| **Prep Batch #...:** | 0132358 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| **Benzene** | **0.31 J** | **1.0** | **ug/L** | **0.080** |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| **-Dichloroethane** | **6.1** | **1.0** | **ug/L** | **0.10** |
| ,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **1500 E** | **1.0** | **ug/L** | **0.12** |
| **trans-1,2-Dichloroethene** | **10** | **1.0** | **ug/L** | **0.080** |
| **1,1-Dichloroethene** | **17** | **1.0** | **ug/L** | **0.090** |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| **Ethylbenzene** | **3.1** | **1.0** | **ug/L** | **0.11** |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| **Toluene** | **12** | **1.0** | **ug/L** | **0.12** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **500 E** | **1.0** | **ug/L** | **0.080** |
| **Vinyl chloride** | **310 E** | **1.0** | **ug/L** | **0.090** |
| **Xylenes (total)** | **30** | **1.0** | **ug/L** | **0.22** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 119 | (80 - 120) |
| 2-Dichloroethane-d4 | 93 | (77 - 131) |
| uene-d8 | 104 | (80 - 120) |
| bromofluoromethane | 99 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP31TFZ-2

GC/MS Volatiles

Lot-Sample #...: B0E020135-005 Work Order #...: DCLXK101 Matrix.....: WG

NOTE(S):

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP31TFZ-2

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0E020135-005 | Work Order #...: | DCLXK201 | Matrix.....: | WG |
| Date Sampled...: | 05/01/00 | Date Received..: | 05/02/00 | | |
| Prep Date.....: | 05/10/00 | Analysis Date..: | 05/11/00 | | |
| Prep Batch #...: | 0132358 | | | | |
| Dilution Factor: | 250 | Initial Wgt/Vol: | 0.1 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 4000 | 250 | ug/L | 30 |
| Trichloroethene | 1000 | 250 | ug/L | 20 |
| Vinyl chloride | 410 | 250 | ug/L | 22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 98 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 94 | (77 - 131) |
| Toluene-d8 | 105 | (80 - 120) |
| Dibromofluoromethane | 101 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP31TFZ-3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0E020135-006 | **Work Order #...:** | DCLXQ101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 05/01/00 | **Date Received..:** | 05/02/00 | | |
| **Prep Date.....:** | 05/10/00 | **Analysis Date..:** | 05/11/00 | | |
| **Prep Batch #...:** | 0132358 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| **Benzene** | **0.42 J** | **1.0** | **ug/L** | **0.080** |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| **Chloroform** | **1.7** | **1.0** | **ug/L** | **0.090** |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| .-Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **100 E** | **1.0** | **ug/L** | **0.12** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| **1,1-Dichloroethene** | **0.48 J** | **1.0** | **ug/L** | **0.090** |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| **Toluene** | **0.76 J** | **1.0** | **ug/L** | **0.12** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **46 E** | **1.0** | **ug/L** | **0.080** |
| Vinyl chloride | ND | 1.0 | ug/L | 0.090 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 99 | (80 - 120) |
| 2-Dichloroethane-d4 | 95 | (77 - 131) |
| uene-d8 | 104 | (80 - 120) |
| ibromofluoromethane | 101 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP31TFZ-3

GC/MS Volatiles

Lot-Sample #...: B0E020135-006 Work Order #...: DCLXQ101 Matrix.....: WG

NOTE(S):

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP31TFZ-3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0E020135-006 | Work Order #...: | DCLXQ201 | Matrix.....: | WG |
| Date Sampled...: | 05/01/00 | Date Received..: | 05/02/00 | | |
| Prep Date.....: | 05/10/00 | Analysis Date..: | 05/11/00 | | |
| Prep Batch #...: | 0132358 | | | | |
| Dilution Factor: | 10 | Initial Wgt/Vol: | 2.5 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 100 | 10 | ug/L | 1.2 |
| Trichloroethene | 45 | 10 | ug/L | 0.80 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 97 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 97 | (77 - 131) |
| Toluene-d8 | 104 | (80 - 120) |
| Dibromofluoromethane | 102 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGMLP32TFZ-1

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D200112-003 | Work Order #...: | DC6P8101 | Matrix.....: | WATER |
| Date Sampled...: | 04/19/00 | Date Received..: | 04/20/00 | | |
| Prep Date.....: | 04/28/00 | Analysis Date..: | 04/28/00 | | |
| Prep Batch #...: | 0122324 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **Acetone** | **20** | **10** | **ug/L** | **1.4** |
| **Benzene** | **0.31 J** | **1.0** | **ug/L** | **0.080** |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| **Carbon disulfide** | **0.53 J** | **1.0** | **ug/L** | **0.080** |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| ,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **71 E** | **1.0** | **ug/L** | **0.12** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.090 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| Toluene | ND | 1.0 | ug/L | 0.12 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **0.34 J** | **1.0** | **ug/L** | **0.080** |
| **Vinyl chloride** | **0.56 J** | **1.0** | **ug/L** | **0.090** |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 102 | (80 - 120) |
| ,2-Dichloroethane-d4 | 96 | (77 - 131) |
| luene-d8 | 101 | (80 - 120) |
| ibromofluoromethane | 95 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGMLP32TFZ-1

GC/MS Volatiles

Lot-Sample #...: B0D200112-003 Work Order #...: DC6P8101 Matrix.....: WATER

NOTE(S):

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGMLP32TFZ-1

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D200112-003 | Work Order #...: | DC6P8201 | Matrix.....: | WATER |
| Date Sampled...: | 04/19/00 | Date Received..: | 04/20/00 | | |
| Prep Date.....: | 04/28/00 | Analysis Date..: | 04/28/00 | | |
| Prep Batch #...: | 0122324 | | | | |
| Dilution Factor: | 4 | Initial Wgt/Vol: | 6.25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 80 | 4.0 | ug/L | 0.48 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 99 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 102 | (77 - 131) |
| Toluene-d8 | 104 | (80 - 120) |
| Dibromofluoromethane | 104 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGMLP32TFZ-2

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D200112-002 | Work Order #...: | DC6P7101 | Matrix.....: | WATER |
| Date Sampled...: | 04/19/00 | Date Received..: | 04/20/00 | | |
| Prep Date.....: | 04/28/00 | Analysis Date..: | 04/28/00 | | |
| Prep Batch #...: | 0122324 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **Acetone** | **63** | **10** | **ug/L** | **1.4** |
| Benzene | ND | 1.0 | ug/L | 0.080 |
| **Bromodichloromethane** | **0.92 J** | **1.0** | **ug/L** | **0.10** |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| **Carbon disulfide** | **1.0** | **1.0** | **ug/L** | **0.080** |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| **Dibromochloromethane** | **1.1** | **1.0** | **ug/L** | **0.10** |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| **Chloroform** | **1.0** | **1.0** | **ug/L** | **0.090** |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **110 E** | **1.0** | **ug/L** | **0.12** |
| **trans-1,2-Dichloroethene** | **0.83 J** | **1.0** | **ug/L** | **0.080** |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.090 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| **Toluene** | **0.70 J** | **1.0** | **ug/L** | **0.12** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **0.65 J** | **1.0** | **ug/L** | **0.080** |
| **Vinyl chloride** | **1.5** | **1.0** | **ug/L** | **0.090** |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 97 | (80 - 120) |
| 2-Dichloroethane-d4 | 103 | (77 - 131) |
| luene-d8 | 102 | (80 - 120) |
| Dibromofluoromethane | 104 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGMLP32TFZ-2

GC/MS Volatiles

Lot-Sample #...: B0D200112-002 Work Order #...: DC6P7101 Matrix.....: WATER

NOTE(S):

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGMLP32TFZ-2

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D200112-002 | Work Order #...: | DC6P7201 | Matrix.....: | WATER |
| Date Sampled...: | 04/19/00 | Date Received..: | 04/20/00 | | |
| Prep Date.....: | 04/28/00 | Analysis Date..: | 04/28/00 | | |
| Prep Batch #...: | 0122324 | | | | |
| Dilution Factor: | 10 | Initial Wgt/Vol: | 2.5 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 110 | 10 | ug/L | 1.2 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 95 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 109 | (77 - 131) |
| Toluene-d8 | 103 | (80 - 120) |
| Dibromofluoromethane | 109 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGMLP32TFZ-2A

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D200112-004 | Work Order #...: | DC6P9101 | Matrix.....: | WATER |
| Date Sampled...: | 04/19/00 | Date Received..: | 04/20/00 | | |
| Prep Date.....: | 04/28/00 | Analysis Date..: | 04/28/00 | | |
| Prep Batch #...: | 0122324 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **Acetone** | **25** | **10** | **ug/L** | **1.4** |
| Benzene | ND | 1.0 | ug/L | 0.080 |
| **Bromodichloromethane** | **1.1** | **1.0** | **ug/L** | **0.10** |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| **Dibromochloromethane** | **1.2** | **1.0** | **ug/L** | **0.10** |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| **1-Dichloroethane** | **4.2** | **1.0** | **ug/L** | **0.10** |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **2100 E** | **1.0** | **ug/L** | **0.12** |
| **trans-1,2-Dichloroethene** | **12** | **1.0** | **ug/L** | **0.080** |
| **1,1-Dichloroethene** | **26 E** | **1.0** | **ug/L** | **0.090** |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| **Ethylbenzene** | **2.7** | **1.0** | **ug/L** | **0.11** |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| **Toluene** | **16** | **1.0** | **ug/L** | **0.12** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| Trichloroethene | 98 E | 1.0 | ug/L | 0.080 |
| Vinyl chloride | 28 E | 1.0 | ug/L | 0.090 |
| Xylenes (total) | 11 | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 97 | (80 - 120) |
| 2-Dichloroethane-d4 | 106 | (77 - 131) |
| luene-d8 | 101 | (80 - 120) |
| Dibromofluoromethane | 115 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGMLP32TFZ-2A

GC/MS Volatiles

Lot-Sample #...: B0D200112-004 Work Order #...: DC6P9101 Matrix.....: WATER

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGMLP32TFZ-2A

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D200112-004 | Work Order #...: | DC6P9301 | Matrix.....: | WATER |
| Date Sampled...: | 04/19/00 | Date Received..: | 04/20/00 | | |
| Prep Date.....: | 05/01/00 | Analysis Date..: | 05/01/00 | | |
| Prep Batch #...: | 0123158 | | | | |
| Dilution Factor: | 10 | Initial Wgt/Vol: | 2.5 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 3100 E | 10 | ug/L | 1.2 |
| 1,1-Dichloroethene | 19 | 10 | ug/L | 0.90 |
| Trichloroethene | 100 | 10 | ug/L | 0.80 |
| Vinyl chloride | 30 | 10 | ug/L | 0.90 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 97 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 98 | (77 - 131) |
| Toluene-d8 | 103 | (80 - 120) |
| Dibromofluoromethane | 102 | (80 - 125) |

NOTE(S):

*Estimated result. Result concentration exceeds the calibration range.*

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGMLP32TFZ-2A

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D200112-004 | Work Order #...: | DC6P9201 | Matrix.....: | WATER |
| Date Sampled...: | 04/19/00 | Date Received..: | 04/20/00 | | |
| Prep Date.....: | 04/28/00 | Analysis Date..: | 04/28/00 | | |
| Prep Batch #...: | 0122324 | | | | |
| Dilution Factor: | 200 | Initial Wgt/Vol: | 0.125 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 3900 | 200 | ug/L | 24 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 99 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 89 | (77 - 131) |
| Toluene-d8 | 102 | (80 - 120) |
| Dibromofluoromethane | 91 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGMLP32TFZ-3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0D200112-001 | **Work Order #...:** | DC6P1101 | **Matrix.....:** | WATER |
| **Date Sampled...:** | 04/19/00 | **Date Received..:** | 04/20/00 | | |
| **Prep Date.....:** | 04/28/00 | **Analysis Date..:** | 04/28/00 | | |
| **Prep Batch #...:** | 0122324 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| Benzene | ND | 1.0 | ug/L | 0.080 |
| **Bromodichloromethane** | **0.67 J** | **1.0** | **ug/L** | **0.10** |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| **Carbon disulfide** | **3.2** | **1.0** | **ug/L** | **0.080** |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| **Dibromochloromethane** | **0.81 J** | **1.0** | **ug/L** | **0.10** |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| **Chloroform** | **1.7** | **1.0** | **ug/L** | **0.090** |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| ,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **92 E** | **1.0** | **ug/L** | **0.12** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| **1,1-Dichloroethene** | **2.2** | **1.0** | **ug/L** | **0.090** |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| **Toluene** | **0.56 J** | **1.0** | **ug/L** | **0.12** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **270 E** | **1.0** | **ug/L** | **0.080** |
| **Vinyl chloride** | **2.3** | **1.0** | **ug/L** | **0.090** |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 87 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 105 | (77 - 131) |
| uene-d8 | 104 | (80 - 120) |
| bromofluoromethane | 120 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: FTIOBGMLP32TFZ-3

GC/MS Volatiles

Lot-Sample #...: B0D200112-001 Work Order #...: DC6P1101 Matrix.....: WATER

NOTE(S):

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: PTIOBGMLP32TFZ-3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D200112-001 | Work Order #...: | DC6P1201 | Matrix.....: | WATER |
| Date Sampled...: | 04/19/00 | Date Received..: | 04/20/00 | | |
| Prep Date.....: | 04/28/00 | Analysis Date..: | 04/28/00 | | |
| Prep Batch #...: | 0122324 | | | | |
| Dilution Factor: | 20 | Initial Wgt/Vol: | 1.25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 79 | 20 | ug/L | 2.4 |
| Trichloroethene | 260 | 20 | ug/L | 1.6 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 95 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 91 | (77 - 131) |
| Toluene-d8 | 102 | (80 - 120) |
| Dibromofluoromethane | 93 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP33TFZ-1

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D290114-001 | Work Order #...: | DCJV6101 | Matrix.....: | WG |
| Date Sampled...: | 04/28/00 | Date Received..: | 04/29/00 | | |
| Prep Date.....: | 05/10/00 | Analysis Date..: | 05/10/00 | | |
| Prep Batch #...: | 0132183 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| **Benzene** | **0.28 J** | **1.0** | **ug/L** | **0.080** |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| **1-Dichloroethane** | **0.63 J** | **1.0** | **ug/L** | **0.10** |
| ,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **210 E** | **1.0** | **ug/L** | **0.12** |
| **trans-1,2-Dichloroethene** | **2.9** | **1.0** | **ug/L** | **0.080** |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.090 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| **Ethylbenzene** | **260 E** | **1.0** | **ug/L** | **0.11** |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| **Toluene** | **160 E** | **1.0** | **ug/L** | **0.12** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **8.9** | **1.0** | **ug/L** | **0.080** |
| **Vinyl chloride** | **270 E** | **1.0** | **ug/L** | **0.090** |
| **Xylenes (total)** | **610 E** | **1.0** | **ug/L** | **0.22** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 113 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 90 | (77 - 131) |
| luene-d8 | 105 | (80 - 120) |
| ibromofluoromethane | 96 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP33TFZ-1

GC/MS Volatiles

Lot-Sample #...: B0D290114-001 Work Order #...: DCJV6101 Matrix.....: WG

NOTE(S):

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERR ENGINEERS, INC.

Client Sample ID: OBGMLP33TFZ-1

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D290114-001 | Work Order #...: | DCJV6201 | Matrix.....: | WG |
| Date Sampled...: | 04/28/00 | Date Received..: | 04/29/00 | | |
| Prep Date.....: | 05/10/00 | Analysis Date..: | 05/10/00 | | |
| Prep Batch #...: | 0132183 | | | | |
| Dilution Factor: | 40 | Initial Wgt/Vol: | 0.625 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 250 | 40 | ug/L | 4.8 |
| Ethylbenzene | 360 | 40 | ug/L | 4.4 |
| Toluene | 210 | 40 | ug/L | 4.8 |
| Vinyl chloride | 280 | 40 | ug/L | 3.6 |
| Xylenes (total) | 1500 | 40 | ug/L | 8.8 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 102 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 91 | (77 - 131) |
| Toluene-d8 | 105 | (80 - 120) |
| Dibromofluoromethane | 96 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP33TFZ-2

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0D290114-002 | **Work Order #...:** | DCJV8101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 04/28/00 | **Date Received..:** | 04/29/00 | | |
| **Prep Date.....:** | 05/10/00 | **Analysis Date..:** | 05/10/00 | | |
| **Prep Batch #...:** | 0132183 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| **Benzene** | **1.4** | **1.0** | **ug/L** | **0.080** |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| **.-Dichloroethane** | **6.1** | **1.0** | **ug/L** | **0.10** |
| ,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **620 E** | **1.0** | **ug/L** | **0.12** |
| **trans-1,2-Dichloroethene** | **6.6** | **1.0** | **ug/L** | **0.080** |
| **1,1-Dichloroethene** | **2.6** | **1.0** | **ug/L** | **0.090** |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| **Toluene** | **28 E** | **1.0** | **ug/L** | **0.12** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **330 E** | **1.0** | **ug/L** | **0.080** |
| **Vinyl chloride** | **600 E** | **1.0** | **ug/L** | **0.090** |
| **Xylenes (total)** | **240 E** | **1.0** | **ug/L** | **0.22** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 100 | (80 - 120) |
| 2-Dichloroethane-d4 | 89 | (77 - 131) |
| uene-d8 | 104 | (80 - 120) |
| Dibromofluoromethane | 97 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP33TFZ-2

GC/MS Volatiles

Lot-Sample #...: B0D290114-002 Work Order #...: DCJV8101 Matrix.....: WG

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP33TFZ-2

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D290114-002 | Work Order #...: | DCJV8201 | Matrix.....: | WG |
| Date Sampled...: | 04/28/00 | Date Received..: | 04/29/00 | | |
| Prep Date.....: | 05/10/00 | Analysis Date..: | 05/10/00 | | |
| Prep Batch #...: | 0132183 | | | | |
| Dilution Factor: | 50 | Initial Wgt/Vol: | 0.5 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 1000 | 50 | ug/L | 6.0 |
| Toluene | 33 J | 50 | ug/L | 6.0 |
| Trichloroethene | 530 | 50 | ug/L | 4.0 |
| Vinyl chloride | 1100 | 50 | ug/L | 4.5 |
| Xylenes (total) | 340 | 50 | ug/L | 11 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 100 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 90 | (77 - 131) |
| Toluene-d8 | 106 | (80 - 120) |
| Dibromofluoromethane | 98 | (80 - 125) |

NOTE(S):

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP33TFZ-2A

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D290114-003 | Work Order #...: | DCJVC101 | Matrix.....: | WG |
| Date Sampled...: | 04/28/00 | Date Received..: | 04/29/00 | | |
| Prep Date.....: | 05/10/00 | Analysis Date..: | 05/10/00 | | |
| Prep Batch #...: | 0132183 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **Acetone** | **220 E** | **10** | **ug/L** | **1.4** |
| **Benzene** | **6.0** | **1.0** | **ug/L** | **0.080** |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| **Chlorobenzene** | **1.8** | **1.0** | **ug/L** | **0.080** |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| **1-Dichloroethane** | **8.3** | **1.0** | **ug/L** | **0.10** |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **1200 E** | **1.0** | **ug/L** | **0.12** |
| **trans-1,2-Dichloroethene** | **16** | **1.0** | **ug/L** | **0.080** |
| **1,1-Dichloroethene** | **6.7** | **1.0** | **ug/L** | **0.090** |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| **Ethylbenzene** | **0.44 J** | **1.0** | **ug/L** | **0.11** |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| **Methylene chloride** | **0.59 J** | **1.0** | **ug/L** | **0.11** |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| **Tetrachloroethene** | **1.3** | **1.0** | **ug/L** | **0.25** |
| **Toluene** | **6.0** | **1.0** | **ug/L** | **0.12** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **1000 E** | **1.0** | **ug/L** | **0.080** |
| **Vinyl chloride** | **710 E** | **1.0** | **ug/L** | **0.090** |
| **Xylenes (total)** | **19** | **1.0** | **ug/L** | **0.22** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 104 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 92 | (77 - 131) |
| Toluene-d8 | 104 | (80 - 120) |
| Dibromofluoromethane | 99 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP33TFZ-2A

GC/MS Volatiles

Lot-Sample #...: B0D290114-003 Work Order #...: DCJVC101 Matrix.....: WG

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP33TFZ-2A

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D290114-003 | Work Order #...: | DCJVC201 | Matrix.....: | WG |
| Date Sampled...: | 04/28/00 | Date Received..: | 04/29/00 | | |
| Prep Date.....: | 05/10/00 | Analysis Date..: | 05/10/00 | | |
| Prep Batch #...: | 0132183 | | | | |
| Dilution Factor: | 250 | Initial Wgt/Vol: | 0.1 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | 470 J | 2500 | ug/L | 350 |
| cis-1,2-Dichloroethene | 2800 | 250 | ug/L | 30 |
| Trichloroethene | 4900 | 250 | ug/L | 20 |
| Vinyl chloride | 1800 | 250 | ug/L | 22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 98 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 92 | (77 - 131) |
| Toluene-d8 | 106 | (80 - 120) |
| Dibromofluoromethane | 100 | (80 - 125) |

NOTE(S):

timated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP33TFZ-3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0D290114-004 | **Work Order #...:** | DCJVD101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 04/28/00 | **Date Received..:** | 04/29/00 | | |
| **Prep Date.....:** | 05/10/00 | **Analysis Date..:** | 05/10/00 | | |
| **Prep Batch #...:** | 0132183 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| Benzene | ND | 1.0 | ug/L | 0.080 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| -Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **37 E** | **1.0** | **ug/L** | **0.12** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| **1,1-Dichloroethene** | **0.63 J** | **1.0** | **ug/L** | **0.090** |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| **Methylene chloride** | **0.59 J** | **1.0** | **ug/L** | **0.11** |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| Toluene | ND | 1.0 | ug/L | 0.12 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **210 E** | **1.0** | **ug/L** | **0.080** |
| **Vinyl chloride** | **0.46 J** | **1.0** | **ug/L** | **0.090** |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| URROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| romofluorobenzene | 99 | (80 - 120) |
| ?-Dichloroethane-d4 | 93 | (77 - 131) |
| uene-d8 | 105 | (80 - 120) |
| ibromofluoromethane | 100 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP33TFZ-3

GC/MS Volatiles

Lot-Sample #...: B0D290114-004 Work Order #...: DCJVD101 Matrix.....: WG

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP33TFZ-3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D290114-004 | Work Order #...: | DCJVD201 | Matrix.....: | WG |
| Date Sampled...: | 04/28/00 | Date Received..: | 04/29/00 | | |
| Prep Date.....: | 05/10/00 | Analysis Date..: | 05/10/00 | | |
| Prep Batch #...: | 0132183 | | | | |
| Dilution Factor: | 20 | Initial Wgt/Vol: | 1.25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 41 | 20 | ug/L | 2.4 |
| Trichloroethene | 330 | 20 | ug/L | 1.6 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 97 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 94 | (77 - 131) |
| Toluene-d8 | 106 | (80 - 120) |
| Dibromofluoromethane | 99 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP34TFZ-1

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0E020135-002 | **Work Order #...:** | DCLXD101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 05/01/00 | **Date Received..:** | 05/02/00 | | |
| **Prep Date.....:** | 05/10/00 | **Analysis Date..:** | 05/10/00 | | |
| **Prep Batch #...:** | 0132358 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol...:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **Acetone** | **57** | **10** | **ug/L** | **1.4** |
| Benzene | ND | 1.0 | ug/L | 0.080 |
| **Bromodichloromethane** | **4.8** | **1.0** | **ug/L** | **0.10** |
| **Bromoform** | **0.67 J** | **1.0** | **ug/L** | **0.15** |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| **Dibromochloromethane** | **3.9** | **1.0** | **ug/L** | **0.10** |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| **Chloroform** | **5.0** | **1.0** | **ug/L** | **0.090** |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| ,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **1.5** | **1.0** | **ug/L** | **0.12** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.090 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| Toluene | ND | 1.0 | ug/L | 0.12 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| Trichloroethene | ND | 1.0 | ug/L | 0.080 |
| **Vinyl chloride** | **4.4** | **1.0** | **ug/L** | **0.090** |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 97 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 99 | (77 - 131) |
| luene-d8 | 104 | (80 - 120) |
| ibromofluoromethane | 103 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP34TFZ-1

GC/MS Volatiles

Lot-Sample #...: B0E020135-002 Work Order #...: DCLXD101 Matrix.....: WG

NOTE(S):

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP34TFZ-2

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0E020135-003 | **Work Order #...:** | DCLXE101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 05/01/00 | **Date Received..:** | 05/02/00 | | |
| **Prep Date.....:** | 05/10/00 | **Analysis Date..:** | 05/11/00 | | |
| **Prep Batch #...:** | 0132358 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| **Benzene** | **0.70 J** | **1.0** | **ug/L** | **0.080** |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| **1-Dichloroethane** | **0.35 J** | **1.0** | **ug/L** | **0.10** |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **22** | **1.0** | **ug/L** | **0.12** |
| **trans-1,2-Dichloroethene** | **0.26 J** | **1.0** | **ug/L** | **0.080** |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.090 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| Toluene | ND | 1.0 | ug/L | 0.12 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **0.64 J** | **1.0** | **ug/L** | **0.080** |
| **Vinyl chloride** | **29 E** | **1.0** | **ug/L** | **0.090** |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 102 | (80 - 120) |
| 2-Dichloroethane-d4 | 98 | (77 - 131) |
| luene-d8 | 105 | (80 - 120) |
| Dibromofluoromethane | 103 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP34TFZ-2

GC/MS Volatiles

Lot-Sample #...: B0E020135-003 Work Order #...: DCLXE101 Matrix.....: WG

NOTE(S):

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP34TFZ-2

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0E020135-003 | Work Order #...: | DCLXE201 | Matrix.....: | WG |
| Date Sampled...: | 05/01/00 | Date Received..: | 05/02/00 | | |
| Prep Date.....: | 05/11/00 | Analysis Date..: | 05/11/00 | | |
| Prep Batch #...: | 0133113 | | | | |
| Dilution Factor: | 2 | Initial Wgt/Vol: | 12.5 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Vinyl chloride | 31 | 2.0 | ug/L | 0.18 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 98 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 100 | (77 - 131) |
| Toluene-d8 | 105 | (80 - 120) |
| Dibromofluoromethane | 104 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP34TFZ-3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0E020135-001 | **Work Order #...:** | DCLX9101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 05/01/00 | **Date Received..:** | 05/02/00 | | |
| **Prep Date.....:** | 05/10/00 | **Analysis Date..:** | 05/10/00 | | |
| **Prep Batch #...:** | 0132358 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| **Benzene** | **0.41 J** | **1.0** | **ug/L** | **0.080** |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| **Chloroform** | **0.83 J** | **1.0** | **ug/L** | **0.090** |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **3.6** | **1.0** | **ug/L** | **0.12** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.090 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| Toluene | ND | 1.0 | ug/L | 0.12 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **21** | **1.0** | **ug/L** | **0.080** |
| Vinyl chloride | ND | 1.0 | ug/L | 0.090 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 97 | (80 - 120) |
| 2-Dichloroethane-d4 | 99 | (77 - 131) |
| Toluene-d8 | 103 | (80 - 120) |
| Dibromofluoromethane | 103 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP34TFZ-3

GC/MS Volatiles

Lot-Sample #...: B0E020135-001 Work Order #...: DCLX9101 Matrix.....: WG

NOTE(S):

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP35TFZ-1

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0E060110-004 | **Work Order #...:** | DCVDQ101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 05/05/00 | **Date Received..:** | 05/06/00 | | |
| **Prep Date.....:** | 05/10/00 | **Analysis Date..:** | 05/11/00 | | |
| **Prep Batch #...:** | 0132358 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **Acetone** | **41** | **10** | **ug/L** | **1.4** |
| **Benzene** | **8.8** | **1.0** | **ug/L** | **0.080** |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| **Chlorobenzene** | **0.93 J** | **1.0** | **ug/L** | **0.080** |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| **1-Dichloroethane** | **0.41 J** | **1.0** | **ug/L** | **0.10** |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **8.0** | **1.0** | **ug/L** | **0.12** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.090 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| **Ethylbenzene** | **0.19 J** | **1.0** | **ug/L** | **0.11** |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| **Toluene** | **0.63 J** | **1.0** | **ug/L** | **0.12** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **0.82 J** | **1.0** | **ug/L** | **0.080** |
| **Vinyl chloride** | **1.5** | **1.0** | **ug/L** | **0.090** |
| **Xylenes (total)** | **0.78 J** | **1.0** | **ug/L** | **0.22** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 103 | (80 - 120) |
| 2-Dichloroethane-d4 | 97 | (77 - 131) |
| luene-d8 | 104 | (80 - 120) |
| )ibromofluoromethane | 100 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP35TFZ-1

GC/MS Volatiles

Lot-Sample #...: B0E060110-004 Work Order #...: DCVDQ101 Matrix.....: WG

NOTE(S):

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP35TFZ-2

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0E060110-005 | **Work Order #...:** | DCVDR101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 05/05/00 | **Date Received..:** | 05/06/00 | | |
| **Prep Date.....:** | 05/10/00 | **Analysis Date..:** | 05/11/00 | | |
| **Prep Batch #...:** | 0132358 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| **Benzene** | **2.8** | **1.0** | **ug/L** | **0.080** |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| **Carbon tetrachloride** | **0.52 J** | **1.0** | **ug/L** | **0.080** |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| **Chloroform** | **3.4** | **1.0** | **ug/L** | **0.090** |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| **l-Dichloroethane** | **3.9** | **1.0** | **ug/L** | **0.10** |
| ,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **460 E** | **1.0** | **ug/L** | **0.12** |
| **trans-1,2-Dichloroethene** | **2.3** | **1.0** | **ug/L** | **0.080** |
| **1,1-Dichloroethene** | **3.4** | **1.0** | **ug/L** | **0.090** |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| Toluene | ND | 1.0 | ug/L | 0.12 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **320 E** | **1.0** | **ug/L** | **0.080** |
| **Vinyl chloride** | **150 E** | **1.0** | **ug/L** | **0.090** |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 100 | (80 - 120) |
| 2-Dichloroethane-d4 | 97 | (77 - 131) |
| uene-d8 | 107 | (80 - 120) |
| ibromofluoromethane | 101 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP35TPZ-2

GC/MS Volatiles

Lot-Sample #...: B0E060110-005 Work Order #...: DCVDR101 Matrix.....: WG

NOTE(S):

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP35TFZ-2

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0E060110-005 | Work Order #...: | DCVDR201 | Matrix.....: | WG |
| Date Sampled...: | 05/05/00 | Date Received..: | 05/06/00 | | |
| Prep Date.....: | 05/10/00 | Analysis Date..: | 05/11/00 | | |
| Prep Batch #...: | 0132358 | | | | |
| Dilution Factor: | 25 | Initial Wgt/Vol: | 1 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 620 | 25 | ug/L | 3.0 |
| Trichloroethene | 480 | 25 | ug/L | 2.0 |
| Vinyl chloride | 160 | 25 | ug/L | 2.2 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 100 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 99 | (77 - 131) |
| Toluene-d8 | 105 | (80 - 120) |
| Dibromofluoromethane | 103 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP35TFZ-2A

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0E060110-006 | Work Order #...: | DCVDV101 | Matrix.....: | WG |
| Date Sampled...: | 05/05/00 | Date Received..: | 05/06/00 | | |
| Prep Date.....: | 05/10/00 | Analysis Date..: | 05/11/00 | | |
| Prep Batch #...: | 0132358 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| **Benzene** | **0.47 J** | **1.0** | **ug/L** | **0.080** |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| **Chloroform** | **0.91 J** | **1.0** | **ug/L** | **0.090** |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| **1-Dichloroethane** | **0.27 J** | **1.0** | **ug/L** | **0.10** |
| 2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **33 E** | **1.0** | **ug/L** | **0.12** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.090 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| **Ethylbenzene** | **0.43 J** | **1.0** | **ug/L** | **0.11** |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| **Toluene** | **6.6** | **1.0** | **ug/L** | **0.12** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **16** | **1.0** | **ug/L** | **0.080** |
| **Vinyl chloride** | **6.3** | **1.0** | **ug/L** | **0.090** |
| **Xylenes (total)** | **2.9** | **1.0** | **ug/L** | **0.22** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 101 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 98 | (77 - 131) |
| Toluene-d8 | 103 | (80 - 120) |
| Bromofluoromethane | 102 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP35TFZ-2A

GC/MS Volatiles

Lot-Sample #...: B0E060110-006 Work Order #...: DCVDV101 Matrix.....: WG

NOTE(S):

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP35TFZ-2A

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0E060110-006 | Work Order #...: | DCVDV201 | Matrix.....: | WG |
| Date Sampled...: | 05/05/00 | Date Received..: | 05/06/00 | | |
| Prep Date.....: | 05/10/00 | Analysis Date..: | 05/11/00 | | |
| Prep Batch #...: | 0132358 | | | | |
| Dilution Factor: | 2 | Initial Wgt/Vol: | 12.5 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 30 | 2.0 | ug/L | 0.24 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 100 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 98 | (77 - 131) |
| Toluene-d8 | 105 | (80 - 120) |
| Dibromofluoromethane | 101 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP35TFZ-3

GC/MS Volatiles

Lot-Sample #...: B0E060110-001 Work Order #...: DCVDK101 Matrix.....: WG
Date Sampled...: 05/04/00 Date Received..: 05/06/00
Prep Date.....: 05/10/00 Analysis Date..: 05/11/00
Prep Batch #...: 0132358
Dilution Factor: 1 Initial Wgt/Vol: 25 mL Final Wgt/Vol..: 25 mL
Method.....: SW846 8260B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| **Benzene** | **0.34 J** | **1.0** | **ug/L** | **0.080** |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| **Chloroform** | **0.60 J** | **1.0** | **ug/L** | **0.090** |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| **1-Dichloroethane** | **3.6** | **1.0** | **ug/L** | **0.10** |
| 2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **1100 E** | **1.0** | **ug/L** | **0.12** |
| **trans-1,2-Dichloroethene** | **2.5** | **1.0** | **ug/L** | **0.080** |
| **1,1-Dichloroethene** | **5.8** | **1.0** | **ug/L** | **0.090** |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| **Ethylbenzene** | **2.0** | **1.0** | **ug/L** | **0.11** |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| **Tetrachloroethene** | **0.74 J** | **1.0** | **ug/L** | **0.25** |
| **Toluene** | **16** | **1.0** | **ug/L** | **0.12** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **770 E** | **1.0** | **ug/L** | **0.080** |
| **Vinyl chloride** | **84 E** | **1.0** | **ug/L** | **0.090** |
| **Xylenes (total)** | **15** | **1.0** | **ug/L** | **0.22** |

| URROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| romofluorobenzene | 102 | (80 - 120) |
| ,2-Dichloroethane-d4 | 97 | (77 - 131) |
| uene-d8 | 105 | (80 - 120) |
| romofluoromethane | 103 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP35TFZ-3

GC/MS Volatiles

Lot-Sample #...: B0E060110-001 Work Order #...: DCVDK101 Matrix.....: WG

NOTE(S):

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP35TFZ-3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0E060110-001 | Work Order #...: | DCVDK301 | Matrix.....: | WG |
| Date Sampled...: | 05/04/00 | Date Received..: | 05/06/00 | | |
| Prep Date.....: | 05/11/00 | Analysis Date..: | 05/11/00 | | |
| Prep Batch #...: | 0133113 | | | | |
| Dilution Factor: | 75 | Initial Wgt/Vol: | 0.333 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 1600 | 75 | ug/L | 9.0 |
| Trichloroethene | 1500 | 75 | ug/L | 6.0 |
| Vinyl chloride | 65 J | 75 | ug/L | 6.8 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 99 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 101 | (77 - 131) |
| Toluene-d8 | 104 | (80 - 120) |
| Dibromofluoromethane | 104 | (80 - 125) |

NOTE(S):

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP35TFZ-4

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0E060110-003 | **Work Order #...:** | DCVDP101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 05/04/00 | **Date Received..:** | 05/06/00 | | |
| **Prep Date.....:** | 05/10/00 | **Analysis Date..:** | 05/11/00 | | |
| **Prep Batch #...:** | 0132358 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| Benzene | ND | 1.0 | ug/L | 0.080 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| cis-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.12 |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.090 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| **Toluene** | **0.59 J** | **1.0** | **ug/L** | **0.12** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| Trichloroethene | ND | 1.0 | ug/L | 0.080 |
| Vinyl chloride | ND | 1.0 | ug/L | 0.090 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 99 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 99 | (77 - 131) |
| Toluene-d8 | 104 | (80 - 120) |
| Dibromofluoromethane | 103 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP35TFZ-4

GC/MS Volatiles

Lot-Sample #...: B0E060110-003 Work Order #...: DCVDP101 Matrix.....: WG

NOTE(S):

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP36TFZ-1

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0E060110-002 | **Work Order #...:** | DCVDM101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 05/05/00 | **Date Received..:** | 05/06/00 | | |
| **Prep Date.....:** | 05/10/00 | **Analysis Date..:** | 05/11/00 | | |
| **Prep Batch #...:** | 0132358 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| **Benzene** | **0.54 J** | **1.0** | **ug/L** | **0.080** |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| `loromethane | ND | 1.0 | ug/L | 0.10 |
| 1-Dichloroethane | **2.0** | **1.0** | **ug/L** | **0.10** |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **4.7** | **1.0** | **ug/L** | **0.12** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| **1,1-Dichloroethene** | **0.21 J** | **1.0** | **ug/L** | **0.090** |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| **Tetrachloroethene** | **1.2** | **1.0** | **ug/L** | **0.25** |
| Toluene | ND | 1.0 | ug/L | 0.12 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **16** | **1.0** | **ug/L** | **0.080** |
| **Vinyl chloride** | **0.47 J** | **1.0** | **ug/L** | **0.090** |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 118 | (80 - 120) |
| 2-Dichloroethane-d4 | 99 | (77 - 131) |
| Toluene-d8 | 102 | (80 - 120) |
| Dibromofluoromethane | 102 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP36TFZ-1

GC/MS Volatiles

Lot-Sample #...: B0E060110-002 Work Order #...: DCVDM101 Matrix.....: WG

NOTE(S):

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP36TFZ-2

GC/MS Volatiles

Lot-Sample #...: B0E090124-001 Work Order #...: DCX43101 Matrix.....: WG
Date Sampled...: 05/06/00 Date Received..: 05/09/00
Prep Date.....: 05/11/00 Analysis Date..: 05/11/00
Prep Batch #...: 0133113
Dilution Factor: 1 Initial Wgt/Vol: 25 mL Final Wgt/Vol..: 25 mL
Method.....: SW846 8260B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **Acetone** | **40** | **10** | **ug/L** | **1.4** |
| **Benzene** | **3.9** | **1.0** | **ug/L** | **0.080** |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| **Chlorobenzene** | **1.0** | **1.0** | **ug/L** | **0.080** |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| **1-Dichloroethane** | **38 E** | **1.0** | **ug/L** | **0.10** |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **2900 E** | **1.0** | **ug/L** | **0.12** |
| **trans-1,2-Dichloroethene** | **62 E** | **1.0** | **ug/L** | **0.080** |
| **1,1-Dichloroethene** | **46 E** | **1.0** | **ug/L** | **0.090** |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| **Ethylbenzene** | **120 E** | **1.0** | **ug/L** | **0.11** |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| **Toluene** | **350 E** | **1.0** | **ug/L** | **0.12** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **3.0** | **1.0** | **ug/L** | **0.080** |
| **Vinyl chloride** | **1500 E** | **1.0** | **ug/L** | **0.090** |
| **Xylenes (total)** | **400 E** | **1.0** | **ug/L** | **0.22** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 109 | (80 - 120) |
| 2-Dichloroethane-d4 | 92 | (77 - 131) |
| luene-d8 | 101 | (80 - 120) |
| Dibromofluoromethane | 97 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP36TFZ-2

GC/MS Volatiles

Lot-Sample #...: B0E090124-001 Work Order #...: DCX43101 Matrix.....: WG

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP36TFZ-2

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0E090124-001 | Work Order #...: | DCX43201 | Matrix.....: | WG |
| Date Sampled...: | 05/06/00 | Date Received..: | 05/09/00 | | |
| Prep Date.....: | 05/11/00 | Analysis Date..: | 05/11/00 | | |
| Prep Batch #...: | 0133113 | | | | |
| Dilution Factor: | 25 | Initial Wgt/Vol: | 1 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,1-Dichloroethane | 40 | 25 | ug/L | 2.5 |
| cis-1,2-Dichloroethene | 11000 E | 25 | ug/L | 3.0 |
| trans-1,2-Dichloroethene | 58 | 25 | ug/L | 2.0 |
| 1,1-Dichloroethene | 41 | 25 | ug/L | 2.2 |
| Ethylbenzene | 150 | 25 | ug/L | 2.8 |
| Toluene | 930 E | 25 | ug/L | 3.0 |
| Vinyl chloride | 8700 E | 25 | ug/L | 2.2 |
| Xylenes (total) | 600 | 25 | ug/L | 5.5 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 102 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 90 | (77 - 131) |
| luene-d8 | 107 | (80 - 120) |
| ibromofluoromethane | 97 | (80 - 125) |

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP36TFZ-2

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0E090124-001 | Work Order #...: | DCX43301 | Matrix.....: | WG |
| Date Sampled...: | 05/06/00 | Date Received..: | 05/09/00 | | |
| Prep Date.....: | 05/11/00 | Analysis Date..: | 05/11/00 | | |
| Prep Batch #...: | 0133113 | | | | |
| Dilution Factor: | 1000 | Initial Wgt/Vol: | 0.025 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 15000 | 1000 | ug/L | 120 |
| Toluene | 1000 | 1000 | ug/L | 120 |
| Vinyl chloride | 12000 | 1000 | ug/L | 90 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 97 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 92 | (77 - 131) |
| Toluene-d8 | 105 | (80 - 120) |
| Dibromofluoromethane | 99 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP36 TFZ3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0F080103-001 | Work Order #...: | DECAR101 | Matrix.....: | WG |
| Date Sampled...: | 06/07/00 | Date Received..: | 06/08/00 | | |
| Prep Date.....: | 06/08/00 | Analysis Date..: | 06/08/00 | | |
| Prep Batch #...: | 0160315 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| **Benzene** | **0.54 J** | **1.0** | **ug/L** | **0.080** |
| **Bromodichloromethane** | **0.53 J** | **1.0** | **ug/L** | **0.10** |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| **Dibromochloromethane** | **0.82 J** | **1.0** | **ug/L** | **0.10** |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| **Chloroform** | **0.63 J** | **1.0** | **ug/L** | **0.090** |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| 1-Dichloroethane | 1.6 | 1.0 | ug/L | 0.10 |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **680 E** | **1.0** | **ug/L** | **0.12** |
| **trans-1,2-Dichloroethene** | **3.1** | **1.0** | **ug/L** | **0.080** |
| **1,1-Dichloroethene** | **6.0** | **1.0** | **ug/L** | **0.090** |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| **Tetrachloroethene** | **0.93 J** | **1.0** | **ug/L** | **0.25** |
| **Toluene** | **4.2** | **1.0** | **ug/L** | **0.12** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **730 E** | **1.0** | **ug/L** | **0.080** |
| **Vinyl chloride** | **110 E** | **1.0** | **ug/L** | **0.090** |
| Xylenes (total) | 3.1 | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 106 | (80 - 120) |
| 2-Dichloroethane-d4 | 104 | (77 - 131) |
| Toluene-d8 | 106 | (80 - 120) |
| Dibromofluoromethane | 107 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP36 TFZ3

GC/MS Volatiles

Lot-Sample #...: B0F080103-001 Work Order #...: DECAR101 Matrix.....: WG

NOTE(S):

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP36 TFZ3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0F080103-001 | Work Order #...: | DECAR201 | Matrix.....: | WG |
| Date Sampled...: | 06/07/00 | Date Received..: | 06/08/00 | | |
| Prep Date.....: | 06/08/00 | Analysis Date..: | 06/08/00 | | |
| Prep Batch #...: | 0160315 | | | | |
| Dilution Factor: | 250 | Initial Wgt/Vol: | 0.1 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 1300 | 250 | ug/L | 30 |
| Trichloroethene | 2400 | 250 | ug/L | 20 |
| Vinyl chloride | 130 J | 250 | ug/L | 22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 100 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 102 | (77 - 131) |
| Toluene-d8 | 107 | (80 - 120) |
| Dibromofluoromethane | 105 | (80 - 125) |

NOTE(S):

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP37TFZ-1

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0E040119-002 | Work Order #...: | DCPVJ101 | Matrix.....: | WG |
| Date Sampled...: | 05/03/00 | Date Received..: | 05/04/00 | | |
| Prep Date.....: | 05/10/00 | Analysis Date..: | 05/10/00 | | |
| Prep Batch #...: | 0132183 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| **Benzene** | **8.6** | **1.0** | **ug/L** | **0.080** |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **0.24 J** | **1.0** | **ug/L** | **0.12** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.090 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| Toluene | ND | 1.0 | ug/L | 0.12 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| Trichloroethene | ND | 1.0 | ug/L | 0.080 |
| **Vinyl chloride** | **0.35 J** | **1.0** | **ug/L** | **0.090** |
| **Xylenes (total)** | **0.70 J** | **1.0** | **ug/L** | **0.22** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 106 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 96 | (77 - 131) |
| Toluene-d8 | 106 | (80 - 120) |
| Dibromofluoromethane | 98 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP37TFZ-1

GC/MS Volatiles

Lot-Sample #...: B0E040119-002 Work Order #...: DCPVJ101 Matrix.....: WG

NOTE(S):

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERR ENGINEERS, INC.

Client Sample ID: OBGMLP37TFZ-2

GC/MS Volatiles

Lot-Sample #...: B0E040119-001 Work Order #...: DCPVH101 Matrix.....: WG
Date Sampled...: 05/03/00 Date Received..: 05/04/00
Prep Date.....: 05/10/00 Analysis Date..: 05/10/00
Prep Batch #...: 0132183
Dilution Factor: 1 Initial Wgt/Vol: 25 mL Final Wgt/Vol..: 25 mL
Method.....: SW846 8260B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| **Benzene** | **2.3** | **1.0** | **ug/L** | **0.080** |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| **1-Dichloroethane** | **37 E** | **1.0** | **ug/L** | **0.10** |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **2600 E** | **1.0** | **ug/L** | **0.12** |
| **trans-1,2-Dichloroethene** | **78 E** | **1.0** | **ug/L** | **0.080** |
| **1,1-Dichloroethene** | **38 E** | **1.0** | **ug/L** | **0.090** |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| **Ethylbenzene** | **9.5** | **1.0** | **ug/L** | **0.11** |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| **Toluene** | **120 E** | **1.0** | **ug/L** | **0.12** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **250 E** | **1.0** | **ug/L** | **0.080** |
| **Vinyl chloride** | **1100 E** | **1.0** | **ug/L** | **0.090** |
| **Xylenes (total)** | **210 E** | **1.0** | **ug/L** | **0.22** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 103 | (80 - 120) |
| 2-Dichloroethane-d4 | 91 | (77 - 131) |
| uene-d8 | 103 | (80 - 120) |
| ibromofluoromethane | 97 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP37TFZ-2

GC/MS Volatiles

Lot-Sample #...: B0E040119-001 Work Order #...: DCPVH101 Matrix.....: WG

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP37TFZ-2

GC/MS Volatiles

Lot-Sample #...: B0E040119-001 Work Order #...: DCPVH301 Matrix.....: WG
Date Sampled...: 05/03/00 Date Received..: 05/04/00
Prep Date.....: 05/11/00 Analysis Date..: 05/11/00
Prep Batch #...: 0133113
Dilution Factor: 25 Initial Wgt/Vol: 1 mL Final Wgt/Vol..: 25 mL
Method.....: SW846 8260B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| 1,1-Dichloroethane | 46 | 25 | ug/L | 2.5 |
| trans-1,2-Dichloroethene | 50 | 25 | ug/L | 2.0 |
| 1,1-Dichloroethene | 48 | 25 | ug/L | 2.2 |
| Toluene | 170 | 25 | ug/L | 3.0 |
| Trichloroethene | 410 | 25 | ug/L | 2.0 |
| Xylenes (total) | 270 | 25 | ug/L | 5.5 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 103 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 98 | (77 - 131) |
| Toluene-d8 | 104 | (80 - 120) |
| Dibromofluoromethane | 102 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGMLP37TFZ-2

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0E040119-001 | Work Order #...: | DCPVH201 | Matrix.....: | WG |
| Date Sampled...: | 05/03/00 | Date Received..: | 05/04/00 | | |
| Prep Date.....: | 05/10/00 | Analysis Date..: | 05/10/00 | | |
| Prep Batch #...: | 0132183 | | | | |
| Dilution Factor: | 1000 | Initial Wgt/Vol: | 0.025 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 16000 | 1000 | ug/L | 120 |
| Vinyl chloride | 9500 | 1000 | ug/L | 90 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 97 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 96 | (77 - 131) |
| Toluene-d8 | 106 | (80 - 120) |
| Dibromofluoromethane | 101 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBG MW-4A

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D270156-001 | Work Order #...: | DCFWV101 | Matrix.....: | WG |
| Date Sampled...: | 04/26/00 | Date Received..: | 04/27/00 | | |
| Prep Date.....: | 04/28/00 | Analysis Date..: | 04/28/00 | | |
| Prep Batch #...: | 0122324 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| **Benzene** | **11** | **1.0** | **ug/L** | **0.080** |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| **Chlorobenzene** | **0.61 J** | **1.0** | **ug/L** | **0.080** |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| .-Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| _,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| cis-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.12 |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.090 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| Toluene | ND | 1.0 | ug/L | 0.12 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| Trichloroethene | ND | 1.0 | ug/L | 0.080 |
| **Vinyl chloride** | **0.66 J** | **1.0** | **ug/L** | **0.090** |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 116 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 88 | (77 - 131) |
| uene-d8 | 99 | (80 - 120) |
| ibromofluoromethane | 85 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBG MW-4A

GC/MS Volatiles

Lot-Sample #...: B0D270156-001 Work Order #...: DCFWV101 Matrix.....: WG

NOTE(S):

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBG MW-4B

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D270156-002 | Work Order #...: | DCFWW101 | Matrix.....: | WG |
| Date Sampled...: | 04/26/00 | Date Received..: | 04/27/00 | | |
| Prep Date.....: | 04/28/00 | Analysis Date..: | 04/28/00 | | |
| Prep Batch #...: | 0122324 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| **Benzene** | **1.2** | **1.0** | **ug/L** | **0.080** |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| **1-Dichloroethane** | **2.7** | **1.0** | **ug/L** | **0.10** |
| ,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **1300 E** | **1.0** | **ug/L** | **0.12** |
| **trans-1,2-Dichloroethene** | **4.0** | **1.0** | **ug/L** | **0.080** |
| **1,1-Dichloroethene** | **3.2** | **1.0** | **ug/L** | **0.090** |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| **Ethylbenzene** | **52 E** | **1.0** | **ug/L** | **0.11** |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| **Toluene** | **280 E** | **1.0** | **ug/L** | **0.12** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| Trichloroethene | ND | 1.0 | ug/L | 0.080 |
| **Vinyl chloride** | **200 E** | **1.0** | **ug/L** | **0.090** |
| **Xylenes (total)** | **220 E** | **1.0** | **ug/L** | **0.22** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 110 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 95 | (77 - 131) |
| luene-d8 | 99 | (80 - 120) |
| .bromofluoromethane | 105 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBG MW-4B

GC/MS Volatiles

Lot-Sample #...: B0D270156-002 Work Order #...: DCFWW101 Matrix.....: WG

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBG MW-4B

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D270156-002 | Work Order #...: | DCFWW201 | Matrix.....: | WG |
| Date Sampled...: | 04/26/00 | Date Received..: | 04/27/00 | | |
| Prep Date.....: | 04/28/00 | Analysis Date..: | 04/28/00 | | |
| Prep Batch #...: | 0122324 | | | | |
| Dilution Factor: | 75 | Initial Wgt/Vol: | 0.333 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 1400 | 75 | ug/L | 9.0 |
| Ethylbenzene | 58 J | 75 | ug/L | 8.2 |
| Toluene | 480 | 75 | ug/L | 9.0 |
| Vinyl chloride | 200 | 75 | ug/L | 6.8 |
| Xylenes (total) | 220 | 75 | ug/L | 16 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 97 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 93 | (77 - 131) |
| Toluene-d8 | 99 | (80 - 120) |
| Dibromofluoromethane | 93 | (80 - 125) |

NOTE(S):

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBG MW-5A

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D270156-003 | Work Order #...: | DCFWX101 | Matrix.....: | WG |
| Date Sampled...: | 04/26/00 | Date Received..: | 04/27/00 | | |
| Prep Date.....: | 04/28/00 | Analysis Date..: | 04/28/00 | | |
| Prep Batch #...: | 0122324 | | | | |
| Dilution Factor: | 10 | Initial Wgt/Vol: | 2.5 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 100 | ug/L | 14 |
| **Benzene** | **7.0 J** | **10** | **ug/L** | **0.80** |
| Bromodichloromethane | ND | 10 | ug/L | 1.0 |
| Bromoform | ND | 10 | ug/L | 1.5 |
| Bromomethane | ND | 10 | ug/L | 1.0 |
| 2-Butanone | ND | 100 | ug/L | 13 |
| Carbon disulfide | ND | 10 | ug/L | 0.80 |
| Carbon tetrachloride | ND | 10 | ug/L | 0.80 |
| Chlorobenzene | ND | 10 | ug/L | 0.80 |
| Dibromochloromethane | ND | 10 | ug/L | 1.0 |
| Chloroethane | ND | 10 | ug/L | 1.5 |
| Chloroform | ND | 10 | ug/L | 0.90 |
| Chloromethane | ND | 10 | ug/L | 1.0 |
| **1-Dichloroethane** | **31** | **10** | **ug/L** | **1.0** |
| ,2-Dichloroethane | ND | 10 | ug/L | 1.1 |
| **cis-1,2-Dichloroethene** | **24000 E** | **10** | **ug/L** | **1.2** |
| **trans-1,2-Dichloroethene** | **910 E** | **10** | **ug/L** | **0.80** |
| **1,1-Dichloroethene** | **120** | **10** | **ug/L** | **0.90** |
| 1,2-Dichloropropane | ND | 10 | ug/L | 1.1 |
| cis-1,3-Dichloropropene | ND | 10 | ug/L | 0.90 |
| trans-1,3-Dichloropropene | ND | 10 | ug/L | 1.0 |
| **Ethylbenzene** | **370 E** | **10** | **ug/L** | **1.1** |
| 2-Hexanone | ND | 100 | ug/L | 6.2 |
| Methylene chloride | ND | 10 | ug/L | 1.1 |
| 4-Methyl-2-pentanone | ND | 100 | ug/L | 4.4 |
| Styrene | ND | 10 | ug/L | 1.0 |
| 1,1,2,2-Tetrachloroethane | ND | 10 | ug/L | 1.1 |
| Tetrachloroethene | ND | 10 | ug/L | 2.5 |
| **Toluene** | **2600 E** | **10** | **ug/L** | **1.2** |
| 1,1,1-Trichloroethane | ND | 10 | ug/L | 0.70 |
| 1,1,2-Trichloroethane | ND | 10 | ug/L | 1.8 |
| Trichloroethene | ND | 10 | ug/L | 0.80 |
| **Vinyl chloride** | **8600 E** | **10** | **ug/L** | **0.90** |
| **Xylenes (total)** | **910 E** | **10** | **ug/L** | **2.2** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 104 | (80 - 120) |
| .2-Dichloroethane-d4 | 118 | (77 - 131) |
| luene-d8 | 103 | (80 - 120) |
| ibromofluoromethane | 125 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBG MW-5A

GC/MS Volatiles

Lot-Sample #...: B0D270156-003 Work Order #...: DCFWX101 Matrix.....: WG

NOTE(S):

J Estimated result. Result is less than RL.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBG MW-5A

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D270156-003 | Work Order #...: | DCFWX201 | Matrix.....: | WG |
| Date Sampled...: | 04/26/00 | Date Received..: | 04/27/00 | | |
| Prep Date.....: | 04/28/00 | Analysis Date..: | 04/28/00 | | |
| Prep Batch #...: | 0122324 | | | | |
| Dilution Factor: | 500 | Initial Wgt/Vol: | 0.05 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 55000 E | 500 | ug/L | 60 |
| trans-1,2-Dichloroethene | 470 J | 500 | ug/L | 40 |
| Ethylbenzene | 350 J | 500 | ug/L | 55 |
| Toluene | 3200 | 500 | ug/L | 60 |
| Vinyl chloride | 27000 E | 500 | ug/L | 45 |
| Xylenes (total) | 850 | 500 | ug/L | 110 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 99 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 90 | (77 - 131) |
| Toluene-d8 | 101 | (80 - 120) |
| Dibromofluoromethane | 90 | (80 - 125) |

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

J Estimated result. Result is less than RL.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBG MW-5A

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D270156-003 | Work Order #...: | DCFWX501 | Matrix.....: | WG |
| Date Sampled...: | 04/26/00 | Date Received..: | 04/27/00 | | |
| Prep Date.....: | 05/02/00 | Analysis Date..: | 05/02/00 | | |
| Prep Batch #...: | 0124237 | | | | |
| Dilution Factor: | 10000 | Initial Wgt/Vol: | 0.0025 m | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 65000 | 10000 | ug/L | 1200 |
| Vinyl chloride | 27000 | 10000 | ug/L | 900 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 96 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 100 | (77 - 131) |
| Toluene-d8 | 102 | (80 - 120) |
| Dibromofluoromethane | 101 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBG MW-5B

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D270156-004 | Work Order #...: | DCFX0101 | Matrix.....: | WG |
| Date Sampled...: | 04/26/00 | Date Received..: | 04/27/00 | | |
| Prep Date.....: | 04/28/00 | Analysis Date..: | 04/28/00 | | |
| Prep Batch #...: | 0122324 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| **Benzene** | **16** | **1.0** | **ug/L** | **0.080** |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| **1-Dichloroethane** | **16** | **1.0** | **ug/L** | **0.10** |
| ,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| **cis-1,2-Dichloroethene** | **1000 E** | **1.0** | **ug/L** | **0.12** |
| **trans-1,2-Dichloroethene** | **12** | **1.0** | **ug/L** | **0.080** |
| **1,1-Dichloroethene** | **4.4** | **1.0** | **ug/L** | **0.090** |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| **Ethylbenzene** | **42 E** | **1.0** | **ug/L** | **0.11** |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| **Toluene** | **16** | **1.0** | **ug/L** | **0.12** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| **Trichloroethene** | **49 E** | **1.0** | **ug/L** | **0.080** |
| **Vinyl chloride** | **860 E** | **1.0** | **ug/L** | **0.090** |
| **Xylenes (total)** | **19** | **1.0** | **ug/L** | **0.22** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 107 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 92 | (77 - 131) |
| luene-d8 | 102 | (80 - 120) |
| ibromofluoromethane | 101 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBG MW-5B

GC/MS Volatiles

Lot-Sample #...: B0D270156-004 Work Order #...: DCFX0101 Matrix.....: WG

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBG MW-5B

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D270156-004 | Work Order #...: | DCFX0201 | Matrix.....: | WG |
| Date Sampled...: | 04/26/00 | Date Received..: | 04/27/00 | | |
| Prep Date.....: | 04/28/00 | Analysis Date..: | 04/28/00 | | |
| Prep Batch #...: | 0122324 | | | | |
| Dilution Factor: | 50 | Initial Wgt/Vol: | 0.5 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 930 | 50 | ug/L | 6.0 |
| Ethylbenzene | 41 J | 50 | ug/L | 5.5 |
| Trichloroethene | 49 J | 50 | ug/L | 4.0 |
| Vinyl chloride | 1800 E | 50 | ug/L | 4.5 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 97 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 95 | (77 - 131) |
| Toluene-d8 | 102 | (80 - 120) |
| Dibromofluoromethane | 99 | (80 - 125) |

NOTE(S):

stimated result. Result is less than RL.

Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBG MW-5B

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0D270156-004 | Work Order #...: | DCFX0301 | Matrix.....: | WG |
| Date Sampled...: | 04/26/00 | Date Received..: | 04/27/00 | | |
| Prep Date.....: | 05/01/00 | Analysis Date..: | 05/01/00 | | |
| Prep Batch #...: | 0123158 | | | | |
| Dilution Factor: | 100 | Initial Wgt/Vol: | 0.25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Vinyl chloride | 2200 | 100 | ug/L | 9.0 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 94 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 98 | (77 - 131) |
| Toluene-d8 | 104 | (80 - 120) |
| Dibromofluoromethane | 102 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-20-TFZ1

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0C070162-001 | Work Order #...: | D9AQE101 | Matrix.....: | WG |
| Date Sampled...: | 03/06/00 | Date Received..: | 03/07/00 | | |
| Prep Date.....: | 03/07/00 | Analysis Date..: | 03/07/00 | | |
| Prep Batch #...: | 0068167 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **Acetone** | **130 E** | **10** | **ug/L** | **1.7** |
| **Benzene** | **3.2** | **1.0** | **ug/L** | **0.14** |
| **Bromodichloromethane** | **1.1** | **1.0** | **ug/L** | **0.17** |
| Bromoform | ND | 1.0 | ug/L | 0.14 |
| Bromomethane | ND | 1.0 | ug/L | 0.14 |
| 2-Butanone | ND | 10 | ug/L | 0.89 |
| **Carbon disulfide** | **2.4** | **1.0** | **ug/L** | **0.17** |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.14 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.18 |
| Chloroethane | ND | 1.0 | ug/L | 0.17 |
| **Chloroform** | **1.2** | **1.0** | **ug/L** | **0.17** |
| Chloromethane | ND | 1.0 | ug/L | 0.16 |
| **Dibromochloromethane** | **1.1** | **1.0** | **ug/L** | **0.15** |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.16 |
| ,2-Dichloroethane | ND | 1.0 | ug/L | 0.19 |
| **cis-1,2-Dichloroethene** | **110 E** | **1.0** | **ug/L** | **0.18** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.18 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.17 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.17 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.16 |
| 2-Hexanone | ND | 10 | ug/L | 0.53 |
| Methylene chloride | ND | 1.0 | ug/L | 0.22 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.46 |
| Styrene | ND | 1.0 | ug/L | 0.16 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.18 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.14 |
| Toluene | ND | 1.0 | ug/L | 0.19 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.17 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.20 |
| **Trichloroethene** | **60 E** | **1.0** | **ug/L** | **0.20** |
| **Vinyl chloride** | **46 E** | **1.0** | **ug/L** | **0.18** |
| Xylenes (total) | ND | 1.0 | ug/L | 0.14 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 103 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 105 | (77 - 131) |
| luene-d8 | 109 | (80 - 120) |
| Dibromofluoromethane | 103 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-20-TFZ1

GC/MS Volatiles

Lot-Sample #...: B0C070162-001 Work Order #...: D9AQE101 Matrix.....: WG

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-20-TFZ1

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0C070162-001 | Work Order #...: | D9AQE201 | Matrix.....: | WG |
| Date Sampled...: | 03/06/00 | Date Received..: | 03/07/00 | | |
| Prep Date.....: | 03/07/00 | Analysis Date..: | 03/07/00 | | |
| Prep Batch #...: | 0068167 | | | | |
| Dilution Factor: | 10 | Initial Wgt/Vol: | 2.5 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | 190 | 100 | ug/L | 17 |
| cis-1,2-Dichloroethene | 130 | 10 | ug/L | 1.8 |
| Trichloroethene | 73 | 10 | ug/L | 2.0 |
| Vinyl chloride | 50 | 10 | ug/L | 1.8 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 102 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 110 | (77 - 131) |
| Toluene-d8 | 107 | (80 - 120) |
| Dibromofluoromethane | 105 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-20-TFZ2

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0C070162-002 | **Work Order #...:** | D9AQF101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 03/06/00 | **Date Received..:** | 03/07/00 | | |
| **Prep Date.....:** | 03/07/00 | **Analysis Date..:** | 03/07/00 | | |
| **Prep Batch #...:** | 0068167 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **Acetone** | **49** | **10** | **ug/L** | **1.7** |
| Benzene | ND | 1.0 | ug/L | 0.14 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.17 |
| Bromoform | ND | 1.0 | ug/L | 0.14 |
| Bromomethane | ND | 1.0 | ug/L | 0.14 |
| 2-Butanone | ND | 10 | ug/L | 0.89 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.17 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.14 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.18 |
| Chloroethane | ND | 1.0 | ug/L | 0.17 |
| **Chloroform** | **1.2** | **1.0** | **ug/L** | **0.17** |
| Chloromethane | ND | 1.0 | ug/L | 0.16 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.15 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.16 |
| ,2-Dichloroethane | ND | 1.0 | ug/L | 0.19 |
| **cis-1,2-Dichloroethene** | **5.4** | **1.0** | **ug/L** | **0.18** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.18 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.17 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.17 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.16 |
| 2-Hexanone | ND | 10 | ug/L | 0.53 |
| Methylene chloride | ND | 1.0 | ug/L | 0.22 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.46 |
| Styrene | ND | 1.0 | ug/L | 0.16 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.18 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.14 |
| Toluene | ND | 1.0 | ug/L | 0.19 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.17 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.20 |
| Trichloroethene | 3.7 | 1.0 | ug/L | 0.20 |
| Vinyl chloride | 1.2 | 1.0 | ug/L | 0.18 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.14 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 102 | (80 - 120) |
| ,2-Dichloroethane-d4 | 104 | (77 - 131) |
| luene-d8 | 107 | (80 - 120) |
| ibromofluoromethane | 104 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-20-TFZ3

GC/MS Volatiles

Lot-Sample #...: B0C070162-003 Work Order #...: D9AQG101 Matrix.....: WG
Date Sampled...: 03/06/00 Date Received..: 03/07/00
Prep Date.....: 03/07/00 Analysis Date..: 03/07/00
Prep Batch #...: 0068167
Dilution Factor: 1 Initial Wgt/Vol: 25 mL Final Wgt/Vol..: 25 mL
Method.....: SW846 8260B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **Acetone** | **18** | **10** | **ug/L** | **1.7** |
| Benzene | ND | 1.0 | ug/L | 0.14 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.17 |
| Bromoform | ND | 1.0 | ug/L | 0.14 |
| Bromomethane | ND | 1.0 | ug/L | 0.14 |
| 2-Butanone | ND | 10 | ug/L | 0.89 |
| **Carbon disulfide** | **19** | **1.0** | **ug/L** | **0.17** |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.14 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.18 |
| Chloroethane | ND | 1.0 | ug/L | 0.17 |
| Chloroform | ND | 1.0 | ug/L | 0.17 |
| Chloromethane | ND | 1.0 | ug/L | 0.16 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.15 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.16 |
| ,2-Dichloroethane | ND | 1.0 | ug/L | 0.19 |
| **cis-1,2-Dichloroethene** | **120 E** | **1.0** | **ug/L** | **0.18** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.18 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.17 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.17 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.16 |
| 2-Hexanone | ND | 10 | ug/L | 0.53 |
| Methylene chloride | ND | 1.0 | ug/L | 0.22 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.46 |
| Styrene | ND | 1.0 | ug/L | 0.16 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.18 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.14 |
| Toluene | ND | 1.0 | ug/L | 0.19 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.17 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.20 |
| **Trichloroethene** | **120 E** | **1.0** | **ug/L** | **0.20** |
| **Vinyl chloride** | **6.7** | **1.0** | **ug/L** | **0.18** |
| Xylenes (total) | ND | 1.0 | ug/L | 0.14 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 101 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 106 | (77 - 131) |
| oluene-d8 | 106 | (80 - 120) |
| ibromofluoromethane | 105 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-20-TPZ3

GC/MS Volatiles

Lot-Sample #...: B0C070162-003 Work Order #...: D9AQG101 Matrix.....: WG

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-20-TFZ3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0C070162-003 | Work Order #...: | D9AQG201 | Matrix.....: | WG |
| Date Sampled...: | 03/06/00 | Date Received..: | 03/07/00 | | |
| Prep Date.....: | 03/07/00 | Analysis Date..: | 03/07/00 | | |
| Prep Batch #...: | 0068167 | | | | |
| Dilution Factor: | 10 | Initial Wgt/Vol: | 2.5 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 130 | 10 | ug/L | 1.8 |
| Trichloroethene | 150 | 10 | ug/L | 2.0 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 102 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 108 | (77 - 131) |
| Toluene-d8 | 107 | (80 - 120) |
| Dibromofluoromethane | 105 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP21 (TFZ1)

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0B240134-004 | **Work Order #...:** | D8XG2101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 02/23/00 | **Date Received..:** | 02/24/00 | | |
| **Prep Date.....:** | 02/24/00 | **Analysis Date..:** | 02/25/00 | | |
| **Prep Batch #...:** | 0056133 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.7 |
| Benzene | ND | 1.0 | ug/L | 0.14 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.17 |
| Bromoform | ND | 1.0 | ug/L | 0.14 |
| Bromomethane | ND | 1.0 | ug/L | 0.14 |
| 2-Butanone | ND | 10 | ug/L | 0.89 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.17 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.14 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.18 |
| Chloroethane | ND | 1.0 | ug/L | 0.17 |
| **Chloroform** | **2.9** | **1.0** | **ug/L** | **0.17** |
| Chloromethane | ND | 1.0 | ug/L | 0.16 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.15 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.16 |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.19 |
| **cis-1,2-Dichloroethene** | **8.8** | **1.0** | **ug/L** | **0.18** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.18 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.17 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.17 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.16 |
| 2-Hexanone | ND | 10 | ug/L | 0.53 |
| Methylene chloride | ND | 1.0 | ug/L | 0.22 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.46 |
| Styrene | ND | 1.0 | ug/L | 0.16 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.18 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.14 |
| **Toluene** | **3.9** | **1.0** | **ug/L** | **0.19** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.17 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.20 |
| **Trichloroethene** | **13** | **1.0** | **ug/L** | **0.20** |
| Vinyl chloride | ND | 1.0 | ug/L | 0.18 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.14 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 99 | (80 - 120) |
| 2-Dichloroethane-d4 | 106 | (77 - 131) |
| luene-d8 | 102 | (80 - 120) |
| Dibromofluoromethane | 103 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP21 (TFZ2)

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0B240134-005 | **Work Order #...:** | D8XG3101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 02/23/00 | **Date Received..:** | 02/24/00 | | |
| **Prep Date.....:** | 02/24/00 | **Analysis Date..:** | 02/25/00 | | |
| **Prep Batch #...:** | 0056133 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.7 |
| Benzene | ND | 1.0 | ug/L | 0.14 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.17 |
| Bromoform | ND | 1.0 | ug/L | 0.14 |
| Bromomethane | ND | 1.0 | ug/L | 0.14 |
| 2-Butanone | ND | 10 | ug/L | 0.89 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.17 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.14 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.18 |
| Chloroethane | ND | 1.0 | ug/L | 0.17 |
| Chloroform | ND | 1.0 | ug/L | 0.17 |
| Chloromethane | ND | 1.0 | ug/L | 0.16 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.15 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.16 |
| ,2-Dichloroethane | ND | 1.0 | ug/L | 0.19 |
| **cis-1,2-Dichloroethene** | **16** | **1.0** | **ug/L** | **0.18** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.18 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.17 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.17 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.16 |
| 2-Hexanone | ND | 10 | ug/L | 0.53 |
| Methylene chloride | ND | 1.0 | ug/L | 0.22 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.46 |
| Styrene | ND | 1.0 | ug/L | 0.16 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.18 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.14 |
| Toluene | ND | 1.0 | ug/L | 0.19 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.17 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.20 |
| **Trichloroethene** | **26 E** | **1.0** | **ug/L** | **0.20** |
| Vinyl chloride | ND | 1.0 | ug/L | 0.18 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.14 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 99 | (80 - 120) |
| ,2-Dichloroethane-d4 | 108 | (77 - 131) |
| luene-d8 | 102 | (80 - 120) |
| Dibromofluoromethane | 104 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP21 (TFZ2)

GC/MS Volatiles

Lot-Sample #...: B0B240134-005 Work Order #...: D8XG3101 Matrix.....: WG

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP21 (TFZ2)

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0B240134-005 | **Work Order #...:** | D8XG3201 | **Matrix.....:** | WG |
| **Date Sampled...:** | 02/23/00 | **Date Received..:** | 02/24/00 | | |
| **Prep Date.....:** | 02/24/00 | **Analysis Date..:** | 02/25/00 | | |
| **Prep Batch #...:** | 0056133 | | | | |
| **Dilution Factor:** | 5 | **Initial Wgt/Vol:** | 5 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Trichloroethene | 24 | 5.0 | ug/L | 1.0 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 99 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 108 | (77 - 131) |
| Toluene-d8 | 102 | (80 - 120) |
| Dibromofluoromethane | 104 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP21 (TFZ3)

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0B240134-006 | **Work Order #...:** | D8XG5201 | **Matrix.....:** | WG |
| **Date Sampled...:** | 02/23/00 | **Date Received..:** | 02/24/00 | | |
| **Prep Date.....:** | 02/24/00 | **Analysis Date..:** | 02/25/00 | | |
| **Prep Batch #...:** | 0056133 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.7 |
| Benzene | ND | 1.0 | ug/L | 0.14 |
| **Bromodichloromethane** | **1.6** | **1.0** | **ug/L** | **0.17** |
| Bromoform | ND | 1.0 | ug/L | 0.14 |
| Bromomethane | ND | 1.0 | ug/L | 0.14 |
| 2-Butanone | ND | 10 | ug/L | 0.89 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.17 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.14 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.18 |
| Chloroethane | ND | 1.0 | ug/L | 0.17 |
| **Chloroform** | **2.9** | **1.0** | **ug/L** | **0.17** |
| Chloromethane | ND | 1.0 | ug/L | 0.16 |
| **bromochloromethane** | **1.8** | **1.0** | **ug/L** | **0.15** |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.16 |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.19 |
| **cis-1,2-Dichloroethene** | **44 E** | **1.0** | **ug/L** | **0.18** |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.18 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.17 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.17 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.16 |
| 2-Hexanone | ND | 10 | ug/L | 0.53 |
| Methylene chloride | ND | 1.0 | ug/L | 0.22 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.46 |
| Styrene | ND | 1.0 | ug/L | 0.16 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.18 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.14 |
| **Toluene** | **1.2** | **1.0** | **ug/L** | **0.19** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.17 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.20 |
| **Trichloroethene** | **49 E** | **1.0** | **ug/L** | **0.20** |
| **Vinyl chloride** | **4.0** | **1.0** | **ug/L** | **0.18** |
| Xylenes (total) | ND | 1.0 | ug/L | 0.14 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 96 | (80 - 120) |
| 2-Dichloroethane-d4 | 163 * | (77 - 131) |
| luene-d8 | 102 | (80 - 120) |
| Dibromofluoromethane | 132 * | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP21 (TFZ3)

GC/MS Volatiles

Lot-Sample #...: B0B240134-006 Work Order #...: D8XG5201 Matrix.....: WG

NOTE(S):

The surrogate recovery in the sample is outside control limits due to confirmed matrix effect.

* Surrogate recovery is outside stated control limits.

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP21 (TFZ3)

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0B240134-006 | Work Order #...: | D8XG5301 | Matrix.....: | WG |
| Date Sampled...: | 02/23/00 | Date Received..: | 02/24/00 | | |
| Prep Date.....: | 02/24/00 | Analysis Date..: | 02/25/00 | | |
| Prep Batch #...: | 0056133 | | | | |
| Dilution Factor: | 5 | Initial Wgt/Vol: | 5 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| cis-1,2-Dichloroethene | 28 | 5.0 | ug/L | 0.90 |
| Trichloroethene | 55 | 5.0 | ug/L | 1.0 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 99 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 110 | (77 - 131) |
| Toluene-d8 | 101 | (80 - 120) |
| Dibromofluoromethane | 92 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP22 (TFZ1)

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0B240134-001 | **Work Order #...:** | D8XFV101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 02/22/00 | **Date Received..:** | 02/24/00 | | |
| **Prep Date.....:** | 02/24/00 | **Analysis Date..:** | 02/25/00 | | |
| **Prep Batch #...:** | 0056133 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **Acetone** | **15** | **10** | **ug/L** | **1.7** |
| Benzene | ND | 1.0 | ug/L | 0.14 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.17 |
| Bromoform | ND | 1.0 | ug/L | 0.14 |
| Bromomethane | ND | 1.0 | ug/L | 0.14 |
| 2-Butanone | ND | 10 | ug/L | 0.89 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.17 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.14 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.18 |
| Chloroethane | ND | 1.0 | ug/L | 0.17 |
| Chloroform | ND | 1.0 | ug/L | 0.17 |
| Chloromethane | ND | 1.0 | ug/L | 0.16 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.15 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.16 |
| ,2-Dichloroethane | ND | 1.0 | ug/L | 0.19 |
| cis-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.18 |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.18 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.17 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.17 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.16 |
| 2-Hexanone | ND | 10 | ug/L | 0.53 |
| Methylene chloride | ND | 1.0 | ug/L | 0.22 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.46 |
| Styrene | ND | 1.0 | ug/L | 0.16 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.18 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.14 |
| Toluene | ND | 1.0 | ug/L | 0.19 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.17 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.20 |
| Trichloroethene | ND | 1.0 | ug/L | 0.20 |
| Vinyl chloride | ND | 1.0 | ug/L | 0.18 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.14 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 97 | (80 - 120) |
| ,2-Dichloroethane-d4 | 104 | (77 - 131) |
| luene-d8 | 101 | (80 - 120) |
| Dibromofluoromethane | 102 | (80 - 125) |

Quanterra

O'BRIEN & GERR ENGINEERS, INC.

Client Sample ID: OBGDP22 (TFZ2)

GC/MS Volatiles

Lot-Sample #...: B0B240134-002 Work Order #...: D8XFW101 Matrix.....: WG
Date Sampled...: 02/22/00 Date Received..: 02/24/00
Prep Date.....: 02/24/00 Analysis Date..: 02/25/00
Prep Batch #...: 0056133
Dilution Factor: 1 Initial Wgt/Vol: 25 mL Final Wgt/Vol..: 25 mL
Method.....: SW846 8260B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.7 |
| Benzene | ND | 1.0 | ug/L | 0.14 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.17 |
| Bromoform | ND | 1.0 | ug/L | 0.14 |
| Bromomethane | ND | 1.0 | ug/L | 0.14 |
| 2-Butanone | ND | 10 | ug/L | 0.89 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.17 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.14 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.18 |
| Chloroethane | ND | 1.0 | ug/L | 0.17 |
| Chloroform | ND | 1.0 | ug/L | 0.17 |
| Chloromethane | ND | 1.0 | ug/L | 0.16 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.15 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.16 |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.19 |
| cis-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.18 |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.18 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.17 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.17 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.16 |
| 2-Hexanone | ND | 10 | ug/L | 0.53 |
| Methylene chloride | ND | 1.0 | ug/L | 0.22 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.46 |
| Styrene | ND | 1.0 | ug/L | 0.16 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.18 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.14 |
| Toluene | ND | 1.0 | ug/L | 0.19 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.17 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.20 |
| Trichloroethene | ND | 1.0 | ug/L | 0.20 |
| Vinyl chloride | ND | 1.0 | ug/L | 0.18 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.14 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 100 | (80 - 120) |
| 2-Dichloroethane-d4 | 110 | (77 - 131) |
| luene-d8 | 101 | (80 - 120) |
| Dibromofluoromethane | 105 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP22 (TFZ3)

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0B240134-003 | **Work Order #...:** | D8XG1101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 02/22/00 | **Date Received..:** | 02/24/00 | | |
| **Prep Date.....:** | 02/24/00 | **Analysis Date..:** | 02/25/00 | | |
| **Prep Batch #...:** | 0056133 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **Acetone** | **610 E** | **10** | **ug/L** | **1.7** |
| Benzene | ND | 1.0 | ug/L | 0.14 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.17 |
| Bromoform | ND | 1.0 | ug/L | 0.14 |
| Bromomethane | ND | 1.0 | ug/L | 0.14 |
| 2-Butanone | ND | 10 | ug/L | 0.89 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.17 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.14 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.18 |
| Chloroethane | ND | 1.0 | ug/L | 0.17 |
| Chloroform | ND | 1.0 | ug/L | 0.17 |
| Chloromethane | ND | 1.0 | ug/L | 0.16 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.15 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.16 |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.19 |
| cis-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.18 |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.18 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.17 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.17 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.16 |
| 2-Hexanone | ND | 10 | ug/L | 0.53 |
| Methylene chloride | ND | 1.0 | ug/L | 0.22 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.46 |
| Styrene | ND | 1.0 | ug/L | 0.16 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.18 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.14 |
| Toluene | ND | 1.0 | ug/L | 0.19 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.17 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.20 |
| Trichloroethene | ND | 1.0 | ug/L | 0.20 |
| Vinyl chloride | ND | 1.0 | ug/L | 0.18 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.14 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 100 | (80 - 120) |
| 2-Dichloroethane-d4 | 110 | (77 - 131) |
| luene-d8 | 102 | (80 - 120) |
| Dibromofluoromethane | 105 | (80 - 125) |

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O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP22 (TFZ3)

GC/MS Volatiles

Lot-Sample #...: B0B240134-003 Work Order #...: D8XG1101 Matrix.....: WG

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP22 (TFZ3)

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0B240134-003 | Work Order #...: | D8XG1201 | Matrix.....: | WG |
| Date Sampled...: | 02/22/00 | Date Received..: | 02/24/00 | | |
| Prep Date.....: | 02/24/00 | Analysis Date..: | 02/25/00 | | |
| Prep Batch #...: | 0056133 | | | | |
| Dilution Factor: | 10 | Initial Wgt/Vol: | 2.5 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | 580 | 100 | ug/L | 17 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 99 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 108 | (77 - 131) |
| Toluene-d8 | 101 | (80 - 120) |
| Dibromofluoromethane | 104 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-23-TFZ2

GC/MS Volatiles

Lot-Sample #...: B0C100121-004 Work Order #...: D9G57101 Matrix.....: WG
Date Sampled...: 03/08/00 Date Received..: 03/10/00
Prep Date.....: 03/10/00 Analysis Date..: 03/11/00
Prep Batch #...: 0073154
Dilution Factor: 1 Initial Wgt/Vol: 25 mL Final Wgt/Vol..: 25 mL
Method.....: SW846 8260B

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| Benzene | ND | 1.0 | ug/L | 0.080 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| ,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| cis-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.12 |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.090 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| Toluene | ND | 1.0 | ug/L | 0.12 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| Trichloroethene | ND | 1.0 | ug/L | 0.080 |
| Vinyl chloride | ND | 1.0 | ug/L | 0.090 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 98 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 98 | (77 - 131) |
| oluene-d8 | 102 | (80 - 120) |
| ibromofluoromethane | 100 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-23-TFZ3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0C100121-005 | Work Order #...: | D9G5D101 | Matrix.....: | WG |
| Date Sampled...: | 03/08/00 | Date Received..: | 03/10/00 | | |
| Prep Date.....: | 03/10/00 | Analysis Date..: | 03/11/00 | | |
| Prep Batch #...: | 0073154 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.4 |
| Benzene | ND | 1.0 | ug/L | 0.080 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.080 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| cis-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.12 |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.090 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| Toluene | ND | 1.0 | ug/L | 0.12 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| Trichloroethene | ND | 1.0 | ug/L | 0.080 |
| Vinyl chloride | ND | 1.0 | ug/L | 0.090 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 97 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 99 | (77 - 131) |
| Toluene-d8 | 104 | (80 - 120) |
| Dibromofluoromethane | 100 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-24-TFZ3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0C170118-001 | **Work Order #...:** | D9QAH101 | **Matrix.....:** | WATER |
| **Date Sampled...:** | 03/16/00 | **Date Received..:** | 03/17/00 | | |
| **Prep Date.....:** | 03/17/00 | **Analysis Date..:** | 03/18/00 | | |
| **Prep Batch #...:** | 0078133 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **Acetone** | **280 E** | **10** | **ug/L** | **1.4** |
| Benzene | ND | 1.0 | ug/L | 0.080 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| **Carbon disulfide** | **2.1** | **1.0** | **ug/L** | **0.080** |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| 2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| cis-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.12 |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.090 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| **Toluene** | **1.1** | **1.0** | **ug/L** | **0.12** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| Trichloroethene | ND | 1.0 | ug/L | 0.080 |
| Vinyl chloride | ND | 1.0 | ug/L | 0.090 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 97 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 98 | (77 - 131) |
| luene-d8 | 106 | (80 - 120) |
| promofluoromethane | 104 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-24-TFZ3

GC/MS Volatiles

Lot-Sample #...: B0C170118-001 Work Order #...: D9QAH101 Matrix.....: WATER

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-24-TFZ3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0C170118-001 | Work Order #...: | D9QAH301 | Matrix.....: | WATER |
| Date Sampled...: | 03/16/00 | Date Received..: | 03/17/00 | | |
| Prep Date.....: | 03/20/00 | Analysis Date..: | 03/20/00 | | |
| Prep Batch #...: | 0080338 | | | | |
| Dilution Factor: | 10 | Initial Wgt/Vol: | 2.5 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | 410 | 100 | ug/L | 14 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 90 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 100 | (77 - 131) |
| Toluene-d8 | 106 | (80 - 120) |
| Dibromofluoromethane | 100 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-25-TFZ3

GC/MS Volatiles

| | | | |
|---|---|---|---|
| Lot-Sample #...: B0C170118-002 | Work Order #...: D9QAJ101 | Matrix.....: WATER | |
| Date Sampled...: 03/16/00 | Date Received..: 03/17/00 | | |
| Prep Date.....: 03/17/00 | Analysis Date..: 03/18/00 | | |
| Prep Batch #...: 0078133 | | | |
| Dilution Factor: 1 | Initial Wgt/Vol: 25 mL | Final Wgt/Vol..: 25 mL | |
| | Method.....: SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **Acetone** | **660 E** | **10** | **ug/L** | **1.4** |
| Benzene | ND | 1.0 | ug/L | 0.080 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.10 |
| Bromoform | ND | 1.0 | ug/L | 0.15 |
| Bromomethane | ND | 1.0 | ug/L | 0.10 |
| 2-Butanone | ND | 10 | ug/L | 1.3 |
| **Carbon disulfide** | **2.1** | **1.0** | **ug/L** | **0.080** |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.080 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.080 |
| Chloroethane | ND | 1.0 | ug/L | 0.15 |
| Chloroform | ND | 1.0 | ug/L | 0.090 |
| Chloromethane | ND | 1.0 | ug/L | 0.10 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.10 |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.10 |
| ,2-Dichloroethane | ND | 1.0 | ug/L | 0.11 |
| cis-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.12 |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.080 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.090 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.11 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.090 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.10 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.11 |
| 2-Hexanone | ND | 10 | ug/L | 0.62 |
| Methylene chloride | ND | 1.0 | ug/L | 0.11 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.44 |
| Styrene | ND | 1.0 | ug/L | 0.10 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.11 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.25 |
| **Toluene** | **11** | **1.0** | **ug/L** | **0.12** |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.070 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.18 |
| Trichloroethene | ND | 1.0 | ug/L | 0.080 |
| Vinyl chloride | ND | 1.0 | ug/L | 0.090 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.22 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 93 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 99 | (77 - 131) |
| luene-d8 | 100 | (80 - 120) |
| bromofluoromethane | 100 | (80 - 125) |

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Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-25-TFZ3

GC/MS Volatiles

Lot-Sample #...: B0C170118-002 Work Order #...: D9QAJ101 Matrix.....: WATER

NOTE(S):

E Estimated result. Result concentration exceeds the calibration range.

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP-25-TFZ3

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0C170118-002 | **Work Order #...:** | D9QAJ201 | **Matrix.....:** | WATER |
| **Date Sampled...:** | 03/16/00 | **Date Received..:** | 03/17/00 | | |
| **Prep Date.....:** | 03/17/00 | **Analysis Date..:** | 03/18/00 | | |
| **Prep Batch #...:** | 0078133 | | | | |
| **Dilution Factor:** | 10 | **Initial Wgt/Vol:** | 2.5 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| **Acetone** | **720** | **100** | **ug/L** | **14** |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 88 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 102 | (77 - 131) |
| Toluene-d8 | 100 | (80 - 120) |
| Dibromofluoromethane | 102 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP27 (TFZ-1)

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| **Lot-Sample #...:** | B0B160122-001 | **Work Order #...:** | D8L8A101 | **Matrix.....:** | WG |
| **Date Sampled...:** | 02/15/00 | **Date Received..:** | 02/16/00 | | |
| **Prep Date.....:** | 02/16/00 | **Analysis Date..:** | 02/17/00 | | |
| **Prep Batch #...:** | 0048139 | | | | |
| **Dilution Factor:** | 1 | **Initial Wgt/Vol:** | 25 mL | **Final Wgt/Vol..:** | 25 mL |
| | | **Method.....:** | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.7 |
| Benzene | ND | 1.0 | ug/L | 0.14 |
| Bromodichloromethane | ND | 1.0 | ug/L | 0.17 |
| Bromoform | ND | 1.0 | ug/L | 0.14 |
| Bromomethane | ND | 1.0 | ug/L | 0.14 |
| 2-Butanone | ND | 10 | ug/L | 0.89 |
| Carbon disulfide | ND | 1.0 | ug/L | 0.17 |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.14 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.18 |
| Chloroethane | ND | 1.0 | ug/L | 0.17 |
| Chloroform | ND | 1.0 | ug/L | 0.17 |
| Chloromethane | ND | 1.0 | ug/L | 0.16 |
| Dibromochloromethane | ND | 1.0 | ug/L | 0.15 |
| 1,1-Dichloroethane | ND | 1.0 | ug/L | 0.16 |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.19 |
| cis-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.18 |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.18 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.17 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.17 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.16 |
| 2-Hexanone | ND | 10 | ug/L | 0.53 |
| Methylene chloride | ND | 1.0 | ug/L | 0.22 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.46 |
| Styrene | ND | 1.0 | ug/L | 0.16 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.18 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.14 |
| Toluene | ND | 1.0 | ug/L | 0.19 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.17 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.20 |
| Trichloroethene | ND | 1.0 | ug/L | 0.20 |
| Vinyl chloride | ND | 1.0 | ug/L | 0.18 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.14 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 85 | (80 - 120) |
| 1,2-Dichloroethane-d4 | 100 | (77 - 131) |
| Toluene-d8 | 97 | (80 - 120) |
| Dibromofluoromethane | 97 | (80 - 125) |

Quanterra

O'BRIEN & GERE ENGINEERS, INC.

Client Sample ID: OBGDP27 (TFZ-2)

GC/MS Volatiles

| | | | | | |
|---|---|---|---|---|---|
| Lot-Sample #...: | B0B160122-002 | Work Order #...: | D8L8H101 | Matrix.....: | WG |
| Date Sampled...: | 02/15/00 | Date Received..: | 02/16/00 | | |
| Prep Date.....: | 02/16/00 | Analysis Date..: | 02/17/00 | | |
| Prep Batch #...: | 0048139 | | | | |
| Dilution Factor: | 1 | Initial Wgt/Vol: | 25 mL | Final Wgt/Vol..: | 25 mL |
| | | Method.....: | SW846 8260B | | |

| PARAMETER | RESULT | REPORTING LIMIT | UNITS | MDL |
|---|---|---|---|---|
| Acetone | ND | 10 | ug/L | 1.7 |
| Benzene | ND | 1.0 | ug/L | 0.14 |
| **Bromodichloromethane** | **1.9** | **1.0** | **ug/L** | **0.17** |
| Bromoform | ND | 1.0 | ug/L | 0.14 |
| Bromomethane | ND | 1.0 | ug/L | 0.14 |
| 2-Butanone | ND | 10 | ug/L | 0.89 |
| **Carbon disulfide** | **6.2** | **1.0** | **ug/L** | **0.17** |
| Carbon tetrachloride | ND | 1.0 | ug/L | 0.14 |
| Chlorobenzene | ND | 1.0 | ug/L | 0.18 |
| Chloroethane | ND | 1.0 | ug/L | 0.17 |
| **Chloroform** | **2.4** | **1.0** | **ug/L** | **0.17** |
| Chloromethane | ND | 1.0 | ug/L | 0.16 |
| **Dibromochloromethane** | **1.3** | **1.0** | **ug/L** | **0.15** |
| 1-Dichloroethane | ND | 1.0 | ug/L | 0.16 |
| 1,2-Dichloroethane | ND | 1.0 | ug/L | 0.19 |
| cis-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.18 |
| trans-1,2-Dichloroethene | ND | 1.0 | ug/L | 0.18 |
| 1,1-Dichloroethene | ND | 1.0 | ug/L | 0.17 |
| 1,2-Dichloropropane | ND | 1.0 | ug/L | 0.17 |
| cis-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| trans-1,3-Dichloropropene | ND | 1.0 | ug/L | 0.15 |
| Ethylbenzene | ND | 1.0 | ug/L | 0.16 |
| 2-Hexanone | ND | 10 | ug/L | 0.53 |
| Methylene chloride | ND | 1.0 | ug/L | 0.22 |
| 4-Methyl-2-pentanone | ND | 10 | ug/L | 0.46 |
| Styrene | ND | 1.0 | ug/L | 0.16 |
| 1,1,2,2-Tetrachloroethane | ND | 1.0 | ug/L | 0.18 |
| Tetrachloroethene | ND | 1.0 | ug/L | 0.14 |
| Toluene | ND | 1.0 | ug/L | 0.19 |
| 1,1,1-Trichloroethane | ND | 1.0 | ug/L | 0.17 |
| 1,1,2-Trichloroethane | ND | 1.0 | ug/L | 0.20 |
| Trichloroethene | ND | 1.0 | ug/L | 0.20 |
| Vinyl chloride | ND | 1.0 | ug/L | 0.18 |
| Xylenes (total) | ND | 1.0 | ug/L | 0.14 |

| SURROGATE | PERCENT RECOVERY | RECOVERY LIMITS |
|---|---|---|
| Bromofluorobenzene | 90 | (80 - 120) |
| 2-Dichloroethane-d4 | 107 | (77 - 131) |
| Toluene-d8 | 98 | (80 - 120) |
| Dibromofluoromethane | 98 | (80 - 125) |

DATE REPORT ACCEPTED 4/14/98
DISPOSITION Further Action ESI/RI
REVIEWER SIGNATURE Draft Approval
HV2901_T1337

Reference No.: 10
HRS Documentation Package
Site Name: ITT-Thompson International, Inc.
FLD043047653

BUREAU OF WASTE CLEANUP
MAY 1 0 1998
TECHNICAL REVIEW SECTION

# Site Inspection Report for the ITT Thompson Industries Site, Madison, Madison County, Florida FLD043047653

February 1998

**Prepared for:**

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BUREAU OF WASTE CLEANUP

MAR 10 1998

TECHNICAL REVIEW SECTION

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# 1 Introduction

This Site Inspection (SI) Report summarizes the results of investigation activities conducted at the ITT Thompson Industries, Inc. (ITT Thompson) site in Madison, Madison County, Florida, in June and July 1997 by Ecology and Environment, Inc. (E & E) for the Florida Department of Environmental Protection (FDEP) under Contract Number HW-363. The purpose of the SI is to confirm the presence of groundwater and/or sediment contamination at the ITT Thompson site, to characterize the contaminants, and evaluate potential impacts on the public and the environment. The SI, described in E & E's June 1997 SI Work Plan for the site, is designed to obtain the information necessary to prepare a Hazard Ranking System (HRS) evaluation for the site and to determine whether additional site work is warranted pursuant to the authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, 42 USC 9601 et seq., as amended by the Superfund Amendments and Reauthorization Act (SARA), Public Law 99-499, and Florida Statutes, Chapter 403. The recommendations and conclusions of this SI are subject to change pending receipt of additional information and/or quality assurance review by the United States Environmental Protection Agency (EPA).

# 2 Site Background/History

## 2.1 Site Description

The ITT Thompson site is located at 800 Livingston Street (State Road 145), in Madison, Madison County, Florida, latitude 30°28'12"N/longitude 83°24'22"W, in Section 22, Township 1 North, and Range 9 East (see Figure 1) [2, 49, 63]. The ITT Thompson facility is located on the eastern edge of Madison, Florida, within the corporation limits [63]. The site occupies approximately 3 acres and includes approximately 107,725 square feet of manufacturing space under roof, an office trailer, and a small storage shed. The portions of the site not occupied by structures are paved with asphalt or concrete (see Figure 2) [50, 63, 64]. In the southwestern corner of the site is a concrete containment area that reportedly contained storage tanks [50, 51]. These tanks were not present during the SI investigation, and information regarding their volumes, contents, and removal dates is not currently in the site file. An approximately 0.5-acre pond is located near the southwestern border of the site; a smaller stormwater retention pond, adjacent to a shopping center parking lot, is located approximately 200 feet south of the site (see Figure 2).

Approximately 15 piezometers/monitoring wells currently exist on site as a result of previous investigations of the facility by the former tenants (ITT) [50, 51, 73, 74]. According to an October 1996 Contamination Assessment Report, Addendum II compiled for the site by Woodward Clyde [73], a former production well is located inside the former manufacturing building on the site. No construction information or specifications for the well were provided by Woodward Clyde. The report indicated that based on visual inspection, the well consists of a 15-horsepower Fairbank-Morse vertical line shaft turbine pump and a 500-gallon vertical cylindrical tank. Power has been disconnected from the pump [73]. It is likely that the well is open to the Floridan aquifer system. The well was located during the SI field investigation; however, because of the lack of power to the well and difficulties in accessing the well casing, the well was not sampled.

At the time of the SI field activities, the ITT Thompson facility appeared to be in disrepair. Portions of the building were rusted and falling down and weeds had overtaken the small unpaved areas of the site. A fence surrounds the property and appears to be in reasonably good condition; however, the site was unsecured at the time of the SI reconnaissance as well as during the field activities. Both of the large gates to the site were open and unlocked during the field activities. Large piles of mulch were found in the loading dock areas of the site. Most of the doors to the building were open and pallets with bags of mulch were observed inside.

A photographic log of the site and surrounding areas is presented in Appendix A.

## 2.2 Ownership History

The present property owner is the Madison Investment Group (MIG). It is unclear when MIG acquired the property. Based on file information [38], MIG leased the property to ITT Thompson from 1970 to 1989 and to Thompson International, Inc. from 1989 to 1991. MIG currently leases the property to a wholesale operation that packages and distributes mulch.

## 2.3 Operation History

The ITT Thompson site operated from approximately 1970 until 1991 [50, 63, 67]. ITT Automotive reportedly manufactured wheel ornamentation for cars, including wheel covers and wire wheel products, at the facility between 1970 and 1989. Thompson International, Inc. (Thompson International) reportedly occupied the property from sometime in 1989 until 1991 [63, 67]. Very little information has been located regarding Thompson International's activities at the site. However, it has been reported that their activities included metal pressing [52]. Thompson International has stated that trichloroethylene (TCE) was not used at the facility during their tenancy [67].

It should be noted that the site name is variously recorded in the file information. In most instances the site is referred to as the ITT Thompson facility [43, 48]. However, the site is also referred to as the ITT Automotive facility [45]. Based on currently available information, the site was known as the ITT Thompson facility between 1970 and 1989, and as the Thompson International, Inc. facility between 1989 and 1991 [43, 45, 48, 67]. It is unclear whether the Thompson in ITT Thompson is the same as the Thompson in Thompson International, Inc. The ITT Thompson facility manufactured wheel ornamentation for cars, including wheel covers and wire wheel products. Electroplating operations, including

cathodic cleaning, were reportedly conducted at the plant as part of the manufacturing process. Tetrachloroethylene (PCE) was reportedly used as a degreaser at the facility; based on a letter from an attorney for Thompson International to FDEP, TCE was used by ITT Corporation at the facility prior to approximately 1974 [67]. According to available file information, raw material storage, cathodic cleaning operations, and drum storage were located on the southwest side of the plant. Two paint thinner tanks were also reportedly located in a containment area outside of the former manufacturing plant in the southwestern portion of the facility. The types and volumes of raw materials and wastes at the plant, as well as the construction of the storage vessels, are not described in the site file information. During the SI field activities, a containment area was observed in the southwest portion of the plant, outside of the building. There were no tanks or other structures in the containment area at the time of the reconnaissance. File information suggests that tanks were located in the containment area and that these tanks contained paint thinner [27, 29, 63, 64].

Waste solvents and buffing compounds from plant operations were sporadically disposed of at the Madison County Landfill, located approximately 1.5 miles north-northeast of the site [63], between 1971 and 1980. In addition, a waste removal contractor, hired by ITT Thompson, disposed of acid wash water from the plant at the Madison County Landfill between 1971 and 1974 [29].

## 2.4 Regulatory/Investigative History

A summary of relevant activities associated with the ITT Thompson site is provided below. Historical information regarding ITT Thompson's involvement with the Madison County Landfill has also been included in the discussion to provide some details of waste volumes and disposal frequency, as well as details of groundwater flow direction in the vicinity of the landfill.

**1971 to 1974.** Acid wash water from the ITT Thompson facility was disposed of at the Madison County Landfill by a waste disposal contractor hired by the facility [29].

**1971 to 1980.** ITT Thompson disposed of an undetermined quantity of liquid waste solvents and semisolid waste buffing compounds at the Madison County Landfill. Solvent wastes from the ITT facility were disposed of in 55-gallon drums in the yard trash area of the landfill. Landfill personnel have stated that the buffing compounds were poured from drums into the trash cells with the domestic waste [29, 30].

**1984.** Madison County and the Suwannee River Water Management District installed a groundwater monitoring well network at the landfill. Samples from the monitoring wells were found to contain TCE and 1,2-dichloroethene (DCE) [29].

**1985.** Groundwater samples from private residential wells in the immediate vicinity of the landfill exhibited elevated concentrations of TCE and DCE [29, 30].

**November 1984 and March 1985.** The Florida Department of Environmental Regulation (FDER), assisted by ITT, removed approximately 40 drums from the landfill and transported them to an EPA-approved hazardous waste facility [29, 30, 63].

**April 1986.** A contamination assessment report (CAR) for the landfill was prepared by Kirkner and Associates, under contract to FDER. The report concluded that groundwater flow in the Floridan Aquifer in the vicinity of the landfill was to the southeast. The CAR also implied that portions of the confining unit (Hawthorn Group or Formation) were missing in the site vicinity and that a paleosink existed at the site [29].

**June 11, 1990.** ITT, the City of Madison, and Madison County entered into a Consent Agreement with EPA. The consent agreement required the completion of a remedial investigation and feasibility study at the landfill [29].

**August 30, 1990.** The Madison County Landfill was added to the National Priorities List (Superfund) [30].

**1986 through 1990.** According to correspondence from ITT, three preliminary contamination assessment reports were generated for the ITT Thompson facility between 1986 and 1990. The assessments evaluated soils, sediments, surface water, and groundwater for the presence of solvents and metals. Reportedly, no significant contamination was found [52].

**September 1994.** Routine water samples collected by the Madison County Public Health Unit (MCPHU) from private wells in the Yellow Pines Subdivision exhibited concentrations of TCE above the maximum contaminant level [35].

**October 1994.** MCPHU collected additional residential well samples in the Yellow Pines subdivision. Nine of the thirteen wells sampled exhibited TCE concentrations above the maximum contaminant level (MCLs) [30, 35].

**November and December 1994.** MCPHU conducted additional residential well sampling. TCE concentrations above federal MCLs were detected in 28 of the 59 wells sampled. Lower levels of TCE were detected in 19 of the other wells [32, 36, 40, 53, 54].

**December 1994.** After a preliminary investigation, FDEP determined that the most likely source of contamination was the former ITT Thompson facility. FDEP staff recommended that ITT Thompson be required to conduct a preliminary contamination assessment [36].

**January 4, 1995.** FDEP issued a request notice to ITT Automotive to discuss further action at the site [37].

**January 25, 1995.** According to an FDEP memorandum to the site file, information gathered by word of mouth indicates that ITT may have dumped chemicals into a pit on the site property [38].

**February 1, 1995.** Results of FDEP's sampling effort in the Yellow Pines subdivision show that 49 of the 144 wells sampled contained elevated concentrations of TCE. An additional 24 wells exhibited trace concentrations of TCE [39].

**February 28, 1995.** ITT Thompson representatives met with FDEP to discuss the evidence of contamination and further action at the site. ITT Thompson and Madison Investment Group (MIG) were identified as potential responsible parties (PRPs) [40].

**March 31, 1995.** ITT Automotive agreed to perform an environmental assessment at the former ITT Thompson facility [43].

**April 3, 1995.** FDEP approved a permit for the City of Madison to extend municipal water lines to the Yellow Pines Subdivision [52].

**May 19, 1995.** ITT submitted a Preliminary Contamination Assessment Plan to FDEP for review and approval. Following a number of revisions, FDEP approved the plan, completed by Woodward Clyde, in July 1995 [45, 50, 52].

**October 1995.** ITT submitted the Preliminary Contamination Assessment Report (completed by Woodward Clyde) to FDEP [50].

**May 1996.** ITT submitted a PCAR Addendum (completed by Woodward Clyde) to FDEP for the former ITT Thompson site [51].

**June 1996.** ITT declined to enter into a consent order with FDEP for the former ITT Thompson site [48].

**July 1996.** As an alternative to the consent order, FDEP drafted a pilot project agreement for the site. The agreement included both MIG and ITT as PRPs [49]. As of September 1997, neither party had signed the agreement.

**September 1996.** FDEP completed a Preliminary Assessment (PA) report on the ITT/Thompson site for Region IV EPA.

**October 1996.** Woodward Clyde completed a Contamination Assessment Report Addendum II for the site for ITT; ITT submitted the report to FDEP in November 1996.

**July 1997.** ITT submitted a Direct-Push Investigation for Interim Remedial Alternative Assessment site report (completed by Woodward Clyde) to FDEP.

During the SI field activities, an interview was conducted with Ms. Shirley Yates, a resident in the neighborhood immediately west of the site and a former night shift employee at the ITT Thompson facility. Ms. Yates indicated that chemicals and waste materials from the facility had been disposed of in the pond vicinity immediately southwest of the site. Ms. Yates observed at least one fish kill in the pond following a waste disposal episode. She indicated that local residents catch and consume fish from the pond [77].

Geological Survey (USGS) quadrangle map for the site area indicates that the elevation of the site near the office is approximately 160 feet National Geodetic Vertical Datum (NGVD), sloping to 134 feet NGVD near Mill Pond [2, 64]. Mill Pond is located approximately 1,000 feet east and slightly north of the site. Approximately 500 feet east of Mill Pond is Brickyard Pond. Another pond comprising approximately 0.5 acres is located about 50 feet from the southwest corner of the site [2, 64, 65, 66]. The southwestern portion of the site drains toward this 0.5-acre pond [2, 64]. A ditch is also located near the southwest corner of the building, with a culvert located at its head. Based on the topographic map of the site area, the ditch discharges into the pond southwest of the site [2]. The direct drainage path to the 0.5-acre pond was inaccessible during the SI field activities because of the presence of a thick vegetation cover. The ponds in the immediate site vicinity appear to be closed depressions with no outlets.

The majority of the site is located in an area of minimal flooding; however, according to the Preliminary Assessment (PA) for the site [63] the southwestern edge of the property appears to be within a designated 100-year floodplain zone [10, 63].

## 3.4 Sensitive Environments

A review of the Florida Natural Areas Inventory (FNAI) database for the site vicinity indicates that the Florida pine snake (*Pituophis melanoleucus mugitus*), a State of Florida Species of Special Concern, inhabits an area approximately 1 mile east-southeast of the site [24, 71]. Based on observations made during the SI field activities, wetland areas exist in the vicinity of the closed depression ponds in the site area.

## 3.5 Geology/Hydrogeology

### 3.5.1 Regional Geology/Hydrogeology

The site is located within the Northern Highlands (Tallahassee Hills) geomorphic feature of the Northern or Proximal Geomorphic Province of Florida. The site area is characterized by undulating hills and ridges ranging as high as 220 feet in relief. The Northern Highlands were shaped by a combination of stream erosion and subsurface dissolution. There are numerous small karst lakes and ponds in the site area due to dissolution of the underlying limestone. Three hydrostratigraphic units exist in the site vicinity: the surficial aquifer system; the intermediate aquifer system; and the Floridan aquifer system [11, 12, 13, 15, 16, 18, 63].

the background location, exhibited a detectable concentration of total xylenes (1.1 μg/L). All other VOCs were below detection limits [50, 53, 54, 63].

Supplemental field activities conducted at the site by Woodward Clyde in January and February 1996 are summarized in the Preliminary Contamination Assessment Addendum (PCAR Addendum) [51]. Supplemental activities included the installation of two additional monitoring wells/soil borings (MW-6B and MW-7A) and four piezometers/soil borings (SB/P-8, SB/P-9 [MW-9B], SB/P-10 [MW-10B], and SB/P-11 [MW-11B]). All of the monitoring wells/piezometers were installed in the "B" (lower) water-bearing zone. Soil samples were collected and screened with an OVA prior to selecting samples for laboratory analysis. Groundwater samples were collected from the two newly installed monitoring wells.

Soil analytical results indicated the presence of cis-1,2-DCE, toluene, and ethylbenzene in site soils. Cis-1,2-DCE (8.5 μg/kg) and toluene (7.7 μg/kg) were detected in soils collected from the MW-6B borehole (located west of the facility); soil samples collected from the MW-7A borehole, located immediately east of the former storage tanks area, exhibited ethylbenzene, toluene, and total xylenes concentrations as high as 2,600 μg/kg, 27 μg/kg, and 2,200 μg/kg, respectively.

Groundwater analytical results from monitoring well MW-7A indicated elevated concentrations of benzene (53.0 μg/L) and total xylenes (110.0 μg/L), with detectable concentrations of toluene and ethylbenzene. A detectable concentration of cis-1,2-DCE was detected in the MW-6B groundwater sample. The benzene concentration in the MW-7A groundwater sample exceeded state and federal MCLs [51, 53, 54, 63].

Woodward Clyde conducted additional field activities at the site in August 1996, which are summarized in the October 1996 Contamination Assessment Report Addendum II [73]. The field activities included installation of three "B"-zone monitoring wells (MW-2B, MW-4B, and MW-5B); conversion of SB/P-9, SB/P-10, and SB/P-11 to permanent monitoring wells (MW-9B, MW-10B, and MW-11B, respectively); installation of an additional "B"-zone piezometer (SB/P-13) on the eastern edge of the site; and completion of a soil vapor survey beneath the on-site building. Groundwater samples were collected from the "B"-zone wells (newly installed wells and converted piezometers) ranging in depth from approximately 24 to 40 feet in depth.

The groundwater analytical results indicated the presence of several VOCs in the deeper "B"-zone wells at significantly elevated concentrations including vinyl chloride, cis-1,2-DCE, benzene, ethylbenzene, toluene, and total xylenes. The highest vinyl chloride and cis-1,2-DCE concentrations were exhibited by the MW-5B original sample (44,000 μg/L and 31,000 μg/L, respectively) with the highest ethylbenzene, toluene, and total xylenes

The surficial aquifer system is generally between 5 and 20 feet thick and consists predominantly of Pliocene- to Holocene-age undifferentiated terrace marine and fluvial deposits and the upper portion of the Miccosukee Formation. The Holocene deposits consist predominantly of reworked quartz sands. The Miccosukee Formation, which outcrops throughout large portions of Madison County, is composed of fine- to coarse-grained, poorly to moderately indurated sands to sandy clays. The surficial aquifer system is not a major source of water in the area because of low yields and high concentrations of color and iron [15, 16, 17, 18, 57, 63].

In the site vicinity, the intermediate aquifer system underlies the surficial aquifer system and consists of discontinuous limestone, dolomite, sand, clayey sand, and shell beds present in either the Miccosukee Formation or the Miocene-age Hawthorn Group. Clay deposits within these sediments form the confining unit of both the intermediate and underlying Floridan aquifer systems. The Miccosukee Formation and the Hawthorn Group are absent in the southern half of Madison County. The Hawthorn Group, in particular the Torreya Formation, varies in composition from phosphatic dolomites and limestones to sandy, silty clays and clayey sands. The Hawthorn Group ranges from 80 to 120 feet in thickness in the site area. Because of the discontinuous nature of the intermediate aquifer system in Madison County, the aquifer system is not a major source of water; however, the aquifer system, which exists under artesian conditions, can produce sufficient yields for small domestic supplies [13, 14, 15, 16, 17, 18, 57, 63].

The Floridan aquifer system, which underlies the intermediate aquifer system, consists of carbonate lower-Miocene-age to Eocene-age units. The units include, in descending order, the St. Marks Formation, the Suwannee Limestone, the Ocala Limestone, and the Avon Park Formation. Based on a review of geologic literature and well logs for the site area, the top of the Floridan aquifer system is between 40 and 75 feet below ground surface (BGS) [13, 15, 16, 18, 19, 20, 63]; however, site-specific data indicate that the top of the Floridan aquifer system is below approximately 88 feet BGS at the ITT Thompson site (see Section 3.5.2). The aquifer, which is approximately 1,600 feet thick in the Madison area, is composed predominantly of fossiliferous limestone with some dolostone lithologies present. The Floridan aquifer system is the primary source of potable water for domestic and public supplies in Madison County, Florida [2, 11, 12, 13, 15, 16, 18, 20, 57, 63].

### 3.5.2 Site-Specific Geology/Hydrogeology

During the SI field activities, one continuous, lithologic, Enviro-Core (EC) boring was installed to approximately 90 feet BGS in the northwestern portion of the site

represent a silicified zone at the top of the St. Marks Formation (top of the Floridan aquifer system) or whether they represent Hawthorn Group sediments.

According to Woodward Clyde, two sandy, water-bearing zones, separated by a southward-dipping clay layer, exist at the site between ground surface and approximately 50 feet BGS [51]. Based on several Woodward Clyde site reports [50, 51, 73, 74], the uppermost water-bearing zone, referred to as the "A" zone, exists only in the southern half of the site, perched on the clay layer that pinches out to the north. The deeper "B" zone, generally encountered between 15 and 50 feet BGS, extends beneath the entire site area. Selected exhibits from reports of previous site investigations have been included in Appendix B; the lithologic log from the SI field investigation is included in Appendix C and photographs of the soil core are presented in Appendix A.

## 3.6 Drinking Water Targets

The City of Madison utilizes two main municipal supply wells (Barrs and Chaison wells) and one standby well (Coody Well). The Barrs, Chaison, and Coody wells, open to the upper portion of the Floridan aquifer system, are located within a 2-mile radius of the site. The Barrs Well, cased to 110 feet BGS with a total depth of 420 feet BGS, is located approximately 0.7 miles west of the site; the other main supply well, the Chaison Well, constructed with casing to 124 feet BGS with a total depth of 150 feet [75, 79], is located approximately 1.8 miles south-southwest of the site. The standby Coody Well (cased to approximately 173 feet BGS with a total depth of 516 feet BGS) is located approximately 1.7 miles west of the site. The City of Madison Water Department serves approximately 6,300 people [2, 20, 21, 22, 63, 75].

Two former standby wells, Francis wells Nos. 1 and 2, located approximately 0.25 miles southwest of the site, are no longer in operation. During the SI field activities, an attempt was made to sample an emergency supply well adjacent to the Francis wells Nos. 1 and 2 (all three of the wells are open to the Floridan aquifer system). However, approximately 6.25 feet of free product was encountered floating on the water column in the emergency supply well (depth to water approximately 92 feet below top of casing), and the sampling efforts were abandoned. Several potential sources of petroleum contamination exist in the immediate vicinity of the Francis wells, including gasoline stations, auto and truck repair shops and garages, and vehicle maintenance and refueling yards [76].

(upgradient/background location). The following lithologic description was compiled based on the continuous soil core:

- 0-1 feet BGS: sand and gravel fill, white to tan, unconsolidated, (approximately 1 inch of asphalt at the ground surface);
- 1-5 feet BGS: sand, tan, fine-grained quartz, unconsolidated;
- 5-19 feet BGS: sand to clayey sand, gray with red mottling to brownish-red, fine- to medium-grained quartz sand, approximate clay percentage <10 to 20%, fairly cohesive;
- 19-21 feet BGS: clay with some silt, reddish-tan, sharp upper and lower contacts, low to moderate plasticity, hematite layer at basal contact;
- 21-28 feet BGS: sand, tan to whitish-tan, medium- to coarse-grained quartz, sharp upper contact with clay;
- 28-36 feet BGS: interbedded sands, silts, and clays in varying textural combinations, tan to reddish-brown; bedding planes thickness ranged from <1 inch to approximately 0.5 feet;
- 36-52 feet BGS: sand to silty sand, red to reddish-brown, very fine to fine-grained quartz sand, unconsolidated. Thin, white, clay laminae (<1 to 2 mm in thickness) observed between 43 and 52 feet BGS;
- 52-55 feet BGS: silty clay to clayey silt, white with reddish mottling, small, <2 to 4 mm diameter, grayish-white, carbonate gravel at 52 feet BGS;
- 55-83 feet BGS: interbedded silty, clayey sand, silty clay, and clay, thin, fine- to medium-grained, quartz, sand seams (<1 inch in thickness) encountered between 69 and 76 feet BGS; silts and clays were generally greenish-gray in color, sand seams were reddish-tan;
- 83-88 feet BGS: silt interbedded with silty sand, light-gray color, nodules (<1inch to 4 inches diameter), possibly phosphatic, observed in interval; and
- 88 to >90 feet BGS: sandstone to well-indurated sands, whitish-tan, silica cement, reddish hematite staining present; powdered sample had no reaction to hydrochloric acid, very hard, resistant, sampler refusal at 90 feet BGS.

The water table was encountered in the boring at approximately 21 feet BGS. It is unclear whether the resistant sandstone/cemented sands encountered at approximately 88 feet BGS

# 3 Site Environmental Setting

## 3.1 Surrounding Areas

Residential areas are located immediately west and south of the ITT Thompson site. A mobile home park is located immediately south of the site. Near the southwest corner of the site is a small (approximately 0.5-acre) pond (see Figure 2). Approximately 400 feet south of the site is a relatively new shopping center/strip mall. A dry cleaning facility, operating since approximately 1993 [64], is located at the westernmost end of this strip mall. Pastureland and wooded areas extend east of the site for approximately 0.5 miles. Located within the pastureland east of the site are Mill Pond and Brickyard Pond. The Yellow Pines subdivision, a rural residential area, is located approximately 0.6 to 0.8 miles east of the ITT Thompson site. North of the site, on the northwest corner of State Road 145 and County Road C-591, are a gasoline station and the M & K Auto Parts facility (see Figure 2). The remainder of the area north of the site is largely rural [2, 63, 64, 65, 66].

## 3.2 Climatology

*The local climate is generally described as moderate* [69] or subtropical [70], with long, hot, humid summers and mild winters. The annual average temperature for Madison County is 64° F. The annual average temperature ranges from 46° F in the winter (December to February) to 83° F in the summer (June to August) [15, 63]. Precipitation is fairly heavy most of the year, with an average yearly rainfall total of approximately 52 inches [69, 70]. The net yearly rainfall for the site area is approximately 6 inches [8]; the 2-year, 24-hour rainfall event for the site area produces approximately 4.5 inches [9].

## 3.3 Site Topography and Surface Water Drainage

Generally, the land surface at the former ITT Thompson facility slopes noticeably from the high point near State Road 145 to the south and east. A review of the United States

Two noncommunity well systems, Jimmy's Motel and Jimmy's Restaurant & Truckstop, were identified (approximately 0.9 miles and 1.1 miles northwest of the site, respectively). These well systems serve approximately 160 people [2, 21, 63].

The Yellow Pines subdivision, located between approximately 0.6 and 0.8 miles east of the site, contains at least 144 private wells. TCE contamination, also present at the ITT Thompson site, was detected in 73 of the private supply wells, with a significant number of those detections exceeding the state and federal maximum contaminant level for TCE. Most supply wells in Madison County produce from the upper 100 feet of the Floridan aquifer system (reported well depths for the Yellow Pines wells range between 145 and 195 feet BGS). The City of Madison has recently extended water lines into the subdivision as an alternate source of potable water [2, 15, 22, 27, 32, 36, 39, 40, 52, 63]. Table 1 summarizes the estimated distribution of municipal and private wells identified within a 4-mile radius of the ITT Thompson site.

Two private wells in the Yellow Pines subdivision were sampled during the SI investigation, as well as a private well located approximately 2,200 feet north of the site on County Road C-591 (Rocky Ford Road).

## Table 1

## ESTIMATED DISTRIBUTION OF POTABLE WELLS WITHIN 4 MILES OF ITT THOMPSON SITE MADISON, MADISON COUNTY, FLORIDA

| WELL DESCRIPTION | 0 to 0.25 mile (# wells/population served) | 0.25 to 0.5 mile (# wells/population served) | 0.5 to 1 mile (# wells/population served) | 1 to 2 miles (# wells/population served) | 2 to 3 miles (# wells/population served) | 3 to 4 miles (# wells/population served) |
|---|---|---|---|---|---|---|
| Municipal[a] | 0/0 | 0/0 | 1/3,150 | 1/3,150 | 0/0 | 0/0 |
| Community/Commercial | 0/0 | 0/0 | 1/100 | 1/60 | 0/0 | 0/0 |
| Private[b] | 0/0 | 10/28 | 144/396 | NE | NE | NE |
| Totals | 0/0 | 10/28 | 146/3,646 | 2/3,210 | 0/0 | 0/0 |

Notes: After FDEP 1997 [63].
Wells are open to the Floridan aquifer system.

[a] City of Madison. The City of Madison and limited outlying areas are provided water by the Madison Water Department. This system currently consists of two main wells (Barrs and Chason wells) and a standby well (Coody Well). These wells are open to the upper portion of the Floridan aquifer system and are located between 0.7 mile (Barrs Well) and 1.8 miles (Chason Well) from the ITT Thompson site. Two former standby wells (Francis wells Nos. 1 and 2), located approximately 0.25 mile from the site, are no longer in operation. The Madison Water Department currently serves 6,300 people (1,900 service connection) [2, 20, 21, 22]. Apportionment = 6,300/2 (main wells only) = 3,150 people per well [63].

[b] During the Preliminary Assessment [63], private well estimates were conducted out to 1 mile from the site. This area included areas not serviced by the City of Madison Water Department (topographic house count) and the Yellow Pines subdivision. Most potable supply wells in the area are open to the upper 100 feet of the Floridan aquifer system. Reported well depths for some of the Yellow Pines Subdivision wells range from 145 to 195 feet. As a result of the TCE contamination, the City of Madison has extended water lines into the subdivision as an alternate source of potable water. The average number of persons per household in Madison County is 2.75 (U.S. 1990 Census) [2, 7, 15, 22, 27, 32, 35, 36, 39, 40, 52, 63].

Key:

NE = Not evaluated.

## 6.2 Surface Water Migration Pathway

The surface water migration pathway does not appear to be a major concern at the site based on the following: the limited extent of surface water flow and wetland areas in the site vicinity (closed depressions); the absence of listed species of concern within the downstream extent of the site; and the use of groundwater as a source of potable water in the site area. However, it should be noted that local residents consume fish caught from the pond located immediately southwest of the site. This pond reportedly received site wastes [77]. Also, concentrations of metals in sediment samples collected in the pond during the SI exceeded EPA ecotoxicity levels.

## 6.3 Soil Exposure Pathway

Although significantly elevated concentrations of several chlorinated and nonchlorinated VOCs have been detected in site soils during previous site investigations [50, 51, 73, 74], the soil exposure pathway does not appear to be of concern at the site based on the following: the presence of asphalt paving and buildings covering the majority of the site; the presence of a security fence surrounding a majority of the site area; and the relatively small number of potential receptors in the immediate site vicinity. However, it should be noted that the extent of soils containing elevated concentrations of VOCs has not been completely assessed; soil sampling has not been conducted in the wooded areas to the west and south of the site (between the site and the pond). These areas may have received site wastes during the reported disposal episodes. Also, the gates to the site fence were not secure during either the SI site reconnaissance or the field effort.

## 6.4 Air Migration Pathway

The air migration pathway does not appear to be a concern at the site because of the presence of asphalt-paving and/or building foundations covering a majority of the site. However, it should be noted that soils in the wooded areas west and south of the site have not been assessed.

# 4 Fieldwork Methodology

## 4.1 Sediment Samples

Three sediment samples were collected during the SI field activities: two samples from the pond located immediately southwest of the former containment area (one sample, ITSD-1, collected at the northeast corner of the pond and the second sample, ITSD-2, collected in the southwestern corner of the pond) and one sample (ITSD-3) collected from the sump adjacent to the former metal plating area inside the southwestern portion of the former manufacturing plant (indoors; see Figure 2). No background sediment sample was collected at the site because of difficulties in locating an appropriate upslope/background location. Sediment samples ITSD-1 and ITSD-2 were analyzed for the following: Target Compound List (TCL) volatile and semivolatile compounds; Target Analyte List (TAL) metals, cyanide, pesticides and PCBs, and Total Recoverable Petroleum Hydrocarbons (TRPHs). Sediment sample ITSD-3 was analyzed for TAL metals only. All laboratory analyses with the exception of TRPHs were conducted by the FDEP laboratory. The TRPHs analyses were conducted by Savannah Laboratories.

## 4.2 Groundwater Samples

Groundwater samples were collected from seven on-site monitoring wells (MW-1B, MW-2B, MW-4B, MW-5B, MW-6B, MW-7A, and MW-11B) during the SI field activities. Six of the seven sampled wells are screened in the lower water-bearing zone, referred to in previous site investigation reports as the "B" zone (monitoring wells are designated with a B) [50, 51, 73, 74].

A low-flow, quiescent sampling technique utilizing a peristaltic pump with Teflon tubing was used for monitoring well purging and sampling. Each monitoring well was purged of a minimum of three well volumes prior to groundwater sampling. The wells were considered purged when pH, specific conductance, and temperature had stabilized and

adjacent to monitoring wells that were included in the SI sampling effort, the profile sampling was attempted below the termination depth of the adjacent wells. It should be noted that the VP-1 sample (38-40 feet BGS; ITGW-1) was collected by pulling up the drill rods approximately 2 feet and using a bailer to collect a grab sample inside the rods (the profiling tip detaches from the rods when the rods are pulled up). The rods were not purged with the bailer because of slow aquifer recharge. During installation of VP-3, located in a potential impact area on the southeastern portion of the site, FDEP and E & E decided to abandon attempts to collect groundwater samples from the sediments overlying the Floridan aquifer system. Instead, sampling efforts were concentrated on driving the profiler into the Floridan aquifer system and collecting a groundwater sample using the bailer method, if required. However, the profiler was unable to penetrate the Floridan aquifer system. The rods were pulled up at the sampler refusal depth (82 feet BGS) in an attempt to collect a groundwater sample using a bailer; however, no water was available for sampling following a 1-hour recharge period.

The VP-4 profile was installed approximately 250 feet west of the site at the east end of Hayne Street (see Figure 2). The profile, designed to evaluate potential groundwater contamination west of the site in the vicinity of the pond, was not located near monitoring wells, so profiling was initiated at the shallow water table. Samples were collected at 8 feet and 25 feet using the peristaltic pump apparatus; attempts to sample between 8 and 25 feet were unsuccessful because of the presence of low-conductivity sediments (no water available for sampling). During collection of the sample at 25 feet BGS, the sample ports and tubing became clogged with sediment, which could not be removed without pulling the rods. FDEP and E & E made the decision to abandon the discrete groundwater sampling and to attempt to push the profiler into the Floridan aquifer system without pulling the rods from the borehole. However, the profiler could not penetrate the Floridan aquifer system; rod refusal was encountered at 65 feet BGS. At 65 feet, the rods were pulled up in an attempt to collect a sample using the bailer technique. No water was present in the rods following a 1.5-hour waiting period and the sampling efforts were abandoned.

The two discrete groundwater samples collected in VP-4 were screened using Sensidyne detector tubes designed to detect vinyl chloride and TCE. All three of the vertical-profile groundwater samples were analyzed for TCL volatile compounds by the FDEP laboratory. The three profile borings were grouted to ground surface through the drill rods.

pushed, driven, and vibrated into the ground. A wireline apparatus was used to lower a 3-foot-long sample barrel through the drive casing to the bottom of the borehole. The EC-1 borehole, located in the vicinity of upgradient/background vertical profile location VP-1, was advanced until sampler refusal at approximately 90 feet BGS. The borehole was grouted to ground surface through the outer casing.

## 4.4 Vertical Profiling

Vertical profiling was attempted at the three locations, VP-1, VP-3, and VP-4 (the VP-2 location was not attempted; see Figure 2); however, because of low hydraulic conductivity values for the fine-grained sediments at the site and mechanical problems with the sampling apparatus, only three groundwater samples were collected for laboratory analysis using the vertical profile method (VP-1, 38-40 feet BGS and VP-4, 8 feet BGS and 25 feet BGS). Generally, the subsurface sediments did not produce sufficient water for sample collection. Use of the vertical profiling method was insufficient for penetration of the underlying Floridan aquifer system for sample collection.

The vertical profiling method, a direct-push technique, uses a sample collection system developed by the University of Waterloo. The method uses a stainless steel sampling point equipped with six 5/32-inch-diameter circular ports fitted with mesh stainless steel screen. The ports empty into a common reservoir in the profiler tip; stainless steel or Teflon tubing extends from the reservoir to the ground surface. The profiler tip is attached to 3-foot lengths of AW drill rod, which is advanced by pushing, hammering, and vibrating the pipe into the ground. During driving, positive pressure is maintained on the sampling tip by pumping deionized water using a peristaltic pump apparatus. At the desired sampling depth, the system is purged of approximately 10 volumes using the peristaltic pump apparatus prior to sample collection. A bladder pump apparatus, designed to collect groundwater samples below the depth attainable by the peristaltic pump, was not successful at the site because of mechanical problems.

The profiles were terminated at the following depths: VP-1, 40 feet BGS; VP-3, 82 feet BGS; and VP-4, 65 feet BGS. Vertical profiles VP-3 and VP-4 were terminated based on refusal at depth; the decision to terminate the background profile (VP-1) was made by FDEP and E & E based on the difficulties involved in obtaining samples and the fact that a background well sample had already been collected (ITGW-1; monitoring well MW-1B).

Several unsuccessful attempts were made to collect discrete groundwater samples in VP-1 and VP-3 using the peristaltic pump apparatus. Because VP-1 and VP-3 were located

## 4.5 Hydrologic Assessment

A hydrologic assessment was conducted at the site that included depth-to-water measurements and a wellhead elevation survey for 14 of the 15 monitoring wells at the site (piezometer/monitoring well MW-8B could not be located).

## 4.6 Quality Assurance/Quality Control

Duplicate, sampling equipment rinsate, and trip blank samples were collected in conjunction with the on-site monitoring well and vertical-profile groundwater sampling efforts; only trip blank samples were collected with the private well groundwater samples. Sampling equipment rinsate and trip blank samples were collected in conjunction with the sediment sampling efforts. All of the duplicate and equipment rinsate blank samples were analyzed for the following: TCL volatile and semivolatile compounds, TAL metals, cyanide, pesticides and PCBs, and TRPHs. The trip blank samples were analyzed for TCL volatiles only. All laboratory analyses were performed by the FDEP laboratory except for TRPHs, which were analyzed by Savannah Laboratories. All sampling and fieldwork activities were conducted in accordance with E & E's FDEP-approved Comprehensive Quality Assurance Plan (No. 860165G).

## 4.7 Investigation-Derived Wastes

All investigation-derived wastes (IDW; i.e., direct-push cuttings, development/purge water, and decontamination fluids) were containerized and staged on site. Six 55-gallon steel drums containing development/purge water and decontamination fluids were generated during the SI field activities and staged on site; one plastic, 5-gallon, sealed container (pail) containing soil cuttings was also generated and staged at the site. The six IDW drums were transported off site for proper disposal in December 1997 and January 1998. At FDEP's direction, the soil cuttings generated during installation of background Enviro-Core boring EC-1 (stored in a 5-gallon pail) were disposed of on site in December 1997.

# 5 Investigation Results

## 5.1 Results of Previous Sampling Investigations

Woodward Clyde has conducted several site investigations at the ITT Thompson site since 1995 [50, 51, 73, and 74]. Tables 2A and 2B provide a summary of selected analytical results from the previous investigations. The Preliminary Contamination Assessment conducted in August 1995 included the installation of five monitoring wells (MW-1 through MW-5) and the collection of soil and groundwater samples. The wells ranged in depth from approximately 15 feet to 30 feet BGS [50, 63]. Elevated levels of organic vapors were detected in the MW-4/SB-4 and MW-5/SB-5 boreholes (field screening was conducted with an Organic Vapor Analyzer; OVA). Soil samples collected during the installation of MW-4/SB-4, located in the vicinity of the former storage tank area (see Figure 2), exhibited elevated concentrations of several VOCs. The highest concentrations were exhibited by the 0- to 2-foot BGS soil sample: toluene (33,000 $\mu$g/kg); ethylbenzene (56,000 $\mu$g/kg); and total xylenes (330,000 $\mu$g/kg). No methyl-tert butyl ether (MTBE), indicative of unleaded petroleum contamination, was detected in any of the site soil samples. The MW-1/SB-1 soil samples, designated as background samples, exhibited no elevated levels of organic vapors or VOCs [50, 63].

Groundwater samples collected during the preliminary contamination assessment exhibited elevated concentrations of several VOCs in monitoring wells located on the southwestern portion of the site. Monitoring well MW-4, situated adjacent to the former storage tank area, exhibited elevated levels of benzene (5.2 $\mu$g/L), ethylbenzene (13 $\mu$g/L), toluene (28 $\mu$g/L), and total xylenes (76 $\mu$g/L). Elevated concentrations of cis-1,2-dichloroethylene (cis-1,2-DCE; 63,000 $\mu$g/L) and vinyl chloride (22,000 $\mu$g/L) were detected in monitoring well MW-5, located southwest of the concrete loading dock (see Figure 2). State and federal maximum contaminant levels (MCLs) were exceeded for benzene, cis-1,2-DCE, and vinyl chloride by site groundwater samples [53, 54]. No detectable concentrations of MTBE were exhibited by site groundwater samples. Monitoring well MW-1, designated as

2-foot and 4-foot samples also contained benzene at concentrations of 0.447 mg/kg and 0.192 mg/kg, respectively [74].

Groundwater sampling conducted during the direct-push investigation indicated the presence of elevated concentrations of chlorinated and nonchlorinated VOCs in site groundwater at depths as great as 70 feet BGS. Detectable concentrations of chlorinated VOCs were encountered in all of the direct-push boreholes; several chlorinated VOCs were detected at 70 feet BGS in the SB-14 borehole (located south of the concrete loading dock), including vinyl chloride (11,000 µg/L), cis-1,2-DCE (20,600 µg/L), and TCE (58 µg/L). Detectable concentrations of ethylbenzene and total xylenes were also detected in the 70-foot sample. Significantly elevated nonchlorinated VOC concentrations were detected in the SB-15 borehole (6 feet BGS), located in the vicinity of the former storage tank area. The 6-foot BGS sample contained toluene, ethylbenzene, and total xylenes at concentrations of 49,700 µg/L, 8,070 µg/L, and 27,500 µg/L, respectively.

## 5.2 Site Investigation Results

The SI groundwater analytical results for the ITT Thompson site will be discussed in comparison to site-specific background concentrations. A significant exceedance of background concentration is considered to be three times background when the background concentration is above the detection limit for the analyte; if the background concentration is below the detection limit for the analyte, any sample exhibiting a detectable concentration of the analyte is considered to significantly exceed the background concentration. Groundwater analytical results are summarized in Tables 5A and 5B. The sediment analytical results (see Table 3) will be compared to sediment screening levels provided in the literature; no background sediment sample was collected at the site because of difficulty in determining an appropriate, upslope/background location.

### 5.2.1 Sediment Analytical Results

Several metals were detected in sediment samples collected in the pond located immediately southwest of the site (ITSD-1A and ITSD-2A) and in the sump located adjacent to the former metal plating area (ITSD-3; see Table 3 and Figure 2). Chromium and lead were detected in both the ITSD-1A sample (located in the northeast corner of the pond, nearest the site; 460 mg/kg and 77.5 mg/kg, respectively) and in the ITSD-3 sample (located in the potential sump/source area inside the building; 252 mg/kg and 301 mg/kg, respectively). These concentrations exceed EPA ecotoxicity thresholds (chromium, 81 mg/kg

concentrations (350 μg/L, 4,300 μg/L, and 1,600 μg/L, respectively) exhibited by the duplicate MW-5B sample. Benzene was detected in MW-2B (16 μg/L), located in the southeastern portion of the site, and in MW-11 (37 μg/L) located east of the former manufacturing plant building (see Figure 2). Elevated concentrations of vinyl chloride and cis-1,2-DCE were also detected in the MW-2B and MW-4B wells; elevated gasoline-range organics (GRO) and diesel-range organics (DRO) concentrations were encountered in monitoring wells MW-2B, MW-4B, MW-5B, MW-10, and MW-11.

According to the Woodward Clyde report (PCAR Addendum II) [73], the soil vapor survey results indicated a source area in the southwestern corner of the property. The report also indicated that the shallow "A" water-bearing zone exists only near the surface in the southern half of the site, with the deeper "B"-zone overlain by a low-permeability, clayey zone at the surface on the northern half of the site and the "A"-zone and the clayey confining unit in the southern portion of the site. The report indicated an "A"-zone groundwater flow direction towards the east-northeast and a "B"-zone flow direction towards the northeast [73].

A direct-push investigation was conducted at the site by Woodward Clyde in April and May 1997 (summarized in the July 1997 Direct-Push Investigation for Interim Remedial Alternative Assessment report [74]). Sixteen direct-push boreholes were installed at the site with soil and groundwater samples analyzed on site by a mobile laboratory. The report indicated the presence of VOCs in two soils areas: one area southwest of the concrete loading dock (in the vicinity of the MW-5A and MW-5B wells) and the other area in the vicinity of the former storage tanks. The report indicated that the soils southwest of the concrete loading dock were in the vicinity of an underground storage tank (UST) discovered at the site. However, this tank could not be located during SI field activities. A casing and metal stick-up in the area does not appear to be a tank port/vent pipe, but possibly a monitoring well (based on the well purging dry at a volume of less than 0.5 gallon). Site maps included in previous site investigation reports do not indicate that a monitoring well is located in the immediate area in question. It is unclear whether a UST exists in the area southwest of the concrete loading dock.

A soil sample in the area southwest of the concrete loading dock (SB-21; 3 feet BGS) exhibited significantly elevated concentrations of TCE (6,490 mg/kg), cis-1,2-DCE (17.4 mg/kg), toluene (509 mg/kg), ethylbenzene (78.2 mg/kg), and total xylenes (387 mg/kg). A soil sample collected at 8 feet BGS in SB-15, located in the vicinity of the former storage tank area, contained elevated concentrations of toluene (342 mg/kg), ethylbenzene (305.5 mg/kg), and total xylenes (1,008 mg/kg). The SB-24 borehole samples (2 feet, 4 feet, and 6 feet BGS) also contained elevated concentrations of toluene, ethylbenzene, and total xylenes; The

a period of approximately 2.5 hours while waiting for sufficient recharge. Monitoring well MW-4B was sampled following removal of approximately five well volumes (the maximum purge volume for site wells based on the June 1997 SI Work Plan).

### 5.2.2.1 Groundwater Analytical Results

Several chlorinated and nonchlorinated VOCs were detected in on-site monitoring well samples at concentrations exceeding background concentrations and federal and state drinking water standards (see Table 5A). All of the sampled monitoring wells, with the exception of MW-7A (ITGW-6 sample), are screened in the deeper "B" water-bearing zone.

VOCs detected at concentrations exceeding background concentrations include benzene; chlorobenzene; 1,1-Dichloroethane (1,1-DCA); 1,1-Dichloroethylene (1,1-DCE); cis-1,2-DCE; trans-1,2-DCE, ethylbenzene; TCE; toluene; vinyl chloride; and total xylenes (see Table 5A). Federal and state MCLs were exceeded for the following compounds: benzene (1 µg/L state; 5 µg/L federal); 1,1-DCE (7 µg/L); cis-1,2-DCE (70 µg/L); TCE (3 µg/L state; 5 µg/L federal); toluene (1,000 µg/L); and vinyl chloride (1 µg/L state; 2 µg/L federal). The highest concentrations of several of the VOCs were detected in monitoring well MW-5B (located southwest of the concrete loading dock; both original and duplicate samples): 1,1-DCA (25 and 21 µg/L); 1,1-DCE (27 and 22 µg/L); cis-1,2-DCE (13,000 and 13,000 µg/L); trans-1,2-DCE (66 and 57 µg/L), ethylbenzene (180 and 190 µg/L); TCE (690 and 630 µg/L); toluene (2,000 and 1,800 µg/L); vinyl chloride (14,000 and 14,000 µg/L); and total xylenes (700 and 690 µg/L). Monitoring well MW-4B (located adjacent to the former storage tank area; ITGW-3 sample) exhibited elevated concentrations of the same VOCs with the exception of TCE, which was not detected (see Table 5A).

The highest concentrations of benzene (62 µg/L), ethylbenzene (200 µg/L), and total xylenes (1,900 µg/L) were detected in monitoring well MW-7A (sample ITGW-6), located adjacent to the former storage tanks area. Benzene, chlorobenzene, and several chlorinated VOCs were detected in monitoring well MW-2B (sample ITGW-2), located at the southeastern corner of the former manufacturing building; trace concentrations of cis-1,2-DCE (4.3 µg/L) and total xylenes (1.2 µg/L) were also detected in MW-11B (sample ITGW-7) located east of the building. No VOCs were detected in background monitoring well MW-1B.

SVOCs were detected above background levels in monitoring wells MW-2B (ITGW-2), MW-4B (ITGW-3 sample), MW-5B (ITGW-4 and ITGW-4 DUP samples), MW-7A (ITGW-6 sample), and MW-11B (ITGW-7; see Table 5A). The state guidance concentration for phenol (10 µg/L) was exceeded by monitoring wells MW-4B (86 µg/L) and MW-5B (19 µg/L; 18 µg/L [duplicate]). The state guidance concentration for naphthalene (6.8 µg/L) was

and lead, 47 mg/kg [78]). The ITSD-3 potential source area sample also exceeded ecotoxicity levels for mercury (0.15 mg/kg), copper (34 mg/kg), iron (20,000 mg/kg), nickel (21 mg/kg), and zinc (150 mg/kg) [78]. The ITSD-3 concentrations were as follows: mercury (0.19 mg/kg); copper (100 mg/kg); iron (128,000 mg/kg); nickel (90 mg/kg); and zinc (12,200 mg/kg). The reported zinc concentration for the ITSD-1A sample (161 mg/kg) exceeded the zinc ecotoxicity level (150 mg/kg); however, the sample concentration was reported as an estimated laboratory value. The ITSD-2A sample, collected in the southwestern portion of the pond (farthest from the site) contained detectable concentrations of the previously mentioned metals (see Table 3); however, the concentrations did not exceed the referenced ecotoxicity levels [78].

Estimated concentrations of DDD-p,p' and DDE-p,p' were exhibited by the ITSD-1A sample. DDE-p,p' was also detected in the ITSD-2A sample at a concentration above the minimum detection limit, but below the minimum quantitation limit (see Table 3). PCB-1260 was detected in pond sample ITSD-1A at a concentration of 59 $\mu$g/kg and in pond sample ITSD-2A at a concentration above the minimum detection limit but below the minimum quantitation limit. TRPHs were detected in both sediment samples. The ITSD-3 sample (sump/potential source area sample) was analyzed for metals only.

The sample results indicate the presence of metals, in the pond sediments and in the sediments present in the on-site sump, at concentrations exceeding EPA-established ecotoxicity levels. Although the sump sediment sample was collected inside the building and is not within a natural area, the metals concentrations in the sample were compared with the ecotoxicity levels to evaluate the toxicity of the potential source area.

### 5.2.2 Groundwater

Table 4 presents the pH, specific conductance, temperature, and turbidity values recorded for on-site monitoring well groundwater samples collected during the June-July 1997 sampling event. The pH values for the wells ranged from 3.75 to 6.87 standard units; six of the seven recorded pH values lie outside the range for pH specified by the Florida Secondary Drinking Water Standards (SDWS; 6.5 to 8.5 standard units). Specific conductance readings for the wells ranged from 113 to 532 micromhos per centimeter ($\mu$mhos/cm).

The temperature readings for the site monitoring well samples ranged from 25° to 27° C, with turbidity values ranging from 1.36 to 48.9 nephelometric units (NTUs). As stated previously, monitoring wells MW-1B and MW-4B were sampled with turbidity measurements exceeding 10 NTUs (48.9 NTUs and 13.1 NTUs, respectively). Monitoring well MW-1B was purged dry after approximately one well volume and was sampled following

turbidity measurements were below 10 nephelometric units (NTUs). It should be noted that two monitoring wells, MW-1B and MW-4B, were sampled with turbidity measurements exceeding 10 NTUs (48.9 NTUs and 13.1 NTUs, respectively). Monitoring well MW-1B purged dry after removal of approximately one well volume and was sampled following a period of approximately 2.5 hours while waiting for sufficient recharge. Monitoring well MW-4B was sampled following removal of approximately five well volumes (the maximum purge volume for site wells based on the June 1997 SI Work Plan). The monitoring well samples were analyzed for the following: TCL volatile and semivolatile compounds; TAL metals, cyanide, pesticides and PCBs, and TRPHs. All laboratory analyses, with the exception of TRPHs, were conducted by the FDEP laboratory. The TRPHs analyses were conducted by Savannah Laboratories.

Three private wells were sampled during the SI field activities: the O'Toole Herb Farm Well located approximately 2,200 feet north of the site near County Road C-591; the W. L. McClamma Well located approximately 3,600 feet northeast of the site in the Yellow Pines subdivision; and the Lewis Downing Well located approximately 2,600 feet east-northeast of the site (also in the Yellow Pines subdivision). As stated previously, the majority of private supply wells in the site area produce from the upper Floridan aquifer system [63]; however, precise construction details for the sampled private wells are not known. Based on information supplied by the well owners, the O'Toole Well is approximately 138 to 168 feet in depth and the Downing Well is deeper than 100 feet BGS; no construction information for the McClamma Well was available. Because water level data and purge volumes for the wells were not available, each well was purged for a 20- to 30-minute period prior to sampling from the tap. The tap was located beyond the holding tank for each well; the purge was designed to empty the holding tank of stored water to activate the well pump. Each of the private well groundwater samples was analyzed for TCL volatiles by the FDEP laboratory.

The City of Madison supply wells (Francis wells Nos. 1 and 2) were not sampled during the SI because of the presence of petroleum free product on the water column in the emergency supply well adjacent to Francis wells Nos. 1 and 2.

## 4.3 Enviro-Core

A continuous soil core was collected in a background location in the northwest corner of the site for lithologic description (EC-1 borehole; see Figure 2). The patented Enviro-Core technique was used to install the boring. The technique utilized a small-diameter drive casing (1 3/4-inch outer diameter) and a 1-inch inner diameter sample barrel that was simultaneously

exceeded by MW-7A (13 μg/L) and MW-11B (7.1 μg/L), while the p-cresols state guidance concentration of (35 μg/L) was exceeded by MW-4B (61 μg/L). It should be noted that the laboratory reported m,p-cresols concentrations for the site samples; the m,p-cresols concentration for MW-4B exceeded the p-cresols guidance concentration (35 μg/L), but was below the m-cresols guidance concentration of 350 μg/L.

Metals, including arsenic, iron, manganese, potassium, and sodium, were detected in site groundwater at concentrations exceeding background concentrations. Manganese concentrations in the MW-2B (ITGW-2 sample), MW-4B (ITGW-3 sample), MW-5B (ITGW-4 and ITGW-4 DUP samples), and MW-7A (ITGW-6 sample) exceeded the federal Secondary Drinking Water Standard and the state guidance concentration for the analyte (50 μg/L). Several on-site monitoring wells, including the background well MW-1B, exhibited aluminum concentrations exceeding the state and federal Secondary Drinking Water Standards (200 μg/L state; 50-200 μg/L federal). Cyanide was not detected in any of the groundwater samples collected at the site.

The three private wells sampled during the SI (O'Toole, McClamma, and Downing wells) were below detection limits for VOCs with the exception of the Downing Well (ITPW-3 sample; see Table 5B). Concentrations of cis-1,2-DCE (6.6 μg/L) and TCE (8.9 μg/L) were detected in the Downing Well, located approximately 2,600 feet east-northeast of the site in the Yellow Pines subdivision. The O'Toole Herb Farm Well is located approximately 2,200 feet north of the site along County Road C-591 (Rocky Ford Road); the W. L. McClamma Well is located approximately 3,600 feet northeast of the site in the Yellow Pines subdivision (see figures 1 and 2).

The vertical profile groundwater profile samples collected in VP-1 (ITVP-1A-background; 38-40 feet BGS) and VP-4 (located on Hayne Street, west of the site and the pond; ITVP-4A, 8 feet BGS; and ITVP-4B, 25 feet BGS) were below detection limits for VOCs (see Table 5C).

A grab sample collected from a previously unknown shallow on-site well located southwest of the concrete loading dock (see Figure 2) contained significantly elevated concentrations of several VOCs, including cis-1,2-DCE (1,300 μg/L) and vinyl chloride (9,100 μg/L) (see Table 5C). The capped steel above-ground casing and protective casing were reported in previous site investigation reports to be associated with a UST in the area (possibly a fill port or vent pipe) [73].

TRPHs were not detected in any of the groundwater samples collected at the site, with the exception of the samples from monitoring wells MW-1B and MW-4B. However, the values were reported as "known to be less than 1,000 μg/L," which was the detection limit.

### 5.2.2.2 Hydrologic Assessment

Depth-to-water measurements were collected in 14 on-site monitoring wells on July 2, 1997. Depth to water ranged from 3.61 feet to 9.19 feet below top of casing (BTOC) for the "A"-zone monitoring wells with a depth to water range for the "B"-zone wells of 8.49 feet to 21.52 feet BTOC (see Table 4). Based on the water level elevation and wellhead top-of-casing survey data collected during the SI, and assuming the two shallow, water-bearing zones designated in previous site investigation reports by Woodward Clyde are representative of the site hydrogeology, the groundwater flow direction in both the "A" and "B" water-bearing zones is generally toward the east (see figures 3 and 4). A north-to-northeastward flow direction characterizes the "A" water-bearing zone in the area between monitoring wells MW-4A and MW-5A (see Figure 3). A groundwater high exists in "B"-zone monitoring well MW-5B, resulting in divergent flow in the vicinity of the well (see Figure 4). Based on the water level elevations in the three "A"-zone and "B"-zone well pairs at the site (MW-2A and MW-2B; MW-4A and MW-4B; and MW-5A and MW-5B; see Table 4), a downward vertical gradient exists between the water-bearing zones beneath the site.

It should be noted that, based on the interbedded, complex nature of the lithologies observed in EC-1 and the steepness of the "A"- and "B"-zone gradients (both approximately 0.033), multiple, shallow, water-bearing zones may exist at the site.

## 5.3 Quality Assurance/Quality Control

One equipment rinsate sample was collected in conjunction with the sediment sampling conducted at the site; three trip blank samples associated with the groundwater sampling effort at the site were shipped with the sediment and groundwater samples. The rinsate blank sample, not specified in the June 1997 Work Plan, was collected at the request of FDEP. The quality assurance/quality control (QA/QC) samples were below the minimum detection limits for all analytes with the exception of a trace concentration of toluene in the sediment equipment rinsate blank. The presence of toluene in the rinsate blank sample did not influence the interpretation of the sediment sample results.

One equipment rinsate blank, one duplicate, and five trip blank samples were collected in conjunction with the monitoring well groundwater sampling conducted at the site. The rinsate and trip blank QA/QC samples were below the minimum detection limits for the applicable analytes with the exception of trip blank sample ITGW-TB1, which exhibited detectable concentrations of acetone, 2-butanone, methylene chloride, toluene, and total xylenes. However, the detected concentrations in the trip blank did not influence the

interpretation of the analytical results. It should be noted that several of the analytes detected in trip blank sample ITGW-TB1, including acetone, 2-butanone, and methylene chloride, are potentially related to laboratory contamination sources. The duplicate sample results were reflective of the concentrations detected in the original sample.

One equipment rinsate blank, one duplicate, and one trip blank sample were collected in conjunction with the vertical profile sampling conducted at the site (a total of two trip blank samples were shipped with the vertical profile samples; one trip blank associated with the monitoring well samples was shipped with the samples; monitoring well groundwater samples and vertical profile groundwater samples were shipped to the laboratory in the same cooler/ package). The vertical profile rinsate blank sample exhibited detectable concentrations of toluene and total xylenes; however, all of the original, duplicate, and trip blank samples associated with the vertical profiling efforts were below minimum detection limits for VOCs. The trip blank samples shipped with the private well groundwater samples were below minimum detection limits for VOCs.

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## Table 2B

## SUMMARY OF SELECTED GROUNDWATER ANALYTICAL RESULTS FROM PREVIOUS SITE INVESTIGATIONS ITT THOMPSON SITE MADISON, MADISON COUNTY, FLORIDA

(All results in micrograms per liter)

| Analyte | MW-4A (August 1995) PCAR [50] | MW-4B (August 1996) PCAR Addendum II [73] | MW-5A (August 1995) PCAR [50] | MW-5B (August 1996) PCAR Addendum II [73] | MW-7A (February 1996) PCAR Addendum [51] | SB-14 (70 feet BGS) direct push; April-May 1997) Direct Push Investigation [74] |
|---|---|---|---|---|---|---|
| cis-1,2-dichloroethylene | 39 | 5,500 | 63,000 | 31,000 | <1 | 20,600 |
| trichloroethylene | <5 | <250 | <5,000 | <100 | <1 | 58 |
| vinyl chloride | <5 | 520 | 22,000 | 44,000 | <1 | 11,000 |
| benzene | 5.2 | <250 | <5,000 | <100 | 53 | <10 |
| toluene | 28 | 550 | <5,000 | 4,100 | 2.7 | <10 |
| ethylbenzene | 13 | <250 | <5,000 | 340 | 4.0 | 18 |
| total xylenes | 76 | <250 | <5,000 | 1,500 | 110 | 146 |

**Table 2A**

**SUMMARY OF SELECTED SOIL ANALYTICAL RESULTS
FROM PREVIOUS SITE INVESTIGATIONS
ITT THOMPSON SITE
MADISON, MADISON COUNTY, FLORIDA
(all results in micrograms per kilogram)**

| Analyte | MW-4A/SB-4 (0 - 2' BGS) (August 1995) PCAR [50] | MW-6B (12 - 14' BGS) (January 1996) PCAR Addendum [51] | MW-7A (0 - 2' BGS) (January 1996) PCAR Addendum [51] | MW-7A (4 - 6' BGS) (January 1996) PCAR Addendum [51] | MW-7A (6 - 8' BGS) (January 1996) PCAR Addendum [51] | SB-15 (8' BGS) (April-May 1997) Direct Push Investigation [74] | SB-21 (3' BGS) (April-May 1997) Direct Push Investigation [74] |
|---|---|---|---|---|---|---|---|
| cis-1,2-dichloroethylene | < 1,400 | 8.5 | < 300 | < 1,700 | 13 | < 2,500 | 17,400 |
| trichloroethylene | < 1,400 | < 6.7 | < 300 | < 1,700 | < 6.3 | < 2,500 | 6,490,000 |
| vinyl chloride | < 1,400 | < 6.7 | < 300 | < 1,700 | < 6.3 | < 2,500 | < 5,000 |
| benzene | < 1,400 | < 6.7 | < 300 | < 1,700 | < 6.3 | < 2,500 | < 5,000 |
| toluene | 33,000 | 7.7 | < 300 | < 1,700 | 27 | 342,000 | 509,000 |
| ethylbenzene | 56,000 | < 6.7 | 360 | 2,600 | < 6.3 | 305,500 | 78,200 |
| total xylenes | 330,000 | < 6.7 | 2,200 | < 1,700 | 11 | 1,008,000 | 387,000 |

## Table 3

## SUMMARY OF SEDIMENT ANALYTICAL RESULTS
## ITT THOMPSON SITE
## (June 27 and July 1-2, 1997)

| Analyte | Sediment Samples (Concentrations in mg/kg unless stated otherwise) | | | |
|---|---|---|---|---|
| | ITSD-1A (NE Corner of Pond) | ITSD-2A (SW Corner of Pond) | ITSD-3 (Sump in Former Metal Plating Area) | ITSD-RB (µg/L) |
| **Metals** | | | | |
| Aluminum | 10,000 | 12,300 | 4,510 | — |
| Antimony | — | — | 36 I | — |
| Barium | 100 J | 125 J | 146 | — |
| Beryllium | 0.3 I | 0.3 I | — | — |
| Cadmium | — | — | 10 I | — |
| Calcium | 3,330 | 2,210 | 10,700 | — |
| Chromium | 460 | 77.3 | 252 | — |
| Cobalt | 2 I | — | 9 I | — |
| Copper | 10 | 3.4 I | 100 | — |
| Iron | 4,410 | 3,140 | 128,000 | — |
| Lead | 77.5 | 24 | 301 | — |
| Magnesium | 526 | 370 | 804 J | — |
| Manganese | 67.2 | 29.0 | 458 | — |
| Mercury | 0.10 A | 0.063 | 0.19 | — |
| Nickel | 7.4 | 5.4 | 90 | — |
| Potassium | 190 J | 180 J | 130 | — |
| Sodium | 100 I | — | — | — |
| Vanadium | 11 | 9.8 | 9 I | — |
| Zinc | 161 J | 86.8 J | 12,200 | — |
| **Volatile Organic Compounds** | | | | |
| Toluene (µg/kg) | — | — | NA | 0.65 I |
| **Pesticides** | | | | |
| DDD-p,p' (µg/kg) | 19 J | 1.8 I | NA | — |
| DDE-p,p' (µg/kg) | 31 J | — | NA | — |
| PCB-1260 (µg/kg) | 59 | 12 I | NA | — |
| TRPH | 360 | 640 | NA | — |

## Table 3

## SUMMARY OF SEDIMENT ANALYTICAL RESULTS
## ITT THOMPSON SITE
## (June 27 and July 1-2, 1997)

Note: Trip blank samples ITGW-TB3, ITGW-TB5, and ITVP-TRIP were shipped with the sediment samples and/or the rinsate blank (ITSD-RB). Analytical results for the trip blanks are presented on Tables 5A and 5C.

Key:

| | | |
|---|---|---|
| — | = | Value is below detection limits. |
| A | = | Value reported is the mean of two or more determinations. |
| I | = | Value is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit. |
| J | = | Estimated value. |
| NA | = | Not analyzed. |

## Table 4

## MONITORING WELL CONSTRUCTION, WATER LEVEL, AND GROUNDWATER FIELD PARAMETER DATA ITT THOMPSON SITE MADISON, MADISON COUNTY, FLORIDA

| Well Construction Data[c] | | | | Water Level Data (July 2, 1997) | | | Groundwater Field Parameters (June 25-July 1, 1997) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Monitoring Well | Well Diameter (inches) | Well Depth (feet BGS)[b] | Screened Interval (feet BGS) | Top of Casing Elevation (feet)[a] | Depth to Water (feet BTOC) | Water Level Elevation (feet)[a] | pH (Standard units) | Specific Conductance (μmhos/cm) | Temperature (°C) | Turbidity (NTUs) |
| MW-1B | 2 | 29.8 | 14.8-29.8 | 110.90 | 21.52 | 89.38 | 6.87 | 446 | 27 | 48.9[b] |
| MW-2A | 2 | 17.0 | 7.0-17.0 | 94.04 | 9.19 | 84.85 | NS | NS | NS | NS |
| MW-2B | 2 | 38.1 | 28.1-38.1 | 93.92 | 12.45 | 81.47 | 6.19 | 339 | 25 | 9.3 |
| MW-3A | 2 | 15.0 | 5.0-15.0 | 93.45 | 7.95 | 85.50 | NS | NS | NS | NS |
| MW-4A | 2 | 19.8 | 4.8-19.8 | 99.06 | 3.61 | 95.45 | NS | NS | NS | NS |
| MW-4B | 2 | 40.0 | 30.0-40.0 | 99.24 | 9.68 | 89.56 | 5.88 | 299 | 27 | 13.1[b] |
| MW-5A | 2 | 19.8 | 4.8-19.8 | 99.89 | 5.20 | 94.69 | NS | NS | NS | NS |
| MW-5B | 2 | 39.2 | 29.2-39.2 | 100.00 | 8.49 | 91.51 | 3.83 | 497 | — | 4.45 |
| MW-6B | 2 | 25.0 | 15.0-25.0 | 102.18 | 13.28 | 88.90 | 3.75 | 113 | 27 | 3.65 |
| MW-7A | 2 | 13.8 | 3.8-13.8 | 100.39 | 4.81 | 95.58 | 6.11 | 532 | 25 | 4.89 |
| MW-9B | 2 | 36.0 | 26.0-36.0 | 110.27 | 21.17 | 89.10 | NS | NS | NS | NS |
| MW-10B | 2 | 24.9 | 14.9-24.9 | 99.22 | 16.81 | 82.41 | NS | NS | NS | NS |
| MW-11B | 2 | 24.5 | 9.5-24.5 | 97.19 | 15.58 | 81.61 | 3.89 | 192 | 26 | 1.36 |
| SB/P-13 | 2 | 24.4 | 14.4-24.4 | 91.45 | 11.76 | 79.69 | NS | NS | NS | NS |

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## Table 4

## MONITORING WELL CONSTRUCTION, WATER LEVEL, AND GROUNDWATER FIELD PARAMETER DATA ITT THOMPSON SITE MADISON, MADISON COUNTY, FLORIDA (July 2, 1997)

[a] Elevation in feet relative to an arbitrary datum.
[b] Monitoring well MW-1B purged dry and sampled following recharge (turbidity = 48.9 NTUs). Monitoring well MW-4B sampled after removing a maximum purge volume of 5 well volumes (turbidity = 13.1 NTUs).
[c] Well screened intervals after Woodward-Clyde 1996 [73].

Key:

| | | |
|---|---|---|
| °C | = | Degrees Celsius. |
| BGS | = | Below ground surface. |
| BTOC | = | Below top of casing (all site monitoring wells are flush-mounted). |
| µmhos/cm | = | Micromhos per centimeter. |

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## Table 5A

## SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
## ON-SITE MONITORING WELLS
## ITT THOMPSON SITE
## (June 25-July 1, 1997)

| Analyte | Groundwater Samples (Concentrations in µg/L) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Applicable Standards | ITGW-1[f] (MW-1B) | ITGW-2 (MW-2B) | ITGW-3 (MW-4B) | ITGW-4 (MW-5B) | ITGW-4 DUP (MW-5B) | ITGW-5 (MW-6B) | ITGW-6 (MW-7A) | ITGW-7 (MW-11B) | ITGW-RB 7/1/97 | ITGW-TB1 | ITGW-TB2 | ITGW-TB3 | ITGW-TB4 | ITGW-TB5 |
| **Metals** | | | | | | | | | | | | | | | |
| Mercury | 2[c,d] | 0.10 U | — | 0.14 I | — | — | — | — | — | — | NA | NA | NA | NA | NA |
| Aluminum | 50-200[a];200[b] | 4,710 | 180 | 275 | 299 A | 387 | 363 | 244 | 3,200 | — | NA | NA | NA | NA | NA |
| Arsenic | 50[c,d] | 4.0 U | 20 | 9 I | 3 I | 3 I | — | — | — | — | NA | NA | NA | NA | NA |
| Barium | 2,000[c,d] | 295 | 9.2 | 25.4 | 125 A | 125 | 12.8 | 70.3 | 29.0 | — | NA | NA | NA | NA | NA |
| Calcium | NS | 58,800 | 7,250 | 28,000 | 62,100 A | 61,300 | 250 I | 93,000 | 6,370 | — | NA | NA | NA | NA | NA |
| Iron | 300[a,b] | 2,990 | 68,400 | 15,200 | 19,100 A | 18,900 | 248 | 26,000 | 3,420 | — | NA | NA | NA | NA | NA |
| Lead | 15[d] | 13 | 0.3 I | 0.6 I | 0.7 A | 1.10 | 0.6 | 0.6 I | 2.34 A | — | NA | NA | NA | NA | NA |
| Magnesium | NS | 8,730 | 4,860 | 7,710 | 9,240 A | 9,130 | 360 I | 2,890 | 5,820 | — | NA | NA | NA | NA | NA |
| Manganese | 50[a,d] | 20 | 68 | 180 | 461 A | 455 | — | 967 | 23 | — | NA | NA | NA | NA | NA |
| Potassium | NS | 400 U | — | 1,700 | 10,600 A | 10,500 | — | 4,200 | 2,900 | — | NA | NA | NA | NA | NA |
| Sodium | NS[c]; 160,000[d] | 3,780 | 26,100 | 17,800 | 17,000 A | 16,800 | 19,300 | 3,220 | 6,740 | — | NA | NA | NA | NA | NA |
| Vanadium | NS | 21 | — | — | — | — | — | — | — | — | NA | NA | NA | NA | NA |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | |
| Acetone | 700[e] | 10 U | — | — | — | — | — | — | — | — | 12 I | — | — | — | — |
| Benzene | 1[d],5[c] | 0.50 U | 9.0 | — | — | — | — | 62 | — | — | — | — | — | — | — |
| 2-Butanone (MEK) | 4,200[e] | 10 U | — | — | — | — | — | — | — | — | 19 I | — | — | — | — |
| Chlorobenzene | NS | 0.5 U | 1.4 | — | — | — | — | — | — | — | — | — | — | — | — |
| Chloroethane | NS | 0.5 U | 0.56 I | — | — | — | — | — | — | — | — | — | — | — | — |
| 1,1-Dichloroethane | 700[e] | 0.5 U | 2.5 | 9.2 I | 25 | 21 | — | — | — | — | — | — | — | — | — |

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## Table 5A

## SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
## ON-SITE MONITORING WELLS
## ITT THOMPSON SITE
## (June 25-July 1, 1997)

| Analyte | Applicable Standards | Groundwater Samples (Concentrations in µg/L) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ITGW-1[l] (MW-1B) | ITGW-2 (MW-2B) | ITGW-3 (MW-4B) | ITGW-4 (MW-5B) | ITGW-4 DUP (MW-5B) | ITGW-5 (MW-6B) | ITGW-6 (MW-7A) | ITGW-7 (MW-11B) | ITGW-RB 7/1/97 | ITGW-TB1 | ITGW-TB2 | ITGW-TB3 | ITGW-TB4 | ITGW-TB5 |
| 1,1-Dichloroethylene | 7[c,d] | 0.5 U | — | 11 | 27 | 22 | — | — | — | — | — | — | — | — | — |
| cis-1,2-Dichloroethylene | 70[c,d] | 1.0 U | 20 | 9,700 | 13,000 | 13,000 | — | — | 4.3 | — | — | — | — | — | — |
| trans-1,2-Dichloroethylene | 100[c,d] | 0.50 U | — | 18 | 66 | 57 | — | — | — | — | — | — | — | — | — |
| Ethylbenzene | 700[c,d] | 0.50 U | — | 120 | 180 | 190 | — | 200 | — | — | — | — | — | — | — |
| Methylene Chloride | | 0.50 U | — | — | — | — | — | — | — | — | 0.80 I | — | — | — | — |
| Trichloroethylene | 3[d], 5[c] | 0.50 U | 0.80 I | — | 690 | 630 | — | — | — | — | — | — | — | — | — |
| Toluene | 1,000[c,d] | 0.50 U | — | 1,800 | 2,000 | 1,800 | — | — | — | — | 0.57 I | — | — | — | — |
| Vinyl Chloride | 2[c], 1[d] | 0.50 U | 66 | 520 | 14,000 | 14,000 | — | — | — | — | — | — | — | — | — |
| Total Xylenes | 10,000[c,d] | 0.50 U | 1.9 | 680 | 700 | 690 | — | 1,900 | 1.2 | — | 0.56 I | — | — | — | — |
| 1,4-Dichlorobenzene | 75[c,d] | NA | 9.0[g] | NA | NA | NA | NA | NA | NA | NA | — | — | — | — | — |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | 75[c,d] | 1.1 U | 3.8[g] | — | — | — | — | — | — | — | NA | NA | NA | NA | NA |
| Naphthalene | 6.8[e] | 1.1 U | — | 4.8 | 2.6 I | 2.1 I | — | 13 | 7.1 | — | NA | NA | NA | NA | NA |
| 2,4-Dimethylphenol | 400[e] | 3.4 U | — | 3.5 I | 3.6 I | 4.2 I | — | 3.9 I | — | — | NA | NA | NA | NA | NA |
| o-Cresol | 350[e] | 1.1 U | — | 5.4 | 2.1 I | 2.2 I | — | — | — | — | NA | NA | NA | NA | NA |
| m,p-Cresols | 35[e,h] | 2.2 U | — | 61 | — | — | — | — | — | — | NA | NA | NA | NA | NA |
| Phenol | 10[e] | 1.1 U | — | 86 | 19 | 18 | — | — | — | — | NA | NA | NA | NA | NA |
| **TRPH** | NS | 1,000 K | — | 1,000 K | <1,000 | <1,000 | <1,000 | — | — | <1,000 | NA | NA | NA | NA | NA |

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# Table 5A

## SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
## ITT THOMPSON SITE
## (June 25-July 1, 1997)

[a] Federal Secondary Drinking Water Standard.
[b] State of Florida Secondary Drinking Water Standard.
[c] Federal Primary Drinking Water Standard.
[d] State of Florida Primary Drinking Water Standard.
[e] Florida Groundwater Guidance Concentrations.
[f] State of Florida Secondary Water Standard of Odor.
[g] ITGW-2 sample (MW-2B) 1,4-Dichlorobenzene results from TCL volatiles analysis (9.0 µg/L) and TCL semi-volatiles analysis (3.8 µg/L).
[h] Florida Groundwater Guidance Concentration for p-Cresols = 35 µg/L; m-Cresols = 350 µg/L.
[i] Background location.

Key:

| | | |
|---|---|---|
| A | = | Value reported is the mean of two or more determinations. |
| — | = | Value is below detection limits. |
| I | = | Value is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit. |
| J | = | Estimated value. |
| K | = | Value is known to be less than 1,000 µg/L. |
| NA | = | Not analyzed. |
| NS | = | No standard. |
| U | = | Material was analyzed for but not detected; value reported is the minimum detection limit. |
| ▒ | = | Significantly above background; concentration is greater than 3 times the corresponding background concentration, or the compound is present at a concentration above the minimum quantitation limit and was not detected in the background sample above the sample quantitation limit. |

**Table 5B**

**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**
**PRIVATE WELLS**
**ITT THOMPSON SITE**
**(June 26 and 27, 1997)**
**(All results in micrograms per liter [μg/L])**

| Analyte | Applicable Standards (μg/L) | ITPW-1 (O'Toole) 6/26/97 | ITPW-2 (McClamma) 6/27/97 | ITPW-3 (Downing) 6/27/97 | ITGW-TB2 | ITGW-TB3 |
|---|---|---|---|---|---|---|
| Volatile Organic Compounds | | | | | | |
| cis-1,2-Dichloroethylene | 70[a,b] | — | — | 6.6 | — | — |
| Trichloroethylene | 3[b], 5[a] | — | — | 8.9 | — | — |

[a] Federal Primary Drinking Water Standard.
[b] State of Florida Primary Drinking Water Standard.

Key:

— = Value is below minimum detection limit.
A = Value reported is the mean of two or more determinations.
I = Value is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J = Estimated value.
+ = Background location.


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## Table 5C

## SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
## VERTICAL PROFILE AND UNKNOWN SHALLOW WELL SAMPLES
## ITT THOMPSON SITE
## (June 30-July 2, 1997)

| Analyte | Maximum Contaminant Level (µg/L) | ITVP-1A+ (38-40 feet BGS) 6/30/97 | ITVP-4A (8 feet BGS) 7/1/97 | ITVP-4B (25 feet BGS) 7/1/97 | ITVP-4B DUP (25 feet BGS) 7/1/97 | UNKNOWN SHALLOW WELL[d] 7/2/97 | ITVP-RB 7/2/97 | ITVP TRIP 7/2/97 | ITGW-TB4 |
|---|---|---|---|---|---|---|---|---|---|
| Volatile Organic Compounds | | | | | | | | | |
| Acetone | 700[c] | — | — | — | — | 11 I | — | — | — |
| Benzene | 1[b],5[a] | — | — | — | — | 0.71 I | — | — | — |
| 1,1-Dichloroethane | 700[c] | — | — | — | — | 17 | — | — | — |
| cis-1,2-Dichloroethylene | 70[a,b] | — | — | — | — | 1,300 | — | — | — |
| trans-1,2-Dichloroethylene | 100[a,b] | — | — | — | — | 64 | — | — | — |
| Ethylbenzene | 700[a,b] | — | — | — | — | 0.64 I | — | — | — |
| Trichloroethylene | 3[b], 5[a] | — | — | — | — | 0.73 I | — | — | — |
| Toluene | 1,000[a,b] | — | — | — | — | 150 | 2.7 | — | — |
| Vinyl Chloride | 2[a], 1[b] | — | — | — | — | 9,100 | — | — | — |
| Total Xylenes | 10,000[a,b] | — | — | — | — | 2 | 1.8 | — | — |

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**Table 5C**

**SUMMARY OF GROUNDWATER ANALYTICAL RESULTS**
**VERTICAL PROFILE AND UNKNOWN SHALLOW WELL SAMPLES**
**ITT THOMPSON SITE**
**(June 30-July 2, 1997)**

[a] Federal Primary Drinking Water Standard.
[b] State of Florida Primary Drinking Water Standard.
[c] Florida Groundwater Guidance Concentrations.
[d] A grab sample was collected from the unknown shallow well (referred to as UST fill port/vent pipe in previous site reports [73]). No QA/QC samples, with the exception of trip blank ITVP-Trip, are associated with the sample.

Key:

| | | |
|---|---|---|
| — | = | Value is below minimum detection limit. |
| A | = | Value reported is the mean of two or more determinations. |
| I | = | Value is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit. |
| J | = | Estimated value. |
| + | = | Background location. |

ecology and environment

# 6 Pathway/Exposure Route Evaluation

## 6.1 Groundwater Migration Pathway

The groundwater migration pathway is of major concern at the ITT Thompson site. Several chlorinated and nonchlorinated VOCs have been detected in site groundwater at concentrations significantly exceeding background levels. In a previous site investigation [74], vinyl chloride and cis-1,2-DCE concentrations of 11,000 $\mu$g/L and 20,600 $\mu$g/L, respectively, were detected in site groundwater at 70 feet BGS. Groundwater samples collected at the site during the SI field effort exceeded state and federal MCLs for benzene, 1,1-DCE, cis-1,2-DCE, TCE, toluene, and vinyl chloride. The VOCs detected in site groundwater were either utilized at the facility or represent biodegradation products of VOCs used at the facility.

The groundwater pathway is of concern at the site based on several factors, including concentration, vertical/horizontal extent, migration potential, and toxicity of VOCs in site groundwater (e.g. vinyl chloride); the presence of karst-related topography and sinkhole features in the immediate site area; and the dependence on the underlying Floridan aquifer system for potable water in the site area, including the City of Madison. Based on the presence of a downward vertical gradient in the on-site monitoring well network (greatest depth to water approximately 21.52 feet BTOC) and a suspected depth to the Floridan aquifer system in the immediate site vicinity of approximately 90 feet BGS, the potential exists for a significant downward vertical gradient between shallow groundwater and the Floridan aquifer system beneath the site. Further, the presence of VOCs in the Yellow Pines subdivision private wells, and the strong possibility that the ITT Thompson site may be the source of these contaminants, heighten concerns regarding the groundwater migration pathway.

# 7 Conclusions/Recommendations

Activities at the ITT Thompson site have apparently resulted in VOC contamination of site groundwater to a depth of at least 70 feet BGS. Several chlorinated and nonchlorinated VOCs, attributable to former site activities, are present in site groundwater at concentrations significantly exceeding background concentrations. Site groundwater samples collected during the SI activities exceeded state and federal MCLs for six VOCs: benzene, 1,1-DCE, cis-1,2-DCE, TCE, toluene, and vinyl chloride. The migration potential of site contaminants, particularly the chlorinated VOCs, and the presence of karst topography and sinkhole features in the site area, are serious concerns with regard to the groundwater migration pathway at the site. Chlorinated solvent contamination, potentially attributable to the ITT Thompson site, has been documented in private, Floridan aquifer system wells in the Yellow Pines subdivision, located approximately 0.6 miles east-northeast of the site. One of two private, Yellow Pines subdivision wells sampled during the SI exhibited a TCE concentration exceeding state and federal PDWS for the compound.

Soils containing elevated concentrations of VOCs are documented beneath the southwestern portion of the site [74]. Sediment samples collected in the pond immediately southwest of and downslope from the metal plating operation at the site exceeded EPA-established ecotoxicity levels for metals common to that type of operation.

Based on the results of this SI, further CERCLA action at the site is warranted on a high-priority basis. It is recommended that future CERCLA action at the site investigate whether the Floridan aquifer system beneath the site has been adversely affected by the documented VOC contamination. Further, the degree of connectivity between the Floridan aquifer system and the overlying water-bearing zones should be investigated.

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# A Photographic Documentation Log

## APPENDIX A

## PHOTOGRAPHIC DOCUMENTATION LOG FOR ITT THOMPSON SITE MADISON, MADISON COUNTY, FLORIDA

| Photo No. | Date | Subject | Direction |
|---|---|---|---|
| 1 | July 1997 | View to the east of former ITT Thompson office (right) and parking area. Gasoline Station is located north of Livingston Street (State Road 145). The M & K Auto Parts facility is to the left of the photograph. | E |
| 2 | July 1997 | View to the east parallel to Merchant Street; site in background (concrete loading dock area) private residences visible on left; private residences also located immediately right of photograph. | E |
| 3 | July 1997 | View to north of southwestern side of former manufacturing building. Inside door on right side of the photograph is the former metal plating operation; concrete loading dock in center background. | N |
| 4 | July 1997 | View to south-southeast of metal plating operation and adjacent sump located inside the southwestern portion of former manufacturing building. | SSE |
| 5 | July 1997 | Steel capped stick-up located southwest of concrete loading dock; believed to be a monitoring well (not located on previous site maps). In previous investigation reports, the stick-up was reported to be associated with an underground storage tank (UST) in the area [74]. | W |
| 6 | July 1997 | View to NE of southeastern corner of former manufacturing building. Monitoring wells MW-2A and MW-2B located in vicinity of corner of building (near front of van). | NE |
| 7 | July 1997 | View to south of gate located on northeast corner of site. | S |
| 8 | July 1997 | View to east of parking area east of site. | E |
| 9 | July 1997 | View to south of concrete containment area located in the southwestern corner of the site; file information indicates storage tanks containing paint thinner were located in the containment area. | S |
| 10 | July 1997 | View to southwest of concrete containment area; the 0.5-acre pond is located beyond the vegetation in the background of the photograph. | SW |
| 11 | July 1997 | View to southeast of mobile home park adjacent to site. | SE |
| 12 | July 1997 | View to southeast of Mill Pond (background) from State Road 145 (northeast of site); abandoned railroad tracks extend across center of photograph. | |
| 13 | July 1997 | Vertical profile location VP-4 located at eastern end of Hayne Street in residential area west-southwest of site. | N |

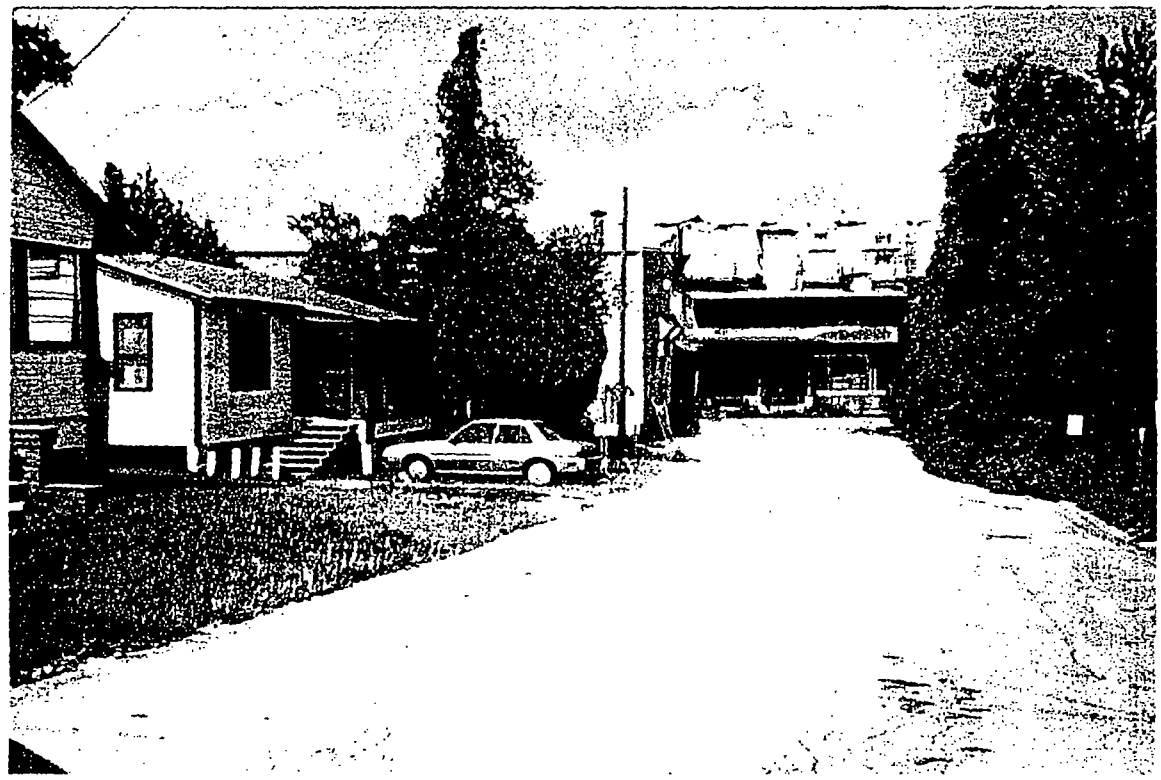
## APPENDIX A

## PHOTOGRAPHIC DOCUMENTATION LOG FOR ITT THOMPSON SITE MADISON, MADISON COUNTY, FLORIDA

| Photo No. | Date | Subject | Direction |
|---|---|---|---|
| 14 | June 1997 | Enviro-core EC-1 soil samples—0 feet BGS sample in upper left; 36 feet BGS sample in center right of photograph. | — |
| 15 | June 1997 | EC-1 soil samples; ~ 39 to 43 feet BGS and ~ 50 to 52 feet BGS. | — |
| 16 | June 1997 | EC-1 soil sample; ~ 43 to 46 feet BGS. | — |
| 17 | June 1997 | EC-1 soil samples; ~ 47 feet BGS to 73 feet BGS. | — |
| 18 | June 1997 | EC-1 soil samples; ~ 71 feet BGS to 88 feet BGS. | — |

## PHOTOS

1



2

ce: Ecology and Environment, Inc., 1997.

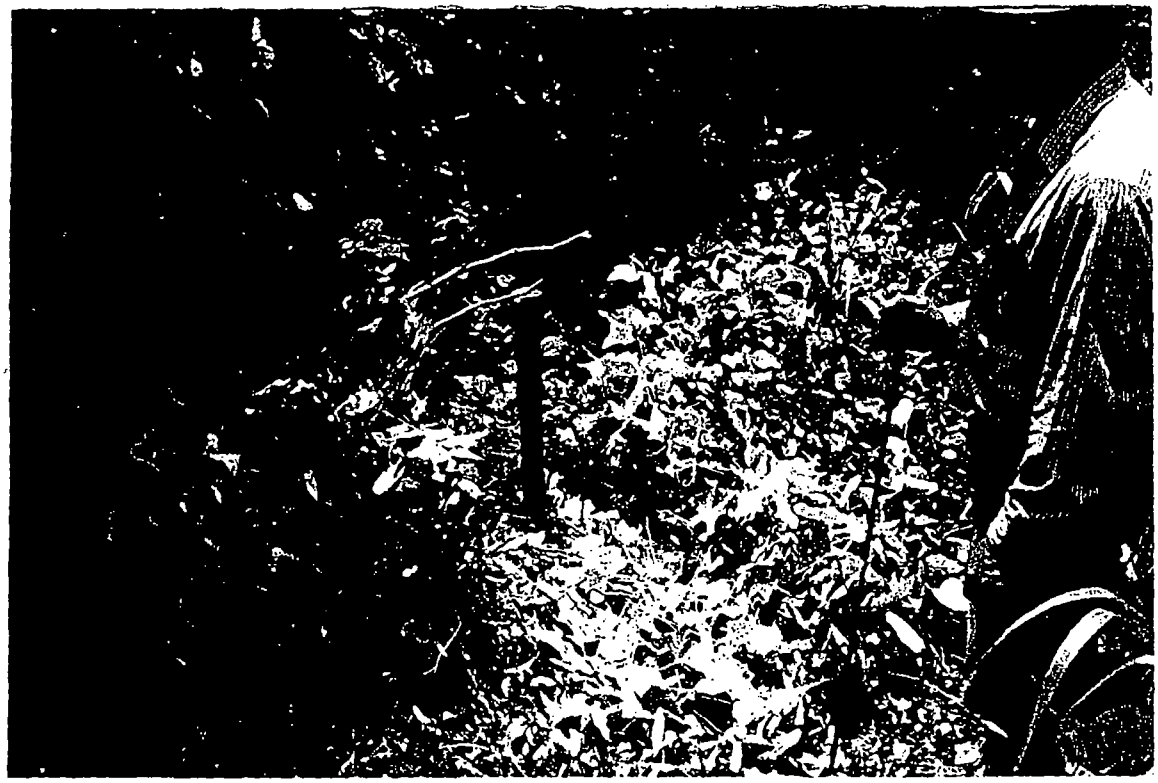
## PHOTOS

3

4

ırce: Ecology and Environment, Inc., 1997.

## PHOTOS



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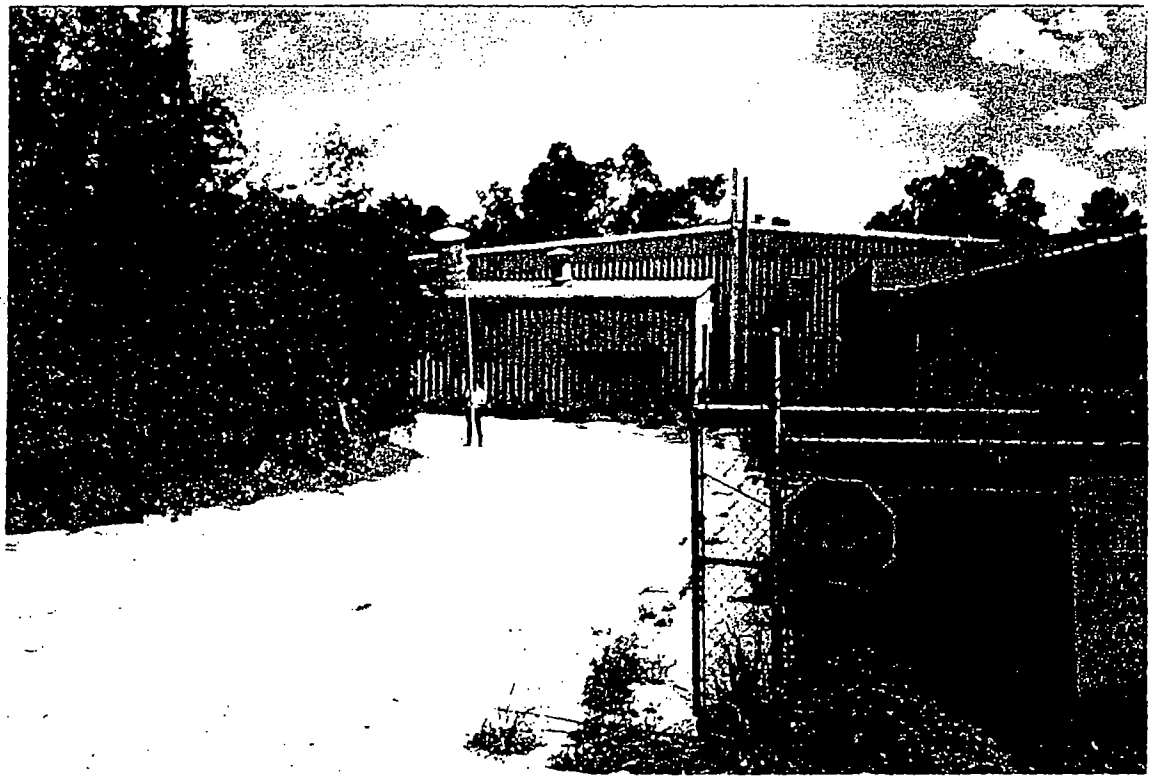
6

ırce: Ecology and Environment, Inc., 1997.

## PHOTOS



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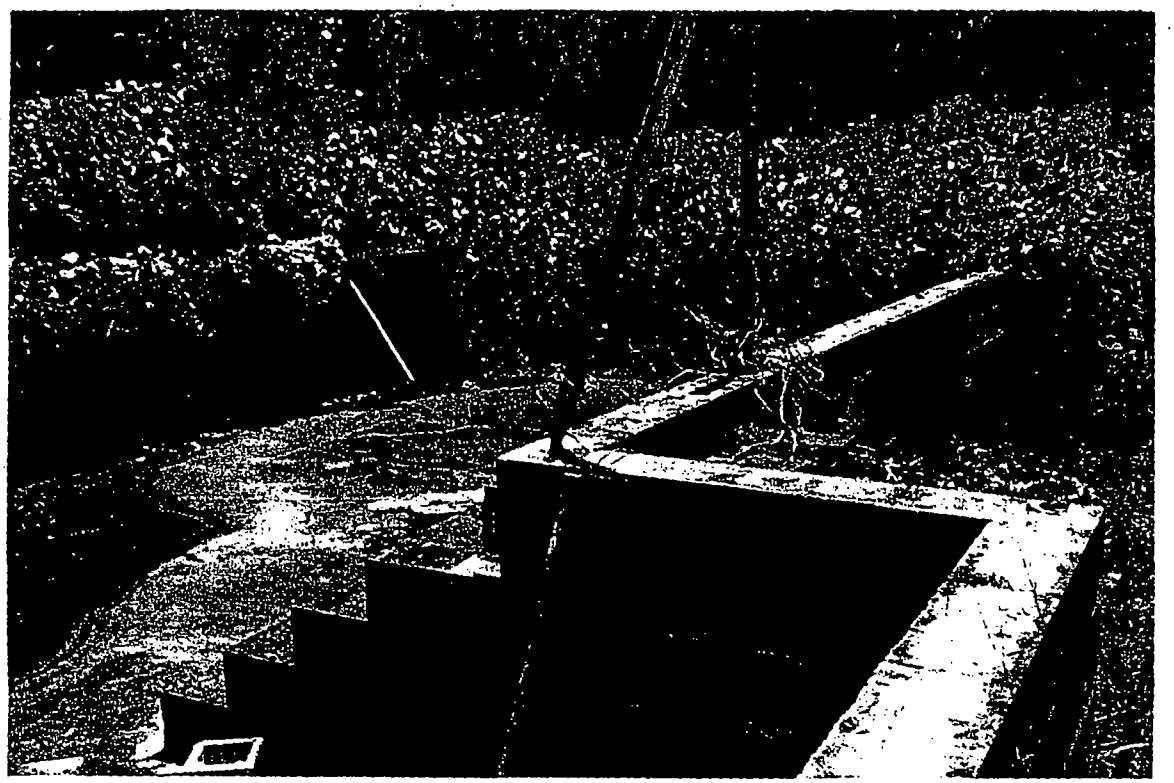
8

urce: Ecology and Environment, Inc., 1997.

## PHOTOS

9



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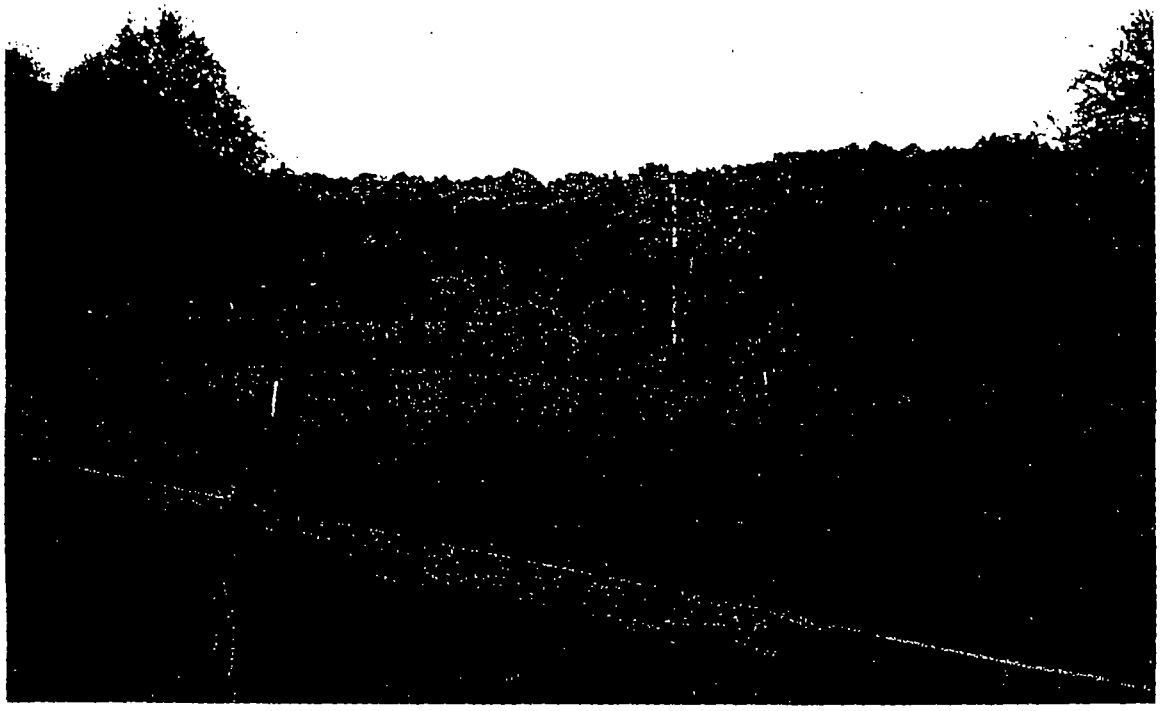
rce: Ecology and Environment, Inc., 1997.

## PHOTOS

11



12

rce: Ecology and Environment, Inc., 1997.

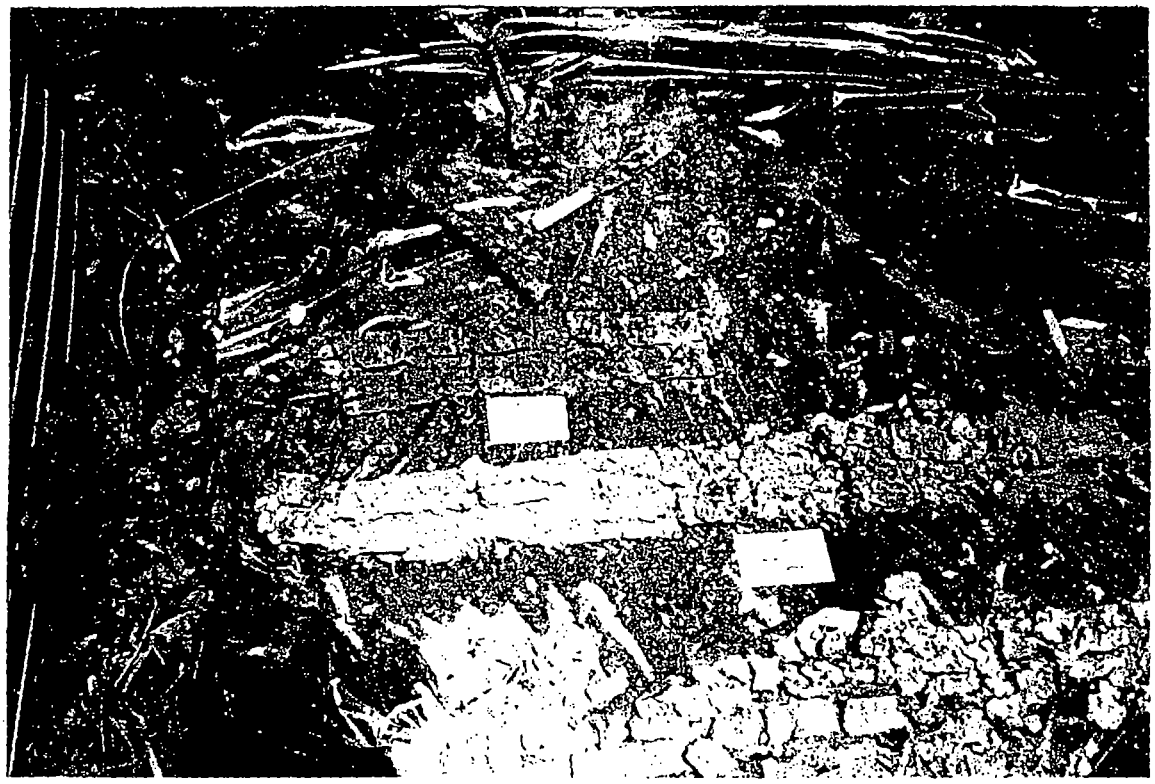
## PHOTOS

13

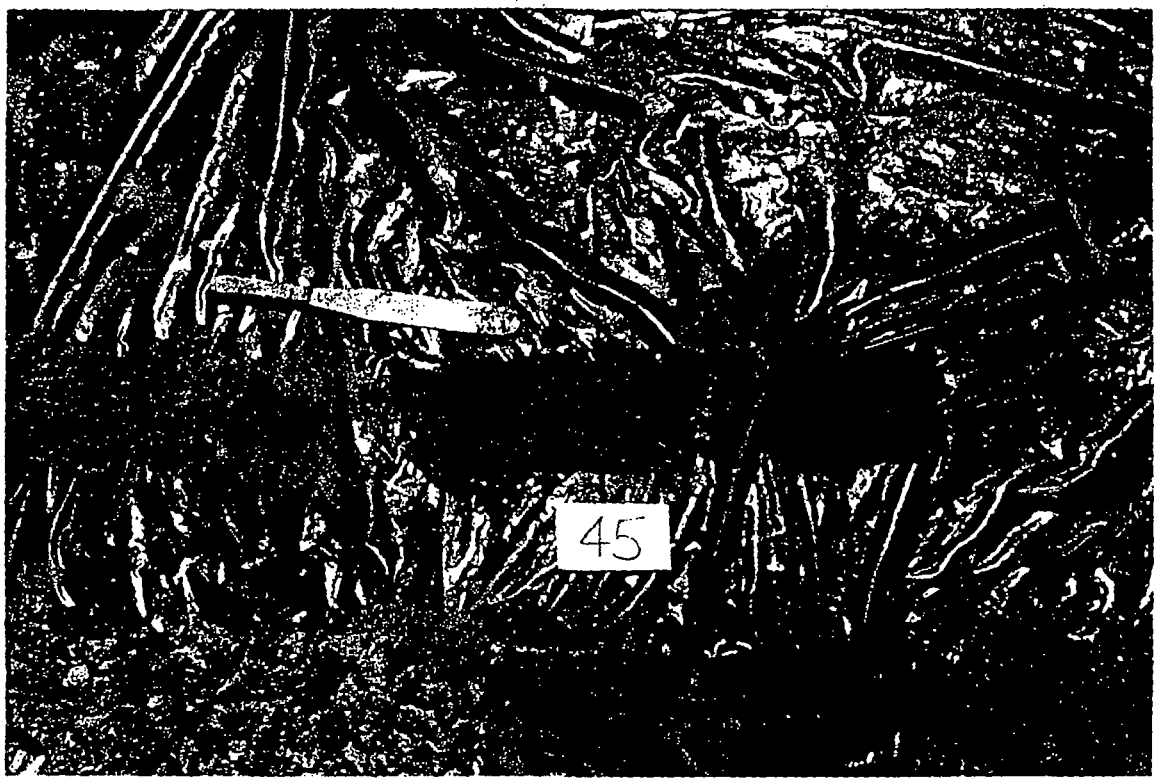
14

Source: Ecology and Environment, Inc., 1997.

## PHOTOS



15




16

rce: Ecology and Environment, Inc., 1997.

## PHOTOS

17

18

Source: Ecology and Environment, Inc., 1997.

# B Selected Exhibits from Previous Investigations

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504



LOG NO: TS-12608

Received: 01 SEP 95

Mr. Tom Kwader
Woodward-Clyde Consultants
3676 Hartsfield Road
Tallahassee, FL 32303-1119

Project: ITT Madison/95F841
Sampled By: Client

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE SAMPLED |
|---|---|---|
| 12608-10 | MW-3 | 08-30-95 |
| 12608-11 | MW-2 | 08-30-95 |
| 12608-12 | MW-4 | 08-31-95 |
| 12608-13 | MW-5 | 08-31-95 |
| 12608-14 | MW-1 | 08-31-95 |

| PARAMETER | 12608-10 | 12608-11 | 12608-12 | 12608-13 | 12608-14 |
|---|---|---|---|---|---|
| Purgeable Halocarbons (601) | | | | | |
| Bromodichloromethane, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| Bromoform, ug/l | <5.0 | <25 | <25 | <25000 | <5.0 |
| Bromomethane, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| Carbon tetrachloride, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| Chlorobenzene, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| Chloroethane, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| 2-Chloroethylvinyl ether, ug/l | <10 | <50 | <50 | <50000 | <10 |
| Chloroform, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| Chloromethane, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| Dibromochloromethane, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| 1,2-Dichlorobenzene, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| 1,3-Dichlorobenzene, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| 1,4-Dichlorobenzene, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| Dichlorodifluoromethane, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| 1,1-Dichloroethane, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| 1,2-Dichloroethane, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| 1,1-Dichloroethene, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| cis-1,2-Dichloroethylene, ug/l | <1.0 | 67 | 39 | 63000 | <1.0 |
| trans-1,2-Dichloroethylene, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| 1,2-Dichloropropane, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| cis-1,3-Dichloropropene, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |

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& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9[illegible]

LOG NO: T5-12608

Received: 01 SEP 95

Mr. Tom Kwader
Woodward-Clyde Consultants
3676 Hartsfield Road
Tallahassee, FL 32303-1119

Project: ITT Madison/95F841
Sampled By: Client

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE SAMPLED |
|---|---|---|
| 12608-10 | MW-3 | 08-30-95 |
| 12608-11 | MW-2 | 08-30-95 |
| 12608-12 | MW-4 | 08-31-95 |
| 12608-13 | MW-5 | 08-31-95 |
| 12608-14 | MW-1 | 08-31-95 |

| PARAMETER | 12608-10 | 12608-11 | 12608-12 | 12608-13 | 12608-14 |
|---|---|---|---|---|---|
| trans-1,3-Dichloropropene, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| Methylene chloride (Dichloromethane), ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| 1,1,2,2-Tetrachloroethane, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| Tetrachloroethene, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| 1,1,1-Trichloroethane, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| 1,1,2-Trichloroethane, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| Trichloroethylene, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| Trichlorofluoromethane, ug/l | <1.0 | <5.0 | <5.0 | <5000 | <1.0 |
| Vinyl chloride, ug/l | <1.0 | 92 | <5.0 | 22000 | <1.0 |
| Date Analyzed | 09.13.95 | 09.14.95 | 09.14.95 | 09.14.95 | 09.14.95 |
| Purgeable Aromatics (602/8020) | | | | | |
| Benzene, ug/l | <1.0 | <5.0 | 5.2 | <5000 | <1.0 |
| Toluene, ug/l | <1.0 | <5.0 | 28 | <5000 | <1.0 |
| Ethylbenzene, ug/l | <1.0 | <5.0 | 13 | <5000 | <1.0 |
| Xylenes, ug/l | <1.0 | <5.0 | 76 | <5000 | 1.1 |
| Total Volatile Organic Aromatics, ug/l | <1.0 | <5.0 | 122.2 | <5000 | 1.1 |
| Methyl-tert-butyl ether (MTBE), ug/l | <10 | <50 | <50 | <50000 | <10 |
| Date Analyzed | 09.13.95 | 09.14.95 | 09.14.95 | 09.14.95 | 09.14.95 |

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& ENVIRONMENTAL SERVICES, INC.

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1 9 0052

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WCC TALLAHASSEE
SEP 04 1996
LOG NO.

LOG NO: T6-12263
Received: 15 AUG 96
Reported: 29 AUG 96

Mr. Tom Kwader
Woodward-Clyde Consultants
3676 Hartsfield Road
Tallahassee, FL 32303-1119

Project: ITT-Thompson/95F841
Sampled By: Client

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE SAMPLED |
|---|---|---|
| 12263-1 | MW-4B | 08-14-96 |
| 12263-2 | MW-2B | 08-14-96 |
| 12263-3 | MW-9 | 08-14-96 |
| 12263-4 | MW-11 | 08-14-96 |

| PARAMETER | 12263-1 | 12263-2 | 12263-3 | 12263-4 |
|---|---|---|---|---|
| Purgeable Halocarbons (601) | | | | |
| Bromodichloromethane, ug/l | <250 | <1.0 | <1.0 | <1.0 |
| Bromoform, ug/l | <1200 | <5.0 | <5.0 | <5.0 |
| Bromomethane, ug/l | <250 | <1.0 | <1.0 | <1.0 |
| Carbon tetrachloride, ug/l | <250 | <1.0 | <1.0 | <1.0 |
| Chlorobenzene, ug/l | <250 | 1.8 | <1.0 | <1.0 |
| Chloroethane, ug/l | <250 | 3.4 | <1.0 | <1.0 |
| 2-Chloroethylvinyl ether, ug/l | <2500 | <10 | <10 | <10 |
| Chloroform, ug/l | <250 | <1.0 | <1.0 | <1.0 |
| Chloromethane, ug/l | <250 | <1.0 | <1.0 | <1.0 |
| Dibromochloromethane, ug/l | <250 | <1.0 | <1.0 | <1.0 |
| 1,2-Dichlorobenzene, ug/l | <250 | <1.0 | <1.0 | <1.0 |
| 1,3-Dichlorobenzene, ug/l | <250 | <1.0 | <1.0 | <1.0 |
| 1,4-Dichlorobenzene, ug/l | <250 | 12 | <1.0 | <1.0 |
| Dichlorodifluoromethane, ug/l | <250 | <1.0 | <1.0 | <1.0 |
| 1,1-Dichloroethane, ug/l | <250 | 2.9 | <1.0 | 1.6 |
| 1,2-Dichloroethane, ug/l | <250 | <1.0 | <1.0 | <1.0 |
| 1,1-Dichloroethene, ug/l | <250 | <1.0 | <1.0 | <1.0 |
| trans-1,2-Dichloroethylene, ug/l | <250 | <1.0 | <1.0 | <1.0 |
| cis-1,2-Dichloroethene, ug/l | 5500 | 15 | <1.0 | <1.0 |
| 1,2-Dichloropropane, ug/l | <250 | <1.0 | <1.0 | <1.0 |
| cis-1,3-Dichloropropene, ug/l | <250 | <1.0 | <1.0 | <1.0 |
| trans-1,3-Dichloropropene, ug/l | <250 | <1.0 | <1.0 | <1.0 |

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6 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T6-12263
Received: 15 AUG 96
Reported: 29 AUG 96

Mr. Tom Kwader
Woodward-Clyde Consultants
3676 Hartsfield Road
Tallahassee, FL 32303-1119

Project: ITT-Thompson/95F841
Sampled By: Client

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE SAMPLED |
|---|---|---|
| 2263-1 | MW-4B | 08-14-96 |
| 2263-2 | MW-2B | 08-14-96 |
| 2263-3 | MW-9 | 08-14-96 |
| 2263-4 | MW-11 | 08-14-96 |

| PARAMETER | 12263-1 | 12263-2 | 12263-3 | 12263-4 |
|---|---|---|---|---|
| Methylene chloride (Dichloromethane), ug/l | <1200 | <5.0 | <5.0 | <5.0 |
| 1,1,2,2-Tetrachloroethane, ug/l | <250 | <1.0 | <1.0 | <1.0 |
| Tetrachloroethene, ug/l | <250 | <1.0 | <1.0 | <1.0 |
| 1,1,1-Trichloroethane, ug/l | <250 | <1.0 | <1.0 | <1.0 |
| 1,1,2-Trichloroethane, ug/l | <250 | <1.0 | <1.0 | <1.0 |
| Trichloroethylene, ug/l | <250 | <1.0 | <1.0 | <1.0 |
| Trichlorofluoromethane, ug/l | <250 | <1.0 | <1.0 | <1.0 |
| Vinyl chloride, ug/l | 520 | 140 | <1.0 | 1.7 |
| Surrogate - Bromochloromethane | 110 % | 106 % | 93 % | 101 % |
| Date Analyzed | 08.21.96 | 08.22.96 | 08.21.96 | 08.21.96 |
| Batch ID | 0819E | 0819E | 0819E | 0819E |
| Purgeable Aromatics (EPA 602) | | | | |
| Benzene, ug/l | <250 | 16 | <1.0 | 37 |
| Toluene, ug/l | 550 | <1.0 | 2.0 | 21 |
| Ethylbenzene, ug/l | <250 | <1.0 | 3.0 | 44 |
| Total Xylenes, ug/l | <250 | 1.1 | 2.4 | 240 |
| Total Volatile Organic Aromatics, ug/l | 500 | 17.1 | 7.4 | 352 |
| Methyl tert-butyl ether (MTBE), ug/l | <2500 | <10 | <10 | <10 |
| Surrogate - a,a,a-Trifluorotoluene | 88 % | 84 % | 80 % | 81 % |
| Date Analyzed | 08.21.96 | 08.21.96 | 08.21.96 | 08.22.96 |
| Batch ID | 0819E | 0819E | 0819E | 0819E |

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

1 9 0053

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T6-12388
Received: 23 AUG 96
Reported: 05 SEP 96

Mr. Tom Kwader
Woodward-Clyde Consultants
3676 Hartsfield Road
Tallahassee, FL 32303-1119

Project: ITT/Thompson
Sampled By: Client

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE SAMPLED |
|---|---|---|
| 12388-1 | MW-5B | 08-23-96 |
| 12388-2 | MW-10' | 08-23-96 |

| PARAMETER | 12388-1 | 12388-2 |
|---|---|---|
| Purgeable Halocarbons (601) | | |
| Bromodichloromethane, ug/l | <100 | <50 |
| Bromoform, ug/l | <500 | <250 |
| Bromomethane, ug/l | <100 | <50 |
| Carbon tetrachloride, ug/l | <100 | <50 |
| Chlorobenzene, ug/l | <100 | <50 |
| Chloroethane, ug/l | <100 | <50 |
| 2-Chloroethylvinyl ether, ug/l | <1000 | <500 |
| Chloroform, ug/l | <100 | <50 |
| Chloromethane, ug/l | <100 | <50 |
| Dibromochloromethane, ug/l | <100 | <50 |
| 1,2-Dichlorobenzene, ug/l | <100 | <50 |
| 1,3-Dichlorobenzene, ug/l | <100 | <50 |
| 1,4-Dichlorobenzene, ug/l | <100 | <50 |
| Dichlorodifluoromethane, ug/l | <100 | <50 |
| 1,1-Dichloroethane, ug/l | <100 | <50 |
| 1,2-Dichloroethane, ug/l | <100 | <50 |
| 1,1-Dichloroethene, ug/l | <100 | <50 |
| trans-1,2-Dichloroethylene, ug/l | 160 | <50 |
| cis-1,2-Dichloroethene, ug/l | 31000 | <50 |
| 1,2-Dichloropropane, ug/l | <100 | <50 |
| cis-1,3-Dichloropropene, ug/l | <100 | <50 |
| trans-1,3-Dichloropropene, ug/l | <100 | <50 |
| Methylene chloride (Dichloromethane), ug/l | <500 | <250 |
| 1,1,2,2-Tetrachloroethane, ug/l | <100 | <50 |

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846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T6-12388
Received: 23 AUG 96
Reported: 05 SEP 96

Mr. Tom Kwader
Woodward-Clyde Consultants
3676 Hartsfield Road
Tallahassee, FL 32303-1119

Project: ITT/Thompson
Sampled By: Client

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE SAMPLED |
|---|---|---|
| 12388-1 | MW-5B | 08-23-96 |
| 12388-2 | MW-10 | 08-23-96 |

| PARAMETER | 12388-1 | 12388-2 |
|---|---|---|
| Tetrachloroethene, ug/l | <100 | <50 |
| 1,1,1-Trichloroethane, ug/l | <100 | <50 |
| 1,1,2-Trichloroethane, ug/l | <100 | <50 |
| Trichloroethylene, ug/l | <100 | <50 |
| Trichlorofluoromethane, ug/l | <100 | <50 |
| Vinyl chloride, ug/l | 44000 | <50 |
| Surrogate - Bromochloromethane | 22.0 | 17.3 |
| Surrogate-Expected Value, ug/l | 20.0 | 20.0 |
| Surrogate-% Recovery | 110 % | 87 % |
| Surrogate-Control Limit | 12-152 % | 12-152 % |
| Date Analyzed | 09.03.96 | 09.02.96 |
| Batch ID | 0826B | 0826B |
| Purgeable Aromatics (EPA 602) | | |
| Benzene, ug/l | <100 | <50 |
| Toluene, ug/l | 4100 | 1500 |
| Ethylbenzene, ug/l | 340 | <50 |
| Total Xylenes, ug/l | 1500 | 310 |
| Total Volatile Organic Aromatics, ug/l | 5940 | 1810 |
| Methyl tert-butyl ether (MTBE), ug/l | <1000 | <500 |
| Surrogate - a,a,a-Trifluorotoluene | 17.8 | 19.7 |
| Surrogate - Expected Value | 20.0 | 20.0 |
| Surrogate - % Actual Recovery | 89 % | 98 % |
| Surrogate - Control Limit | 41-150 % | 41-150 % |
| Date Analyzed | 09.03.96 | 09.03.96 |
| Batch ID | 0826B | 0826B |

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1 9 0054

LOG NO: T6-10346
Received: 07 FEB 96
Reported: 21 FEB 96

Mr. Tom Kwader
Woodward-Clyde Consultants
3676 Hartsfield Road
Tallahassee, FL 32303-1119

Project: ITT/95F841
Sampled By: Client

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE SAMPLED |
|---|---|---|
| 10346-1 | MW-7-4-6 | 01-31-96 |
| 10346-2 | MW-7-6-8 | 01-31-96 |
| 10346-3 | MW-7-0-2 | 01-30-96 |
| 10346-4 | MW-6-8-10 | 01-30-96 |
| 10346-5 | MW-6-12-14 | 01-30-96 |

| PARAMETER | 10346-1 | 10346-2 | 10346-3 | 10346-4 | 10346-5 |
|---|---|---|---|---|---|
| Volatile Organics (8010 and 8020) | | | | | |
| Bromodichloromethane, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| Bromoform, ug/kg dw | <8500 | <32 | <1500 | <28 | <34 |
| Bromomethane, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| Carbon tetrachloride, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| Chlorobenzene, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| Chloroethane, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| 2-Chloroethylvinyl ether, ug/kg dw | <17000 | <63 | <3000 | <57 | <67 |
| Chloroform, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| Chloromethane, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| Dibromochloromethane, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| 1,2-Dichlorobenzene, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| 1,3-Dichlorobenzene, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| 1,4-Dichlorobenzene, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| Dichlorodifluoromethane, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| 1,1-Dichloroethane, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| 1,2-Dichloroethane, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| 1,1-Dichloroethene, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| cis-1,2-Dichloroethylene, ug/kg dw | <1700 | 13 | <300 | <5.7 | 8.5 |
| trans-1,2-Dichloroethylene, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-950

LOG NO: T6-10346
Received: 07 FEB 96
Reported: 21 FEB 96

Mr. Tom Kwader
Woodward-Clyde Consultants
3676 Hartsfield Road
Tallahassee, FL 32303-1119

Project: ITT/95F841
Sampled By: Client

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE SAMPLED |
|---|---|---|
| 10346-1 | MW-7-4-6 | 01-31-96 |
| 10346-2 | MW-7-6-8 | 01-31-96 |
| 10346-3 | MW-7-0-2 | 01-30-96 |
| 10346-4 | MW-6-8-10 | 01-30-96 |
| 10346-5 | MW-6-12-14 | 01-30-96 |

| PARAMETER | 10346-1 | 10346-2 | 10346-3 | 10346-4 | 10346-5 |
|---|---|---|---|---|---|
| 1,2-Dichloropropane, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| cis-1,3-Dichloropropene, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| trans-1,3-Dichloropropene, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| Methylene chloride (Dichloromethane), ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| 1,1,2,2-Tetrachloroethane, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| Tetrachloroethene, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| 1,1,1-Trichloroethane, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| 1,1,2-Trichloroethane, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| Trichloroethylene, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| Trichlorofluoromethane, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| Vinyl chloride, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| Surrogate - Bromochloromethane | 74 % | 143 %*F53 | 106 % | 54 % | 118 % |
| Benzene, ug/kg dw | <1700 | <6.3 | <300 | <5.7 | <6.7 |
| Toluene, ug/kg dw | <1700 | 27 | <300 | <5.7 | 7.7 |
| Ethylbenzene, ug/kg dw | 2600 | <6.3 | 360 | <5.7 | <6.7 |
| Total Xylenes, ug/kg dw | <1700 | 11 | 2200 | <5.7 | <6.7 |
| Methyl tert-butyl ether (MTBE), ug/kg dw | <17000 | <63 | <3000 | <57 | <67 |
| Surrogate - a,a,a-Trifluorotoluene | 70 % | 91 % | 85 % | 116 % | 107 % |
| Date Analyzed | 02.13.96 | 02.13.96 | 02.13.96 | 02.13.96 | 02.13.96 |
| Batch ID | 0208D | 0208D | 0208D | 0208D | 0208D |

19 0055

# TABLE 2

## SUMMARY OF DETECTED VOLATILE ORGANIC COMPOUNDS (VOCs) IN GROUND WATER FROM VERTICAL PROFILE SAMPLING AS REPORTED BY TEG'S MOBILE LABORATORY

April 28 through May 3, 1997

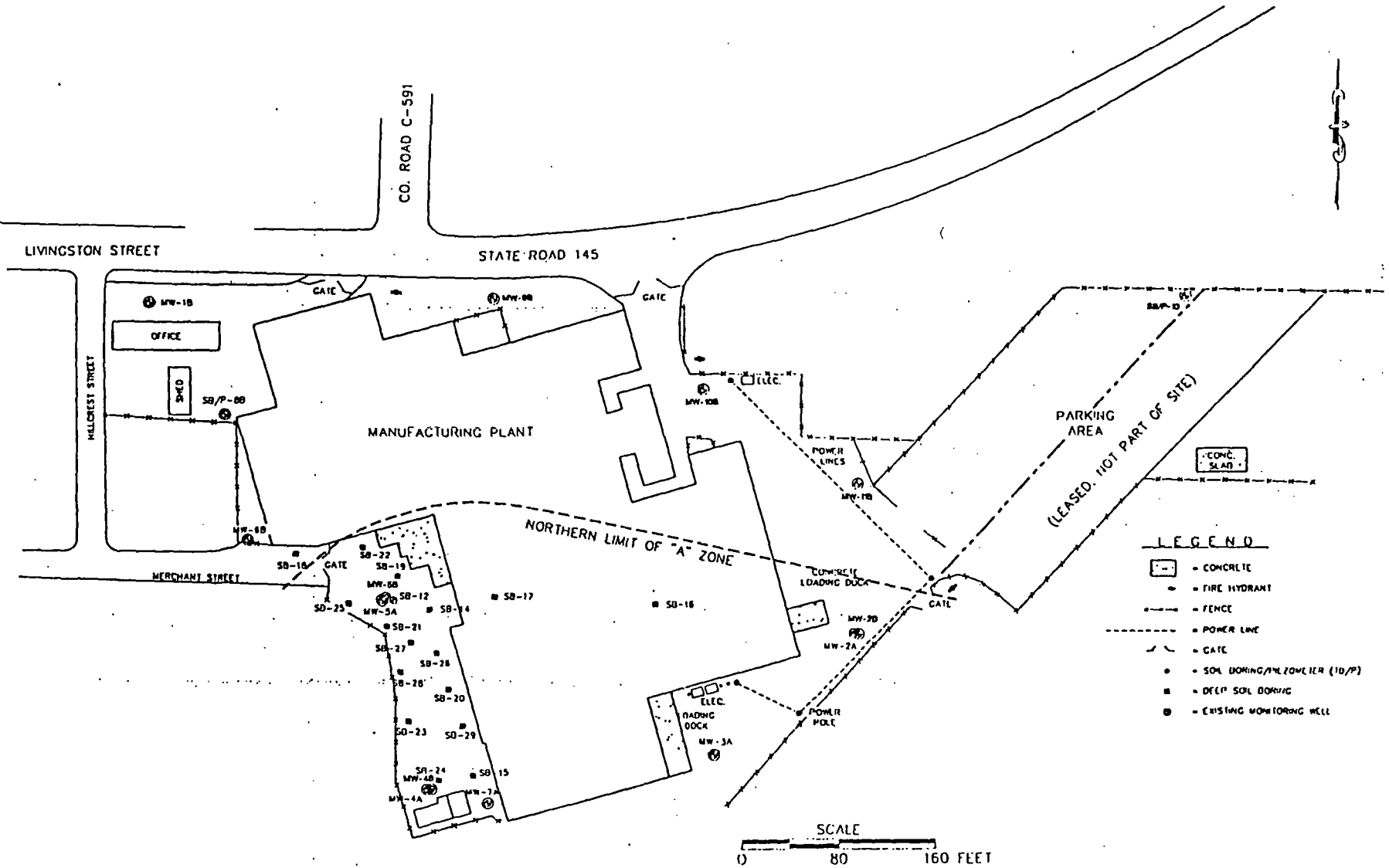
Former ITTA/Thompson Facility

Madison, Florida

### CONCENTRATIONS OF DETECTED COMPOUNDS

| AMPLE LOCATION | SB-14 | | | | | | | | | SB-15 | | | | | | | | SB-16 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DEPTH (FT BLS) | 2 | 6 | 10 | 18 | 30 | 40 | 50 | 60 | 70 | 6 | 10 | 11 | 22 | 27 | 30 | 40 | 50 | 24 | 30 | 40 | 50 |
| | | | | | | | | | | | | | | | | | | | | | |
| METER | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) | (µg/L) |
| Chlorinated VOCs | | | | | | | | | | | | | | | | | | | | | |
| hloride | ND | 176 | 2330 | 1570 | 15700 | 676 | 11500 | 18700 | 11000 | ND | ND | ND | ND | ND | 291 | 2320 | ND | 12 | 89 | 11 | 15 |
| hloroethene | ND | ND | 19.2 | ND | ND | 50 | 64 | ND | 72 | ND | ND | ND | ND | ND | 15 | ND | 208 | ND | ND | 17 | ND |
| 2-dichloroethene | ND | ND | 9 | ND | 62 | 18 | 182 | 44 | 107 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| hloroethane | ND | 25 | 17.4 | ND | 41 | 31 | 40 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| dichloroethene | 3.2 | 1050 | 45300 | 2340 | 5670 | 11100 | 22400 | 6280 | 20600 | ND | ND | ND | ND | ND | 3910 | ND | 1400 | 114 | ND | 231 | ND |
| orm | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 54 | ND |
| etrachloride | ND | ND | ND | ND | ND | ND | ND | ND | 356 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| ethene (TCE) | 4.9 | 16 | ND | 69 | ND | 13000 | 351 | 37 | 58 | ND | ND | ND | ND | 286 | 712 | 9560 | 5250 | ND | ND | 130 | ND |
| VOCs | 8 | 1267 | 47676 | 3979 | 21473 | 24875 | 34537 | 25061 | 32193 | ND | ND | ND | ND | 286 | 4928 | 11880 | 6858 | 126 | 89 | 443 | 15 |
| BTEX | | | | | | | | | | | | | | | | | | | | | |
| | ND | ND | 41 | ND | ND | ND | ND | ND | ND | ND | 272 | 208 | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| | 7.4 | 146 | 895 | 54 | 120 | 706 | 604 | 340 | ND | 49700 | 33 | 1190 | 48 | 4120 | 1880 | 288 | 4260 | ND | ND | ND | ND |
| zene | 16 | 768 | 68.3 | 21 | 84 | 146 | 39 | 20 | 18 | 8070 | 12 | 454 | ND | 1530 | 753 | 96.3 | 1870 | ND | ND | ND | ND |
| nes | 112 | 1840 | 258 | 83 | 233 | 869 | 212 | 97 | 146 | 27500 | 161 | 15200 | 50 | 4960 | 3150 | 405 | 7190 | ND | ND | ND | ND |
| VOCs | 135 | 2754 | 1262 | 158 | 437 | 1721 | 855 | 457 | 164 | 85270 | 478 | 17052 | 98 | 10610 | 5783 | 789 | 13320 | ND | ND | ND | ND |

NOTES: ND indicates analyte not detected at or above the Practical Quantitation Limit (PQL)




| DESCRIPTION OF REVISION | BY | DATE |
|---|---|---|
| | | |

MADISON INDUSTRIES
MADISON, FLORIDA

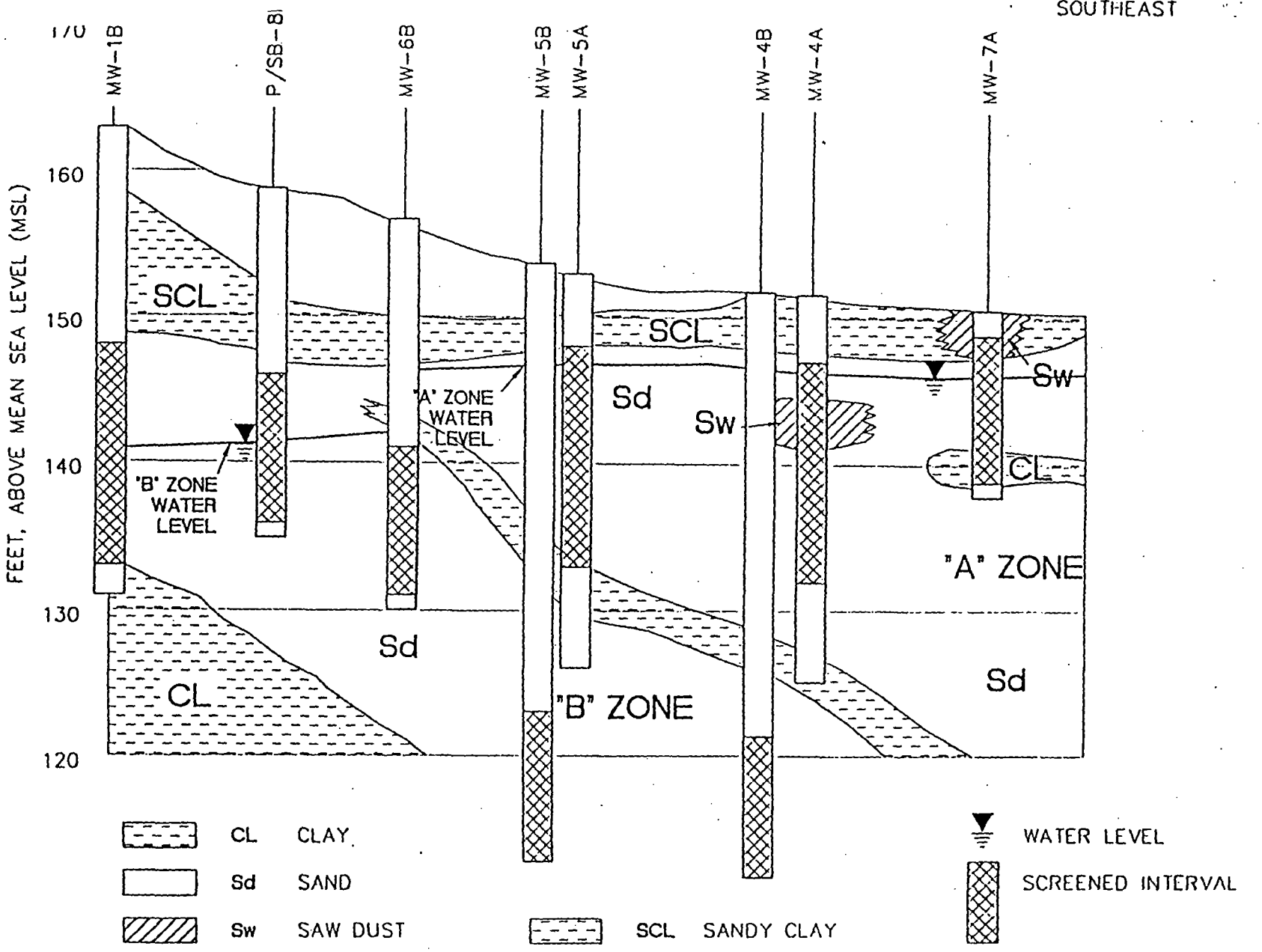
Woodward-Clyde Consultants
Engineering & sciences applied to the earth & its environment
Tallahassee, Florida

SCALE 1" = 80' | DRAWN BY: KH | DATE: 9/23/96 | CHECKED BY: JK | DATE: 9/23/96
X:\ACAD\DWGS\95\95F841\FIG2

SITE MAP SHOWING LOCATIONS OF SOIL BORINGS, PIEZOMETERS, AND MONITORING WELLS
SEPTEMBER, 1996

PROJECT NUMBER 95F841
FIGURE NUMBER 2

00004




| | | | |
|---|---|---|---|
| ITT CORPORATION<br>MADISON, FLORIDA | Woodward-Clyde Consultants<br>Engineering & sciences applied to the earth & its environment<br>Tallahassee, Florida | HYDROGEOLOGIC CROSS SECTION,<br>WESTERN EDGE OF PROPERTY | PROJECT NUMBER<br>95F841 |
| | SCALE: 1" = 10' \| DRAWN BY: KH \| DATE: 10/5/95<br>CHECKED BY: TK \| DATE: 10/5/95<br>K:\ACAD\DWGS\95\95F841\XSECTION | | FIGURE NUMBER<br>3 |

19 0056

# DATA REPORT

FILE

VOLATILE HALOGENATED & AROMATIC HYDROCARBON ANALYSIS OF SOIL (EPA METHOD 8010/8020)
WOODWARD-CLYDE 3676 HARTSFIELD RD. TALLAHASSEE, FL 32303
FORMER ITT/THOMPSON FACILITY MADISON, FL CLIENT PROJECT #: 95F841

:G PROJECT # 1-97241-LT

.TA REPORTED IN MICROGRAMS PER KILOGRAM (PPB)

| DATE COLLECTED | 5/2/97 | 5/2/97 | 5/2/97 | ..... | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE ANALYZED | 5/2/97 | 5/2/97 | 5/2/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 | 5/3/97 |
| SAMPLE ID | SB-24S 2' | SB-24S 4' | SB-24S 6' | METHOD BLANK | SB-25 6' S | SB-26 5' S | SB-27 2' S | SB-27 4' S | SB-28 2' S | SB-29 2' S | SB-29 4' S |
| NYL CHLORIDE | ND | ND | ND | ND | 13 | ND | ND | ND | 835 | ND | ND |
| 1-DICHLOROETHENE | ND | ND | ND | ND | 49 | ND | ND | ND | ND | ND | ND |
| ETHYLENE CHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND | 184.0 | 150.0 |
| RANS-1,2-DICHLOROETHENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | 94.5 | ND |
| ,1-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| :IS-1,2-DICHLOROETHENE | 207 | 181 | ND | ND | ND | 555 | 216 | ND | 35800 | ND | 502.5 |
| :HLOROFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND | 42.5 | 61.0 |
| ,1,1-TRICHLOROETHANE (TCA) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| :ARBON TETRACHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| ,2-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRICHLOROETHENE (TCE) | 55.0 | 106 | ND | ND | 18.0 | ND | ND | ND | ND | 178.5 | 1396.5 |
| 1,2-DICHLOROPROPANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMODICHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | 207.5 | 1236.5 |
| CIS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRANS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-TRICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | 116.5 | 561.5 |
| TETRACHLOROETHENE (PCE) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| DIBROMOCHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | 26.0 | 39.5 |
| 1,1,1,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMOFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | 1809.0 | 3516.5 |
| 1,3-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BENZENE | 447 | 192 | ND | ND | ND | 79 | ND | ND | ND | 54.5 | 113.0 |
| TOLUENE | 154000 d | 11800 d | 356 | ND | 94.9 | 436 | ND | ND | 8450 | 149.5 | 5800 d |
| ETHYLBENZENE | 29700 d | 85200 d | 2130 | ND | ND | ND | ND | ND | ND | 2473.5 | 9200 d |
| TOTAL XYLENES | 95200 d | 380200 d | 3450 | ND | 47.6 | 1300 | ND | ND | 9120 | 622.5 | 4300 d |
| Surrogate Recovery (%) | 66.0 | 82.7 | MI | 115.0 | 115.0 | MI | MI | MI | 102.0 | 132.2 | 128.7 |
| Data Qualifiers | D | D | D | | | D | | D | D | D | D |
| Practical Quantitation Limit (PQL) | 50.0 | 100 | 100 | 10.0 | 10.0 | 50.0 | 100 | 50.0 | 50.0 | 50.0 | 50.0 |

"ND" INDICATES ANALYTE NOT DETECTED AT OR ABOVE LISTED PQL
DATA QUALIFIERS LEGEND APPEARS ON QA/QC DATA REPORT PAGE

ANALYSIS PERFORMED IN TEG'S CERTIFIED MOBILE LABORATORY
ANALYSIS PERFORMED BY: ROBERT BARTHOLOMEW
DATA [illegible]WED BY: JONATHAN R. MILLER, RHSP



3600-C KENNESAW N. IND. PKWY KENNESAW, [illegible]J144 770-919-0805 FAX 770-919-0806

teg

# DATA REPORT

VOLATILE HALOGENATED & AROMATIC HYDROCARBON ANALYSIS OF SOIL (EPA METHOD 8010/8020)
WOODWARD-CLYDE · 3676 HARTSFIELD RD. TALLAHASSEE, FL 32303
FORMER ITT/THOMPSON FACILITY MADISON, FL CLIENT PROJECT #: 95F841

TEG PROJECT # 1-97241-LT

DATA REPORTED IN MICROGRAMS PER KILOGRAM (PPB)

| DATE COLLECTED | ----- | 4/29/97 | 4/29/97 | 4/29/97 | ..... | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE ANALYZED | 4/29/97 | 4/29/97 | 4/29/97 | 4/29/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 | 5/2/97 |
| SAMPLE ID | METHOD BLANK | SB-15S 8' | SB-15S 16' | SB-15S 22' | METHOD BLANK | SB-19S 3' | SB-20S 3' | SB-21S 3' | SB-22S 8' | SB-23S 2' | SB-23S 4' | SB-23S 6' |
| VINYL CHLORIDE | ND | ND | ND | ND | ND | 293 | ND | ND | ND | 525 | 1610 | ND |
| 1,1-DICHLOROETHENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| METHYLENE CHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRANS-1,2-DICHLOROETHENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CIS-1,2-DICHLOROETHENE | ND | ND | ND | ND | ND | 25.2 | ND | 17400 | 297 | 157 | 201 | 207 |
| CHLOROFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1-TRICHLOROETHANE (TCA) | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CARBON TETRACHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRICHLOROETHENE (TCE) | ND | ND | ND | ND | ND | ND | ND | 6490000 d | 274 | 135 | 196 | 55.0 |
| 1,2-DICHLOROPROPANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMODICHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CIS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TRANS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-TRICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| TETRACHLOROETHENE (PCE) | ND | ND | ND | ND | ND | 70.0 | ND | ND | ND | ND | ND | ND |
| DIBROMOCHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| CHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMOFORM | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| ,3-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| ,4-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| ,2-DICHLOROBENZENE | ND | ND | ND | ND | ND | 219 | ND | ND | ND | ND | ND | ND |
| ENZENE | ND | ND | ND | ND | ND | 11.0 | 12.4 | ND | ND | ND | ND | ND |
| OLUENE | ND | 342000 | ND | ND | ND | 61.5 | 20.0 | 509000 | 59.5 | 943 | 151 | ND |
| THYLBENZENE | ND | 305500 | ND | ND | ND | ND | 17.6 | 78200 | ND | 157 | ND | ND |
| OTAL XYLENES | ND | 1008000 | ND | ND | ND | 86.6 | 55.0 | 387000 | 56.0 | 1200 | 371 | ND |
| rrogate Recovery (%) | 68 6 | MI | 117.6 | MI | 140.0 | 82.7 | 80.0 | MI | 130.0 | 88.8 | 84.4 | 70 0 |
| la Qualifiers | | D | D | D | | | | D | D | D | D | D |
| ictical Quantitation Limit (PQL) | 10.0 | 2500 | 50.0 | 50.0 | 10.0 | 10.0 | 10.0 | 5000 | 50.0 | 50.0 | 100 | 50.0 |

D" INDICATES ANALYTE NOT DETECTED AT OR ABOVE LISTED PQL
TA QUALIFIERS LEGEND APPEARS ON QA/QC DATA REPORT PAGE

ANALYSIS PERFORMED IN TEG'S CERTIFIED MOBILE LABORATORY
ANALYSIS PERFORMED BY: ROBERT BARTHOLOMEW
DATA REVIEWED BY: JONATHAN R. MILLER, RHSP 5/6/97



3600-C KENNESAW N. IND. PKWY KENNESAW, GA 30144 770-919-0805 FAX 770-919-0806

teg

# DATA REPORT

VOLATILE HALOGENATED & AROMATIC HYDROCARBON ANALYSIS OF WATER (EPA METHOD 8010/8020)

WOODWARD-CLYDE 3676 HARTSFIELD RD. TALLAHASSEE, FL 32303

FORMER ITT/THOMPSON FACILITY MADISON, FL CLIENT PROJECT #: 95F841

## TEG PROJECT # 1-97241-LT

DATA REPORTED IN MICROGRAMS PER LITER (PPB)

| DATE COLLECTED | ----- | 4/30/97 | 4/30/97 | 4/30/97 | 4/30/97 | 4/30/97 | 4/30/97 | 4/30/97 |
|---|---|---|---|---|---|---|---|---|
| DATE ANALYZED | 4/30/97 | 4/30/97 | 4/30/97 | 4/30/97 | 4/30/97 | 4/30/97 | 4/30/97 | 4/30/97 |
| SAMPLE ID | METHOD BLANK | SB-14 60'DUP | SB-14 70' | SB-16 24' | SB-16 30' | SB-16 40' | SB-16 50 | EQUIP. BLANK |
| VINYL CHLORIDE | ND | 20600 | 11000 d | 11 | 89 | 11 | 15 | ND |
| 1,1-DICHLOROETHENE | ND | 340 | 72 | ND | ND | 17 | ND | ND |
| METHYLENE CHLORIDE | ND | ND | ND | ND | ND | ND | ND | ND |
| TRANS-1,2-DICHLOROETHENE | ND | ND | 107 | ND | ND | ND | ND | ND |
| 1,1-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND |
| CIS-1,2-DICHLOROETHENE | ND | 24100 | 20600 d | 114 | ND | 231 | ND | ND |
| CHLOROFORM | ND | ND | ND | ND | ND | 54 | ND | ND |
| 1,1,1-TRICHLOROETHANE (TCA) | ND | ND | ND | ND | ND | ND | ND | ND |
| CARBON TETRACHLORIDE | ND | ND | 356 | ND | ND | ND | ND | ND |
| 1,2-DICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND |
| TRICHLOROETHENE (TCE) | ND | ND | 58 | ND | ND | 130 | ND | ND |
| 1,2-DICHLOROPROPANE | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMODICHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND |
| CIS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND |
| TRANS-1,3-DICHLOROPROPENE | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2-TRICHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND |
| TETRACHLOROETHENE (PCE) | ND | ND | ND | ND | ND | ND | ND | ND |
| DIBROMOCHLOROMETHANE | ND | ND | ND | ND | ND | ND | ND | ND |
| CHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,1,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND |
| BROMOFORM | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,1,2,2-TETRACHLOROETHANE | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,3-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,4-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND |
| 1,2-DICHLOROBENZENE | ND | ND | ND | ND | ND | ND | ND | ND |
| BENZENE | ND | ND | ND | ND | ND | ND | ND | ND |
| TOLUENE | ND | 460 | ND | ND | ND | ND | ND | ND |
| ETHYLBENZENE | ND | ND | 18 | ND | ND | ND | ND | ND |
| TOTAL XYLENES | ND | ND | 146 | ND | ND | ND | ND | ND |
| Surrogate Recovery (%) | 93.7 | MI | 94.5 | 75.6 | MI | 98.7 | MI | 85.7 |
| Data Qualifiers | | D | D | D | D | D | D | |
| Practical Quantitation Limit (PQL) | 1.0 | 200 | 10 | 10 | 10 | 10 | 10 | 1.0 |

"ND" INDICATES ANALYTE NOT DETECTED AT OR ABOVE LISTED PQL

DATA QUALIFIERS LEGEND APPEARS ON QA/QC DATA REPORT PAGE

ANALYSIS PERFORMED IN TEG'S CERTIFIED MOBILE LABORATORY

ANALYSIS PERFORMED BY: ROBERT BARTHOLEMEW

DATA REVIEWED BY: JONATHAN R. MILLER, RHSP

970428W2.XY

3600-C KENNESAW N. IND. PKWY KENNESAW 30144 770-919-0805 FAX 770-919-0806

# C Lithologic Log

## SOIL BOREHOLE LITHOLOGIC LOG

**Boring Number** EC-1 (ENVIRO CORE) ITT THOMPSON SITE
**Start Date** 6/25/97 **Completion Date** 6/27/97 **Geologist** KEVIN HAYES
**Borehole Location** NW CORNER OF SITE (BACKGROUND) **Borehole Depth** 90' BGS
**Drilling Method** ENVIRO-CORE (DIRECT PUSH) **Depth to water while drilling** ~21-22' BGS
**Drilling Firm** PRECISION SAMPLING, INC. **Type of Rig** SD-1 DIRECT PUSH **Driller** TERRY McADOO

| Depth Interval (Feet BGS) | Blow Count | Lithologic Description |
|---|---|---|
| 0 - 0.1 | | ASPHALT |
| 0.1 - 1 | | SAND AND GRAVEL FILL, WHITE-TAN, $CaCO_3$, LOOSE, DRY |
| 1 - 5 | | SAND, TAN, FINE GRAINED QUARTZ, SOFT, UNCONSOLIDATED, |
| | | DRY, POSSIBLY FILL MATERIAL |
| 5 - 11 | | CLAYEY SAND, GRAY WITH RED MOTTLING, FAIRLY |
| | | COHESIVE/COMPETENT CLAY ~10 TO 20 %. |
| | | FINE TO MEDIUM GRAINED QUARTZ SAND, DRY |
| 11 - 19 | | SAND WITH MINOR CLAY, (<5 TO 10 %), RED TO |
| | | BROWNISH-RED, MEDIUM GRAINED QUARTZ SAND, |
| | | CRUMBLY, LOW COHESION |
| 19 - 21 | | CLAY WITH SOME SILT, GRAY (19 - 19.3' BGS); |
| | | REDDISH-TAN (19.3 - 21' BGS); SHARP UPPER |
| | | AND LOWER CONTACT, LOW PLASTICITY; HEMATITE |
| | | (CEMENTED) @ BASE ~ 1 cm THICK MOIST-WET |
| 21 - 28 | | SAND, RED (21 - 21.5' BGS) LIGHT TAN to WHITISH-TAN |
| | | (21.5 - 28' BGS) SHARP UPPER CONTACT, |

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**LITHOLOGIC LOG (Continued)**

Well Number EC-1 cont.

| Sample Interval (Feet BLS) | Blow Count | TOV Reading (ppm) | Lithologic Description |
|---|---|---|---|
| 21-28 (CONT) | | | FINE TO MEDIUM GRAINED QUARTZ (21-24' BGS) |
| | | | MEDIUM TO COARSE (24-28' BGS) |
| | | | "SUGARY" APPEARANCE, WET |
| 28-34 | | | SILTY SANDS, SILTY CLAYS, AND CLAYEY SILTS |
| | | | INTERBEDDED, LT. TAN (29-34' BGS) RED |
| | | | (28-29' BGS) BEDDING THICKNESS RANGES |
| | | | FROM < 1cm TO ~ 15 cm THICK, WET |
| 34-35.5 | | | SAND, WHITE TO WHITISH-TAN, (MINOR SILT) |
| | | | FINE TO VERY FINE QUARTZ SAND, SOFT, |
| | | | WET |
| 35.5-36.5 | | | CLAY, RED - REDDISH BROWN, MODERATE TO HIGH |
| | | | PLASTICITY, GOOD COHESION/COMPETENT |
| 36.5-40 | | | SAND, REDDISH-BROWN, FINE TO MEDIUM |
| | | | GRAINED QUARTZ SAND, SOFT |
| 40-43 | | | SAND WITH MINOR SILT, TAN, FINE TO VERY |
| | | | FINE QUARTZ SAND, SOFT, UNCONSOLIDATED |
| | | | MINOR CLAY 42.5-43' BGS, WET |
| 43-52 | | | SAND SAME AS 40-43' BGS WITH MORE |
| | | | SILT AND RED TO BROWNISH-RED COLOR |
| | | | THIN WHITE CLAY LAMINAE < 1-2 mm |
| | | | THICK THROUGHOUT SECTION |

**LITHOLOGIC LOG (Continued)**

Well Number EC-1 cont.

| Sample Interval (Feet BLS) | Blow Count | TOV Reading (ppm) | Lithologic Description |
|---|---|---|---|
| 52-55 | | | SILTY CLAY TO CLAYEY SILT, WHITE WITH |
| - | | | REDDISH MOTTLING, SMALL <2 mm - 4 mm |
| | | | DIAMETER GRAVEL GRAY-WHITE SOME HCl |
| | | | REACTION - GRAVEL @ ~ 52' BGS |
| 55-63 | | | SILTY CLAYEY SAND TO CLAY WITH SOME SILT, |
| | | | GREENISH GRAY, NO MOTTLING, COHESIVE, |
| | | | COMPETENT, MODERATE PLASTICITY |
| 63-69 | | | SILTY CLAY, MORE SILT/FINE SAND THAN 55-63' |
| | | | BGS, GRAY WITH BROWNISH-GREEN |
| | | | MOTTLING, LOW COHESION, SMALL NODULES |
| | | | <1 cm DIA @ 63' BGS HEMATITE? (WHITE), |
| | | | PHOSPHATE? |
| 69-73 | | | SILTY CLAYEY SAND TO CLAY, SAME AS |
| | | | 55-63' BGS EXCEPT INCLUDES SAND |
| | | | SEAMS/STRINGERS ~ 2 TO 3 cm THICK |
| | | | REDDISH-TAN, MEDIUM, QUARTZ SANDS |
| | | | NO HCl REACTION |
| 73-76 | | | CLAY GRAY (73-74' BGS) REDDISH-TAN |
| | | | (74-76' BGS) FINE SAND AND SILT INCORPORATED |
| | | | INTO CLAY MATRIX, SAND AND SMALL GRAVEL |
| | | | ZONE 5 TO 6 cm THICK @ ~ 75' BGS. |

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**LITHOLOGIC LOG (Continued)**

Well Number EC-1 cont.

| Sample Interval (Feet BLS) | Blow Count | TOV Reading (ppm) | Lithologic Description |
|---|---|---|---|
| 76-83 | | | SILTY CLAYEY SAND TO SILTY SANDY CLAY, |
| - | | | REDDISH-TAN TO REDDISH-BROWN, VERY |
| | | | HARD, LOW PLASTICITY, VERY COHESIVE |
| | | | COLOR GRADING TO LIGHT GRAY ~80-83' |
| 83-87 | | | SILT WITH SOME FINE SAND INTERBEDDED |
| | | | WITH SILTY SAND LENSES < 3 TO 10 cm |
| | | | THICK INCLUDING LT GRAY PHOSPHATIC? |
| | | | NODULES |
| 87-88 | | | SILT WITH SAND, REDDISH BROWN |
| 88-90 | | | SANDSTONE / WELL CEMENTED SANDS, TAN |
| | | | VERY HARD, SILICA? CEMENT, POSSIBLY |
| | | | NODULES?; SOME REDDISH, HEMATITE |
| | | | STAINING, NO HCl REACTION TO POWDERED |
| | | | SAMPLE, VERY FINE TO FINE GRAINED |
| | | | QUARTZ SAND GRAINS |
| | | | (SAMPLER REFUSAL @~90' BGS) |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

# D Laboratory Analytical Data

1 9 0066

# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
## CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 182220
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: N.E. quadrant of pond S.W. of site
Collection Date: 7/1/97
Field ID/Name: ITSD-1A ~~(Background)~~
Collection Time: 08:50
Storet Station Number:
Grab: X
NPDES Number:
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | X FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| ___GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: N/A
Signature:
Sampled By: Ken Starling
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet):
Chlorine, Total Residual - 50060 (mg/L):
Dissolved Oxygen (Probe) -00299 (mg/L):
pH - 00400 (Stnd. Units):
Salinity - 00480 (PPTh):
Secchi Depth - 00078 (M):
Specific Conductance - 00094 (umho/cm):
Temperature - 00010 (C):

## Soil/Sediment:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| HG-H-S<br>S-ICP<br>S-CN | Glass Jar-250mL | 1 | ICE |
| S-VOC-SS | Glass Jar-250mL | 1 | ICE |
| S-CLPCB-SS<br>S-BNA-SSSS | Glass Jar-500mL | 1 | ICE |
| TRPH | Glass Jar-250mL | 1 | ICE |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals/Cyanide | Glass Jar-250mL | 1 | Ice |
| Volatiles | Glass Jar-250mL | 1 | Ice |
| BNAs/Pesticides/PCBs | Glass Jar-500mL | 1 | Ice |
| TRPH | Glass Jar-250mL | 1 | Ice |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup *** SPIKE IN LAB***

1 9 0067

# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
## CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 18222 (Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: S.E. quandrent of pond S.W. of pond
Field ID/Name: ITSD-2A
Storet Station Number:
NPDES Number:

Collection Date: 7/1/97
Collection Time: 0930
Grab: X
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | Ø FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| ___GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature:
Sampled By: KEN STARLING
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet):
Chlorine, Total Residual - 50060 (mg/L):
Dissolved Oxygen (Probe) -00299 (mg/L):
pH - 00400 (Stnd. Units):
Salinity - 00480 (PPTh):
Secchi Depth - 00078 (M):
Specific Conductance - 00094 (umho/cm):
Temperature - 00010 (C):

### Soil/Sediment:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| HG-H-S<br>S-ICP<br>S-CN | Glass Jar-250mL | 1 | ICE |
| S-VOC-SS | Glass Jar-250mL | 1 | ICE |
| S-CLPCB-SS<br>S-BNA-SSSS | Glass Jar-500mL | 1 | ICE |
| TRPH | Glass Jar-250mL | 1 | ICE |

### For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals/Cyanide | Glass Jar-250mL | 1 | Ice |
| Volatiles | Glass Jar-250mL | 1 | Ice |
| BNAs/Pesticides/PCBs | Glass Jar-500mL | 1 | Ice |
| TRPH | Glass Jar-250mL | 1 | Ice |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

Summary For Request ID: RQ-97-JUN-23-12

Reqested By: HANK CHENG
Customer...: SSSS
Division...: WSM
Project Name: ITT Thompson

Date of Request: 18-JUN-1997
Project.....: SUPERFUND
District.....: XX

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Comments: Contact Hank when coolers are ready. Coolers will be picked up by E+E. Pre-preserved VOCs. Include 1+1 HNO3 in kit. Include 1 TB per VOC cooler + 1 extra TB. Include 1 FedEx waybill per cooler. Hank will provide field sheets.

Phone : 904-921-0858
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

Program Module Number: 0436
Priority.....: 3
Request Status.....: S
Request Reviewed By..: YUHHSU
Sampling Kit Required: YES
Sampling Kit Shipped.: YES
Kit Packed By.....: MARIA

Criminal Ivestigation: NO
Custody.....: YES
Base Project....: YES
Date Reviewed...: 18-JUN-1997
Date to Ship Kit: 16-JUN-1997
Kit Shipped.....: 19-JUN-1997
Receive Samples.: 23-JUN-1997

Group# 1 - METALS 18 Samples

ABS 6-26-97 1 Sample 1 T.Blk

| Analysis ID | Analysis Description |
|---|---|
| HG-H-W | - Mercury in liquid samples by Method 245.1 (modified) |
| W-ICP-23 | - ICP multielement analysis of aqueous samples by Method 200.7 |
| W-ICPMS | - ICPMS analysis of total metals in water by Method 200.8 |

JAW - (4) sites 6/27/97
JAW - (4) sites 6/30/97
JAW - (4) 7/1/97
JAW - (4) 7/3/97

Group# 1 - VOLATILE 18 Samples

| Analysis ID | Analysis Description |
|---|---|
| W-VOC-SS | - Volatiles in wtr by 624/5030-8260 for Superfund Group only |

Group# 1 - SM-VOLATIL 18 Samples

| Analysis ID | Analysis Description |
|---|---|
| W-BNA-SS | - BNA in water by EPA 625 for Superfund Group only. |

Group# 1 - PSTHRB-GC 18 Samples

| Analysis ID | Analysis Description |
|---|---|
| W-CLPCB-SS | - Cl-pesticides & PCBs in water by alt 608 for Superfund Group only. |

Group# 2 - METALS 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| HG-H-S | - Mercury in solids by Method 245.5, 7470 or 7471. |
| S-ICP | - ICP multielement analysis for soil by Method 6010 |

Group# 2 - PSTHRB-GC 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| S-CLPCB-SS | - Cl-pest & PCBs in soil 3550/8080 dry wt for Superfund Group only |

Group# 2 - SM-VOLATIL 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| S-BNA-SSSS | - BNA in soil or waste 3550/8270 dry wt for Superfund Group only. |

Group# 2 - VOLATILE 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| S-VOC-SS | - Volatiles in soil or waste by 5030-8260 by dry wt for Superfund Group only |

Group Summary:

| | | |
|---|---|---|
| METALS | 18 | Samples |
| VOLATILE | 18 | Samples |
| SM-VOLATIL | 18 | Samples |
| PSTHRB-GC | 18 | Samples |

Additonal Comments:

Comments: NONE

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page 1 of 1

| | | |
|---|---|---|
| SUBMITTING AGENCY / COMPANY NAME: Site Screening Superfund Subsection | CONTACT NAME AND PHONE#: Hank Cheng (904) 921-0858 | Request ID: 12 RQ-97- Jun - 23 |
| PROJECT NAME: ~~Bert Horsch~~ ITT THOMPSON | SAMPLERS (SIGNATURES): Kevin Hayes, Ken Stalling | DATE: |

| Field ID | ITSD-1A | ITSD-2A | ITGW-RB | ITGW-TRIP-S | FRANCIS MUNICIPAL WELL | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | |
| LAB SPIKE | | | | | | | | | |
| WATER | | | X | X | X | X | | X | |
| SOIL/SEDIMENT | X | X | | | | | X | | X |
| METALS | | | 1 | | 1 | P-1L | | HNO3 | |
| CYANIDE | | | 1 | | | P-1L | | NaOH | |
| VOLATILES | 1 | 1 | 4 | 2 | 4 | G-40ml | G250m | HCl | ICE |
| BNAs | | | 2 | | 2 | G-1L | | ICE | |
| PESTICIDES/PCBs | 1 KH | | 2 | | 2 | G-1L | | ICE | |
| METALS/CYANIDE | 1 | 1 | | | | | G250m | | ICE |
| BNA/PEST/PCB | 1 | 1 | | | | | G500m | | ICE |
| TRPH | 1 | 1 | 1 | | 1 | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | P250ml | | HCl | |
| | | | | | | | | | |
| TOTAL | 4 | 4 | 11 | 2 | | | | | |
| Turbidity | NA | NA | NA | NA | NA | | | | |
| Temperature | ↓ | ↓ | ↓ | ↓ | ↓ | | | | |
| pH-00400 | | | | | | | | | |
| Conductance(umho/cm) | ↓ | ↓ | ↓ | ↓ | ↓ | | | | |

COMMENTS: FRANCIS MUNICIPAL WELL NOT SAMPLED DUE TO PRESENCE OF FREE PRODUCT.
KEH 7/1/97

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin Hayes | 2: | 3: |
| Time/date | 1: 7/1/97 | 2: | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: | 3: |
| Received By | 1: [illegible] | 2: | 3: |
| received/logged | 7/2/97 | 2: | 3: ecology and environment |

1 9 0069

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUL-03-13 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 3-JUL-1997 11:33
Date Received: 3-JUL-1997 Customer ID: SSSS
Authorized: 19-AUG-1997 By: Liang T. Lin

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

BUREAU OF WASTE CLEANUP
AUG 29 1997
TECHNICAL REVIEW SECTION

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: TWF Date: 8/22/97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

000001

Sample ID: 182298/97-JUL-03-13-01 Matrix: W-EQPMT-BK
Location: ITT THOMPSON
Field ID: ITSD-RB
Collected: 2-JUL-1997 10:50 By: KEVIN HAYES
Authorized: 18-AUG-1997 By: Adrian Niculescu
Type: Grab Sample
Lab Comments: TEMP-3DC
Field Comments:

Analysis ID: W-CLPCB-SS
Cl-pesticides & PCBs in water by alt 608 for Superfund Group only.
Prepared: 7-JUL-1997 14:00 By: Nelly N. Mateeva
Analyzed: 15-JUL-1997 15:42 By: Lih-Ji Wang
Authorized: 18-AUG-1997 By: Adrian Niculescu

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 39330 | Aldrin | 0.0097 U | ug/L |
| 39337 | Alpha-BHC | 0.0097 U | ug/L |
| 39338 | Beta-BHC | 0.019 U | ug/L |
| 34259 | Delta-BHC | 0.0097 U | ug/L |
| 39340 | Gamma-BHC | 0.0097 U | ug/L |
| | Alpha-Chlordane | 0.0097 U | ug/L |
| | Gamma-Chlordane | 0.0097 U | ug/L |
| 39310 | DDD-p,p' | 0.019 U | ug/L |
| 39320 | DDE-p,p' | 0.019 U | ug/L |
| 39300 | DDT-p,p' | 0.019 U | ug/L |
| 39380 | Dieldrin | 0.019 U | ug/L |
| 34361 | Endosulfan I | 0.0097 U | ug/L |
| 34356 | Endosulfan II | 0.0097 U | ug/L |
| 34351 | Endosulfan Sulfate | 0.019 U | ug/L |
| 39390 | Endrin | 0.019 U | ug/L |
| 34366 | Endrin Aldehyde | 0.019 U | ug/L |
| | Endrin Ketone | 0.019 U | ug/L |
| 39410 | Heptachlor | 0.0097 U | ug/L |
| 39420 | Heptachlor Epoxide | 0.0097 U | ug/L |
| | Methoxychlor | 0.048 U | ug/L |
| 39400 | Toxaphene | 0.73 U | ug/L |
| 34671 | PCB-1016 | 0.19 U | ug/L |
| 39488 | PCB-1221 | 0.19 U | ug/L |
| 39492 | PCB-1232 | 0.19 U | ug/L |
| 39496 | PCB-1242 | 0.19 U | ug/L |
| 39500 | PCB-1248 | 0.19 U | ug/L |
| 39504 | PCB-1254 | 0.19 U | ug/L |
| 39508 | PCB-1260 | 0.19 U | ug/L |

Comment(1): None

1 9 0063

Summary For Request ID: RQ-97-JUN-23-12

Reqested By: HANK CHENG
Customer...: SSSS
Division...: WSM
Project Name: ITT Thompson

Date of Request: 18-JUN-1997
Project.....: SUPERFUND
District.....: XX

Comments: Contact Hank when coolers are ready. Coolers will be picked up by E+E. Pre-preserved VOCs. Include 1+1 HNO3 in kit. Include 1 TB per VOC cooler + 1 extra TB. Include 1 FedEx waybill per cooler. Hank will provide field sheets.

Phone : 904-921-0858
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

Program Module Number: 0436
Priority.....: 3
Request Status.....: S
Request Reviewed By..: YUHHSU
Sampling Kit Required: YES
Sampling Kit Shipped.: YES
Kit Packed By.....: MARIA

Criminal Ivestigation: NO
Custody.....: YES
Base Project....: YES
Date Reviewed...: 18-JUN-1997
Date to Ship Kit: 16-JUN-1997
Kit Shipped.....: 19-JUN-1997
Receive Samples.: 23-JUN-1997

Group# 1 - METALS 18 Samples

| Analysis ID | Analysis Description |
|---|---|
| -W | - Mercury in liquid samples by Method 245.1 (modified) |
| W-ICP-23 | - ICP multielement analysis of aqueous samples by Method 200.7 |
| W-ICPMS | - ICPMS analysis of total metals in water by Method 200.8 |

Group# 1 - VOLATILE 18 Samples

| Analysis ID | Analysis Description |
|---|---|
| W-VOC-SS | - Volatiles in wtr by 624/5030-8260 for Superfund Group only |

Group# 1 - SM-VOLATIL 18 Samples

| Analysis ID | Analysis Description |
|---|---|
| -BNA-SS | - BNA in water by EPA 625 for Superfund Group only. |

Group# 1 - PSTHRB-GC 18 Samples

| Analysis ID | Analysis Description |
|---|---|
| CLPCB-SS | - Cl-pesticides & PCBs in water by alt 608 for Superfund Group only. |

Group# 2 - METALS 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| -S | - Mercury in solids by Method 245.5, 7470 or 7471. |
| CP | - ICP multielement analysis for soil by Method 6010 |

ABS 6-26-97 1 Sample
1 T.Blk too

FAW - (4) sites 6/27/97
FAW - (4) sites 6/30/9
FAW - (4) 7/1/97
FAW - (4) 7/2/97

Group# 2 - PSTHRB-GC 8 Samples

| lysis ID | Analysis Description |
|---|---|
| CPCB-SS | - Cl-pest & PCBs in soil 3550/8080 dry wt for Superfund Group only |

Group# 2 - SM-VOLATIL 8 Samples

| lysis ID | Analysis Description |
|---|---|
| NA-SSSS | - BNA in soil or waste 3550/8270 dry wt for Superfund Group only. |

Group# 2 - VOLATILE 8 Samples

| lysis ID | Analysis Description |
|---|---|
| OC-SS | - Volatiles in soil or waste by 5030-8260 by dry wt for Superfund Group only |

Group Summary:

| | | |
|---|---|---|
| METALS | 18 | Samples |
| VOLATILE | 18 | Samples |
| SM-VOLATIL | 18 | Samples |
| PSTHRB-GC | 18 | Samples |

Additonal Comments:

Comments: NONE

1 9 0064

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUL-02-27 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 2-JUL-1997 11:42
Date Received: 2-JUL-1997 Customer ID: SSSS
Authorized: 12-AUG-1997 By: Liang T. Lin

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

BUREAU OF WASTE CLEANUP
AUG 29 1997
TECHNICAL REVIEW SECTION

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: TWF Date: 8/19/97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value repqrted is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

10000

Sample ID: 182220/97-JUL-02-27-01 Matrix: S-FRHWTRSD
Location: N.E. QUADRANT OF POND S.W. OF SITE
Field ID: ITSD-1A
Collected: 1-JUL-1997 08:50 By: K. STARLING
Authorized: 12-AUG-1997 By: Adrian Niculescu
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: S-CLPCB-SS
Cl-pest & PCBs in soil 3550/8080 dry wt for Superfund Group only
Prepared: 11-JUL-1997 14:00 By: Gary Dearman
Analyzed: 21-JUL-1997 16:53 By: Lih-Ji Wang
Authorized: 12-AUG-1997 By: Adrian Niculescu

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 39333 | Aldrin | 0.67 U | ug/kg |
| 39076 | Alpha-BHC | 0.67 U | ug/kg |
| 34257 | Beta-BHC | 1.2 U | ug/kg |
| 34262 | Delta-BHC | 0.67 U | ug/kg |
| 39343 | Gamma-BHC | 0.67 U | ug/kg |
| 46481 | Alpha-Chlordane | 0.67 U | ug/kg |
| 39811 | Gamma-Chlordane | 2.1 U | ug/kg |
| 39311 | DDD-p,p' | 19 J | ug/kg |
| 39321 | DDE-p,p' | 31 J | ug/kg |
| 39301 | DDT-p,p' | 1.2 U | ug/kg |
| 39383 | Dieldrin | 1.2 U | ug/kg |
| 34364 | Endosulfan I | 0.67 U | ug/kg |
| 34359 | Endosulfan II | 0.67 U | ug/kg |
| 34354 | Endosulfan Sulfate | 1.2 U | ug/kg |
| 39393 | Endrin | 1.2 U | ug/kg |
| 82633 | Endrin Aldehyde | 2.8 U | ug/kg |
| 85791 | Endrin Ketone | 1.2 U | ug/kg |
| 75044 | Heptachlor | 0.67 U | ug/kg |
| 39423 | Heptachlor Epoxide | 0.67 U | ug/kg |
| 39481 | Methoxychlor | 2.8 U | ug/kg |
| 39403 | Toxaphene | 42 U | ug/kg |
| 39514 | PCB-1016 | 12 U | ug/kg |
| 39491 | PCB-1221 | 12 U | ug/kg |
| 39495 | PCB-1232 | 12 U | ug/kg |
| 39499 | PCB-1242 | 12 U | ug/kg |
| 39503 | PCB-1248 | 12 U | ug/kg |
| 39507 | PCB-1254 | 12 U | ug/kg |
| 39511 | PCB-1260 | 59 | ug/kg |

Comment(1): Estimated values for DDD-p,p' and DDE-p,p' are due to calibration check standard exceeding the control limits.
(2): Method detection limits for Gamma-Chlordane and Endrin Aldehyde were elevated due to matrix interference.

19 0065

Sample ID: 182221/97-JUL-02-27-02 Matrix: S-FRHWTRSD
Location: S.E. QUADRANT OF POND S.W. OF POND
Field ID: ITSD-2A
Collected: 1-JUL-1997 09:30 By: K. STARLING
Authorized: 12-AUG-1997 By: Adrian Niculescu
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: S-CLPCB-SS
Cl-pest & PCBs in soil 3550/8080 dry wt for Superfund Group only
Prepared: 11-JUL-1997 14:00 By: Gary Dearman
Analyzed: 21-JUL-1997 16:53 By: Lih-Ji Wang
Authorized: 12-AUG-1997 By: Adrian Niculescu

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 39333 | Aldrin | 0.61 U | ug/kg |
| 39076 | Alpha-BHC | 0.61 U | ug/kg |
| 34257 | Beta-BHC | 1.1 U | ug/kg |
| 34262 | Delta-BHC | 0.61 U | ug/kg |
| 39343 | Gamma-BHC | 0.61 U | ug/kg |
| 46481 | Alpha-Chlordane | 0.61 U | ug/kg |
| 39811 | Gamma-Chlordane | 1.9 U | ug/kg |
| 39311 | DDD-p,p' | 1.8 I | ug/kg |
| 39321 | DDE-p,p' | 5.5 J | ug/kg |
| 39301 | DDT-p,p' | 1.1 U | ug/kg |
| 39383 | Dieldrin | 1.1 U | ug/kg |
| 34364 | Endosulfan I | 0.61 U | ug/kg |
| 34359 | Endosulfan II | 0.61 U | ug/kg |
| 34354 | Endosulfan Sulfate | 1.1 U | ug/kg |
| 39393 | Endrin | 1.1 U | ug/kg |
| 82633 | Endrin Aldehyde | 1.1 U | ug/kg |
| 85791 | Endrin Ketone | 1.1 U | ug/kg |
| 75044 | Heptachlor | 0.61 U | ug/kg |
| 39423 | Heptachlor Epoxide | 0.61 U | ug/kg |
| 39481 | Methoxychlor | 2.6 U | ug/kg |
| 39403 | Toxaphene | 38 U | ug/kg |
| 39514 | PCB-1016 | 11 U | ug/kg |
| 39491 | PCB-1221 | 11 U | ug/kg |
| 39495 | PCB-1232 | 11 U | ug/kg |
| 39499 | PCB-1242 | 11 U | ug/kg |
| 39503 | PCB-1248 | 11 U | ug/kg |
| 39507 | PCB-1254 | 11 U | ug/kg |
| 39511 | PCB-1260 | 12 I | ug/kg |

Comment(1): Estimated value for DDE-p,p' is due to calibration check standard exceeding the control limits.
(2): Method detection limit for Gamma-Chlordane was elevated due to matrix interference.

F0000

# QUALITY CONTROL REPORT
## Job ID: 97-JUL-02-27

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK, SMP |
|---|---|---|---|---|---|---|
| W-PEST-GC | Aldrin | 131 | 78.0 | 71.6 | | 8.4 |
| W-PEST-GC | Alpha-BHC | 104 | 77.6 | 74.5 | | 4.0 |
| W-PEST-GC | Beta-BHC | 106 | 88.5 | 86.0 | | 2.9 |
| W-PEST-GC | Delta-BHC | 110 | 89.3 | 94.2 | | 5.4 |
| W-PEST-GC | Gamma-BHC | 105 | 67.9 | 66.9 | | 1.5 |
| W-PEST-GC | Alpha-Chlordane | 99.4 | 56.2 | 52.8 | | 6.2 |
| W-PEST-GC | DDD-p,p' | 117 | 60.7 | 69.9 | | 14.2 |
| W-PEST-GC | DDE-p,p' | 110 | 72.0 | 92.2 | | 24.5 |
| W-PEST-GC | DDT-p,p' | 123 | 107 | 116 | | 7.4 |
| W-PEST-GC | Dieldrin | 106 | 60.8 | 55.6 | | 8.9 |
| W-PEST-GC | Endosulfan I | 102 | 62.6 | 59.0 | | 6.0 |
| W-PEST-GC | Endosulfan II | 111 | 85.0 | 84.6 | | 0.5 |
| W-PEST-GC | Endosulfan Sulfate | 110 | 88.3 | 83.7 | | 5.3 |
| W-PEST-GC | Endrin | 130 | 111 | 114 | | 2.3 |
| W-PEST-GC | Endrin Aldehyde | 115 | 65.9 | 65.9 | | 0.0 |
| W-PEST-GC | Heptachlor | 118 | 83.8 | 77.7 | | 7.6 |
| W-PEST-GC | Heptachlor Epoxide | 104 | 71.4 | 68.1 | | 4.6 |
| W-PEST-GC | Methoxychlor | 138 | 82.3 | 90.8 | | 9.7 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

19 0070

# QUALITY CONTROL REPORT
## Job ID: 97-JUL-03-13

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK, SMP |
|---|---|---|---|---|---|---|
| W-PEST-GC | Aldrin | 56.6 | 72.0 | 72.0 | | 0.1 |
| W-PEST-GC | Alpha-BHC | 93.8 | 86.7 | 88.0 | | 1.5 |
| W-PEST-GC | Beta-BHC | 107 | 106 | 106 | | 0.1 |
| W-PEST-GC | Delta-BHC | 99.4 | 92.6 | 91.2 | | 1.6 |
| W-PEST-GC | Gamma-BHC | 94.4 | 87.9 | 89.2 | | 1.4 |
| W-PEST-GC | Alpha-Chlordane | 70.3 | 73.3 | 71.5 | | 2.5 |
| W-PEST-GC | DDD-p,p' | 69.7 | 85.0 | 72.8 | | 15.5 |
| W-PEST-GC | DDE-p,p' | 69.7 | 84.8 | 68.2 | | 21.8 |
| W-PEST-GC | DDT-p,p' | 114 | 113 | 113 | | 0.3 |
| W-PEST-GC | Dieldrin | 90.4 | 91.2 | 88.1 | | 3.4 |
| W-PEST-GC | Endosulfan I | 92.3 | 91.4 | 89.4 | | 2.2 |
| W-PEST-GC | Endosulfan II | 74.6 | 85.9 | 74.6 | | 14.1 |
| W-PEST-GC | Endosulfan Sulfate | 81.8 | 92.1 | 76.8 | | 18.2 |
| W-PEST-GC | Endrin | 113 | 120 | 112 | | 6.8 |
| W-PEST-GC | Endrin Aldehyde | 104 | 97.9 | 102 | | 3.9 |
| W-PEST-GC | Heptachlor | 95.6 | 92.8 | 98.2 | | 5.7 |
| W-PEST-GC | Heptachlor Epoxide | 72.8 | 85.8 | 69.9 | | 20.4 |
| W-PEST-GC | Methoxychlor | 114 | 115 | 115 | | 0.0 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson 1 9 0071

Sample ID: 182298
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: _____
Field ID/Name: ITSD-RB
Storet Station Number: _____
NPDES Number: _____

Collection Date: 7/2/97
Collection Time: 10:50
Grab: _____
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| KH X GROUND | | X EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature: _____
Sampled By: KEVIN HAYES
Signature: Kevin Hayes
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet): _____
Chlorine, Total Residual - 50060 (mg/L): _____
Dissolved Oxygen (Probe) -00299 (mg/L): _____
pH - 00400 (Stnd. Units): _____
Salinity - 00480 (PPTh): _____
Secchi Depth - 00078 (M): _____
Specific Conductance - 00094 (umho/cm): _____
Temperature - 00010 (C): _____

## Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| SEE BELOW | | | |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| METALS | 1 LITER POLY | 1 | $HNO_3$ |
| CYANIDE | 1 LITER POLY | 1 | NaOH |
| BNAs | 1 LITER AMBER | 2 | ICE |
| PESTICIDES/PCBS | 1 LITER AMBER | 2 | ICE |
| TRPHS | 1 LITER AMBER | 1 | HCl |
| | | | |

end Final Report to : Hank Cheng, Bureau of Waste Cleanup

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page ____ of ____

| | | |
|---|---|---|
| SUBMITTING AGENCY / COMPANY NAME: Site Screening Superfund Subsection | CONTACT NAME AND PHONE#: Hank Cheng (904) 921-0858 | Request ID: RQ-97-Jun - 23 12 |
| PROJECT NAME: ~~Bart Morsch~~ ITT THOMPSON | SAMPLERS (SIGNATURES): Kevin Hayes | DATE: 7/2/97 |

| Field ID | ITVP-4A(8') | ITVP-4B(25') | ITVP-4B-DUP (25) | ITSD-RB | ITVP-RB | UNKNOWN WELL | ITVP-TRIP | | | | | | | | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | | | | | | | | | | |
| LAB SPIKE | | | | | | | | | | | | | | | | | | |
| WATER | X | X | X | X | X | X | X | | | | | | | | X | | X | |
| SOIL/SEDIMENT | | | | | | | | | | | | | | | | X | | X |
| METALS | | | | 1 | | | | | | | | | | | P-1L | | HNO3 | |
| CYANIDE | | | | 1 | | | | | | | | | | | P-1L | | NaOH | |
| VOLATILES | ~~4~~ | 4 | 4 | 4 | 4 | 4 | 2 | | | | | | | | G-40ml | G250m | HCl | ICE |
| BNAs | | | | 2 | | | | | | | | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | | | | 2 | | | | | | | | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | | | | | | | | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | | | | | | | | | | G500m | | ICE |
| TRPH | | | | 1 | | | | | | | | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | | | | | | | | |
| TOTAL | 4 | 4 | 4 | 10 | 4 | 4 | 2 | | | | | | | | | | | |
| Turbidity | | | | | | | | | | | | | | | | | | |
| Temperature | | | | | | | | | | | | | | | | | | |
| pH-00400 | | | | | | | | | | | | | | | | | | |
| Conductance(umho/cm) | | | | | | | | | | | | | | | | | | |

COMMENTS:

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin Hayes | 2: | 3: |
| Time/date | 1: 7/3/97 11:00 A | 2: | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: | 3: |
| Received By | 1: Amyed B S | 2: | 3: |
| | 11:10 7-3-97 | 2: | 3: ecology and environment |

181880/97-JUL-01-09-02 Continued from Page 4

19 0114

Analysis ID: W-ICPMS
ICPMS analysis of total metals in water by Method 200.8
Prepared: 10-JUL-1997 12:00 By: Christa Kinyon
Analyzed: 27-JUL-1997 14:10 By: Robert C. Pellow
Authorized: 19-AUG-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01105 | Aluminum | 0 | ug/L |
| 01002 | Arsenic | 3 I | ug/L |
| 01097 | Antimony | 0 | ug/L |
| 01007 | Barium | 0 | ug/L |
| 01012 | Beryllium | 0 | ug/L |
| 01027 | Cadmium | 0 | ug/L |
| 01034 | Chromium | 0 | ug/L |
| 01037 | Cobalt | 0 | ug/L |
| 01042 | Copper | 0 | ug/L |
| 01051 | Lead | 1.10 | ug/L |
| 01055 | Manganese | 0 | ug/L |
| 01062 | Molybdenum | 0 | ug/L |
| 01067 | Nickel | 0 | ug/L |
| 01147 | Selenium | 1 U | ug/L |
| 01077 | Silver | 0 | ug/L |
| 01059 | Thallium | 0.05 U | ug/L |
| 01087 | Vanadium | 0 | ug/L |
| 01092 | Zinc | 0 | ug/L |
| Comment | None | | |

---

Sample ID: 181881/97-JUL-01-09-03 Matrix: W-GROUND
Location: MW6
Field ID: ITGW-5
Collected: 30-JUN-1997 18:40 By: K. STARLING
Authorized: 19-AUG-1997 By: Julio J. Arrecis
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: HG-H-W
Mercury in liquid samples by Method 245.1 (modified)
Prepared: 11-JUL-1997 14:00 By: Tanya Denis
Analyzed: 15-JUL-1997 12:11 By: Felix A. Akinade
Authorized: 16-JUL-1997 By: TM Chandrashekar

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 71900 | Mercury | 0.10 U | ug/L |

 Continued on Page 6

181881/97-JUL-01-09-03/HG-H-W Continued from Page

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| Comment | None | | |

---

Analysis ID: W-ICP-23
ICP multielement analysis of aqueous samples by Method 200.7
Prepared: 10-JUL-1997 12:00 By: Christa Kinyon
Analyzed: 5-AUG-1997 19:22 By: Elena Compton
Authorized: 19-AUG-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01105 | Aluminum | 363 | ug/L |
| 01002 | Arsenic | 0 | ug/L |
| 01097 | Antimony | 10 U | ug/L |
| 01007 | Barium | 12.8 | ug/L |
| 01012 | Beryllium | 0.5 U | ug/L |
| 01027 | Cadmium | 5 U | ug/L |
| 00916 | Calcium | 0.25 I | mg/L |
| 01034 | Chromium | 10 U | ug/L |
| 01037 | Cobalt | 4 U | ug/L |
| 01042 | Copper | 10 U | ug/L |
| 01045 | Iron | 248 | ug/L |
| 01051 | Lead | 0 | ug/L |
| 00927 | Magnesium | 0.36 I | mg/L |
| 01055 | Manganese | 2 U | ug/L |
| 01067 | Nickel | 6 U | ug/L |
| 00937 | Potassium | 0.2 U | mg/L |
| 01147 | Selenium | 0 | ug/L |
| 01077 | Silver | 3 U | ug/L |
| 00929 | Sodium | 19.3 | mg/L |
| 01082 | Strontium | 0 | ug/L |
| 01059 | Thallium | 0 | ug/L |
| 01087 | Vanadium | 4 U | ug/L |
| 01092 | Zinc | 10 U | ug/L |
| Comment | The confirmed sample results are not consistent with the measured field conductivity. | | |

---

Analysis ID: W-ICPMS
ICPMS analysis of total metals in water by Method 200.8
Prepared: 10-JUL-1997 12:00 By: Christa Kinyon
Analyzed: 27-JUL-1997 14:14 By: Robert C. Pellow
Authorized: 19-AUG-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01105 | Aluminum | 0 | ug/L |
| 01002 | Arsenic | 2 U | ug/L |

181881/97-JUL-01-09-03/W-ICPMS Continued from Page 6

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01097 | Antimony | 0 | ug/L |
| 01007 | Barium | 0 | ug/L |
| 01012 | Beryllium | 0 | ug/L |
| 01027 | Cadmium | 0 | ug/L |
| 01034 | Chromium | 0 | ug/L |
| 01037 | Cobalt | 0 | ug/L |
| 01042 | Copper | 0 | ug/L |
| 01051 | Lead | 0.60 | ug/L |
| 01055 | Manganese | 0 | ug/L |
| 01062 | Molybdenum | 0 | ug/L |
| 01067 | Nickel | 0 | ug/L |
| 01147 | Selenium | 1 U | ug/L |
| 01077 | Silver | 0 | ug/L |
| 01059 | Thallium | 0.05 U | ug/L |
| 01087 | Vanadium | 0 | ug/L |
| 01092 | Zinc | 0 | ug/L |

Comment None

60000

# QUALITY CONTROL REPORT
## Job ID: 97-JUL-01-09

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK, SMP |
|---|---|---|---|---|---|---|
| HG-H-W | Mercury | | 104 | 95.6 | | 8.0 |
| W-ICP-23 | Aluminum | | 99.0 | 86.8 | | 2.5 |
| W-ICP-23 | Antimony | | 96.1 | 91.2 | | 5.2 |
| W-ICP-23 | Barium | | 102 | 98.9 | | 0.6 |
| W-ICP-23 | Beryllium | | 102 | 100 | | 1.9 |
| W-ICP-23 | Cadmium | | 114 | 107 | | 6.1 |
| W-ICP-23 | Calcium | | 86.8 | | | 0.3 |
| W-ICP-23 | Chromium | | 105 | 102 | | 2.9 |
| W-ICP-23 | Cobalt | | 95.7 | 100 | | 4.7 |
| W-ICP-23 | Copper | | 101 | 99.4 | | 2.1 |
| W-ICP-23 | Iron | | 90.1 | | | 0.3 |
| W-ICP-23 | Magnesium | | 90.7 | | | 0.2 |
| W-ICP-23 | Manganese | | 106 | 92.4 | | 0.3 |
| W-ICP-23 | Nickel | | 104 | 100 | | 4.1 |
| W-ICP-23 | Potassium | | 94.0 | | | 0.7 |
| W-ICP-23 | Silver | | 99.1 | 96.3 | | 2.8 |
| W-ICP-23 | Sodium | | 93.5 | | | 0.3 |
| W-ICP-23 | Vanadium | | 100 | 99.0 | | 1.4 |
| W-ICP-23 | Zinc | | 102 | 98.2 | | 4.1 |
| W-ICPMS | Arsenic | | 94.9 | 93.0 | | 2.0 |
| W-ICPMS | Lead | | 104 | 100 | | 2.1 |
| W-ICPMS | Selenium | | 86.6 | 83.3 | | 3.8 |
| W-ICPMS | Thallium | | 105 | 101 | | 4.4 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0116

Sample ID: 181881
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW6
Field ID/Name: ITGW-5
Storet Station Number:
NPDES Number:

Collection Date: 6/30/97
Collection Time: 18:40
Grab: X
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: KEN STARLING — [signature]
Signature:
Sampled By: KEN STARLING — [signature]
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters:
Depth (Feet): 25' BTOC (TD)
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.75
Salinity - 00480 (PPTh): NA
TURBIDITY (NTUS) ~~Secchi Depth - 00078~~ (M): 3.65
Specific Conductance - 00094 (umho/cm): 1130
Temperature - 00010 (C): 27

## Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| METALS | PLASTIC 1L | 1 | $HNO_3$ |
| CYANIDE | PLASTIC 1L | 1 | NaOH |
| BNAs | BROWN GLASS-1L | 2 | ICE |
| PESTICIDES/PCBS | BROWN GLASS-1L | 2 | ICE |
| TRPH | BROWN GLASS-1L | 1 | HCl |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

# STATE OF FLORIDA
# DEPARTMENT OF ENVIRONMENTAL PROTECTION
# CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD

Page 1 of 1

CERCLA SITE SCREENING

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 - 12 |
| PROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Kevin Hayes, K. Fann, Jason Dias | DATE: 6/30/97 |

| Field ID | ITGW-4 | ITGW-4-DUP | ITGW-5 | ITGW-TRIP-4 | ITVP-1A | | | | | | | | | | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | | | | | | | | | | |
| LAB SPIKE | | | | | | | | | | | | | | | | | | |
| WATER | X | X | X | X | X | | | | | | | | | | X | | X | |
| SOIL/SEDIMENT | | | | | | | | | | | | | | | | X | | X |
| METALS | 1 | 1 | 1 | | | | | | | | | | | | P-1L | | HNO3 | |
| CYANIDE | 1 | 1 | 1 | | | | | | | | | | | | P-1L | | NaOH | |
| VOLATILES | 4 | 4 | 4 | 2 | 4 | | | | | | | | | | G-40ml | G250m | HCl | ICE |
| BNAs | 2 | 2 | 2 | | | | | | | | | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | 1* | 2 | 2 | | | | | | | | | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | | | | | | | | | | | | | | G250m | | ICE |
| ~~BNA~~/PEST/PCB | | | | | | | | | | | | | | | | G500m | | ICE |
| TRPH | 1 | 1 | 1 | | | | | | | | | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | | | | | | | | |
| TOTAL | 10 | 11 | 11 | 2 | 4 | | | | | | | | | | | | | |
| Turbidity | 4.45 | 4.45 | 3.65 | NA | NA | | | | | | | | | | | | | |
| Temperature | UNK | UNK. | 27 | NA | NA | | | | | | | | | | | | | |
| pH-00400 | 3.83 | 3.83 | 3.75 | NA | NA | | | | | | | | | | | | | |
| Conductance(umho/cm) | 497 | 497 | 1130 | NA | NA | | | | | | | | | | | | | |

COMMENTS: * SHORT 1 - BROWN 1-LITER AMBER FOR PESTICIDES

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin Hayes | 2: | 3: |
| Time/date | 1: 6/30/97 @ 21:00 | 2: | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: | 3: |
| Received By | 1: Jason Arnold | 2: | 3: |

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0117

Sample ID: 181879
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

mple Location: MW5B
Field ID/Name: IT GW - 4
Storet Station Number:
NPDES Number:

Collection Date: 6/30/97
Collection Time: 12:30
Grab: X
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: KEN STARLING - Jennie Dix
Signature:
Sampled By: KEN STARLING - Jennie Dix
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters:
Depth (Feet): TD @ 39.2' BTOC
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.83
Salinity - 00480 (PPTh): NA
TURBIDITY (NTUS) ~~Secchi Depth - 00078~~ (M): 4.45
Specific Conductance - 00094 (umho/cm): 497
Temperature - 00010 (C): — THERMOMETER - NOT UNKNOWN TEMP FUNCT.

ater:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| NAs | Brown Glass-1L | 2 | Ice |
| esticides/PCBs | Brown Glass-1L | 1 * | Ice |
| PH | Brown Glass-1L | 1 | HCl |
| | | | |

NOTE: SHORT 1 ~~[illegible]~~ 1-liter amber

d Final Report to : Hank Cheng, Bureau of Waste Cleanup

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

'MAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 181550
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

00006

Sample Location: MWSB
Field ID/Name: ITGW-4-DUP
Storet Station Number:
NPDES Number:

Collection Date: 6/30/97
Collection Time: 12:30
Grab: X
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: KEN STARLING - ~~Denis Day~~
Signature:
Sampled By: KEN STARLING - ~~Denis Day~~
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: Depth (Feet): TDC 39.2 / BTOC
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.83
Salinity - 00480 (PPTh): NA
TURBIDITY (NTUs)
~~Secchi Depth - 00078~~ (M): 4-45
Specific Conductance - 00094 (umho/cm): 497
Temperature - 00010 (C): UNKNOWN
THERMOMETER NOT FUNCTIONING

Water:**( Full Scan)

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |

...of Waste Cleanup

1 9 0118

BUREAU OF WASTE CLEANUP
AUG 19 1997
TECHNICAL REVIEW SECTION

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUN-27-06 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 27-JUN-1997 08:59
Date Received: 27-JUN-1997 Customer ID: SSSS
Authorized: 29-JUL-1997 By: Julio J. Arrecis

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: Hsu Date: 8-4-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00005

Sample ID: 181806/97-JUN-27-06-01 Matrix: W-GROUND
Location: MW-2
Field ID: ITGW-2
Collected: 26-JUN-1997 16:00 By: A. KLEI
Authorized: 29-JUL-1997 By: Julio J. Arrecis
Type: Grab Sample
Lab Comments: DEP TEMP=5DC.
Field Comments:

Analysis ID: HG-H-W
Mercury in liquid samples by Method 245.1 (modified)
Prepared: 30-JUN-1997 13:40 By: Tanya Denis
Analyzed: 2-JUL-1997 11:14 By: Felix A. Akinade
Authorized: 3-JUL-1997 By: TM Chandrashekar

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 71900 | Mercury | 0.10 U | ug/L |
| Comment | None | | |

---

Analysis ID: W-ICP-23
ICP multielement analysis of aqueous samples by Method 200.7
Prepared: 1-JUL-1997 15:00 By: Christa Kinyon
Analyzed: 8-JUL-1997 15:27 By: Elena Compton
Authorized: 29-JUL-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01105 | Aluminum | 180 | ug/L |
| 01002 | Arsenic | O | ug/L |
| 01097 | Antimony | 30 U | ug/L |
| 01007 | Barium | 9.2 | ug/L |
| 01012 | Beryllium | 1 U | ug/L |
| 01027 | Cadmium | 10 U | ug/L |
| 00916 | Calcium | 7.25 | mg/L |
| 01034 | Chromium | 20 U | ug/L |
| 01037 | Cobalt | 8 U | ug/L |
| 01042 | Copper | 20 U | ug/L |
| 01045 | Iron | 6.84E+04 | ug/L |
| 01051 | Lead | O | ug/L |
| 00927 | Magnesium | 4.86 | mg/L |
| 01055 | Manganese | 68 | ug/L |
| 01067 | Nickel | 10 U | ug/L |
| 00937 | Potassium | 0.4 U | mg/L |
| 01147 | Selenium | O | ug/L |
| 01077 | Silver | 6 U | ug/L |
| 00929 | Sodium | 26.1 | mg/L |
| 01082 | Strontium | O | ug/L |
| 01059 | Thallium | O | ug/L |

 Continued on Page 3

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0079

Sample ID: 151605
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW-11B
Field ID/Name: ITGW-7
Storet Station Number:
NPDES Number:

Collection Date: 6/26/97
Collection Time:
Grab:
Composite Begin: End:

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): ~24'
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.89
Salinity - 00480 (PPTh): NA
Turbidity (NTU)
Secchi Depth -00078 (M): 1.36 NTU
Specific Conductance - 00094 (umho/cm): 192
Temperature - 00010 (C): 26°C

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | X 2 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | X 6 | Ice |
| W-CLPCB-SS | Brown Glass-1L | X 6 | Ice |
| TRPH | Brown Glass-1L | X 3 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 2 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 6 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 6 | Ice |
| TRPH | Brown Glass-1L | 3 | HCl |
| | | | |

SPIKE IN LAB

Send Final Report to: Hank Chang, Bureau of Waste Cl...

# STATE OF FLORIDA
## DEPARTMENT OF ENVIRONMENTAL PROTECTION
## CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD

CERCLA SITE SCREENING



00004

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 - 12 |
| PROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Amy J. Klei | DATE: 6-26-97 |

| Field ID | ITGW-2 | ITGW-7 (MS) | ITGW-6 | ITGW-TRIP2 | ITPW-1 | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | |
| LAB SPIKE | | X | | | | | | | |
| WATER | X | X | X | X | X | X | | X | |
| SOIL/SEDIMENT | | | | | | | X | | X |
| METALS | X | X | X | | | P-1L | | HNO3 | |
| CYANIDE | X | X | X | | | P-1L | | NaOH | |
| VOLATILES | X | X | X | X | X | G-40ml | G250m | HCl | ICE |
| BNAs | X | X | X | | | G-1L | | ICE | |
| PESTICIDES/PCBs | X | X | X | | | G-1L | | ICE | |
| METALS/CYANIDE | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | G500m | | ICE |
| TRPH | X | X | X | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | P250ml | | HCl | |
| | | | | | | | | | |
| TOTAL | | | | | | | | | |
| Turbidity (NTU) | 9.3 | 1.4 | | — | — | | | | |
| Temperature (°C) | 25 | 26 | | — | — | | | | |
| pH-00400 | 6.19 | 3.89 | | — | — | | | | |
| Conductance(umho/cm) | 339 | 192 | | — | — | | | | |

COMMENTS: ITGW-7 is LAB SPIKE.

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Amy J. Klei | 2: Hei-Fong Cheng | 3: |
| Time/date | 1: 6/26/97 | 2: 6/26/97 | 3: |
| Method of Dispatch | 1: Hand Delivered | 2: Hand delivered | 3: |
| | 1: | 2: | 3: |

1 9 0078

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requester: SSSS
Project ID: ITT Thompson

Sample ID: 191503
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW-2
Field ID/Name: ~~ITT~~ ITGW-2
Storet Station Number: —
NPDES Number: —

Collection Date: 6/26/97
Collection Time: 1600
Grab: X
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| _X_GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Jo Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): 37' BTOC
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 6.19
Salinity - 00480 (PPTh): NA
Turbidity (NTU)
~~Secchi Depth - 00078~~ (M): 9.3 NTU
Specific Conductance - 00094 (umho/cm): 339
Temperature - 00010 (C): 25°C

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 197504
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: mw 7
Field ID/Name: ITGW-6
Storet Station Number: —
NPDES Number: —

Collection Date: 6/26/97
Collection Time: 1740
Grab: X
Composite Begin: _____ End: _____

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Jo Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): 12.5
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 6.11
Salinity - 00480 (PPTh): NA
Turbidity (NTU)
~~Secchi Depth - 00078~~ (M): 4.89
Specific Conductance - 00094 (umho/cm): 532
Temperature - 00010 (C): 25

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |

Mark Chang, Bureau of Waste Cleanup

1 9 0077

Sample ID: 181805/97-JUN-27-05-03 Matrix: W-GROUND
Location: MW-11B
Field ID: ITGW-7
Collected: 26-JUN-1997 00:00 By: A. KLEI
Authorized: 11-JUL-1997 By: Colin Wright
Type: Grab Sample
Lab Comments: DEP TEMP=5DC.
Field Comments:

Analysis ID: W-CN
Cyanide analysis of water samples
Prepared: 3-JUL-1997 10:45 By: Kim Barrett
Analyzed: 3-JUL-1997 13:26 By: Virginia Leavell
Authorized: 7-JUL-1997 By: Colin Wright

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 00720 | Cyanide | 0.010 U | mg CN/L |
| Comment | None | | |

00002

QUALITY CONTROL REPORT
Job ID: 97-JUN-27-05

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | Precision %RPD LFB | Precision %RPD SPK, SMP |
|---|---|---|---|---|---|
| W-CN | Cyanide | | 110 113 | | 2.7 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

1 9 0076
BUREAU OF WASTE CLEANUP

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

JUL 17 1997
TECHNICAL REVIEW SECTION

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUN-27-05 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 27-JUN-1997 08:59
Date Received: 27-JUN-1997 Customer ID: SSSS
Authorized: 11-JUL-1997 By: Colin Wright

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: Yhan Date: 7-14-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00001

Sample ID: 181803/97-JUN-27-05-01 Matrix: W-GROUND
Location: MW-2
Field ID: ITGW-2
Collected: 26-JUN-1997 16:00 By: A. KLEI
Authorized: 11-JUL-1997 By: Colin Wright
Type: Grab Sample
Lab Comments: DEP TEMP=5DC
Field Comments:

Analysis ID: W-CN
Cyanide analysis of water samples
Prepared: 3-JUL-1997 10:45 By: Kim Barrett
Analyzed: 3-JUL-1997 13:26 By: Virginia Leavell
Authorized: 7-JUL-1997 By: Colin Wright

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 00720 | Cyanide | 0.010 U | mg CN/L |
| Comment | None | | |

Sample ID: 181804/97-JUN-27-05-02 Matrix: W-GROUND
Location: MW-7
Field ID: ITGW-6
Collected: 26-JUN-1997 17:40 By: A. KLEI
Authorized: 11-JUL-1997 By: Colin Wright
Type: Grab Sample
Lab Comments: DEP TEMP=5DC.
Field Comments:

Analysis ID: W-CN
Cyanide analysis of water samples
Prepared: 3-JUL-1997 10:45 By: Kim Barrett
Analyzed: 3-JUL-1997 13:26 By: Virginia Leavell
Authorized: 7-JUL-1997 By: Colin Wright

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 00720 | Cyanide | 0.010 U | mg CN/L |
| Comment | None | | |

1 9 0075

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 181712
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW-1
Field ID/Name: ITGW-1 (Background)
Storet Station Number:
NPDES Number:

Collection Date: 6/25/97
Collection Time: 1700 hrs
Grab:
Composite Begin: End:

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | X TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: AJ Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): 29.8' BTOC
Chlorine, Total Residual - 50060 (mg/L): —
Dissolved Oxygen (Probe) -00299 (mg/L): —
pH - 00400 (Stnd. Units): 6.87
Salinity - 00480 (PPTh): NA
Turbidity (NTU)
~~Secchi Depth - 00078 (M)~~: 37.7 NTU
Specific Conductance - 00094 (umho/cm): 446
Temperature - 00010 (C): 27

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 2 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 6 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 6 | Ice |
| TRPH | Brown Glass-1L | 3 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |
| | | | |

Hank Chang, Bureau of Waste Cl

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page 1 of 1

00100

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 - 12 |
| PROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Amy J. Klein | DATE: 6/25/97 |

| Field ID | ITGW-1 | ITGW-TRIP | | | | | | | | | | | | | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | | | | | | | | | | |
| LAB SPIKE | | | | | | | | | | | | | | | | | | |
| WATER | X | | | | | | | | | | | | | | X | | X | |
| SOIL/SEDIMENT | | | | | | | | | | | | | | | | X | | X |
| METALS | 1 | | | | | | | | | | | | | | P-1L | | HNO3 | |
| CYANIDE | 1 | | | | | | | | | | | | | | P-1L | | NaOH | |
| VOLATILES | 4 | 2 | | | | | | | | | | | | | G-40ml | G250m | HCl | ICE |
| BNAs | 2 | | | | | | | | | | | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | 2 | | | | | | | | | | | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | | | | | | | | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | | | | | | | | | | G500m | | ICE |
| TRPH | 1 | | | | | | | | | | | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | | | | | | | | |
| TOTAL | 11 | 2 | | | | | | | | | | | | | | | | |
| Turbidity (NTU) | 37.7 | — | | | | | | | | | | | | | | | | |
| Temperature °C | 27 | — | | | | | | | | | | | | | | | | |
| pH-00400 | 6.87 | — | | | | | | | | | | | | | | | | |
| Conductance(umho/cm) | 446 | — | | | | | | | | | | | | | | | | |

COMMENTS: No matrix spike samples collected due to low productivity of well (ITGW-1/Background). Spike samples will be collected at another location (TBD).

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Amy J. Klein | 2: | 3: |
| Time/date | 1: 6/25/97 2020 | 2: | 3: |
| Method of Dispatch | 1: | 2: | 3: |
| | 1. Amzad B. Shaikh | 2: | 3: |

19 0074

QUALITY CONTROL REPORT
Job ID: 97-JUN-26-05

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | Precision %RPD LFB | Precision %RPD SPK,SMP |
|---|---|---|---|---|---|
| W-CN | Cyanide | | 110 113 | | 2.7 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

1 9 0073

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BUREAU OF WASTE CLEANUP
JUL 17 1997
TECHNICAL REVIEW SECTION

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUN-26-05 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 26-JUN-1997 09:36
Date Received: 26-JUN-1997 Customer ID: SSSS
Authorized: 11-JUL-1997 By: Colin Wright

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: _____ Date: 7-14-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

20002

Sample ID: 181712/97-JUN-26-05-01 Matrix: W-GROUND
Location: ITT THOMPSON (MW-1)
Field ID: ITGW-1 (B.GROUND)
Collected: 25-JUN-1997 17:00 By: AMY JO KLEI
Authorized: 11-JUL-1997 By: Colin Wright
Type: Grab Sample
Lab Comments: TEMP=4DC
Field Comments: TURBIDITY (NTU) 37.7

Analysis ID: W-CN
Cyanide analysis of water samples
Prepared: 3-JUL-1997 10:45 By: Kim Barrett
Analyzed: 3-JUL-1997 13:26 By: Virginia Leavell
Authorized: 7-JUL-1997 By: Colin Wright

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 00720 | Cyanide | 0.010 U | mg CN/L |
| Comment | None | | |

1 9 0072

Summary For Request ID: RQ-97-JUN-23-12

Regested By: HANK CHENG
Customer...: SSSS
Division...: WSM
Project Name: ITT Thompson

Date of Request: 18-JUN-1997
Project.....: SUPERFUND
District.....: XX

Comments: Contact Hank when coolers are ready. Coolers will be picked up by E+E. Pre-preserved VOCs. Include 1+1 HNO3 in kit. Include 1 TB per VOC cooler + 1 extra TB. Include 1 FedEx waybill per cooler. Hank will provide field sheets.

Phone : 904-921-0858
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

Program Module Number: 0436
Priority.....: 3
Request Status.....: S
Request Reviewed By..: YUHHSU
Sampling Kit Required: YES
Sampling Kit Shipped.: YES
Kit Packed By.....: MARIA

Criminal Ivestigation: NO
Custody.....: YES
Base Project....: YES
Date Reviewed...: 18-JUN-1997
Date to Ship Kit: 16-JUN-1997
Kit Shipped.....: 19-JUN-1997
Receive Samples.: 23-JUN-1997

Group# 1 - METALS 18 Samples

| sis ID | Analysis Description |
|---|---|
| -W | - Mercury in liquid samples by Method 245.1 (modified) |
| -ICP-23 | - ICP multielement analysis of aqueous samples by Method 200.7 |
| -ICPMS | - ICPMS analysis of total metals in water by Method 200.8 |

Group# 1 - VOLATILE 18 Samples

| alysis ID | Analysis Description |
|---|---|
| VOC-SS | - Volatiles in wtr by 624/5030-8260 for Superfund Group only |

Group# 1 - SM-VOLATIL 18 Samples

| lysis ID | Analysis Description |
|---|---|
| NA-SS | - BNA in water by EPA 625 for Superfund Group only. |

Group# 1 - PSTHRB-GC 18 Samples

| ysis ID | Analysis Description |
|---|---|
| PCB-SS | - Cl-pesticides & PCBs in water by alt 608 for Superfund Group only. |

Group# 2 - METALS 8 Samples

| sis ID | Analysis Description |
|---|---|
| ; | - Mercury in solids by Method 245.5, 7470 or 7471. |
| | - ICP multielement analysis for soil by Method 6010 |

ABS 6-26-97 1 Sample
1 T.Blk for V

JAW - (4) sites 6/27/97
JAW - (4) sites 6/30/97
JAW - (4) 7/1/97
JAW - (4) 7/3/97
ABS (1) 7-3-97

Group# 2 - PSTHRB-GC 8 Samples

| ysis ID | Analysis Description |
|---|---|
| PCB-SS | - Cl-pest & PCBs in soil 3550/8080 dry wt for Superfund Group only |

Group# 2 - SM-VOLATIL 8 Samples

| lysis ID | Analysis Description |
|---|---|
| NA-SSSS | - BNA in soil or waste 3550/8270 dry wt for Superfund Group only. |

Group# 2 - VOLATILE 8 Samples

| alysis ID | Analysis Description |
|---|---|
| VOC-SS | - Volatiles in soil or waste by 5030-8260 by dry wt for Superfund Group only |

10001

Group Summary:

| | | |
|---|---|---|
| METALS | 18 | Samples |
| VOLATILE | 18 | Samples |
| SM-VOLATIL | 18 | Samples |
| PSTHRB-GC | 18 | Samples |

Additonal Comments:

Comments: NONE

181879/97-JUL-01-09-01/W-ICP-23 Continued from Page 2

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01087 | Vanadium | 4 U | ug/L |
| 01092 | Zinc | 10 U | ug/L |

Comment The Ag MDL was adjusted due to matrix interference.

---

Analysis ID: W-ICPMS
ICPMS analysis of total metals in water by Method 200.8
Prepared: 10-JUL-1997 12:00 By: Christa Kinyon
Analyzed: 27-JUL-1997 13:50 By: Robert C. Pellow
Authorized: 19-AUG-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01105 | Aluminum | 0 | ug/L |
| 01002 | Arsenic | 3 I | ug/L |
| 01097 | Antimony | 0 | ug/L |
| 01007 | Barium | 0 | ug/L |
| 01012 | Beryllium | 0 | ug/L |
| 01027 | Cadmium | 0 | ug/L |
| 01034 | Chromium | 0 | ug/L |
| 01037 | Cobalt | 0 | ug/L |
| 01042 | Copper | 0 | ug/L |
| 01051 | Lead | 0.70 A | ug/L |
| 01055 | Manganese | 0 | ug/L |
| 01062 | Molybdenum | 0 | ug/L |
| 01067 | Nickel | 0 | ug/L |
| 01147 | Selenium | 1 U | ug/L |
| 01077 | Silver | 0 | ug/L |
| 01059 | Thallium | 0.05 U | ug/L |
| 01087 | Vanadium | 0 | ug/L |
| 01092 | Zinc | 0 | ug/L |

Comment None

---

Sample ID: 181880/97-JUL-01-09-02 Matrix: W-GROUND
Location: MW5B
Field ID: ITGW-4-DUP
Collected: 30-JUN-1997 12:30 By: K. STARLING
Authorized: 19-AUG-1997 By: Julio J. Arrecis
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

181880/97-JUL-01-09-02 Continued on Page 4

181880/97-JUL-01-09-02 Continued from Page 3

00010

Analysis ID: HG-H-W
Mercury in liquid samples by Method 245.1 (modified)
Prepared: 11-JUL-1997 14:00 By: Tanya Denis
Analyzed: 15-JUL-1997 12:11 By: Felix A. Akinade
Authorized: 16-JUL-1997 By: TM Chandrashekar

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 71900 | Mercury | 0.10 U | ug/L |
| Comment | None | | |

---

Analysis ID: W-ICP-23
ICP multielement analysis of aqueous samples by Method 200.7
Prepared: 10-JUL-1997 12:00 By: Christa Kinyon
Analyzed: 5-AUG-1997 19:16 By: Elena Compton
Authorized: 19-AUG-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01105 | Aluminum | 387 | ug/L |
| 01002 | Arsenic | O | ug/L |
| 01097 | Antimony | 10 U | ug/L |
| 01007 | Barium | 125 | ug/L |
| 01012 | Beryllium | 0.5 U | ug/L |
| 01027 | Cadmium | 5 U | ug/L |
| 00916 | Calcium | 61.3 | mg/L |
| 01034 | Chromium | 10 U | ug/L |
| 01037 | Cobalt | 4 U | ug/L |
| 01042 | Copper | 10 U | ug/L |
| 01045 | Iron | 1.89E+04 | ug/L |
| 01051 | Lead | O | ug/L |
| 00927 | Magnesium | 9.13 | mg/L |
| 01055 | Manganese | 455 | ug/L |
| 01067 | Nickel | 6 U | ug/L |
| 00937 | Potassium | 10.5 | mg/L |
| 01147 | Selenium | O | ug/L |
| 01077 | Silver | 4 U | ug/L |
| 00929 | Sodium | 16.8 | mg/L |
| 01082 | Strontium | O | ug/L |
| 01059 | Thallium | O | ug/L |
| 01087 | Vanadium | 4 U | ug/L |
| 01092 | Zinc | 10 U | ug/L |
| Comment | The Ag MDL was adjusted due to matrix interference. | | |

---

181880/97-JUL-01-09-02 Continued on Page 5

19 0112

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BUREAU OF WASTE CLEANUP
SEP 05 1997
TECHNICAL REVIEW SECTION

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUL-01-09 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 1-JUL-1997 10:14
Date Received: 1-JUL-1997 Customer ID: SSSS
Authorized: 19-AUG-1997 By: Julio J. Arrecis

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: Han Date: 8-21-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00011

Sample ID: 181879/97-JUL-01-09-01 Matrix: W-GROUND
Location: MW5B
Field ID: ITGW-4
Collected: 30-JUN-1997 12:30 By: K. STARLING
Authorized: 19-AUG-1997 By: Julio J. Arrecis
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: HG-H-W
Mercury in liquid samples by Method 245.1 (modified)
Prepared: 11-JUL-1997 14:00 By: Tanya Denis
Analyzed: 15-JUL-1997 12:11 By: Felix A. Akinade
Authorized: 16-JUL-1997 By: TM Chandrashekar

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 71900 | Mercury | 0.10 U | ug/L |
| Comment | None | | |

---

Analysis ID: W-ICP-23
ICP multielement analysis of aqueous samples by Method 200.7
Prepared: 10-JUL-1997 12:00 By: Christa Kinyon
Analyzed: 5-AUG-1997 19:33 By: Elena Compton
Authorized: 19-AUG-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01105 | Aluminum | 299 A | ug/L |
| 01002 | Arsenic | O | ug/L |
| 01097 | Antimony | 10 U | ug/L |
| 01007 | Barium | 125 A | ug/L |
| 01012 | Beryllium | 0.5 U | ug/L |
| 01027 | Cadmium | 5 U | ug/L |
| 00916 | Calcium | 62.1 A | mg/L |
| 01034 | Chromium | 10 U | ug/L |
| 01037 | Cobalt | 4 U | ug/L |
| 01042 | Copper | 10 U | ug/L |
| 01045 | Iron | 1.91E+04 A | ug/L |
| 01051 | Lead | O | ug/L |
| 00927 | Magnesium | 9.24 A | mg/L |
| 01055 | Manganese | 461 A | ug/L |
| 01067 | Nickel | 6 U | ug/L |
| 00937 | Potassium | 10.6 A | mg/L |
| 01147 | Selenium | O | ug/L |
| 01077 | Silver | 4 U | ug/L |
| 00929 | Sodium | 17.0 A | mg/L |
| 01082 | Strontium | O | ug/L |
| 01059 | Thallium | O | ug/L |

 Continued on Page 3

19 0111

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUL-02-26 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 2-JUL-1997 11:42
Date Received: 2-JUL-1997 Customer ID: SSSS
Authorized: 14-AUG-1997 By: Liang T. Lin

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

AUG 29 1997
TECHNICAL REVIEW SEC

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: TWF Date: 8/22/97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00012

Sample ID: 182218/97-JUL-02-26-01 Matrix: S-FRHWTRSD
Location: N.E. QUADRANT OF POND S.W. OF SITE
Field ID: ITSD-1A
Collected: 1-JUL-1997 08:50 By: K. STARLING
Authorized: 14-AUG-1997 By: Kerry Tate
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: S-VOC-SS
Volatiles in soil or waste by 5030-8260 by dry wt for Superfund Grou
Prepared: NA By:
Analyzed: 10-JUL-1997 12:55 By: Joel Nagle
Authorized: 14-AUG-1997 By: Kerry Tate

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 75059 | Acetone | 1.7E3 U | ug/kg |
| 34237 | Benzene | 1.7E3 U | ug/kg |
| 34330 | Bromodichloromethane | 1.7E3 U | ug/kg |
| 34290 | Bromoform | 1.7E3 U | ug/kg |
| 34416 | Bromomethane | 1.7E3 U | ug/kg |
| 75078 | 2-Butanone | 1.7E3 U | ug/kg |
| 78544 | Carbon disulfide | 1.7E3 U | ug/kg |
| 34299 | Carbon tetrachloride | 1.7E3 U | ug/kg |
| 34304 | Chlorobenzene | 1.7E3 U | ug/kg |
| 34314 | Chloroethane | 1.7E3 U | ug/kg |
| 34318 | Chloroform | 1.7E3 U | ug/kg |
| 34421 | Chloromethane | 1.7E3 U | ug/kg |
| 34309 | Dibromochloromethane | 1.7E3 U | ug/kg |
| 34499 | 1,1-Dichloroethane | 1.7E3 U | ug/kg |
| 34534 | 1,2-Dichloroethane | 1.7E3 U | ug/kg |
| 34504 | 1,1-Dichloroethene | 1.7E3 U | ug/kg |
| 78497 | cis-1,2-Dichloroethene | 1.7E3 U | ug/kg |
| 34549 | trans-1,2-Dichloroethene | 1.7E3 U | ug/kg |
| 34544 | 1,2-Dichloropropane | 1.7E3 U | ug/kg |
| 34702 | cis-1,3-Dichloropropene | 1.7E3 U | ug/kg |
| 34697 | trans-1,3-Dichloropropene | 1.7E3 U | ug/kg |
| 34374 | Ethylbenzene | 1.7E3 U | ug/kg |
| 75166 | 2-Hexanone | 1.7E3 U | ug/kg |
| 75169 | 4-Methyl-2-Pentanone | 1.7E3 U | ug/kg |
| 34426 | Methylene chloride | 1.7E3 U | ug/kg |
| 75192 | Styrene | 1.7E3 U | ug/kg |
| 34519 | 1,1,2,2-Tetrachloroethane | 1.7E3 U | ug/kg |
| 34478 | Tetrachloroethene | 1.7E3 U | ug/kg |
| 34509 | 1,1,1-Trichloroethane | 1.7E3 U | ug/kg |
| 34514 | 1,1,2-Trichloroethane | 1.7E3 U | ug/kg |
| 34487 | Trichloroethene | 1.7E3 U | ug/kg |
| 34483 | Toluene | 1.7E3 U | ug/kg |
| 34495 | Vinyl chloride | 1.7E3 U | ug/kg |
| 45510 | Xylenes (total) | 1.7E3 U | ug/kg |

Comments(1): Total other purgeable petroleum hydrocarbons: est. conc. 2E5 ug/Kg.

 Continued on Page 3

# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
## CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0110

Sample ID: 167219
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: S.E. quandrent of pond S.W. of pond
Field ID/Name: ITSD-2A
Storet Station Number:
NPDES Number:

Collection Date: 7/1/97
Collection Time: 0930
Grab: X
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | X FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| ___GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature:
Sampled By: KEN Starling
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet):
Chlorine, Total Residual - 50060 (mg/L):
Dissolved Oxygen (Probe) -00299 (mg/L):
pH - 00400 (Stnd. Units):
Salinity - 00480 (PPTh):
Secchi Depth - 00078 (M):
Specific Conductance - 00094 (umho/cm):
Temperature - 00010 (C):

### Soil/Sediment:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| HG-H-S<br>S-ICP<br>S-CN | Glass Jar-250mL | 1 | ICE |
| S-VOC-SS | Glass Jar-250mL | 1 | ICE |
| S-CLPCB-SS<br>S-BNA-SSSS | Glass Jar-500mL | 1 | ICE |
| TRPH | Glass Jar-250mL | 1 | ICE |

### For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals/Cyanide | Glass Jar-250mL | 1 | Ice |
| Volatiles | Glass Jar-250mL | 1 | Ice |
| BNAs/Pesticides/PCBs | Glass Jar-500mL | 1 | Ice |
| TRPH | Glass Jar-250mL | 1 | Ice |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

# Summary For Request ID: RQ-97-JUN-23-12

Reqested By: HANK CHENG
Customer...: SSSS
Division...: WSM
Project Name: ITT Thompson

Date of Request: 18-JUN-1997
Project.....: SUPERFUND
District.....: XX

Comments: Contact Hank when coolers are ready. Coolers will be picked up by E+E. Pre-preserved VOCs. Include 1+1 HNO3 in kit. Include 1 TB per VOC cooler + 1 extra TB. Include 1 FedEx waybill per cooler. Hank will provide field sheets.

Phone : 904-921-0858
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

Program Module Number: 0436
Priority.....: 3
Request Status.....: S
Request Reviewed By..: YUHHSU
Sampling Kit Required: YES
Sampling Kit Shipped.: YES
Kit Packed By.....: MARIA

Criminal Ivestigation: NO
Custody.....: YES
Base Project....: YES
Date Reviewed...: 18-JUN-1997
Date to Ship Kit: 16-JUN-1997
Kit Shipped.....: 19-JUN-1997
Receive Samples.: 23-JUN-1997

Group# 1 - METALS 18 Samples

| Analysis ID | Analysis Description |
|---|---|
| HG-H-W | - Mercury in liquid samples by Method 245.1 (modified) |
| W-ICP-23 | - ICP multielement analysis of aqueous samples by Method 200.7 |
| W-ICPMS | - ICPMS analysis of total metals in water by Method 200.8 |

Group# 1 - VOLATILE 18 Samples

| Analysis ID | Analysis Description |
|---|---|
| W-VOC-SS | - Volatiles in wtr by 624/5030-8260 for Superfund Group only |

Group# 1 - SM-VOLATIL 18 Samples

| Analysis ID | Analysis Description |
|---|---|
| W-BNA-SS | - BNA in water by EPA 625 for Superfund Group only. |

Group# 1 - PSTHRB-GC 18 Samples

| Analysis ID | Analysis Description |
|---|---|
| W-CLPCB-SS | - Cl-pesticides & PCBs in water by alt 608 for Superfund Group only. |

Group# 2 - METALS 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| HG-H-S | - Mercury in solids by Method 245.5, 7470 or 7471. |
| S-ICP | - ICP multielement analysis for soil by Method 6010 |

ABS 6-26-97 1 Sample 1 T.Blk

JAW - (4) sites 6/27/97
JAW - (4) sites 6/30/97
JAW - (4) 7/1/97
JAW - (4) 7/2/97

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0109

Sample ID: 182292
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

mple Location:
Field ID/Name: ITVP-TRIP
Storet Station Number:
NPDES Number:

Collection Date: 6-21-97
Collection Time: 14:30
Grab:
Composite Begin: End:

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | X TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| KH X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature:
Sampled By: KEVIN HAYES
Signature: Kevin Hayes
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet):
Chlorine, Total Residual - 50060 (mg/L):
Dissolved Oxygen (Probe) -00299 (mg/L):
pH - 00400 (Stnd. Units):
Salinity - 00480 (PPTh):
Secchi Depth - 00078 (M):
Specific Conductance - 00094 (umho/cm):
Temperature - 00010 (C):

ater:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| W-VOC-SS | Brown Glass Vial-40mL | x 2 | Ice/HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 2 | HCl |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

id Final Report to : Hank Cheng, Bureau of Waste Cleanup

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page _____ of _____

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: 92 |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 - ~~93~~ |
| PROJECT NAME: ~~Bart Morsch~~ ITT THOMPSON | SAMPLERS (SIGNATURES): Kevin Hayes | DATE: 7/2/97 |

| Field ID | ITVP-4A(8') | ITVP-4B(25') | ITVP-4B-DUP (25) | ITSD-RB | ITVP-RB | UNKNOWN WELL | ITVP-TRIP | | | | | | | | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | | | | | | | | | | |
| LAB SPIKE | | | | | | | | | | | | | | | | | | |
| WATER | X | X | X | X | X | X | X | | | | | | | | X | | X | |
| SOIL/SEDIMENT | | | | | | | | | | | | | | | | X | | X |
| METALS | | | | 1 | | | | | | | | | | | P-1L | | HNO3 | |
| CYANIDE | | | | 1 | | | | | | | | | | | P-1L | | NaOH | |
| VOLATILES | ~~4~~ 4 | 4 | 4 | 4 | 4 | 4 | 2 | | | | | | | | G-40ml | G250m | HCl | ICE |
| BNAs | | | | 2 | | | | | | | | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | | | | 2 | | | | | | | | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | | | | | | | | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | | | | | | | | | | G500m | | ICE |
| TRPH | | | | 1 | | | | | | | | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | | | | | | | | |
| TOTAL | 4 | 4 | 4 | ~~16~~ 10 | 4 | 4 | 2 | | | | | | | | | | | |
| Turbidity | | | | | | | | | | | | | | | | | | |
| Temperature | | | | | | | | | | | | | | | | | | |
| pH-00400 | | | | | | | | | | | | | | | | | | |
| Conductance(umho/cm) | | | | | | | | | | | | | | | | | | |

COMMENTS:

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin Hayes | 2: | 3: |
| Time/date | 1: 7/3/97 11:00 A | 2: | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: | 3: |
| Received By | 1: [illegible] | 2: | 3: |
| | [illegible] 7-3-97 | 2. | 3: [illegible] ecology and environment |

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0108

Sample ID: 182290
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: _____
Field ID/Name: ITVP-RB
Storet Station Number: _____
NPDES Number: _____

Collection Date: 7/2/97
Collection Time: 08:15
Grab: X
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | X EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

FH

Field Parameters Measured By: NA
Signature: _____
Sampled By: KEVIN HAYES
Signature: Kevin Hayes
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet): _____
Chlorine, Total Residual - 50060 (mg/L): _____
Dissolved Oxygen (Probe) -00299 (mg/L): _____
pH - 00400 (Stnd. Units): _____
Salinity - 00480 (PPTh): _____
Secchi Depth - 00078 (M): _____
Specific Conductance - 00094 (umho/cm): _____
Temperature - 00010 (C): _____

ater:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

:nd Final Report to : Hank Cheng, Bureau of Waste Cleanup

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

'MAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 182391
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

00115

Sample Location: _____
Field ID/Name: UNKNOWN WELL
Storet Station Number: _____
NPDES Number: _____

Collection Date: 7/2/97
Collection Time: 14:45
Grab: X
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature: _____
Sampled By: KEVIN HAYES
Signature: Kevin Hayes
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet): _____
Chlorine, Total Residual - 50060 (mg/L): _____
Dissolved Oxygen (Probe) -00299 (mg/L): _____
pH - 00400 (Stnd. Units): _____
Salinity - 00480 (PPTh): _____
Secchi Depth - 00078 (M): _____
Specific Conductance - 00094 (umho/cm): _____
Temperature - 00010 (C): _____

## Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| *Volatiles* | *Brown Glass Vial-40mL* | 4 | *HCl* |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

19. 0107

Sample ID: 182288 (Lab Use Only)

RQ- 97 - Jun - 23 - 12

Sample Location: _____
Collection Date: 7/1/97
Field ID/Name: ITVP-4B-DUP (25')
Collection Time: 17:25
Storet Station Number: _____
Grab: X
NPDES Number: _____
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature: _____
Sampled By: KEVIN HAYES
Signature: Kevin Hayes
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet): _____
Chlorine, Total Residual - 50060 (mg/L): _____
Dissolved Oxygen (Probe) -00299 (mg/L): _____
pH - 00400 (Stnd. Units): _____
Salinity - 00480 (PPTh): _____
Secchi Depth - 00078 (M): _____
Specific Conductance - 00094 (umho/cm): _____
Temperature - 00010 (C): _____

Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | | HCl |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 182289
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

0015

Sample Location: _____
Field ID/Name: ITSD-RB
Storet Station Number: _____
NPDES Number: _____

Collection Date: 7/2/97
Collection Time: 10:50
Grab: _____
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| H X GROUND | | X EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature: _____
Sampled By: KEVIN HAYES
Signature: Kevin Hayes
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet): _____
Chlorine, Total Residual - 50060 (mg/L): _____
Dissolved Oxygen (Probe) -00299 (mg/L): _____
pH - 00400 (Stnd. Units): _____
Salinity - 00480 (PPTh): _____
Secchi Depth - 00078 (M): _____
Specific Conductance - 00094 (umho/cm): _____
Temperature - 00010 (C): _____

## Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| SEE BELOW | | | |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| METALS | 1 LITER POLY | 1 | $HNO_3$ |
| CYANIDE | 1 LITER POLY | 1 | NaOH |
| BNAs | 1 LITER AMBER | 2 | ICE |
| PESTICIDES/PCBs | 1 LITER AMBER | 2 | ICE |
| TRPHs | 1 LITER AMBER | 1 | HCl |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0106

Sample ID: 182286 (Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: _____
Field ID/Name: ITVP-4A (8')
Storet Station Number: _____
NPDES Number: _____

Collection Date: 7/1/97
Collection Time: 16:25
Grab: X
Composite Begin: _____ End: _____

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| _X_GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature: _____
Sampled By: KEVIN HAYES
Signature: Kevin Hayes
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet): _____
Chlorine, Total Residual - 50060 (mg/L): _____
Dissolved Oxygen (Probe) -00299 (mg/L): _____
pH - 00400 (Stnd. Units): _____
Salinity - 00480 (PPTh): _____
Secchi Depth - 00078 (M): _____
Specific Conductance - 00094 (umho/cm): _____
Temperature - 00010 (C): _____

## Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 182287
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

0101F

Sample Location: _____
Field ID/Name: ITVP-4B (25')
Storet Station Number: _____
NPDES Number: _____

Collection Date: 7/1/97
Collection Time: 17:25
Grab: X
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature: _____
Sampled By: KEVIN HAYES
Signature: Kevin Hayes
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet): _____
Chlorine, Total Residual - 50060 (mg/L): _____
Dissolved Oxygen (Probe) -00299 (mg/L): _____
pH - 00400 (Stnd. Units): _____
Salinity - 00480 (PPTh): _____
Secchi Depth - 00078 (M): _____
Specific Conductance - 00094 (umho/cm): _____
Temperature - 00010 (C): _____

## Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

Group# 2 - PSTHRB-GC 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| CB-SS | - Cl-pest & PCBs in soil 3550/8080 dry wt for Superfund Group only |

Group# 2 - SM-VOLATIL 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| S-BNA-SSSS | - BNA in soil or waste 3550/8270 dry wt for Superfund Group only. |

Group# 2 - VOLATILE 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| S-VOC-SS | - Volatiles in soil or waste by 5030-8260 by dry wt for Superfund Group only |

Group Summary:

| | | |
|---|---|---|
| METALS | 18 | Samples |
| VOLATILE | 18 | Samples |
| SM-VOLATIL | 18 | Samples |
| PSTHRB-GC | 18 | Samples |

Additonal Comments:

Comments: NONE

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING



| | | |
|---|---|---|
| IMITTING AGENCY / COMPANY NAME: Screening Superfund Subsection | CONTACT NAME AND PHONE#: Hank Cheng (904) 921-0858 | Request ID: RQ-97- Jun - 23 - ~~18~~ 12 |
| OJECT NAME: ~~Bert Morsch~~ ITT THOMPSON | SAMPLERS (SIGNATURES): Kevin Hayer, Ken Standley | DATE: |

| Id ID | ITSD-1A | ITSD-2A | ITGW-RB | ITGW-TRIP-S | FRANCIS MUNICIPAL WELL | | | | | | | | | | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ab ID (Lab Use Only) | | | | | | | | | | | | | | | | | | |
| AB SPIKE | | | | | | | | | | | | | | | | | | |
| NATER | | | X | X | X | | | | | | | | | | X | | X | |
| SOIL/SEDIMENT | X | X | | | | | | | | | | | | | | X | | X |
| METALS | | | 1 | | 1 | | | | | | | | | | P-1L | | HNO3 | |
| CYANIDE | | | 1 | | | | | | | | | | | | P-1L | | NaOH | |
| VOLATILES | 1 | 1 | 4 | 2 | 4 | | | | | | | | | | G-40ml | G250m | HCl | ICE |
| BNAs | | | 2 | | 2 | | | | | | | | | | G-1L | | ICE | |
| PESTICIDES/PCBs (~~Base~~) | 1 | | 2 | | 2 | | | | | | | | | | G-1L | | ICE | |
| METALS/CYANIDE | 1 | 1 | | | | | | | | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | 1 | 1 | | | | | | | | | | | | | | G500m | | ICE |
| TRPH | 1 | 1 | 1 | | 1 | | | | | | | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | | | | | | | | |
| TOTAL | 4 | 4 | 11 | 2 | | | | | | | | | | | | | | |
| Turbidity | NA | NA | NA | NA | NA | | | | | | | | | | | | | |
| Temperature | ↓ | ↓ | ↓ | ↓ | ↓ | | | | | | | | | | | | | |
| pH-00400 | | | | | | | | | | | | | | | | | | |
| Conductance(umho/cm) | ↓ | ↓ | ↓ | ↓ | ↓ | | | | | | | | | | | | | |

COMMENTS: FRANCIS MUNICIPAL WELL NOT SAMPLED DUE TO PRESENCE OF FREE PRODUCT.
KEH 7/1/97

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin Hayer | 2: | 3: |
| Time/date | 1: 7/1/97 | 2: | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: | 3: |
| Received By | 1: [signature] 7/1/97 | 2: | 3: |

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 91 0104

Sample ID: ~~151402~~ 181791
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW-11B
Field ID/Name: ITHW-7
Storet Station Number:
NPDES Number:

Collection Date: 6/26/97
Collection Time:
Grab:
Composite Begin: End:

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): ~24'
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.89
Salinity - 00480 (PPTh): NA
Turbidity (NTU)
Secchi Depth -00078 (M): 1.36 NTU
Specific Conductance - 00094 (umho/cm): 192
Temperature - 00010 (C): 26°C

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | X 2 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | X 6 | Ice |
| W-CLPCB-SS | Brown Glass-1L | X 6 | Ice |
| TRPH | Brown Glass-1L | X 3 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | ~~Plastic~~-1L | 2 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 6 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 6 | Ice |
| TRPH | Brown Glass-1L | 3 | HCl |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

SPIKE IN LAB

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING



| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 -12 |
| PROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Hei-Fong Cheng | DATE: 6-26-97 |

| Field ID | ITGW-2 | ITGW-7 DC | ITGW-6 | ITGW-Trip2 | ITPW-1 | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | 181789 | 181791 | 181790 | 181793 | 181792 | | | | |
| LAB SPIKE | | X | | | | | | | |
| WATER | X | X | X | X | X | X | | X | |
| SOIL/SEDIMENT | | | | | | | X | | X |
| METALS | X | X | X | | | P-1L | | HNO3 | |
| CYANIDE | X | X | X | | | P-1L | | NaOH | |
| VOLATILES | X | X | X | X | X | G-40ml | G250m | HCl | ICE |
| BNAs | X | X | X | | | G-1L | | ICE | |
| PESTICIDES/PCBs | X | X | X | | | G-1L | | ICE | |
| METALS/CYANIDE | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | G500m | | ICE |
| TRPH | X | X | X | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | P250ml | | HCl | |
| | | | | | | | | | |
| TOTAL | | | | | | | | | |
| Turbidity (NTU) | 9.3 | 1.4 | | — | — | | | | |
| Temperature (°C) | 25 | 26 | | — | — | | | | |
| pH-00400 | 6.19 | 3.81 | | — | — | | | | |
| Conductance(umho/cm) | 339 | 192 | | — | — | | | | |

COMMENTS: ITGW-7 is LAB SPIKE.

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Hei-Fong Cheng | 2: Hei-Fong Cheng | 3: |
| Time/date | 1: 6/26/97 | 2: 6/26/97 | 3: |
| Method of Dispatch | 1: Hand Delivery | 2: Hand delivery | 3: |
| | 1: | 2: | 3: |

181793/97-JUN-27-01-05/W-VOC-SS Continued from Page 6

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 34699 | trans-1,3-Dichloropropene | 0.50 U | ug/L |
| 34371 | Ethylbenzene | 0.50 U | ug/L |
| 77103 | 2-Hexanone | 10 U | ug/L |
| 78133 | 4-Methyl-2-Pentanone | 10 U | ug/L |
| 34423 | Methylene chloride | 0.50 U | ug/L |
| 77128 | Styrene | 1.0 U | ug/L |
| 34516 | 1,1,2,2-Tetrachloroethane | 0.50 U | ug/L |
| 34475 | Tetrachloroethene | 0.50 U | ug/L |
| 34506 | 1,1,1-Trichloroethane | 0.50 U | ug/L |
| 34511 | 1,1,2-Trichloroethane | 0.50 U | ug/L |
| 39180 | Trichloroethene | 0.50 U | ug/L |
| 78131 | Toluene | 0.50 U | ug/L |
| 39175 | Vinyl chloride | 0.50 U | ug/L |
| 81551 | Xylenes (total) | 0.50 U | ug/L |

00020

# QUALITY CONTROL REPORT
## Job ID: 97-JUN-27-01

| Test ID | Analyte | LFB %Rec | | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK, SMP |
|---|---|---|---|---|---|---|---|
| W-VOC-MS-A | Benzene | 104 | 101 | 103 | 103 | 3.1 | 0.7 |
| W-VOC-MS-A | Bromodichloromethane | 101 | 94.0 | 104 | 103 | 6.9 | 1.0 |
| W-VOC-MS-A | Bromoform | 100 | 93.7 | 102 | 102 | 6.9 | 0.0 |
| W-VOC-MS-A | Carbon tetrachloride | 99.0 | 97.1 | 100 | 102 | 1.9 | 1.4 |
| W-VOC-MS-A | Chlorobenzene | 103 | 98.6 | 107 | 106 | 4.7 | 1.0 |
| W-VOC-MS-A | Chloroform | 101 | 97.8 | 100 | 102 | 3.0 | 1.4 |
| W-VOC-MS-A | Dibromochloromethane | 110 | 100 | 111 | 110 | 9.4 | 1.5 |
| W-VOC-MS-A | 1,1-Dichloroethane | 100 | 99.3 | 101 | 105 | 1.1 | 4.0 |
| W-VOC-MS-A | 1,2-Dichloroethane | 102 | 101 | 101 | 105 | 1.8 | 3.5 |
| W-VOC-MS-A | 1,1-Dichloroethene | 98.5 | 96.9 | 100 | 102 | 1.6 | 2.4 |
| W-VOC-MS-A | trans-1,2-Dichloroethene | 100 | 96.4 | 98.4 | 104 | 4.0 | 5.3 |
| W-VOC-MS-A | 1,2-Dichloropropane | 97.9 | 98.8 | 103 | 104 | 0.9 | 0.4 |
| W-VOC-MS-A | cis-1,3-Dichloropropene | 106 | 90.4 | 109 | 111 | 16.3 | 1.5 |
| W-VOC-MS-A | trans-1,3-Dichloropropene | 109 | 89.2 | 111 | 111 | 20.0 | 0.6 |
| W-VOC-MS-A | Ethylbenzene | 109 | 101 | 109 | 108 | 7.1 | 1.0 |
| W-VOC-MS-A | Methylene chloride | 100 | 99.2 | 102 | 105 | 1.0 | 3.5 |
| W-VOC-MS-A | 1,1,2,2-Tetrachloroethane | 104 | 97.4 | 109 | 109 | 6.8 | 0.4 |
| W-VOC-MS-A | Tetrachloroethene | 104 | 90.7 | 107 | 106 | 13.9 | 0.8 |
| W-VOC-MS-A | 1,1,1-Trichloroethane | 100 | 99.2 | 101 | 103 | 0.6 | 1.6 |
| W-VOC-MS-A | 1,1,2-Trichloroethane | 103 | 98.2 | 106 | 108 | 4.7 | 1.4 |
| W-VOC-MS-A | Trichloroethene | 102 | 97.1 | 102 | 104 | 4.6 | 1.6 |
| W-VOC-MS-A | Toluene | 104 | 95.9 | 106 | 107 | 7.7 | 1.2 |
| W-VOC-MS-A | Xylenes (total) | 107 | 102 | 110 | 108 | 5.5 | 2.1 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

181791/97-JUN-27-01-03/W-VOC-SS Continued from Page 4

| toret# | Analyte | Value | Units |
|---|---|---|---|
| 81551 | Xylenes (total) | 1.2 | ug/L |

Comments(1): Total other purgeable petroleum compounds: est. conc. 85 ug/L.

---

Sample ID: 181792/97-JUN-27-01-04 Matrix: W-GROUND
Location: ITPW-1
Field ID: ITPW-1
Collected: 26-JUN-1997 16:00 By: A. MCCARTHY/H. CHENG
Authorized: 25-JUL-1997 By: Kerry Tate
Type: Grab Sample
Lab Comments: DEP TEMP=5DC.
Field Comments:

Analysis ID: W-VOC-SS
Volatiles in wtr by 624/5030-8260 for Superfund Group only
Prepared: NA By:
Analyzed: 2-JUL-1997 05:54 By: Joel Nagle
Authorized: 25-JUL-1997 By: Kerry Tate

| toret# | Analyte | Value | Units |
|---|---|---|---|
| 81552 | Acetone | 10 U | ug/L |
| 78124 | Benzene | 0.50 U | ug/L |
| 32101 | Bromodichloromethane | 0.50 U | ug/L |
| 32104 | Bromoform | 0.50 U | ug/L |
| 34413 | Bromomethane | 0.50 U | ug/L |
| 81595 | 2-Butanone | 10 U | ug/L |
| 77041 | Carbon disulfide | 1.2 U | ug/L |
| 32102 | Carbon tetrachloride | 0.50 U | ug/L |
| 34301 | Chlorobenzene | 0.50 U | ug/L |
| 34311 | Chloroethane | 0.50 U | ug/L |
| 32106 | Chloroform | 0.50 U | ug/L |
| 34418 | Chloromethane | 0.50 U | ug/L |
| 32105 | Dibromochloromethane | 0.50 U | ug/L |
| 34496 | 1,1-Dichloroethane | 0.50 U | ug/L |
| 34531 | 1,2-Dichloroethane | 0.50 U | ug/L |
| 34501 | 1,1-Dichloroethene | 0.50 U | ug/L |
| 77093 | cis-1,2-Dichloroethene | 1.0 U | ug/L |
| 34546 | trans-1,2-Dichloroethene | 0.50 U | ug/L |
| 34541 | 1,2-Dichloropropane | 0.50 U | ug/L |
| 34704 | cis-1,3-Dichloropropene | 0.50 U | ug/L |
| 34699 | trans-1,3-Dichloropropene | 0.50 U | ug/L |
| 34371 | Ethylbenzene | 0.50 U | ug/L |
| 77103 | 2-Hexanone | 10 U | ug/L |
| 78133 | 4-Methyl-2-Pentanone | 10 U | ug/L |
| 34423 | Methylene chloride | 0.50 U | ug/L |
| 77128 | Styrene | 1.0 U | ug/L |

181792/97-JUN-27-01-04/W-VOC-SS Continued from Page 5

00021

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 34516 | 1,1,2,2-Tetrachloroethane | 0.50 U | ug/L |
| 34475 | Tetrachloroethene | 0.50 U | ug/L |
| 34506 | 1,1,1-Trichloroethane | 0.50 U | ug/L |
| 34511 | 1,1,2-Trichloroethane | 0.50 U | ug/L |
| 39180 | Trichloroethene | 0.50 U | ug/L |
| 78131 | Toluene | 0.50 U | ug/L |
| 39175 | Vinyl chloride | 0.50 U | ug/L |
| 81551 | Xylenes (total) | 0.50 U | ug/L |

Comments(1): None

---

Sample ID: 181793/97-JUN-27-01-05 Matrix: W-TRIP-BLK
Location: FDEP LAB
Field ID: ITGW-TRIP2
Collected: 26-JUN-1997 00:00 By: A. SHAIK
Authorized: 25-JUL-1997 By: Kerry Tate
Type: Grab Sample
Lab Comments: DEP TEMP=5DC.
Field Comments:

Analysis ID: W-VOC-SS
Volatiles in wtr by 624/5030-8260 for Superfund Group only
Prepared: NA By:
Analyzed: 2-JUL-1997 11:20 By: Joel Nagle
Authorized: 25-JUL-1997 By: Kerry Tate

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 81552 | Acetone | 10 U | ug/L |
| 78124 | Benzene | 0.50 U | ug/L |
| 32101 | Bromodichloromethane | 0.50 U | ug/L |
| 32104 | Bromoform | 0.50 U | ug/L |
| 34413 | Bromomethane | 0.50 U | ug/L |
| 81595 | 2-Butanone | 10 U | ug/L |
| 77041 | Carbon disulfide | 1.7 U | ug/L |
| 32102 | Carbon tetrachloride | 0.50 U | ug/L |
| 34301 | Chlorobenzene | 0.50 U | ug/L |
| 34311 | Chloroethane | 0.50 U | ug/L |
| 32106 | Chloroform | 0.50 U | ug/L |
| 34418 | Chloromethane | 0.50 U | ug/L |
| 32105 | Dibromochloromethane | 0.50 U | ug/L |
| 34496 | 1,1-Dichloroethane | 0.50 U | ug/L |
| 34531 | 1,2-Dichloroethane | 0.50 U | ug/L |
| 34501 | 1,1-Dichloroethene | 0.50 U | ug/L |
| 77093 | cis-1,2-Dichloroethene | 1.0 U | ug/L |
| 34546 | trans-1,2-Dichloroethene | 0.50 U | ug/L |
| 34541 | 1,2-Dichloropropane | 0.50 U | ug/L |
| 34704 | cis-1,3-Dichloropropene | 0.50 U | ug/L |

19 0101

Sample ID: 181790/97-JUN-27-01-02 Matrix: W-GROUND
Location: MW-7
Field ID: ITGW-6
Collected: 26-JUN-1997 17:40 By: A. KLEI
Authorized: 25-JUL-1997 By: Kerry Tate
Type: Grab Sample
Lab Comments: DEP TEMP-5DC.
Field Comments:

Analysis ID: W-VOC-SS
Volatiles in wtr by 624/5030-8260 for Superfund Group only
Prepared: NA By:
Analyzed: 2-JUL-1997 13:29 By: Joel Nagle
Authorized: 25-JUL-1997 By: Kerry Tate

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 81552 | Acetone | 500 U | ug/L |
| 78124 | Benzene | 62 | ug/L |
| 32101 | Bromodichloromethane | 25 U | ug/L |
| 32104 | Bromoform | 25 U | ug/L |
| 34413 | Bromomethane | 25 U | ug/L |
| 81595 | 2-Butanone | 500 U | ug/L |
| 77041 | Carbon disulfide | 80 U | ug/L |
| 32102 | Carbon tetrachloride | 25 U | ug/L |
| 34301 | Chlorobenzene | 25 U | ug/L |
| 34311 | Chloroethane | 25 U | ug/L |
| 32106 | Chloroform | 25 U | ug/L |
| 34418 | Chloromethane | 25 U | ug/L |
| 32105 | Dibromochloromethane | 25 U | ug/L |
| 34496 | 1,1-Dichloroethane | 25 U | ug/L |
| 34531 | 1,2-Dichloroethane | 25 U | ug/L |
| 34501 | 1,1-Dichloroethene | 25 U | ug/L |
| 77093 | cis-1,2-Dichloroethene | 50 U | ug/L |
| 34546 | trans-1,2-Dichloroethene | 25 U | ug/L |
| 34541 | 1,2-Dichloropropane | 25 U | ug/L |
| 34704 | cis-1,3-Dichloropropene | 25 U | ug/L |
| 34699 | trans-1,3-Dichloropropene | 25 U | ug/L |
| 34371 | Ethylbenzene | 200 | ug/L |
| 77103 | 2-Hexanone | 500 U | ug/L |
| 78133 | 4-Methyl-2-Pentanone | 500 U | ug/L |
| 34423 | Methylene chloride | 25 U | ug/L |
| 77128 | Styrene | 50 U | ug/L |
| 34516 | 1,1,2,2-Tetrachloroethane | 25 U | ug/L |
| 34475 | Tetrachloroethene | 25 U | ug/L |
| 34506 | 1,1,1-Trichloroethane | 25 U | ug/L |
| 34511 | 1,1,2-Trichloroethane | 25 U | ug/L |
| 39180 | Trichloroethene | 25 U | ug/L |
| 78131 | Toluene | 25 U | ug/L |
| 39175 | Vinyl chloride | 25 U | ug/L |
| 81551 | Xylenes (total) | 1900 | ug/L |

Comments(1): The MDLs are elevated due to required dilution of the sample.

00022

Sample ID: 181791/97-JUN-27-01-03 Matrix: W-GROUND
Location: MW-11B
Field ID: ITGW-7
Collected: 26-JUN-1997 00:00 By: A. KLEI
Authorized: 25-JUL-1997 By: Kerry Tate
Type: Grab Sample
Lab Comments: DEP TEMP=5DC.
Field Comments:

Analysis ID: W-VOC-SS
Volatiles in wtr by 624/5030-8260 for Superfund Group only
Prepared: NA By:
Analyzed: 2-JUL-1997 12:46 By: Joel Nagle
Authorized: 25-JUL-1997 By: Kerry Tate

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 81552 | Acetone | 10 U | ug/L |
| 78124 | Benzene | 0.50 U | ug/L |
| 32101 | Bromodichloromethane | 0.50 U | ug/L |
| 32104 | Bromoform | 0.50 U | ug/L |
| 34413 | Bromomethane | 0.50 U | ug/L |
| 81595 | 2-Butanone | 10 U | ug/L |
| 77041 | Carbon disulfide | 1.7 U | ug/L |
| 32102 | Carbon tetrachloride | 0.50 U | ug/L |
| 34301 | Chlorobenzene | 0.50 U | ug/L |
| 34311 | Chloroethane | 0.50 U | ug/L |
| 32106 | Chloroform | 0.50 U | ug/L |
| 34418 | Chloromethane | 0.50 U | ug/L |
| 32105 | Dibromochloromethane | 0.50 U | ug/L |
| 34496 | 1,1-Dichloroethane | 0.50 U | ug/L |
| 34531 | 1,2-Dichloroethane | 0.50 U | ug/L |
| 34501 | 1,1-Dichloroethene | 0.50 U | ug/L |
| 77093 | cis-1,2-Dichloroethene | 4.3 | ug/L |
| 34546 | trans-1,2-Dichloroethene | 0.50 U | ug/L |
| 34541 | 1,2-Dichloropropane | 0.50 U | ug/L |
| 34704 | cis-1,3-Dichloropropene | 0.50 U | ug/L |
| 34699 | trans-1,3-Dichloropropene | 0.50 U | ug/L |
| 34371 | Ethylbenzene | 0.50 U | ug/L |
| 77103 | 2-Hexanone | 10 U | ug/L |
| 78133 | 4-Methyl-2-Pentanone | 10 U | ug/L |
| 34423 | Methylene chloride | 0.50 U | ug/L |
| 77128 | Styrene | 1.0 U | ug/L |
| 34516 | 1,1,2,2-Tetrachloroethane | 0.50 U | ug/L |
| 34475 | Tetrachloroethene | 0.50 U | ug/L |
| 34506 | 1,1,1-Trichloroethane | 0.50 U | ug/L |
| 34511 | 1,1,2-Trichloroethane | 0.50 U | ug/L |
| 39180 | Trichloroethene | 0.70 I | ug/L |
| 78131 | Toluene | 0.50 U | ug/L |
| 39175 | Vinyl chloride | 0.50 U | ug/L |


Continued on Page 5

1 9 0100

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BUREAU OF WASTE CLEANUP
SEP 05 1997
TECHNICAL REVIEW SECTION

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUN-27-01 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 27-JUN-1997 08:59
Date Received: 27-JUN-1997 Customer ID: SSSS
Authorized: 22-AUG-1997 By: Liang T. Lin

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: TWF Date: 8/28/97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

32000

Sample ID: 181789/97-JUN-27-01-01 Matrix: W-GROUND
Location: MW-2
Field ID: ITGW-2
Collected: 26-JUN-1997 16:00 By: A. KLEI
Authorized: 25-JUL-1997 By: Kerry Tate
Type: Grab Sample
Lab Comments: DEP TEMP=5DC.
Field Comments:

Analysis ID: W-VOC-SS
Volatiles in wtr by 624/5030-8260 for Superfund Group only
Prepared: NA By:
Analyzed: 2-JUL-1997 12:03 By: Joel Nagle
Authorized: 25-JUL-1997 By: Kerry Tate

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 81552 | Acetone | 10 U | ug/L |
| 78124 | Benzene | 9.0 | ug/L |
| 32101 | Bromodichloromethane | 0.50 U | ug/L |
| 32104 | Bromoform | 0.50 U | ug/L |
| 34413 | Bromomethane | 0.50 U | ug/L |
| 81595 | 2-Butanone | 10 U | ug/L |
| 77041 | Carbon disulfide | 2.0 U | ug/L |
| 32102 | Carbon tetrachloride | 0.50 U | ug/L |
| 34301 | Chlorobenzene | 1.4 | ug/L |
| 34311 | Chloroethane | 0.56 I | ug/L |
| 32106 | Chloroform | 0.50 U | ug/L |
| 34418 | Chloromethane | 0.50 U | ug/L |
| 32105 | Dibromochloromethane | 0.50 U | ug/L |
| 34496 | 1,1-Dichloroethane | 2.5 | ug/L |
| 34531 | 1,2-Dichloroethane | 0.50 U | ug/L |
| 34501 | 1,1-Dichloroethene | 0.50 U | ug/L |
| 77093 | cis-1,2-Dichloroethene | 20 | ug/L |
| 34546 | trans-1,2-Dichloroethene | 0.50 U | ug/L |
| 34541 | 1,2-Dichloropropane | 0.50 U | ug/L |
| 34704 | cis-1,3-Dichloropropene | 0.50 U | ug/L |
| 34699 | trans-1,3-Dichloropropene | 0.50 U | ug/L |
| 34371 | Ethylbenzene | 0.50 U | ug/L |
| 77103 | 2-Hexanone | 10 U | ug/L |
| 78133 | 4-Methyl-2-Pentanone | 10 U | ug/L |
| 34423 | Methylene chloride | 0.50 U | ug/L |
| 77128 | Styrene | 1.0 U | ug/L |
| 34516 | 1,1,2,2-Tetrachloroethane | 0.50 U | ug/L |
| 34475 | Tetrachloroethene | 0.50 U | ug/L |
| 34506 | 1,1,1-Trichloroethane | 0.50 U | ug/L |
| 34511 | 1,1,2-Trichloroethane | 0.50 U | ug/L |
| 39180 | Trichloroethene | 0.80 I | ug/L |
| 78131 | Toluene | 0.50 U | ug/L |
| 39175 | Vinyl chloride | 66 | ug/L |
| 81551 | Xylenes (total) | 1.9 | ug/L |

Comments(1): 1,4-Dichlorobenzene = 9.0 ug/L.

1 9 0099

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 182296
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: _____
Field ID/Name: ITSD-RB
Storet Station Number: _____
NPDES Number: _____

Collection Date: 7/2/97
Collection Time: 10:50
Grab: _____
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| KH X GROUND | | X EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature: _____
Sampled By: KEVIN HAYES
Signature: Kevin Hayes
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet): _____
Chlorine, Total Residual - 50060 (mg/L): _____
Dissolved Oxygen (Probe) -00299 (mg/L): _____
pH - 00400 (Stnd. Units): _____
Salinity - 00480 (PPTh): _____
Secchi Depth - 00078 (M): _____
Specific Conductance - 00094 (umho/cm): _____
Temperature - 00010 (C): _____

## Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| SEE BELOW | | | |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| METALS | 1 LITER POLY | 1 | $HNO_3$ |
| CYANIDE | 1 LITER POLY | 1 | NaOH |
| BNAs | 1 LITER AMBER | 2 | ICE |
| PESTICIDES/PCBs | 1 LITER AMBER | 2 | ICE |
| TRPHs | 1 LITER AMBER | 1 | HCl |
| | | | |

nd Final Report to : Hank Cheng, Bureau of Waste Cleanup

# STATE OF FLORIDA
## DEPARTMENT OF ENVIRONMENTAL PROTECTION
## CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page_____of_____

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 ~~13~~ 12 |
| PROJECT NAME: ~~Bert Morsch~~ ITT THOMPSON | SAMPLERS (SIGNATURES): Kevin Hayes | DATE: 7/2/97 |

| Field ID | ITVP-4A(8') | ITVP-4B(25') | ITVP-4B-DUP (25) | ITSD-RB | ITVP-RB | UNKNOWN WELL | ITVP-TRIP | | | | | | | | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | | | | | | | | | | |
| LAB SPIKE | | | | | | | | | | | | | | | | | | |
| WATER | X | X | X | X | X | X | X | | | | | | | | X | | X | |
| SOIL/SEDIMENT | | | | | | | | | | | | | | | | X | | X |
| METALS | | | | 1 | | | | | | | | | | | P-1L | | HNO3 | |
| CYANIDE | | | | 1 | | | | | | | | | | | P-1L | | NaOH | |
| VOLATILES | 4 | 4 | 4 | 4 | 4 | 4 | 2 | | | | | | | | G-40ml | G250m | HCl | ICE |
| BNAs | | | | 2 | | | | | | | | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | | | | 2 | | | | | | | | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | | | | | | | | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | | | | | | | | | | G500m | | ICE |
| TRPH | | | | 1 | | | | | | | | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | | | | | | | | |
| TOTAL | 4 | 4 | 4 | 10 | 4 | 4 | 2 | | | | | | | | | | | |
| Turbidity | | | | | | | | | | | | | | | | | | |
| Temperature | | | | | | | | | | | | | | | | | | |
| pH-00400 | | | | | | | | | | | | | | | | | | |
| Conductance(umho/cm) | | | | | | | | | | | | | | | | | | |

COMMENTS:

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin Hayes | 2: | 3: |
| Time/date | 1: 7/3/97 11:00 A | 2: | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: | 3: |
| | 1: Amzad B S | 2: | 3: |

19 0098

QUALITY CONTROL REPORT
Job ID: 97-JUL-03-11

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK,SMP |
|---|---|---|---|---|---|---|
| W-CN | Cyanide | | 108 | 111 | | 2.7 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

1 9 0097

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BUREAU OF WASTE CLEANUP
JUL 17 1997
TECHNICAL REVIEW SECTION

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUL-03-11 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 3-JUL-1997 11:33
Date Received: 3-JUL-1997 Customer ID: SSSS
Authorized: 11-JUL-1997 By: Colin Wright

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: _____ Date: 7-14-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00000

Sample ID: 182296/97-JUL-03-11-01 Matrix: W-EQPMT-BK
Location: ITT THOMPSON
Field ID: ITSD-RB
Collected: 2-JUL-1997 10:50 By: KEVIN HAYES
Authorized: 11-JUL-1997 By: Colin Wright
Type: Grab Sample
Lab Comments: TEMP=3DC
Field Comments:

Analysis ID: W-CN
Cyanide analysis of water samples
Prepared: 7-JUL-1997 11:30 By: Kim Barrett
Analyzed: 7-JUL-1997 14:01 By: Virginia Leavell
Authorized: 7-JUL-1997 By: Colin Wright

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 00720 | Cyanide | 0.010 U | mg CN/L |
| Comment | None | | |

1 9 0096

# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
## CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 181845
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: _____
Field ID/Name: ITSD-03
Storet Station Number: _____
NPDES Number: _____

Collection Date: 6/27/97
Collection Time: 14:32
Grab: _____
Composite (X) Begin: 14:32 End: 14:37

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| ___GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | X SLUDGE → SUMP SEDIMENT | ___OTHER | |

Field Parameters Measured By: NA
Signature: —
Sampled By: Hank Cheng / Tom McCaffrey
Signature: (Hank Cheng / Tom McCaffrey)
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet): _____
Chlorine, Total Residual - 50060 (mg/L): _____
Dissolved Oxygen (Probe) -00299 (mg/L): _____
pH - 00400 (Stnd. Units): _____
Salinity - 00480 (PPTh): _____
Secchi Depth - 00078 (M): _____
Specific Conductance - 00094 (umho/cm): _____
Temperature - 00010 (C): _____ ✓

### Soil/Sediment:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| X HG-H-S<br>S-ICP<br>S-CN | Glass Jar-250mL | 1 | ICE |
| S-VOC-SS | Glass Jar-250mL | 1 | ICE |
| S-CLPCB-SS<br>S-BNA-SSSS | Glass Jar-500mL | 1 | ICE |
| TRPH | Glass Jar-250mL | 1 | ICE |

### For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals/Cyanide | Glass Jar-250mL | 1 | Ice |
| Volatiles | Glass Jar-250mL | — | Ice |
| BNAs/Pesticides/PCBs | Glass Jar-500mL | — | Ice |
| TPH | Glass Jar-250mL | — | Ice |

Send Final Report to: Hank Cheng, Bureau of Waste Cleanup

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page 1 of 1

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 - 12 |
| PROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Amy J. Klein / Jennifer Cheng / Arthur M Cuffe | DATE: 6-27-97 |

| Field ID | ITGW-TRIP3 | ITGW-3 | ITSD-03 | ITPW-02 | ITPW-03 | | | | | | | | | | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | | | | | | | | | | |
| LAB SPIKE | | | | | | | | | | | | | | | | | | |
| WATER | X | X | | X | X | | | | | | | | | | X | | X | |
| SOIL/SEDIMENT | | | X | | | | | | | | | | | | | X | | X |
| METALS | | X[1] | ~~X~~ AK | | | | | | | | | | | | P-1L | | HNO3 | |
| CYANIDE | | X[1] | | | | | | | | | | | | | P-1L | | NaOH | |
| VOLATILES | X[2] | [4] | | X[4] | X[4] | | | | | | | | | | G-40ml | G250m | HCl | ICE |
| BNAs | | X[2] | | | | | | | | | | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | | X[2] | | | | | | | | | | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | X[1] | | | | | | | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | | | | | | | | | | G500m | | ICE |
| TRPH | | X[1] | | | | | | | | | | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | | | | | | | | |
| TOTAL | 2 | 11 | 1 | 4 | 4 | | | | | | | | | | | | | |
| Turbidity | – | 13.1 | – | – | – | | | | | | | | | | | | | |
| Temperature | – | 27 | – | – | – | | | | | | | | | | | | | |
| pH-00400 | – | 5.88 | – | – | – | | | | | | | | | | | | | |
| Conductance(umho/cm) | – | 299 | – | – | – | | | | | | | | | | | | | |

COMMENTS:

TEMP. BLANK INCLUDED

| Relinquished By: | 1: Kevin R. Hayes | 2: Hank Cheng | 3: |
|---|---|---|---|
| Time/date | 1: 16:00 6/27/97 | 2: 17:10 6/27/97 | 3: |
| | [illegible] | 2: ~~Hank~~ Hand del. | 3: |

1 9 0095

QUALITY CONTROL REPORT
Job ID: 97-JUN-30-08

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK,SMP |
|---|---|---|---|---|---|---|
| S-CN | Cyanide | | 108 | 110 | | 1.7 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

1 9 0094

BUREAU OF WASTE CLEANUP

JUL 17 1997

TECHNICAL REVIEW SECTION

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUN-30-08 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 30-JUN-1997 10:32
Date Received: 30-JUN-1997 Customer ID: SSSS
Authorized: 11-JUL-1997 By: Colin Wright

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: _____ Date: 7-14-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00000

Sample ID: 181845/97-JUN-30-08-01 Matrix: S-OTHER
Location: ITSD-03
Field ID: ITSD-03
Collected: 27-JUN-1997 14:37 By: J. MCCARTHY/H. CHENG
Authorized: 11-JUL-1997 By: Colin Wright
Type: Composite 27-JUN-1997 14:32 27-JUN-1997 14:37
Lab Comments: DEP TEMP=2DC.
Field Comments: **SAMPLE IS "SLUDGE"-SUMP SEDIMENT.

Analysis ID: S-CN
Analysis of cyanide in sediment by Method 9010
Prepared: 7-JUL-1997 11:30 By: Kim Barrett
Analyzed: 7-JUL-1997 14:01 By: Virginia Leavell
Authorized: 7-JUL-1997 By: Colin Wright

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 00721 | Cyanide | 0.69 U | mg CN/Kg |
| Comment | None | | |

1 9 0093

# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
## CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 182217
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: S.E. quandrant of pond S.W. of pond
Field ID/Name: ITSD-2A
Storet Station Number:
NPDES Number:

Collection Date: 7/1/97
Collection Time: 0930
Grab: X
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | X FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| ___GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature:
Sampled By: KEN STARLING
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet):
Chlorine, Total Residual - 50060 (mg/L):
Dissolved Oxygen (Probe) -00299 (mg/L):
pH - 00400 (Stnd. Units):
Salinity - 00480 (PPTh):
Secchi Depth - 00078 (M):
Specific Conductance - 00094 (umho/cm):
Temperature - 00010 (C):

Soil/Sediment:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| HG-H-S | Glass Jar-250mL | 1 | ICE |
| S-ICP | | | |
| S-CN | | | |
| S-VOC-SS | Glass Jar-250mL | 1 | ICE |
| S-CLPCB-SS | Glass Jar-500mL | 1 | ICE |
| S-BNA-SSSS | | | |
| TRPH | Glass Jar-250mL | 1 | ICE |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals/Cyanide | Glass Jar-250mL | 1 | Ice |
| Volatiles | Glass Jar-250mL | 1 | Ice |
| BNAs/Pesticides/PCBs | Glass Jar-500mL | 1 | Ice |
| TPH | Glass Jar-250mL | 1 | Ice |

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page 1 of 1

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: 19000 92 |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 - ~~13~~ |
| PROJECT NAME: ~~Bert Morsch~~ ITT THOMPSON | SAMPLERS (SIGNATURES): Kevin Hayes, Ken Stanley | DATE: |

| Field ID | ITSD-1A | ITSD-2A | ITGW-RB | ITGW-TRIP-S | ~~FRANCIS MUNICIPAL WELL~~ | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | |
| LAB SPIKE | | | | | | | | | |
| WATER | | | X | X | X | X | | X | |
| SOIL/SEDIMENT | X | X | | | | | X | | X |
| METALS | | | 1 | | 1 | P-1L | | HNO3 | |
| CYANIDE | | | 1 | | | P-1L | | NaOH | |
| VOLATILES | 1 | 1 | 4 | 2 | 4 | G-40ml | G250m | HCl | ICE |
| BNAs | | | 2 | | 2 | G-1L | | ICE | |
| PESTICIDES/PCBs | 1 | | 2 | | 2 | G-1L | | ICE | |
| METALS/CYANIDE | 1 | 1 | | | | | G250m | | ICE |
| BNA/PEST/PCB | 1 | 1 | | | | | G500m | | ICE |
| TRPH | 1 | 1 | 1 | | 1 | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | P250ml | | HCl | |
| | | | | | | | | | |
| TOTAL | 4 | 4 | 11 | 2 | | | | | |
| Turbidity | NA | NA | NA | NA | NA | | | | |
| Temperature | | | | | | | | | |
| pH-00400 | | | | | | | | | |
| Conductance(umho/cm) | | | | | | | | | |

COMMENTS: FRANCIS MUNICIPAL WELL NOT SAMPLED DUE TO PRESENCE OF FREE PRODUCT.
KRK 7/1/97

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin Hayes | 2: | 3: |
| Time/date | 1: 7/1/97 | 2: | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: | 3: |
| | | 2: | 3: |

1 9 0092

QUALITY CONTROL REPORT
Job ID: 97-JUL-02-25

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK,SMP |
|---|---|---|---|---|---|---|
| S-CN | Cyanide | | 108 | 110 | | 1.7 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
## CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 132216 (Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: N. E. quadrant of pond S.W. of site
Field ID/Name: ITSD-1 ~~(Background)~~
Storet Station Number:
NPDES Number:

Collection Date: 7/1/97
Collection Time: 08:50
Grab: X
Composite Begin: End:

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | X FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| ___GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: N/A
Signature:
Sampled By: Kevin Starling
Signature: Kevin Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet):
Chlorine, Total Residual - 50060 (mg/L):
Dissolved Oxygen (Probe) -00299 (mg/L):
pH - 00400 (Stnd. Units):
Salinity - 00480 (PPTh):
Secchi Depth - 00078 (M):
Specific Conductance - 00094 (umho/cm):
Temperature - 00010 (C):

### Soil/Sediment:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| HG-H-S<br>S-ICP<br>S-CN | Glass Jar-250mL | 1 | ICE |
| S-VOC-SS | Glass Jar-250mL | 1 | ICE |
| S-CLPCB-SS<br>S-BNA-SSSS | Glass Jar-500mL | 1 | ICE |
| TRPH | Glass Jar-250mL | 1 | ICE |

### For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals/Cyanide | Glass Jar-250mL | 1 | Ice |
| Volatiles | Glass Jar-250mL | 1 | Ice |
| BNAs/Pesticides/PCBs | Glass Jar-500mL | 1 | Ice |
| TRPH | Glass Jar-250mL | 1 | Ice |

Send Final Report to: Hank Cheng, Bureau of Waste Cleanup

*** SPIKE IN LAB***

1 9 0091

BUREAU OF WASTE CLEANUP

JUL 17 1997

TECHNICAL REVIEW SECTION

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUL-02-25 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 2-JUL-1997 11:42
Date Received: 2-JUL-1997 Customer ID: SSSS
Authorized: 11-JUL-1997 By: Colin Wright

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: Han Date: 7-14-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00003

Sample ID: 182216/97-JUL-02-25-01 Matrix: S-FRHWTRSD
Location: N.E. QUADRANT OF POND S.W. OF SITE
Field ID: ITSD-1A
Collected: 1-JUL-1997 08:50 By: K. STARLING
Authorized: 11-JUL-1997 By: Colin Wright
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: S-CN
Analysis of cyanide in sediment by Method 9010
Prepared: 7-JUL-1997 11:30 By: Kim Barrett
Analyzed: 7-JUL-1997 14:01 By: Virginia Leavell
Authorized: 7-JUL-1997 By: Colin Wright

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 00721 | Cyanide | 0.92 U | mg CN/Kg |
| Comment | None | | |

---

Sample ID: 182217/97-JUL-02-25-02 Matrix: S-FRHWTRSD
Location: S.E. QUADRANT OF POND S.W. OF POND
Field ID: ITSD-2A
Collected: 1-JUL-1997 09:30 By: K. STARLING
Authorized: 11-JUL-1997 By: Colin Wright
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: S-CN
Analysis of cyanide in sediment by Method 9010
Prepared: 7-JUL-1997 11:30 By: Kim Barrett
Analyzed: 7-JUL-1997 14:01 By: Virginia Leavell
Authorized: 7-JUL-1997 By: Colin Wright

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 00721 | Cyanide | 0.77 U | mg CN/Kg |
| Comment | None | | |

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0090

Sample ID: 187150
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: _____
Field ID/Name: ITGW-RB
Storet Station Number: _____
NPDES Number: _____

Collection Date: 7/1/97
Collection Time: 10:00 A
Grab: _____
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | X EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature: _____
Sampled By: KEVIN HAYES
Signature: Kevin Hayes
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet): _____
Chlorine, Total Residual - 50060 (mg/L): _____
Dissolved Oxygen (Probe) -00299 (mg/L): _____
pH - 00400 (Stnd. Units): _____
Salinity - 00480 (PPTh): _____
Secchi Depth - 00078 (M): _____
Specific Conductance - 00094 (umho/cm): _____
Temperature - 00010 (C): _____

Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| See Below | | | |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| METALS | 1 LITER POLY | 1 | $HNO_3$ |
| CYANIDE | 1 LITER POLY | 1 | NaOH |
| BNAs | 2 LITER AMBER | 2 | ICE |
| PESTICIDES/PCBS | 1 LITER AMBER | 2 | ICE |
| TRPHs | 1 LITER AMBER | 1 | HCl |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page 1 of 1

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| e Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 - 12 |
| OJECT NAME: ~~Bert Morsch~~ ITT THOMPSON | SAMPLERS (SIGNATURES): Kevin Hayes, Ken Stanley | DATE: |

| Field ID | ITSD-1A | ITSD-2A | ITGW-RB | ITGW-TRIP-S | FRANCIS MUNICIPAL WELL | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | |
| LAB SPIKE | | | | | | | | | |
| WATER | | | X | X | X | X | | X | |
| SOIL/SEDIMENT | X | X | | | | | X | | X |
| METALS | | | 1 | | 1 | P-1L | | HNO3 | |
| CYANIDE | | | 1 | | | P-1L | | NaOH | |
| VOLATILES | 1 | 1 | 4 | 2 | 4 | G-40ml | G250m | HCl | ICE |
| BNAs | | | 2 | | 2 | G-1L | | ICE | |
| PESTICIDES/PCBs | 1 | 1 | 2 | | 2 | G-1L | | ICE | |
| METALS/CYANIDE | 1 | 1 | | | | | G250m | | ICE |
| BNA/PEST/PCB | 1 | 1 | | | | | G500m | | ICE |
| TRPH | 1 | 1 | 1 | | 1 | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | P250ml | | HCl | |
| | | | | | | | | | |
| TOTAL | 4 | 4 | 11 | 2 | | | | | |
| Turbidity | NA | NA | NA | NA | NA | | | | |
| Temperature | ↓ | ↓ | ↓ | ↓ | ↓ | | | | |
| pH-00400 | | | | | | | | | |
| Conductance(umho/cm) | ↓ | ↓ | ↓ | ↓ | ↓ | | | | |

COMMENTS: FRANCIS MUNICIPAL WELL NOT SAMPLED DUE TO PRESENCE OF FREE PRODUCT.
KRK 7/1/97

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin Hayes | 2: | 3: |
| Time/date | 1: 7/1/97 | 2: | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: | 3: |
| | 1: | 2: | 3: |

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0089

Sample ID: 18252 (Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: _____
Field ID/Name: ITGW-RB
Storet Station Number: _____
NPDES Number: _____

Collection Date: 7/1/97
Collection Time: 10:00 A
Grab: _____
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | X EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature: _____
Sampled By: KEVIN HAYES
Signature: Kevin Hayes
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet): _____
Chlorine, Total Residual - 50060 (mg/L): _____
Dissolved Oxygen (Probe) -00299 (mg/L): _____
pH - 00400 (Stnd. Units): _____
Salinity - 00480 (PPTh): _____
Secchi Depth - 00078 (M): _____
Specific Conductance - 00094 (umho/cm): _____
Temperature - 00010 (C): _____ √

Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| See Below | | | |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| METALS | 1 LITER POLY | 1 | $HNO_3$ |
| CYANIDE | 1 LITER POLY | 1 | NaOH |
| BNAs | 1 LITER AMBER | 2 | ICE |
| PESTICIDES/PCBS | 1 LITER AMBER | 2 | ICE |
| TRPHs | 1 LITER AMBER | 1 | HCl |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

STATE OF FLORIDA

# DEPARTMENT OF ENVIRONMENTAL PROTECTION

## CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD

CERCLA SITE SCREENING



| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: 5000 12 |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 18 |
| PROJECT NAME: ~~Bert Morsch~~ ITT THOMPSON | SAMPLERS (SIGNATURES): Kevin Hayes, Ken Starling | DATE: |

| Field ID | ITSD-1A | ITSD-2A | ITGW-RB | ITGW-TRIP-S | FRANCIS MUNICIPAL WELL | | | | | | | | | | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | | | | | | | | | | |
| LAB SPIKE | | | | | | | | | | | | | | | | | | |
| WATER | | | X | X | X | | | | | | | | | | X | | X | |
| SOIL/SEDIMENT | X | X | | | | | | | | | | | | | | X | | X |
| METALS | | | 1 | | 1 | | | | | | | | | | P-1L | | HNO3 | |
| CYANIDE | | | 1 | | | | | | | | | | | | P-1L | | NaOH | |
| VOLATILES | 1 | 1 | 4 | 2 | 4 | | | | | | | | | | G-40ml | G250m | HCl | ICE |
| BNAs | | | 2 | | 2 | | | | | | | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | 1 | 1 | 2 | | 2 | | | | | | | | | | G-1L | | ICE | |
| METALS/CYANIDE | 1 | 1 | | | | | | | | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | 1 | 1 | | | | | | | | | | | | | | G500m | | ICE |
| TRPH | 1 | 1 | 1 | | 1 | | | | | | | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | | | | | | | | |
| TOTAL | 4 | 4 | 11 | 2 | | | | | | | | | | | | | | |
| Turbidity | NA | NA | NA | NA | NA | | | | | | | | | | | | | |
| Temperature | ↓ | ↓ | ↓ | ↓ | ↓ | | | | | | | | | | | | | |
| pH-00400 | | | | | | | | | | | | | | | | | | |
| Conductance(umho/cm) | ↓ | ↓ | ↓ | ↓ | ↓ | | | | | | | | | | | | | |

COMMENTS: FRANCIS MUNICIPAL WELL NOT SAMPLED DUE TO PRESENCE OF FREE PRODUCT.

FRH 7/1/97

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin Hayes | 2: | 3: |
| Time/date | 1: 7/1/97 | 2: | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: | 3: |
| Received By | 1: [illegible] 7-1-97 | 2: | 3: |

19 0068

QUALITY CONTROL REPORT
Job ID: 97-JUL-02-21

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK, SMP |
|---|---|---|---|---|---|---|
| W-CN | Cyanide | | 110 | 113 | | 2.7 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

1 9 0067

BUREAU OF WASTE CLEANUP

JUL 17 1997

TECHNICAL REVIEW SECTION

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUL-02-21 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 2-JUL-1997 11:19
Date Received: 2-JUL-1997 Customer ID: SSSS
Authorized: 11-JUL-1997 By: Colin Wright

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: _____ Date: 7-14-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00000

Sample ID: 182152/97-JUL-02-21-01 Matrix: W-EQPMT-BK
Location: ITGW-RB
Field ID: ITGW-RB
Collected: 1-JUL-1997 10:00 By: K. HAYES
Authorized: 11-JUL-1997 By: Colin Wright
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: W-CN
Cyanide analysis of water samples
Prepared: 3-JUL-1997 10:45 By: Kim Barrett
Analyzed: 3-JUL-1997 13:26 By: Virginia Leavell
Authorized: 7-JUL-1997 By: Colin Wright

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 00720 | Cyanide | 0.010 U | mg CN/L |
| Comment | None | | |

1 9 0086

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 181877
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW6
Field ID/Name: ITGW-5
Storet Station Number:
NPDES Number:

Collection Date: 6/30/97
Collection Time: 18:40
Grab: X
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: KEN STARLING — Jessie Davis
Signature:
Sampled By: KEN STARLING — Jessie Davis
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters:
Depth (Feet): 25' BTOC (TD)
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.75
Salinity - 00480 (PPTh): NA
TURBIDITY (NTUs)
~~Secchi Depth - 00078~~ (M): 3.65
Specific Conductance - 00094 (umho/cm): 1130
Temperature - 00010 (C): 27

Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| METALS | PLASTIC 1L | 1 | $HNO_3$ |
| CYANIDE | PLASTIC 1L | 1 | NaOH |
| BNAS | BROWN GLASS-1L | 2 | ICE |
| PESTICIDES/PCBS | BROWN GLASS-1L | 2 | ICE |
| TRPH | BROWN GLASS-1L | 1 | HCl |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page_____of_____

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 - 12 |
| PROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Kevin R Hayes, X K Stark - [illegible] | DATE: 6/30/97 |

| Field ID | ITGW-4 | ITGW-4-DUP | ITGW-5 | ITGW-TRIP-4 | ITVP-1A | | | | | | | | | | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | | | | | | | | | | |
| LAB SPIKE | | | | | | | | | | | | | | | | | | |
| WATER | X | X | X | X | X | | | | | | | | | | X | | X | |
| SOIL/SEDIMENT | | | | | | | | | | | | | | | | X | | X |
| METALS | 1 | 1 | 1 | | | | | | | | | | | | P-1L | | HNO3 | |
| CYANIDE | 1 | 1 | 1 | | | | | | | | | | | | P-1L | | NaOH | |
| VOLATILES | 4 | 4 | 4 | 2 | 4 | | | | | | | | | | G-40ml | G250m | HCl | ICE |
| BNAs | 2 | 2 | 2 | | | | | | | | | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | 1* | 2 | 2 | | | | | | | | | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | | | | | | | | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | | | | | | | | | | G500m | | ICE |
| TRPH | 1 | 1 | 1 | | | | | | | | | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | | | | | | | | |
| TOTAL | 10 | 11 | 11 | 2 | 4 | | | | | | | | | | | | | |
| Turbidity | 4.45 | 4.45 | 3.65 | NA | NA | | | | | | | | | | | | | |
| Temperature | UNK | UNK. | 27 | NA | NA | | | | | | | | | | | | | |
| pH-00400 | 3.83 | 3.83 | 3.75 | NA | NA | | | | | | | | | | | | | |
| Conductance(umho/cm) | 497 | 497 | 1130 | NA | NA | | | | | | | | | | | | | |

COMMENTS: * SHORT 1 - BROWN 1-LITER AMBER FOR PESTICIDES

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin Hayes | 2: | 3: |
| Time/date | 1: 6/30/97 P21:00 | 2: | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: | 3: |
| Received By | 1: [illegible] | 2: | 3: |
| | [illegible] 10:00 am | 2: | 3: |

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0085

Sample ID: 181675
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW5B
Field ID/Name: IT GW-4
Storet Station Number:
NPDES Number:

Collection Date: 6/30/97
Collection Time: 12:30
Grab: X
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| _X_GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: KEN STARLING - ~~Sean Decker~~
Signature:
Sampled By: KEN STARLING - Sean Decker
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters:
~~Depth~~ (Feet): TD @ 39.2' BTOC
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.83
Salinity - 00480 (PPTh): NA
~~Secchi Depth - 00078~~ TURBIDITY (NTUs) (M): 4.45
Specific Conductance - 00094 (umho/cm): 497
Temperature - 00010 (C): — UNKNOWN THERMOMETER - NOT TEMP FUNCT

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 1 * | Ice |
| TPH | Brown Glass-1L | 1 | HCl |
| | | | |

NOTE: SHORT 1 ~~-L~~ 1-liter

Hank Cheng, Bureau of Waste Cleanup

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 151576
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MWSB
Field ID/Name: ITGW-4-DUP
Storet Station Number:
NPDES Number:

Collection Date: 6/30/97
Collection Time: 12:30
Grab: X
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| _X_GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: KEN STARLING - ~~Jesus Diaz~~
Signature:
Sampled By: KEN STARLING - ~~Jesus Diaz~~
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters:
~~Depth~~ (Feet): TOC 39.21 BTOC
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.83
Salinity - 00480 (PPTh): NA
TURBIDITY (NTUS)
~~Secchi Depth - 00078~~ (M): 4.45
Specific Conductance - 00094 (umho/cm): 497
Temperature - 00010 (C): UNKNOWN
THERMOMETER NOT FUNCTIONAL

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| ~~W-CN~~ | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |

Hank Cheng, Bureau of Waste Cleanup

Sample ID: 181877/97-JUL-01-07-03 Matrix: W-GROUND
Location: MW6
Field ID: ITGW-5
Collected: 30-JUN-1997 18:40 By: K. STARLING
Authorized: 11-JUL-1997 By: Colin Wright
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: W-CN
Cyanide analysis of water samples
Prepared: 3-JUL-1997 10:45 By: Kim Barrett
Analyzed: 3-JUL-1997 13:26 By: Virginia Leavell
Authorized: 7-JUL-1997 By: Colin Wright

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 00720 | Cyanide | 0.010 U | mg CN/L |
| Comment | None | | |

00003

QUALITY CONTROL REPORT
Job ID: 97-JUL-01-07

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK, SMP |
|---|---|---|---|---|---|---|
| W-CN | Cyanide | | 110 | 113 | | 2.7 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

1 9 0083

BUREAU OF WASTE CLEANUP

JUL 17 1997

TECHNICAL REVIEW SECTION

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUL-01-07 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 1-JUL-1997 10:14
Date Received: 1-JUL-1997 Customer ID: SSSS
Authorized: 11-JUL-1997 By: Colin Wright

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: _____ Date: 7-14-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00004

Sample ID: 181875/97-JUL-01-07-01 Matrix: W-GROUND
Location: MW5B
Field ID: ITGW-4
Collected: 30-JUN-1997 12:30 By: K. STARLING
Authorized: 11-JUL-1997 By: Colin Wright
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: W-CN
Cyanide analysis of water samples
Prepared: 3-JUL-1997 10:45 By: Kim Barrett
Analyzed: 3-JUL-1997 13:26 By: Virginia Leavell
Authorized: 7-JUL-1997 By: Colin Wright

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 00720 | Cyanide | 0.010 U | mg CN/L |
| Comment | None | | |

---

Sample ID: 181876/97-JUL-01-07-02 Matrix: W-GROUND
Location: MW5B
Field ID: ITGW-4-DUP
Collected: 30-JUN-1997 12:30 By: K. STARLING
Authorized: 11-JUL-1997 By: Colin Wright
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: W-CN
Cyanide analysis of water samples
Prepared: 3-JUL-1997 10:45 By: Kim Barrett
Analyzed: 3-JUL-1997 13:26 By: Virginia Leavell
Authorized: 7-JUL-1997 By: Colin Wright

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 00720 | Cyanide | 0.010 U | mg CN/L |
| Comment | None | | |

1 9 0082

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 181643
(Lab Use Only)

RQ- 97 - Jun - 23 - 12

Sample Location: MW 4B
Field ID/Name: ITGW-3
Storet Station Number: —
NPDES Number: —

Collection Date: 6-27-97
Collection Time: 1400 hrs
Grab: —
Composite Begin: _____ End: _____

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Jo Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): 40
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 5.88
Salinity - 00480 (PPTh): NA
Turbidity (NTU)
~~Secchi Depth~~ - 00078 (M): 13.1 NTU
Specific Conductance - 00094 (umho/cm): 299
Temperature - 00010 (C): 27

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page 1 of 1 00005

| | | |
|---|---|---|
| BMITTING AGENCY / COMPANY NAME: e Screening Superfund Subsection | CONTACT NAME AND PHONE#: Hank Cheng (904) 921-0858 | Request ID: RQ-97- Jun - 23 - 12 |
| ROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Amy J. Klei / Hank Cheng | DATE: 6-27-97 |

| ield ID | ITGW-TRIP3 | ITGW-3 | ITSD-03 | ITPW-02 | ITPW-03 | | | | | | | | | | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | | | | | | | | | | |
| LAB SPIKE | | | | | | | | | | | | | | | | | | |
| WATER | X | X | | X | X | | | | | | | | | | x | | x | |
| SOIL/SEDIMENT | | | X | | | | | | | | | | | | | x | | x |
| METALS | | X[1] | ~~X~~ AK | | | | | | | | | | | | P-1L | | HNO3 | |
| CYANIDE | | X[1] | | | | | | | | | | | | | P-1L | | NaOH | |
| VOLATILES | X[2] | [4] | | X[4] | X[4] | | | | | | | | | | G-40ml | G250m | HCl | ICE |
| BNAs | | X[2] | | | | | | | | | | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | | X[2] | | | | | | | | | | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | X[1] | | | | | | | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | | | | | | | | | | G500m | | ICE |
| TRPH | | X[1] | | | | | | | | | | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | | | | | | | | |
| TOTAL | 2 | 11 | 1 | 4 | 4 | | | | | | | | | | | | | |
| Turbidity | — | 13.1 | — | — | — | | | | | | | | | | | | | |
| Temperature | — | 27 | — | — | — | | | | | | | | | | | | | |
| pH-00400 | — | 5.88 | — | — | — | | | | | | | | | | | | | |
| Conductance(umho/cm) | — | 299 | — | — | — | | | | | | | | | | | | | |

COMMENTS:

TEMP. BLANK INCLUDED

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin R. Hayes | 2: Hank Cheng | 3: |
| Time/date | 1: 16:00 6/27/97 | 2: 17:10 6/27/97 | 3: |
| | | 2: ~~Hank~~ Hand del. | 3: |

QUALITY CONTROL REPORT
Job ID: 97-JUN-30-06

19 0081

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD | |
|---|---|---|---|---|---|---|
| | | | | | LFB | SPK, SMP |
| W-CN | Cyanide | | 110 | 113 | | 2.7 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

19 0080

BUREAU OF WASTE CLEANUP

JUL 30 1997

TECHNICAL REVIEW SECTION

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUN-30-06 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 30-JUN-1997 10:32
Date Received: 30-JUN-1997 Customer ID: SSSS
Authorized: 15-JUL-1997 By: Colin Wright

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: _____ Date: 7-17-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00000

Sample ID: 181843/97-JUN-30-06-01 Matrix: W-GROUND
Location: MW4B
Field ID: ITGW-3
Collected: 27-JUN-1997 14:00 By: A. KLEI
Authorized: 15-JUL-1997 By: Colin Wright
Type: Grab Sample
Lab Comments: DEP TEMP=2DC.
Field Comments:

Analysis ID: W-CN
Cyanide analysis of water samples
Prepared: 3-JUL-1997 10:45 By: Kim Barrett
Analyzed: 3-JUL-1997 13:26 By: Virginia Leavell
Authorized: 7-JUL-1997 By: Colin Wright

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 00720 | Cyanide | 0.010 U | mg CN/L |
| Comment | None | | |

181806/97-JUN-27-06-01/W-ICP-23 Continued from Page 2

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01087 | Vanadium | 8 U | ug/L |
| 01092 | Zinc | 20 U | ug/L |
| Comment | None | | |

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Analysis ID: W-ICPMS
ICPMS analysis of total metals in water by Method 200.8
Prepared: 1-JUL-1997 15:00 By: Christa Kinyon
Analyzed: 14-JUL-1997 14:08 By: Brett Organ
Authorized: 29-JUL-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01105 | Aluminum | 0 | ug/L |
| 01002 | Arsenic | 20 | ug/L |
| 01097 | Antimony | 0 | ug/L |
| 01007 | Barium | 0 | ug/L |
| 01012 | Beryllium | 0 | ug/L |
| 01027 | Cadmium | 0 | ug/L |
| 01034 | Chromium | 0 | ug/L |
| 01037 | Cobalt | 0 | ug/L |
| 01042 | Copper | 0 | ug/L |
| 01051 | Lead | 0.3 I | ug/L |
| 01055 | Manganese | 0 | ug/L |
| 01062 | Molybdenum | 0 | ug/L |
| 01067 | Nickel | 0 | ug/L |
| 01147 | Selenium | 4 U | ug/L |
| 01077 | Silver | 0 | ug/L |
| 01059 | Thallium | 0.2 U | ug/L |
| 01087 | Vanadium | 0 | ug/L |
| 01092 | Zinc | 0 | ug/L |
| Comment | The Se and Tl MDLs were adjusted due to sample preparation background. The Se spike recovery was outside the control limits. | | |

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Sample ID: 181807/97-JUN-27-06-02 Matrix: W-GROUND
Location: MW-7
Field ID: ITGW-6
Collected: 26-JUN-1997 17:40 By: A. KLEI
Authorized: 29-JUL-1997 By: Julio J. Arrecis
Type: Grab Sample
Lab Comments: DEP TEMP=5DC.
Field Comments:

181807/97-JUN-27-06-02 Continued on Page 4

181807/97-JUN-27-06-02 Continued from Page 3

00001

Analysis ID: HG-H-W
Mercury in liquid samples by Method 245.1 (modified)
Prepared: 30-JUN-1997 13:40 By: Tanya Denis
Analyzed: 2-JUL-1997 11:14 By: Felix A. Akinade
Authorized: 3-JUL-1997 By: TM Chandrashekar

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 71900 | Mercury | 0.10 U | ug/L |
| Comment | None | | |

---

Analysis ID: W-ICP-23
ICP multielement analysis of aqueous samples by Method 200.7
Prepared: 1-JUL-1997 15:00 By: Christa Kinyon
Analyzed: 8-JUL-1997 15:32 By: Elena Compton
Authorized: 29-JUL-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01105 | Aluminum | 244 | ug/L |
| 01002 | Arsenic | 0 | ug/L |
| 01097 | Antimony | 30 U | ug/L |
| 01007 | Barium | 70.3 | ug/L |
| 01012 | Beryllium | 1 U | ug/L |
| 01027 | Cadmium | 10 U | ug/L |
| 00916 | Calcium | 93.0 | mg/L |
| 01034 | Chromium | 20 U | ug/L |
| 01037 | Cobalt | 8 U | ug/L |
| 01042 | Copper | 20 U | ug/L |
| 01045 | Iron | 2.60E+04 | ug/L |
| 01051 | Lead | 0 | ug/L |
| 00927 | Magnesium | 2.89 | mg/L |
| 01055 | Manganese | 967 | ug/L |
| 01067 | Nickel | 10 U | ug/L |
| 00937 | Potassium | 4.20 | mg/L |
| 01147 | Selenium | 0 | ug/L |
| 01077 | Silver | 6 U | ug/L |
| 00929 | Sodium | 3.22 | mg/L |
| 01082 | Strontium | 0 | ug/L |
| 01059 | Thallium | 0 | ug/L |
| 01087 | Vanadium | 8 U | ug/L |
| 01092 | Zinc | 20 U | ug/L |
| Comment | None | | |

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181807/97-JUN-27-06-02 Continued on Page 5

181807/97-JUN-27-06-02 Continued from Page 4

Analysis ID: W-ICPMS
ICPMS analysis of total metals in water by Method 200.8
Prepared: 1-JUL-1997 15:00 By: Christa Kinyon
Analyzed: 14-JUL-1997 14:12 By: Brett Organ
Authorized: 29-JUL-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01105 | Aluminum | 0 | ug/L |
| 01002 | Arsenic | 4 U | ug/L |
| 01097 | Antimony | 0 | ug/L |
| 01007 | Barium | 0 | ug/L |
| 01012 | Beryllium | 0 | ug/L |
| 01027 | Cadmium | 0 | ug/L |
| 01034 | Chromium | 0 | ug/L |
| 01037 | Cobalt | 0 | ug/L |
| 01042 | Copper | 0 | ug/L |
| 01051 | Lead | 0.6 I | ug/L |
| 01055 | Manganese | 0 | ug/L |
| 01062 | Molybdenum | 0 | ug/L |
| 01067 | Nickel | 0 | ug/L |
| 01147 | Selenium | 4 U | ug/L |
| 01077 | Silver | 0 | ug/L |
| 01059 | Thallium | 0.2 U | ug/L |
| 01087 | Vanadium | 0 | ug/L |
| 01092 | Zinc | 0 | ug/L |

Comment The Se and Tl MDLs were adjusted due to sample preparation background. The Se spike recovery was outside the control limits.

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Sample ID: 181808/97-JUN-27-06-03 Matrix: W-GROUND
Location: MW-11B
Field ID: ITGW-7
Collected: 26-JUN-1997 00:00 By: A. KLEI
Authorized: 29-JUL-1997 By: Julio J. Arrecis
Type: Grab Sample
Lab Comments: DEP TEMP=5DC.
Field Comments:

Analysis ID: HG-H-W
Mercury in liquid samples by Method 245.1 (modified)
Prepared: 30-JUN-1997 13:40 By: Tanya Denis
Analyzed: 2-JUL-1997 11:14 By: Felix A. Akinade
Authorized: 3-JUL-1997 By: TM Chandrashekar

| Storet# | Analyte | Value | Units |
|---|---|---|---|

181808/97-JUN-27-06-03/HG-H-W Continued on Page 6

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 71900 | Mercury | 0.10 U | ug/L |
| Comment | None | | |

Analysis ID: W-ICP-23
ICP multielement analysis of aqueous samples by Method 200.7
Prepared: 1-JUL-1997 15:00 By: Christa Kinyon
Analyzed: 8-JUL-1997 15:38 By: Elena Compton
Authorized: 29-JUL-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01105 | Aluminum | 3200 | ug/L |
| 01002 | Arsenic | 0 | ug/L |
| 01097 | Antimony | 30 U | ug/L |
| 01007 | Barium | 29.0 | ug/L |
| 01012 | Beryllium | 1 U | ug/L |
| 01027 | Cadmium | 10 U | ug/L |
| 00916 | Calcium | 6.37 | mg/L |
| 01034 | Chromium | 20 U | ug/L |
| 01037 | Cobalt | 8 U | ug/L |
| 01042 | Copper | 20 U | ug/L |
| 01045 | Iron | 3420 | ug/L |
| 01051 | Lead | 0 | ug/L |
| 00927 | Magnesium | 5.82 | mg/L |
| 01055 | Manganese | 23 | ug/L |
| 01067 | Nickel | 10 U | ug/L |
| 00937 | Potassium | 2.90 | mg/L |
| 01147 | Selenium | 0 | ug/L |
| 01077 | Silver | 6 U | ug/L |
| 00929 | Sodium | 6.74 | mg/L |
| 01082 | Strontium | 0 | ug/L |
| 01059 | Thallium | 0 | ug/L |
| 01087 | Vanadium | 8 U | ug/L |
| 01092 | Zinc | 20 U | ug/L |
| Comment | None | | |

Analysis ID: W-ICPMS
ICPMS analysis of total metals in water by Method 200.8
Prepared: 1-JUL-1997 15:00 By: Christa Kinyon
Analyzed: 27-JUL-1997 13:30 By: Robert C. Pellow
Authorized: 29-JUL-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01105 | Aluminum | 0 | ug/L |
| 01002 | Arsenic | 4 U | ug/L |

181808/97-JUN-27-06-03/W-ICPMS Continued from Page 6

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01097 | Antimony | 0 | ug/L |
| 01007 | Barium | 0 | ug/L |
| 01012 | Beryllium | 0 | ug/L |
| 01027 | Cadmium | 0 | ug/L |
| 01034 | Chromium | 0 | ug/L |
| 01037 | Cobalt | 0 | ug/L |
| 01042 | Copper | 0 | ug/L |
| 01051 | Lead | 2.34 A | ug/L |
| 01055 | Manganese | 0 | ug/L |
| 01062 | Molybdenum | 0 | ug/L |
| 01067 | Nickel | 0 | ug/L |
| 01147 | Selenium | 2 U | ug/L |
| 01077 | Silver | 0 | ug/L |
| 01059 | Thallium | 0.1 U | ug/L |
| 01087 | Vanadium | 0 | ug/L |
| 01092 | Zinc | 0 | ug/L |

Comment None

000005

# QUALITY CONTROL REPORT
## Job ID: 97-JUN-27-06

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK, SMP |
|---|---|---|---|---|---|---|
| [illegible]-W | Mercury | | 93.6 | 93.1 | | 0.5 |
| [illegible]-23 | Aluminum | | 105 | 107 | | 14.8 |
| [illegible]-23 | Antimony | | 109 | 108 | | 0.5 |
| [illegible]-23 | Barium | | 106 | 105 | | 2.2 |
| [illegible]-23 | Beryllium | | 109 | 107 | | 2.2 |
| W-ICP-23 | Cadmium | | 110 | 109 | | 1.1 |
| W-ICP-23 | Calcium | | 108 | | | 1.9 |
| W-ICP-23 | Chromium | | 110 | 109 | | 0.6 |
| W-ICP-23 | Cobalt | | 106 | 102 | | 3.9 |
| W-ICP-23 | Copper | | 109 | 105 | | 3.6 |
| W-ICP-23 | Iron | | 112 | 112 | | 5.1 |
| W-ICP-23 | Magnesium | | 103 | | | 1.9 |
| W-ICP-23 | Manganese | | 109 | 107 | | 0.0 |
| W-ICP-23 | Nickel | | 110 | 108 | | 2.0 |
| W-ICP-23 | Potassium | | 99.3 | | | 4.1 |
| W-ICP-23 | Silver | | 105 | 103 | | 1.9 |
| W-ICP-23 | Sodium | | 99.1 | | | 1.9 |
| W-ICP-23 | Vanadium | | 107 | 106 | | 1.5 |
| W-ICP-23 | Zinc | | 111 | 108 | | 0.8 |
| W-ICPMS | Arsenic | | 103 | 103 | | 0.1 |
| W-ICPMS | Arsenic | | 99.1 | 95.7 | | 3.4 |
| W-ICPMS | Lead | | 106 | 105 | | 1.2 |
| W-ICPMS | Lead | | 107 | 105 | | 6.9 |
| W-ICPMS | Selenium | | 116 | 122 | | 4.9 |
| W-ICPMS | Selenium | | 102 | 98.5 | | 3.6 |
| W-ICPMS | Thallium | | 105 | 106 | | 1.2 |
| W-ICPMS | Thallium | | 103 | 103 | | 0.2 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson 19 0122

Sample ID: 1418806 (Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW-2
Field ID/Name: ~~ITT~~ ITGW-2
Storet Station Number: —
NPDES Number: —

Collection Date: 6/26/97
Collection Time: 1600
Grab: X
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Jo Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): 37' BTOC
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 6.19
Salinity - 00480 (PPTh): NA
Turbidity (NTU)
~~Secchi Depth - 00078~~ (M): 9.3 NTU
Specific Conductance - 00094 (umho/cm): 339
Temperature - 00010 (C): 25°C

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

MAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 151807
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW 7
Field ID/Name: ITGW-6
Storet Station Number: —
NPDES Number: —

Collection Date: 6/26/97
Collection Time: 1740
Grab: X
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Jo Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): 12.5
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 6.41
Salinity - 00480 (PPTh): NA
Turbidity (N.T.U.)
~~Secchi Depth - 00078~~ (M): 4.89
Specific Conductance - 00094 (umho/cm): 532
Temperature - 00010 (C): 25

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |

Hank Cheng, Bureau of Waste Cleanup

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

19 0123

Sample ID: 181808
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW-11B
Field ID/Name: ITGW-7
Storet Station Number:
NPDES Number:

Collection Date: 6/26/97
Collection Time:
Grab:
Composite Begin: End:

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): ~24'
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.89
Salinity - 00480 (PPTh): NA
Turbidity (NTU)
Secchi Depth -00078 (M): 1.36 NTU
Specific Conductance - 00094 (umho/cm): 192
Temperature - 00010 (C): 26°C

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | X 2 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | X 6 | Ice |
| W-CLPCB-SS | Brown Glass-1L | X 6 | Ice |
| TRPH | Brown Glass-1L | X 3 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 2 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 6 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 6 | Ice |
| TRPH | Brown Glass-1L | 3 | HCl |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

SPIKE IN LAB

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING



| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 0012 |
| PROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Hei-Fong Cheng | DATE: 6-26-97 |

| Field ID | ITGW-2 | ITGW-7 MS | ITGW-6 | ITGW-TRIP2 | ITPW-1 | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | |
| LAB SPIKE | | X | | | | | | | |
| WATER | X | X | X | X | X | X | | X | |
| SOIL/SEDIMENT | | | | | | | X | | X |
| METALS | X | X | X | | | P-1L | | HNO3 | |
| CYANIDE | X | X | X | | | P-1L | | NaOH | |
| VOLATILES | X | X | X | X | X | G-40ml | G250m | HCl | ICE |
| BNAs | X | X | X | | | G-1L | | ICE | |
| PESTICIDES/PCBs | X | X | X | | | G-1L | | ICE | |
| METALS/CYANIDE | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | G500m | | ICE |
| TRPH | X | X | X | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | P250ml | | HCl | |
| | | | | | | | | | |
| TOTAL | | | | | | | | | |
| Turbidity (NTU) | 9.3 | 1.4 | | — | — | | | | |
| Temperature (°C) | 25 | 26 | | — | — | | | | |
| pH-00400 | 6.19 | 3.81 | | — | — | | | | |
| Conductance(umho/cm) | 339 | 192 | | — | — | | | | |

COMMENTS: ITGW-7 is LAB SPIKE.

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Hei-Fong Cheng | 2: Hei-Fong Cheng | 3: |
| Time/date | 1: 6/26/97 | 2: 6/26/97 | 3: |
| Method of Dispatch | 1: Hand Delivery | 2: Hand delivery | 3: |
| Received By | 1: [illegible] | 2: [illegible] | 3: |
| | | 2: 6/27/97 9:30 | 3: |

BUREAU OF WASTE CLEANUP



AUG 01 1997

TECHNICAL REVIEW SECTION

19 0124

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUN-30-05 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 30-JUN-1997 10:32
Date Received: 30-JUN-1997 Customer ID: SSSS
Authorized: 23-JUL-1997 By: Julio J. Arrecis

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: _____ Date: 7-25-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

90006

Sample ID: 181842/97-JUN-30-05-01 Matrix: W-GROUND
Location: MW4B
Field ID: ITGW-3
Collected: 27-JUN-1997 14:00 By: A. KLEI
Authorized: 23-JUL-1997 By: Julio J. Arrecis
Type: Grab Sample
Lab Comments: DEP TEMP=20C.
Field Comments:

Analysis ID: HG-H-W
Mercury in liquid samples by Method 245.1 (modified)
Prepared: 18-JUL-1997 11:30 By: Tanya Denis
Analyzed: 22-JUL-1997 11:41 By: Felix A. Akinade
Authorized: 23-JUL-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 71900 | Mercury | 0.14 I | ug/L |
| Comment | Reported result confirmed on Jul 15, 1997. | | |

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Analysis ID: W-ICP-23
ICP multielement analysis of aqueous samples by Method 200.7
Prepared: 1-JUL-1997 15:00 By: Christa Kinyon
Analyzed: 8-JUL-1997 15:58 By: Elena Compton
Authorized: 23-JUL-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01105 | Aluminum | 275 | ug/L |
| 01002 | Arsenic | 0 | ug/L |
| 01097 | Antimony | 30 U | ug/L |
| 01007 | Barium | 25.4 | ug/L |
| 01012 | Beryllium | 1 U | ug/L |
| 01027 | Cadmium | 10 U | ug/L |
| 00916 | Calcium | 28.0 | mg/L |
| 01034 | Chromium | 20 U | ug/L |
| 01037 | Cobalt | 8 U | ug/L |
| 01042 | Copper | 20 U | ug/L |
| 01045 | Iron | 1.52E+04 | ug/L |
| 01051 | Lead | 0 | ug/L |
| 00927 | Magnesium | 7.71 | mg/L |
| 01055 | Manganese | 180 | ug/L |
| 01067 | Nickel | 10 U | ug/L |
| 00937 | Potassium | 1.7 | mg/L |
| 01147 | Selenium | 0 | ug/L |
| 01077 | Silver | 6 U | ug/L |
| 00929 | Sodium | 17.8 | mg/L |
| 01082 | Strontium | 0 | ug/L |
| 01059 | Thallium | 0 | ug/L |

 Continued on Page 3

181842/97-JUN-30-05-01/W-ICP-23 Continued from Page 2

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01087 | Vanadium | 8 U | ug/L |
| 01092 | Zinc | 20 U | ug/L |
| Comment | None | | |

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Analysis ID: W-ICPMS
ICPMS analysis of total metals in water by Method 200.8
Prepared: 1-JUL-1997 15:00 By: Christa Kinyon
Analyzed: 14-JUL-1997 14:17 By: Brett Organ
Authorized: 23-JUL-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01105 | Aluminum | 0 | ug/L |
| 01002 | Arsenic | 9 I | ug/L |
| 01097 | Antimony | 0 | ug/L |
| 01007 | Barium | 0 | ug/L |
| 01012 | Beryllium | 0 | ug/L |
| 01027 | Cadmium | 0 | ug/L |
| 01034 | Chromium | 0 | ug/L |
| 01037 | Cobalt | 0 | ug/L |
| 01042 | Copper | 0 | ug/L |
| 01051 | Lead | 0.6 I | ug/L |
| 01055 | Manganese | 0 | ug/L |
| 01062 | Molybdenum | 0 | ug/L |
| 01067 | Nickel | 0 | ug/L |
| 01147 | Selenium | 4 U | ug/L |
| 01077 | Silver | 0 | ug/L |
| 01059 | Thallium | 0.2 U | ug/L |
| 01087 | Vanadium | 0 | ug/L |
| 01092 | Zinc | 0 | ug/L |
| Comment | The Se and Tl MDLs were adjusted due to sample preparation background. The Se spike recovery was outside the control limits. | | |

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00007

# QUALITY CONTROL REPORT
## Job ID: 97-JUN-30-05

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK, SMP |
|---|---|---|---|---|---|---|
| HG-H-W | Mercury | | 104 | 108 | | 4.0 |
| W-ICP-23 | Aluminum | | 105 | 107 | | 14.8 |
| W-ICP-23 | Antimony | | 109 | 108 | | 0.5 |
| W-ICP-23 | Barium | | 106 | 105 | | 2.2 |
| W-ICP-23 | Beryllium | | 109 | 107 | | 2.2 |
| W-ICP-23 | Cadmium | | 110 | 109 | | 1.1 |
| W-ICP-23 | Calcium | | 108 | | | 1.9 |
| W-ICP-23 | Chromium | | 110 | 109 | | 0.6 |
| W-ICP-23 | Cobalt | | 106 | 102 | | 3.9 |
| W-ICP-23 | Copper | | 109 | 105 | | 3.6 |
| W-ICP-23 | Iron | | 112 | 112 | | 5.1 |
| W-ICP-23 | Magnesium | | 103 | | | 1.9 |
| W-ICP-23 | Manganese | | 109 | 107 | | 0.0 |
| W-ICP-23 | Nickel | | 110 | 108 | | 2.0 |
| W-ICP-23 | Potassium | | 99.3 | | | 4.1 |
| W-ICP-23 | Silver | | 105 | 103 | | 1.9 |
| W-ICP-23 | Sodium | | 99.1 | | | 1.9 |
| W-ICP-23 | Vanadium | | 107 | 106 | | 1.5 |
| W-ICP-23 | Zinc | | 111 | 108 | | 0.8 |
| W-ICPMS | Arsenic | | 103 | 103 | | 0.1 |
| W-ICPMS | Lead | | 106 | 105 | | 1.2 |
| W-ICPMS | Selenium | | 116 | 122 | | 4.9 |
| W-ICPMS | Thallium | | 105 | 106 | | 1.2 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

1 9 0126

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
equestor: SSSS
oject ID: ITT Thompson

Sample ID: 181542
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW 4B
Field ID/Name: ITGW-3
Storet Station Number: —
NPDES Number: —

Collection Date: 6-27-97
Collection Time: 1400 hrs
Grab: —
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| _X_GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Jo Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): 40
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 5.88
Salinity - 00480 (PPTh): NA
~~Secchi Depth~~ Turbidity (NTU) - 00078 (M): 13.1 NTU
Specific Conductance - 00094 (umho/cm): 299
Temperature - 00010 (C): 27

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING



| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 - 12 |
| PROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Amy J. Kline, Kevin L. Hayes, Hank Cheng | DATE: 6-27-97 |

| Field ID | IT6W-MIP3 | IT6W-3 | IT SD-03 | ITPW-02 | ITPW-03 | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | |
| LAB SPIKE | | | | | | | | | |
| WATER | X | X | | X | X | X | | X | |
| SOIL/SEDIMENT | | | X | | | | X | | X |
| METALS | | X[1] | X[1,K] | | | P-1L | | HNO3 | |
| CYANIDE | | X[1] | | | | P-1L | | NaOH | |
| VOLATILES | X[2] | [4] | | X[4] | X[4] | G-40ml | G250m | HCl | ICE |
| BNAs | | X[2] | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | | X[2] | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | X[1] | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | G500m | | ICE |
| TRPH | | X[1] | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | P250ml | | HCl | |
| | | | | | | | | | |
| TOTAL | 2 | 11 | 1 | 4 | 4 | | | | |
| Turbidity | — | 13.1 | — | — | — | | | | |
| Temperature | — | 27 | — | — | — | | | | |
| pH-00400 | — | 5.88 | — | — | — | | | | |
| Conductance(umho/cm) | — | 299 | — | — | — | | | | |

COMMENTS: TEMP. BLANK INCLUDED

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin L. Hayes | 2: Hank Cheng | 3: |
| Time/date | 1: 16:00 6/27/97 | 2: 17:10 6/27/97 | 3: |
| | | 2: ~~Hank~~ Hand deli- | 3: |

1 9 0127

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BUREAU OF WASTE CLEANUP
SEP 05 1997
TECHNICAL REVIEW SECTION

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUL-02-22 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 2-JUL-1997 11:19
Date Received: 2-JUL-1997 Customer ID: SSSS
Authorized: 7-AUG-1997 By: Christopher A. Morga

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: Hau Date: 8-21-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
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Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

50000

Sample ID: 182153/97-JUL-02-22-01 Matrix: W-EQPMT-BK
Location: ITGW-RB
Field ID: ITGW-RB
Collected: 1-JUL-1997 10:00 By: K. HAYES
Authorized: 7-AUG-1997 By: Christopher A. Morgan
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: HG-H-W
Mercury in liquid samples by Method 245.1 (modified)
Prepared: 11-JUL-1997 14:00 By: Tanya Denis
Analyzed: 15-JUL-1997 12:11 By: Felix A. Akinade
Authorized: 16-JUL-1997 By: TM Chandrashekar

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 71900 | Mercury | 0.10 U | ug/L |
| Comment | None | | |

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Analysis ID: W-ICP-23
ICP multielement analysis of aqueous samples by Method 200.7
Prepared: 10-JUL-1997 12:00 By: Christa Kinyon
Analyzed: 5-AUG-1997 19:10 By: Elena Compton
Authorized: 7-AUG-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01105 | Aluminum | 35 U | ug/L |
| 01002 | Arsenic | 0 | ug/L |
| 01097 | Antimony | 10 U | ug/L |
| 01007 | Barium | 1 U | ug/L |
| 01012 | Beryllium | 0.5 U | ug/L |
| 01027 | Cadmium | 5 U | ug/L |
| 00916 | Calcium | 0.1 U | mg/L |
| 01034 | Chromium | 10 U | ug/L |
| 01037 | Cobalt | 4 U | ug/L |
| 01042 | Copper | 10 U | ug/L |
| 01045 | Iron | 10 U | ug/L |
| 01051 | Lead | 0 | ug/L |
| 00927 | Magnesium | 0.1 U | mg/L |
| 01055 | Manganese | 2 U | ug/L |
| 01067 | Nickel | 6 U | ug/L |
| 00937 | Potassium | 0.2 U | mg/L |
| 01147 | Selenium | 0 | ug/L |
| 01077 | Silver | 3 U | ug/L |
| 00929 | Sodium | 0.1 U | mg/L |
| 01082 | Strontium | 0 | ug/L |
| 01059 | Thallium | 0 | ug/L |

 Continued on Page 3

182153/97-JUL-02-22-01/W-ICP-23 Continued from Page 2

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01087 | Vanadium | 4 U | ug/L |
| 01092 | Zinc | 10 U | ug/L |
| Comment | None | | |

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Analysis ID: W-ICPMS
ICPMS analysis of total metals in water by Method 200.8
Prepared: 10-JUL-1997 12:00 By: Christa Kinyon
Analyzed: 27-JUL-1997 14:17 By: Robert C. Pellow
Authorized: 7-AUG-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01105 | Aluminum | 0 | ug/L |
| 01002 | Arsenic | 2 U | ug/L |
| 01097 | Antimony | 0 | ug/L |
| 01007 | Barium | 0 | ug/L |
| 01012 | Beryllium | 0 | ug/L |
| 01027 | Cadmium | 0 | ug/L |
| 01034 | Chromium | 0 | ug/L |
| 01037 | Cobalt | 0 | ug/L |
| 01042 | Copper | 0 | ug/L |
| 01051 | Lead | 0.1 U | ug/L |
| 01055 | Manganese | 0 | ug/L |
| 01062 | Molybdenum | 0 | ug/L |
| 01067 | Nickel | 0 | ug/L |
| 01147 | Selenium | 1 U | ug/L |
| 01077 | Silver | 0 | ug/L |
| 01059 | Thallium | 0.05 U | ug/L |
| 01087 | Vanadium | 0 | ug/L |
| 01092 | Zinc | 0 | ug/L |
| Comment | None | | |

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000010

# QUALITY CONTROL REPORT
## Job ID: 97-JUL-02-22

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK, SMP |
|---|---|---|---|---|---|---|
| HG-H-W | Mercury | | 104 | 95.6 | | 8.0 |
| W-ICP-23 | Aluminum | | 99.0 | 86.8 | | 2.5 |
| W-ICP-23 | Antimony | | 96.1 | 91.2 | | 5.2 |
| W-ICP-23 | Barium | | 102 | 98.9 | | 0.6 |
| W-ICP-23 | Beryllium | | 102 | 100 | | 1.9 |
| W-ICP-23 | Cadmium | | 114 | 107 | | 6.1 |
| W-ICP-23 | Calcium | | 86.8 | | | 0.3 |
| W-ICP-23 | Chromium | | 105 | 102 | | 2.9 |
| W-ICP-23 | Cobalt | | 95.7 | 100 | | 4.7 |
| W-ICP-23 | Copper | | 101 | 99.4 | | 2.1 |
| W-ICP-23 | Iron | | 90.1 | | | 0.3 |
| W-ICP-23 | Magnesium | | 90.7 | | | 0.2 |
| W-ICP-23 | Manganese | | 106 | 92.4 | | 0.3 |
| W-ICP-23 | Nickel | | 104 | 100 | | 4.1 |
| W-ICP-23 | Potassium | | 94.0 | | | 0.7 |
| W-ICP-23 | Silver | | 99.1 | 96.3 | | 2.8 |
| W-ICP-23 | Sodium | | 93.5 | | | 0.3 |
| W-ICP-23 | Vanadium | | 100 | 99.0 | | 1.4 |
| W-ICP-23 | Zinc | | 102 | 98.2 | | 4.1 |
| W-ICPMS | Arsenic | | 94.9 | 93.0 | | 2.0 |
| W-ICPMS | Lead | | 104 | 100 | | 2.1 |
| W-ICPMS | Selenium | | 86.6 | 83.3 | | 3.8 |
| W-ICPMS | Thallium | | 105 | 101 | | 4.4 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0129

Sample ID: 182153 (Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: _____
Field ID/Name: ITGW-RB
Storet Station Number: _____
NPDES Number: _____

Collection Date: 7/1/97
Collection Time: 10:00 A
Grab: _____
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | X EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature: _____
Sampled By: KEVIN HAYES
Signature: Kevin Hayes
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet): _____
Chlorine, Total Residual - 50060 (mg/L): _____
Dissolved Oxygen (Probe) -00299 (mg/L): _____
pH - 00400 (Stnd. Units): _____
Salinity - 00480 (PPTh): _____
Secchi Depth - 00078 (M): _____
Specific Conductance - 00094 (umho/cm): _____
Temperature - 00010 (C): _____ V

Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| See Below | | | |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| METALS | 1 LITER POLY | 1 | $HNO_3$ |
| CYANIDE | 1 LITER POLY | 1 | NaOH |
| BNAs | 1 LITER AMBER | 2 | ICE |
| PESTICIDES/PCBS | 1 LITER AMBER | 2 | ICE |
| TRPHs | 1 LITER AMBER | 1 | HCl |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page 1 of 1

00411

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: 12 |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 - ~~18~~ |
| PROJECT NAME: ~~Bert Morsch~~ ITT THOMPSON | SAMPLERS (SIGNATURES): Kevin Hayes, Ken Standley | DATE: |

| Field ID | ITSD-1A | ITSD-2A | ITGW-RB | ITGW-TRIP-S | FRANCIS MUNICIPAL WELL | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | |
| LAB SPIKE | | | | | | | | | |
| WATER | | | X | X | X | X | | X | |
| SOIL/SEDIMENT | X | X | | | | | X | | X |
| METALS | | | 1 | | 1 | P-1L | | HNO3 | |
| CYANIDE | | | 1 | | | P-1L | | NaOH | |
| VOLATILES | 1 | 1 | 4 | 2 | 4 | G-40ml | G250m | HCl | ICE |
| BNAs | | | 2 | | 2 | G-1L | | ICE | |
| PESTICIDES/PCBs | 1 | | 2 | | 2 | G-1L | | ICE | |
| METALS/CYANIDE | 1 | 1 | | | | | G250m | | ICE |
| BNA/PEST/PCB | 1 | 1 | | | | | G500m | | ICE |
| TRPH | 1 | 1 | 1 | | 1 | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | P250ml | | HCl | |
| | | | | | | | | | |
| TOTAL | 4 | 4 | 11 | 2 | | | | | |
| Turbidity | NA | NA | NA | NA | NA | | | | |
| Temperature | | | | | | | | | |
| pH-00400 | | | | | | | | | |
| Conductance(umho/cm) | | | | | | | | | |

COMMENTS: FRANCIS MUNICIPAL WELL NOT SAMPLED DUE TO PRESENCE OF FREE PRODUCT.
KRH 1/1/97

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin Hayes | 2: | 3: |
| Time/date | 1: 1/9/97 | 2: | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: | 3: |
| | | 2: | 3: |

1 9 0130

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BUREAU OF WASTE CLEANUP
AUG 19 1997
TECHNICAL REVIEW SECTION

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUL-02-24 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 2-JUL-1997 11:42
Date Received: 2-JUL-1997 Customer ID: SSSS
Authorized: 31-JUL-1997 By: Julio J. Arrecis

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: Han Date: 8-7-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00012

Sample ID: 182214/97-JUL-02-24-01 Matrix: S-FRHWTRSD
Location: N.E. QUADRANT OF POND S.W. OF SITE
Field ID: ITSD-1A
Collected: 1-JUL-1997 08:50 By: K. STARLING
Authorized: 31-JUL-1997 By: Julio J. Arrecis
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: HG-H-S
Mercury in solids by Method 245.5, 7470 or 7471.
Prepared: 16-JUL-1997 14:00 By: Tanya Denis
Analyzed: 17-JUL-1997 14:06 By: Felix A. Akinade
Authorized: 18-JUL-1997 By: TM Chandrashekar

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 71921 | Mercury | 0.10 A | mg/kg |
| Comment | None | | |

---

Analysis ID: S-ICP
ICP multielement analysis for soil by Method 6010
Prepared: 10-JUL-1997 00:00 By: Vijaya Reddy
Analyzed: 28-JUL-1997 20:15 By: Elena Compton
Authorized: 31-JUL-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01108 | Aluminum | 1.00E+04 | mg/Kg |
| 01003 | Arsenic | 9 U | mg/Kg |
| 01098 | Antimony | 3 U | mg/Kg |
| 01008 | Barium | 100 J | mg/Kg |
| 01013 | Beryllium | 0.3 I | mg/Kg |
| 01028 | Cadmium | 1 U | mg/Kg |
| 00917 | Calcium | 3330 | mg/Kg |
| 01029 | Chromium | 460 | mg/Kg |
| 01038 | Cobalt | 2 I | mg/Kg |
| 01043 | Copper | 10 | mg/Kg |
| 01170 | Iron | 4410 | mg/Kg |
| 01052 | Lead | 77.5 | mg/Kg |
| 00924 | Magnesium | 526 | mg/Kg |
| 01053 | Manganese | 67.2 | mg/Kg |
| 01068 | Nickel | 7.4 | mg/Kg |
| 00938 | Potassium | 190 J | mg/Kg |
| 01148 | Selenium | 10 U | mg/Kg |
| 01078 | Silver | 2 U | mg/Kg |
| 00934 | Sodium | 100 I | mg/Kg |
| 01083 | Strontium | O | mg/Kg |
| 34480 | Thallium | 10 U | mg/Kg |


Continued on Page 3

182214/97-JUL-02-24-01/S-ICP Continued from Page 2

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01088 | Vanadium | 11 | mg/Kg |
| 01093 | Zinc | 161 J | mg/Kg |
| Comment | The Zn precision value and one Ba recovery were outside of the control limits; the K and Na precision values are not available; the Ag MDL was adjusted due to matrix interference. | | |

---

Sample ID: 182215/97-JUL-02-24-02 Matrix: S-FRHWTRSD
Location: S.E. QUADRANT OF POND S.W. OF POND
Field ID: ITSD-2A
Collected: 1-JUL-1997 09:30 By: K. STARLING
Authorized: 31-JUL-1997 By: Julio J. Arrecis
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: HG-H-S
Mercury in solids by Method 245.5, 7470 or 7471.
Prepared: 16-JUL-1997 14:00 By: Tanya Denis
Analyzed: 17-JUL-1997 14:06 By: Felix A. Akinade
Authorized: 18-JUL-1997 By: TM Chandrashekar

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 71921 | Mercury | 0.063 | mg/kg |
| Comment | None | | |

---

Analysis ID: S-ICP
ICP multielement analysis for soil by Method 6010
Prepared: 10-JUL-1997 00:00 By: Vijaya Reddy
Analyzed: 28-JUL-1997 20:21 By: Elena Compton
Authorized: 31-JUL-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01108 | Aluminum | 1.23E+04 | mg/Kg |
| 01003 | Arsenic | 10 U | mg/Kg |
| 01098 | Antimony | 4 U | mg/Kg |
| 01008 | Barium | 125 J | mg/Kg |
| 01013 | Beryllium | 0.3 I | mg/Kg |
| 01028 | Cadmium | 2 U | mg/Kg |
| 00917 | Calcium | 2210 | mg/Kg |
| 01029 | Chromium | 77.3 | mg/Kg |
| 01038 | Cobalt | 1 U | mg/Kg |

 Continued on Page 4

182215/97-JUL-02-24-02/S-ICP Continued from Page 0013

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01043 | Copper | 3.4 I | mg/Kg |
| 01170 | Iron | 3140 | mg/Kg |
| 01052 | Lead | 24 | mg/Kg |
| 00924 | Magnesium | 370 | mg/Kg |
| 01053 | Manganese | 29.0 | mg/Kg |
| 01068 | Nickel | 5.4 | mg/Kg |
| 00938 | Potassium | 180 J | mg/Kg |
| 01148 | Selenium | 10 U | mg/Kg |
| 01078 | Silver | 3 U | mg/Kg |
| 00934 | Sodium | 50 U | mg/Kg |
| 01083 | Strontium | O | mg/Kg |
| 34480 | Thallium | 10 U | mg/Kg |
| 01088 | Vanadium | 9.8 | mg/Kg |
| 01093 | Zinc | 86.8 J | mg/Kg |

Comment The Zn precision value and one Ba recovery were outside of the control limits; the K and Na precision values are not available; the Ag MDL was adjusted due to matrix interference.

# QUALITY CONTROL REPORT
## Job ID: 97-JUL-02-24

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK,SMP |
|---|---|---|---|---|---|---|
| HG-H-S | Mercury | | 104 | 98.9 | | 10.5 |
| S-ICP | Aluminum | | 93.0 | | | 5.3 |
| S-ICP | Arsenic | | 88.2 | 77.8 | | 12.5 |
| S-ICP | Antimony | | 79.8 | 78.4 | | 1.8 |
| S-ICP | Barium | | 84.2 | 138 | | 11.6 |
| S-ICP | Beryllium | | 84.6 | 83.7 | | 1.1 |
| S-ICP | Cadmium | | 85.5 | 83.3 | | 2.6 |
| S-ICP | Calcium | | 101 | | | 3.2 |
| S-ICP | Chromium | | 85.4 | 85.6 | | 0.3 |
| S-ICP | Cobalt | | 85.2 | 86.0 | | 1.0 |
| S-ICP | Copper | | 97.2 | 96.0 | | 17.7 |
| S-ICP | Iron | | 90.3 | | | 7.5 |
| S-ICP | Lead | | 82.8 | 85.1 | | 2.7 |
| S-ICP | Magnesium | | 88.3 | | | 5.6 |
| S-ICP | Manganese | | 83.5 | 85.2 | | 7.0 |
| S-ICP | Nickel | | 84.6 | 85.5 | | 7.9 |
| S-ICP | Potassium | | 87.1 | | | |
| S-ICP | Selenium | | 90.1 | 87.0 | | 3.5 |
| S-ICP | Silver | | 87.9 | 87.0 | | 0.9 |
| S-ICP | Sodium | | 90.1 | | | |
| S-ICP | Thallium | | 83.6 | 78.0 | | 7.0 |
| S-ICP | Vanadium | | 88.9 | 87.9 | | 1.1 |
| S-ICP | Zinc | | 82.6 | 92.8 | | 20.1 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
## CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 182214 (Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: N.E. quadrant of pond S.W. of site
Field ID/Name: ITSD-1 ~~(Background)~~
Storet Station Number:
NPDES Number:

Collection Date: 7/1/97
Collection Time: 08:50
Grab: X
Composite Begin: End:

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | X FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| ___GROUND | ___TRIP BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | ___FIELD BLANK | ___SLUDGE | ___OTHER | |
| | ___EQUIPMENT BLANK | | | |

Field Parameters Measured By: N/A
Signature:
Sampled By: Ken Starling
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet):
Chlorine, Total Residual - 50060 (mg/L):
Dissolved Oxygen (Probe) -00299 (mg/L):
pH - 00400 (Stnd. Units):
Salinity - 00480 (PPTh):
Secchi Depth - 00078 (M):
Specific Conductance - 00094 (umho/cm):
Temperature - 00010 (C):

### Soil/Sediment:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| HG-H-S<br>S-ICP<br>S-CN | Glass Jar-250mL | 1 | ICE |
| S-VOC-SS | Glass Jar-250mL | 1 | ICE |
| S-CLPCB-SS<br>S-BNA-SSSS | Glass Jar-500mL | 1 | ICE |
| TRPH | Glass Jar-250mL | 1 | ICE |

### For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals/Cyanide | Glass Jar-250mL | 1 | Ice |
| Volatiles | Glass Jar-250mL | 1 | Ice |
| BNAs/Pesticides/PCBs | Glass Jar-500mL | 1 | Ice |
| TRPH | Glass Jar-250mL | 1 | Ice |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup *** SPIKE IN LAB***

1 9 0133

# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
## CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 162215
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: S.E. quandrant of pond S.W. of pond
Field ID/Name: ITSD-2A
Storet Station Number:
NPDES Number:

Collection Date: 7/1/97
Collection Time: 0930
Grab: X
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | X FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| ___GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature:
Sampled By: KEN STARLING
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet):
Chlorine, Total Residual - 50060 (mg/L):
Dissolved Oxygen (Probe) -00299 (mg/L):
pH - 00400 (Stnd. Units):
Salinity - 00480 (PPTh):
Secchi Depth - 00078 (M):
Specific Conductance - 00094 (umho/cm):
Temperature - 00010 (C):

### Soil/Sediment:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| (HG-H-S) S-ICP S-CN | Glass Jar-250mL | 1 | ICE |
| S-VOC-SS | Glass Jar-250mL | 1 | ICE |
| S-CLPCB-SS S-BNA-SSSS | Glass Jar-500mL | 1 | ICE |
| TRPH | Glass Jar-250mL | 1 | ICE |

### For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals/Cyanide | Glass Jar-250mL | 1 | Ice |
| Volatiles | Glass Jar-250mL | 1 | Ice |
| BNAs/Pesticides/PCBs | Glass Jar-500mL | 1 | Ice |
| TRPH | Glass Jar-250mL | 1 | Ice |

nd Final Report to : Hank Cheng, Bureau of Waste Cleanup

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page 1 of 1

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: 12 |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 |
| PROJECT NAME: ~~Bert Morsch~~ ITT THOMPSON | SAMPLERS (SIGNATURES): Kevin Hayes, Ken Standley | DATE: |

| Field ID | ITSD-1A | ITSD-2A | ITGW-RB | ITGW-TRIP-S | FRANCIS MUNICIPAL WELL | | | | | | | | | | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | | | | | | | | | | |
| LAB SPIKE | | | | | | | | | | | | | | | | | | |
| WATER | | | X | X | X | | | | | | | | | | X | | X | |
| SOIL/SEDIMENT | X | X | | | | | | | | | | | | | | X | | X |
| METALS | | | 1 | | 1 | | | | | | | | | | P-1L | | HNO3 | |
| CYANIDE | | | 1 | | | | | | | | | | | | P-1L | | NaOH | |
| VOLATILES | 1 | 1 | 4 | 2 | 4 | | | | | | | | | | G-40ml | G250m | HCl | ICE |
| BNAs | | | 2 | | 2 | | | | | | | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | 1 | | 2 | | 2 | | | | | | | | | | G-1L | | ICE | |
| METALS/CYANIDE | 1 | 1 | | | | | | | | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | 1 | 1 | | | | | | | | | | | | | | G500m | | ICE |
| TRPH | 1 | 1 | 1 | | 1 | | | | | | | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | | | | | | | | |
| TOTAL | 4 | 4 | 11 | 2 | | | | | | | | | | | | | | |
| Turbidity | NA | NA | NA | NA | NA | | | | | | | | | | | | | |
| Temperature | | | | | | | | | | | | | | | | | | |
| pH-00400 | | | | | | | | | | | | | | | | | | |
| Conductance(umho/cm) | | | | | | | | | | | | | | | | | | |

COMMENTS: FRANCIS MUNICIPAL WELL NOT SAMPLED DUE TO PRESENCE OF FREE PRODUCT.
KRK 7/1/97

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin Hayes | 2: | 3: |
| Time/date | 1: 7/8/97 | 2: | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: | 3: |
| Received By | 1: [signature] | 2: | 3: |

1 9 0134

BUREAU OF WASTE CLEANUP

AUG 22 1997

TECHNICAL REVIEW SECTION

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUL-03-10 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 3-JUL-1997 11:33
Date Received: 3-JUL-1997 Customer ID: SSSS
Authorized: 7-AUG-1997 By: Christopher A. Morga

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: Han Date: 8-11-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00016

Sample ID: 182295/97-JUL-03-10-01 Matrix: W-EQPMT-BK
Location: ITT THOMPSON
Field ID: ITSD-RB
Collected: 2-JUL-1997 10:50 By: KEVIN HAYES
Authorized: 7-AUG-1997 By: Christopher A. Morgan
Type: Grab Sample
Lab Comments: TEMP=3DC/PH<2
Field Comments:

Analysis ID: HG-H-W
Mercury in liquid samples by Method 245.1 (modified)
Prepared: 11-JUL-1997 14:00 By: Tanya Denis
Analyzed: 15-JUL-1997 12:11 By: Felix A. Akinade
Authorized: 16-JUL-1997 By: TM Chandrashekar

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 71900 | Mercury | 0.10 U | ug/L |
| Comment | None | | |

---

Analysis ID: W-ICP-23
ICP multielement analysis of aqueous samples by Method 200.7
Prepared: 10-JUL-1997 12:00 By: Christa Kinyon
Analyzed: 5-AUG-1997 19:05 By: Elena Compton
Authorized: 7-AUG-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01105 | Aluminum | 35 U | ug/L |
| 01002 | Arsenic | 0 | ug/L |
| 01097 | Antimony | 10 U | ug/L |
| 01007 | Barium | 1 U | ug/L |
| 01012 | Beryllium | 0.5 U | ug/L |
| 01027 | Cadmium | 5 U | ug/L |
| 00916 | Calcium | 0.1 U | mg/L |
| 01034 | Chromium | 10 U | ug/L |
| 01037 | Cobalt | 4 U | ug/L |
| 01042 | Copper | 10 U | ug/L |
| 01045 | Iron | 10 U | ug/L |
| 01051 | Lead | 0 | ug/L |
| 00927 | Magnesium | 0.1 U | mg/L |
| 01055 | Manganese | 2 U | ug/L |
| 01067 | Nickel | 6 U | ug/L |
| 00937 | Potassium | 0.2 U | mg/L |
| 01147 | Selenium | 0 | ug/L |
| 01077 | Silver | 3 U | ug/L |
| 00929 | Sodium | 0.1 U | mg/L |
| 01082 | Strontium | 0 | ug/L |
| 01059 | Thallium | 0 | ug/L |

 Continued on Page 3

182295/97-JUL-03-10-01/W-ICP-23 Continued from Page 2

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01087 | Vanadium | 4 U | ug/L |
| 01092 | Zinc | 10 U | ug/L |
| Comment | None | | |

Analysis ID: W-ICPMS
ICPMS analysis of total metals in water by Method 200.8
Prepared: 10-JUL-1997 12:00 By: Christa Kinyon
Analyzed: 27-JUL-1997 14:21 By: Robert C. Pellow
Authorized: 7-AUG-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01105 | Aluminum | 0 | ug/L |
| 01002 | Arsenic | 2 U | ug/L |
| 01097 | Antimony | 0 | ug/L |
| 01007 | Barium | 0 | ug/L |
| 01012 | Beryllium | 0 | ug/L |
| 01027 | Cadmium | 0 | ug/L |
| 01034 | Chromium | 0 | ug/L |
| 01037 | Cobalt | 0 | ug/L |
| 01042 | Copper | 0 | ug/L |
| 01051 | Lead | 0.1 U | ug/L |
| 01055 | Manganese | 0 | ug/L |
| 01062 | Molybdenum | 0 | ug/L |
| 01067 | Nickel | 0 | ug/L |
| 01147 | Selenium | 1 U | ug/L |
| 01077 | Silver | 0 | ug/L |
| 01059 | Thallium | 0.05 U | ug/L |
| 01087 | Vanadium | 0 | ug/L |
| 01092 | Zinc | 0 | ug/L |
| Comment | None | | |

00017

# QUALITY CONTROL REPORT
## Job ID: 97-JUL-03-10

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK, SMP |
|---|---|---|---|---|---|---|
| HG-H-W | Mercury | | 104 | 95.6 | | 8.0 |
| W-ICP-23 | Aluminum | | 99.0 | 86.8 | | 2.5 |
| W-ICP-23 | Antimony | | 96.1 | 91.2 | | 5.2 |
| W-ICP-23 | Barium | | 102 | 98.9 | | 0.6 |
| W-ICP-23 | Beryllium | | 102 | 100 | | 1.9 |
| W-ICP-23 | Cadmium | | 114 | 107 | | 6.1 |
| W-ICP-23 | Calcium | | 86.8 | | | 0.3 |
| W-ICP-23 | Chromium | | 105 | 102 | | 2.9 |
| W-ICP-23 | Cobalt | | 95.7 | 100 | | 4.7 |
| W-ICP-23 | Copper | | 101 | 99.4 | | 2.1 |
| W-ICP-23 | Iron | | 90.1 | | | 0.3 |
| W-ICP-23 | Magnesium | | 90.7 | | | 0.2 |
| W-ICP-23 | Manganese | | 106 | 92.4 | | 0.3 |
| W-ICP-23 | Nickel | | 104 | 100 | | 4.1 |
| W-ICP-23 | Potassium | | 94.0 | | | 0.7 |
| W-ICP-23 | Silver | | 99.1 | 96.3 | | 2.8 |
| W-ICP-23 | Sodium | | 93.5 | | | 0.3 |
| W-ICP-23 | Vanadium | | 100 | 99.0 | | 1.4 |
| W-ICP-23 | Zinc | | 102 | 98.2 | | 4.1 |
| W-ICPMS | Arsenic | | 94.9 | 93.0 | | 2.0 |
| W-ICPMS | Lead | | 104 | 100 | | 2.1 |
| W-ICPMS | Selenium | | 86.6 | 83.3 | | 3.8 |
| W-ICPMS | Thallium | | 105 | 101 | | 4.4 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0136

Sample ID: 182295
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: _____
Field ID/Name: ITSD-RB
Storet Station Number: _____
NPDES Number: _____

Collection Date: 7/2/97
Collection Time: 10:50
Grab: _____
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| KH X GROUND | | X EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature: _____
Sampled By: KEVIN HAYES
Signature: Kevin Hayes
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet): _____
Chlorine, Total Residual - 50060 (mg/L): _____
Dissolved Oxygen (Probe) -00299 (mg/L): _____
pH - 00400 (Stnd. Units): _____
Salinity - 00480 (PPTh): _____
Secchi Depth - 00078 (M): _____
Specific Conductance - 00094 (umho/cm): _____
Temperature - 00010 (C): _____

## Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| -SEE BELOW | | | |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| METALS | 1 LITER POLY | 1 | $HNO_3$ |
| CYANIDE | 1 LITER POLY | 1 | NaOH |
| BNAs | 1 LITER AMBER | 2 | ICE |
| PESTICIDES/ PCBS | 1 LITER AMBER | 2 | ICE |
| TRPHs | 1 LITER AMBER | 1 | HCl |
| | | | |

d Final Report to : Hank Cheng, Bureau of Waste Cleanup

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page _____ of _____

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 ~~13~~ 12 |
| PROJECT NAME: ~~Bart Morsch~~ ITT THOMPSON | SAMPLERS (SIGNATURES): Kevin Hayes | DATE: 7/2/97 |

| Field ID | ITVP-4A(8') | ITVP-4B(25') | ITVP-4B-DUP (GS) | ITSD-RB | ITVP-RB | UNKNOWN WELL | ITVP-TRIP | | | | | | | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | | | | | | | | | |
| LAB SPIKE | | | | | | | | | | | | | | | | | |
| WATER | X | X | X | X | X | X | X | | | | | | | X | | X | |
| SOIL/SEDIMENT | | | | | | | | | | | | | | | X | | X |
| METALS | | | | 1 | | | | | | | | | | P-1L | | HNO3 | |
| CYANIDE | | | | 1 | | | | | | | | | | P-1L | | NaOH | |
| VOLATILES | ~~4~~ | 4 | 4 | 4 | 4 | 4 | 2 | | | | | | | G-40ml | G250m | HCl | ICE |
| BNAs | | | | 2 | | | | | | | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | | | | 2 | | | | | | | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | | | | | | | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | | | | | | | | | G500m | | ICE |
| TRPH | | | | 1 | | | | | | | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | | | | | | | |
| TOTAL | 4 | 4 | 4 | ~~10~~ | 4 | 4 | 2 | | | | | | | | | | |
| Turbidity | | | | | | | | | | | | | | | | | |
| Temperature | | | | | | | | | | | | | | | | | |
| pH-00400 | | | | | | | | | | | | | | | | | |
| Conductance(umho/cm) | | | | | | | | | | | | | | | | | |

COMMENTS:

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin Hayes | 2: | 3: |
| Time/date | 1: 7/3/97 11:00 A | 2: | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: | 3: |
| | [illegible] | 2: | 3: |

19 0137

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

BUREAU OF WASTE CLEANUP
AUG 22 1997
TECHNICAL REVIEW SECTION

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUN-30-07 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 30-JUN-1997 10:32
Date Received: 30-JUN-1997 Customer ID: SSSS
Authorized: 1-AUG-1997 By: Julio J. Arrecis

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: _____ Date: 8-11-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00019

Sample ID: 181844/97-JUN-30-07-01 Matrix: S-OTHER
Location: ITSD-03
Field ID: ITSD-03
Collected: 27-JUN-1997 14:37 By: J. MCCARTHY/H. CHENG
Authorized: 1-AUG-1997 By: Julio J. Arrecis
Type: Composite 27-JUN-1997 14:32 27-JUN-1997 14:37
Lab Comments: DEP TEMP=2DC.
Field Comments: **SAMPLE IS "SLUDGE"-SUMP SEDIMENT.

Analysis ID: HG-H-S
Mercury in solids by Method 245.5, 7470 or 7471.
Prepared: 2-JUL-1997 13:30 By: Tanya Denis
Analyzed: 3-JUL-1997 11:17 By: Felix A. Akinade
Authorized: 11-JUL-1997 By: TM Chandrashekar

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 71921 | Mercury | 0.19 | mg/kg |
| Comment | None | | |

---

Analysis ID: S-ICP
ICP multielement analysis for soil by Method 6010
Prepared: 1-JUL-1997 00:00 By: Vijaya Reddy
Analyzed: 28-JUL-1997 17:49 By: Elena Compton
Authorized: 1-AUG-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01108 | Aluminum | 4510 | mg/Kg |
| 01003 | Arsenic | 70 U | mg/Kg |
| 01098 | Antimony | 36 I | mg/Kg |
| 01008 | Barium | 146 | mg/Kg |
| 01013 | Beryllium | 0.09 U | mg/Kg |
| 01028 | Cadmium | 10 I | mg/Kg |
| 00917 | Calcium | 1.07E+04 J | mg/Kg |
| 01029 | Chromium | 252 | mg/Kg |
| 01038 | Cobalt | 9 I | mg/Kg |
| 01043 | Copper | 100 | mg/Kg |
| 01170 | Iron | 1.28E+05 | mg/Kg |
| 01052 | Lead | 301 | mg/Kg |
| 00924 | Magnesium | 804 J | mg/Kg |
| 01053 | Manganese | 458 | mg/Kg |
| 01068 | Nickel | 90 | mg/Kg |
| 00938 | Potassium | 130 | mg/Kg |
| 01148 | Selenium | 90 U | mg/Kg |
| 01078 | Silver | 5 U | mg/Kg |
| 00934 | Sodium | 40 U | mg/Kg |
| 01083 | Strontium | O | mg/Kg |
| 34480 | Thallium | 90 U | mg/Kg |


Continued on Page 3

181844/97-JUN-30-07-01/S-ICP Continued from Page 2

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01088 | Vanadium | 9 I | mg/Kg |
| 01093 | Zinc | 1.22E+04 | mg/Kg |
| Comment | The Ca recovery and the Ca and Mg precision values were not available. One Ag recovery and the Ag precision of the QC sample were outside the control limits; the Ag MDL was adjusted due to matrix interference. | | |

00020

# QUALITY CONTROL REPORT
## Job ID: 97-JUN-30-07

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK,SMP |
|---|---|---|---|---|---|---|
| HG-H-S | Mercury | | 88.7 | 84.0 | | 14.9 |
| S-ICP | Aluminum | | 93.7 | | | 19.3 |
| S-ICP | Arsenic | | 78.8 | 84.0 | | 6.3 |
| S-ICP | Antimony | | 78.1 | 84.5 | | 7.9 |
| S-ICP | Barium | | 80.7 | 81.7 | | 4.6 |
| S-ICP | Beryllium | | 93.5 | 94.3 | | 0.8 |
| S-ICP | Cadmium | | 93.5 | 104 | | 10.4 |
| S-ICP | Chromium | | 86.4 | 89.6 | | 3.6 |
| S-ICP | Cobalt | | 96.0 | 95.0 | | 1.1 |
| S-ICP | Copper | | 87.9 | 85.4 | | 2.9 |
| S-ICP | Iron | | 98.3 | | | 1.0 |
| S-ICP | Lead | | 109 | 89.3 | | 12.5 |
| S-ICP | Magnesium | | 86.9 | | | |
| S-ICP | Manganese | | 101 | 91.7 | | 3.4 |
| S-ICP | Nickel | | 92.0 | 94.0 | | 2.2 |
| S-ICP | Potassium | | 86.2 | | | 8.3 |
| S-ICP | Selenium | | 118 | 105 | | 11.7 |
| S-ICP | Silver | | 66.5 | 91.8 | | [illegible] |
| S-ICP | Sodium | | 88.7 | | | 11.8 |
| S-ICP | Thallium | | 104 | 108 | | 3.7 |
| S-ICP | Vanadium | | 91.9 | 92.1 | | 0.2 |
| S-ICP | Zinc | | 97.2 | 84.2 | | 14.3 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

1 9 0139

# Summary For Request ID: RQ-97-JUN-23-12

Reqested By: HANK CHENG
Customer...: SSSS
Division...: WSM
Project Name: ITT Thompson

Date of Request: 18-JUN-1997
Project.....: SUPERFUND
District.....: XX

Comments: Contact Hank when coolers are ready. Coolers will be picked up by E+E. Pre-preserved VOCs. Include 1+1 HNO3 in kit. Include 1 TB per VOC cooler + 1 extra TB. Include 1 FedEx waybill per cooler. Hank will provide field sheets.

Phone : 904-921-0858
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

Program Module Number: 0436
Priority.....: 3
Request Status.....: S
Request Reviewed By..: YUHHSU
Sampling Kit Required: YES
Sampling Kit Shipped.: YES
Kit Packed By.....: MARIA

Criminal Ivestigation: NO
Custody.....: YES
Base Project....: YES
Date Reviewed...: 18-JUN-1997
Date to Ship Kit: 16-JUN-1997
Kit Shipped.....: 19-JUN-1997
Receive Samples.: 23-JUN-1997

Group# 1 - METALS 18 Samples

ABS 6-26-97 1 Sample 1 T.Blk for 1

| ysis ID | Analysis Description |
|---|---|
| EG-H-W | - Mercury in liquid samples by Method 245.1 (modified) |
| -ICP-23 | - ICP multielement analysis of aqueous samples by Method 200.7 |
| -ICPMS | - ICPMS analysis of total metals in water by Method 200.8 |

JAN – (4) sites 6/27/97
JAN – (4) sites 6/30/97

Group# 1 - VOLATILE 18 Samples

| nalysis ID | Analysis Description |
|---|---|
| VOC-SS | - Volatiles in wtr by 624/5030-8260 for Superfund Group only |

Group# 1 - SM-VOLATIL 18 Samples

| alysis ID | Analysis Description |
|---|---|
| NA-SS | - BNA in water by EPA 625 for Superfund Group only. |

Group# 1 - PSTHRB-GC 18 Samples

| lysis ID | Analysis Description |
|---|---|
| PCB-SS | - Cl-pesticides & PCBs in water by alt 608 for Superfund Group only. |

Group# 2 - METALS 8 Samples

| sis ID | Analysis Description |
|---|---|
| S | - Mercury in solids by Method 245.5, 7470 or 7471. |
| | - ICP multielement analysis for soil by Method 6010 |

Group# 2 - PSTHRB-GC 8 Samples

| lysis ID | Analysis Description |
|---|---|
| LPCB-SS | - Cl-pest & PCBs in soil 3550/8080 dry wt for Superfund Group only |

Group# 2 - SM-VOLATIL 8 Samples

| alysis ID | Analysis Description |
|---|---|
| BNA-SSSS | - BNA in soil or waste 3550/8270 dry wt for Superfund Group only. |

Group# 2 - VOLATILE 8 Samples

| nalysis ID | Analysis Description |
|---|---|
| VOC-SS | - Volatiles in soil or waste by 5030-8260 by dry wt for Superfund Group only |

Group Summary:

| | | |
|---|---|---|
| METALS | 18 | Samples |
| VOLATILE | 18 | Samples |
| SM-VOLATIL | 18 | Samples |
| PSTHRB-GC | 18 | Samples |

Additonal Comments:

Comments: NONE

00021

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

19 0140

Sample ID: 161535
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: ~~MW-3~~ TRIP BLANK
Field ID/Name: ~~Untitled~~ ITGW-TRIP3
Storet Station Number: —
NPDES Number: —

Collection Date: 6/27/97
Collection Time: 1300
Grab: —
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | X TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| AK ~~X~~ GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei (Prepared in Lab)
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): NA
Chlorine, Total Residual - 50060 (mg/L): _____
Dissolved Oxygen (Probe) -00299 (mg/L): _____
pH - 00400 (Std. Units): _____
Salinity - 00480 (PPTH): _____
Secchi Depth - 00078 (M): _____
Specific Conductance - 00094 (umho/cm): _____
Temperature - 00010 (C): _____

## Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 2 | HCl |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

end Final Report to : Hank Cheng, Bureau of Waste Cleanup

# STATE OF FLORIDA
## DEPARTMENT OF ENVIRONMENTAL PROTECTION
## CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page 1 of 1

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 - 12 |
| PROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Amy J. Klein / Hank Cheng / Arthur M Cuffe | DATE: 6-27-97 |

| Field ID | ITGW-TRIP3 | ITGW-3 | ITSD-03 | ITPW-02 | ITPW-03 | | | | | | | | | | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | | | | | | | | | | |
| LAB SPIKE | | | | | | | | | | | | | | | | | | |
| WATER | X | X | | X | X | | | | | | | | | | x | | x | |
| SOIL/SEDIMENT | | | X | | | | | | | | | | | | | x | | x |
| METALS | | X[1] | ~~X~~ AK | | | | | | | | | | | | P-1L | | HNO3 | |
| CYANIDE | | X[1] | | | | | | | | | | | | | P-1L | | NaOH | |
| VOLATILES | X[2] | [4] | | X[4] | X[4] | | | | | | | | | | G-40ml | G250m | HCl | ICE |
| BNAs | | X[2] | | | | | | | | | | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | | X[2] | | | | | | | | | | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | X[1] | | | | | | | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | | | | | | | | | | G500m | | ICE |
| TRPH | | X[1] | | | | | | | | | | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | | | | | | | | |
| TOTAL | 2 | 11 | 1 | 4 | 4 | | | | | | | | | | | | | |
| Turbidity | – | 13.1 | – | – | – | | | | | | | | | | | | | |
| Temperature | – | 27 | – | – | – | | | | | | | | | | | | | |
| pH-00400 | – | 5.88 | – | – | – | | | | | | | | | | | | | |
| Conductance(umho/cm) | – | 299 | – | – | – | | | | | | | | | | | | | |

COMMENTS:

TEMP. BLANK INCLUDED

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin R. Hayes | 2: Hank Cheng | 3: |
| Time/date | 1: 16:00 6/27/97 | 2: 17:10 6/27/97 | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: ~~Hank~~ Hand del. | 3: |
| Received By | 1: Hank Cheng | 2: Amzad B. Shaikh | 3: |
| | | 17:10 6-27-97 | ecology and environment |

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

19 0141

Sample ID: 181836 (Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: ITPW-02
Field ID/Name: ITPW-02
Storet Station Number:
NPDES Number:

Collection Date: 6/27/97
Collection Time: 11:20A
Grab: X
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature:
Sampled By: Jim McCarthy/Hank Cheng
Signature: [signature]
Field Report Prepared By: Kevin Hayes
Signature: [signature]

Field Parameters: NA
Depth (Feet):
Chlorine, Total Residual - 50060 (mg/L):
Dissolved Oxygen (Probe) -00299 (mg/L):
pH - 00400 (Stnd. Units):
Salinity - 00480 (PPTh):
Secchi Depth - 00078 (M):
Specific Conductance - 00094 (umho/cm):
Temperature - 00010 (C):

Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 161637
(Lab Use Only)
RQ- 97 - Jun - 23 - 120

Sample Location: ITPW-03
Field ID/Name: ITPW-03
Storet Station Number: —
NPDES Number: —

Collection Date: 6/27/97
Collection Time: 1151
Grab: X
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: N.A
Signature: —
Sampled By: Hank Cheng & Jim McCarthy
Signature: [signature]
Field Report Prepared By: Amy Jo Klein
Signature: Amy Jo Klein

Field Parameters:
Depth (Feet): Not Measured
Chlorine, Total Residual - 50060 (mg/L): _____
Dissolved Oxygen (Probe) - 00299 (mg/L): _____
pH - 00400 (Stnd. Units): _____
Salinity - 00480 (PPTh): _____
Secchi Depth - 00078 (M): _____
Specific Conductance - 00094 (umho/cm): _____
Temperature - 00010 (C): _____

## Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

1 9 0142
BUREAU OF WASTE CLEANUP
JUL 30 1997
TECHNICAL REVIEW SECTION

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUN-26-04 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 26-JUN-1997 09:36
Date Received: 26-JUN-1997 Customer ID: SSSS
Authorized: 17-JUL-1997 By: Julio J. Arrecis

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: _____ Date: 7-18-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00024

Sample ID: 181711/97-JUN-26-04-01 Matrix: W-GROUND
Location: ITT THOMPSON (MW-1)
Field ID: ITGW-1 (B.GROUND)
Collected: 25-JUN-1997 17:00 By: AMY JO KLEI
Authorized: 17-JUL-1997 By: Julio J. Arrecis
Type: Grab Sample
Lab Comments: TEMP=4DC/PH<2
Field Comments: TURBIDITY (NTU) 37.7

Analysis ID: HG-H-W
Mercury in liquid samples by Method 245.1 (modified)
Prepared: 30-JUN-1997 13:40 By: Tanya Denis
Analyzed: 2-JUL-1997 11:14 By: Felix A. Akinade
Authorized: 3-JUL-1997 By: TM Chandrashekar

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 71900 | Mercury | 0.10 U | ug/L |
| Comment | None | | |

---

Analysis ID: W-ICP-23
ICP multielement analysis of aqueous samples by Method 200.7
Prepared: 1-JUL-1997 15:00 By: Christa Kinyon
Analyzed: 8-JUL-1997 15:21 By: Elena Compton
Authorized: 16-JUL-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01105 | Aluminum | 4710 | ug/L |
| 01002 | Arsenic | 0 | ug/L |
| 01097 | Antimony | 30 U | ug/L |
| 01007 | Barium | 295 | ug/L |
| 01012 | Beryllium | 1 U | ug/L |
| 01027 | Cadmium | 10 U | ug/L |
| 00916 | Calcium | 58.8 | mg/L |
| 01034 | Chromium | 20 U | ug/L |
| 01037 | Cobalt | 8 U | ug/L |
| 01042 | Copper | 20 U | ug/L |
| 01045 | Iron | 2990 | ug/L |
| 01051 | Lead | 0 | ug/L |
| 00927 | Magnesium | 8.73 | mg/L |
| 01055 | Manganese | 20 | ug/L |
| 01067 | Nickel | 10 U | ug/L |
| 00937 | Potassium | 0.4 U | mg/L |
| 01147 | Selenium | 0 | ug/L |
| 01077 | Silver | 6 U | ug/L |
| 00929 | Sodium | 3.78 | mg/L |
| 01082 | Strontium | 0 | ug/L |
| 01059 | Thallium | 0 | ug/L |


Continued on Page 3

181711/97-JUN-~~26-04-01~~/W-ICP-23 Continued from Page 2

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01087 | Vanadium | 21 | ug/L |
| 01092 | Zinc | 20 U | ug/L |
| Comment | The sample results are not consistent with the measured field conductivity. | | |

Analysis ID: W-ICPMS
ICPMS analysis of total metals in water by Method 200.8
Prepared: 1-JUL-1997 15:00 By: Christa Kinyon
Analyzed: 14-JUL-1997 14:04 By: Brett Organ
Authorized: 16-JUL-1997 By: Christopher A. Morgan

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 01105 | Aluminum | 0 | ug/L |
| 01002 | Arsenic | 4 U | ug/L |
| 01097 | Antimony | 0 | ug/L |
| 01007 | Barium | 0 | ug/L |
| 01012 | Beryllium | 0 | ug/L |
| 01027 | Cadmium | 0 | ug/L |
| 01034 | Chromium | 0 | ug/L |
| 01037 | Cobalt | 0 | ug/L |
| 01042 | Copper | 0 | ug/L |
| 01051 | Lead | 13.0 | ug/L |
| 01055 | Manganese | 0 | ug/L |
| 01062 | Molybdenum | 0 | ug/L |
| 01067 | Nickel | 0 | ug/L |
| 01147 | Selenium | 5 I | ug/L |
| 01077 | Silver | 0 | ug/L |
| 01059 | Thallium | 0.2 U | ug/L |
| 01087 | Vanadium | 0 | ug/L |
| 01092 | Zinc | 0 | ug/L |
| Comment | The Se spike recovery was outside the control limits. The Tl MDL was adjusted due to sample preparation background. | | |

00025

# QUALITY CONTROL REPORT
## Job ID: 97-JUN-26-04

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK,SMP |
|---|---|---|---|---|---|---|
| HG-H-W | Mercury | | 93.6 | 93.1 | | 0.5 |
| W-ICP-23 | Aluminum | | 105 | 107 | | 14.8 |
| W-ICP-23 | Antimony | | 109 | 108 | | 0.5 |
| W-ICP-23 | Barium | | 106 | 105 | | 2.2 |
| W-ICP-23 | Beryllium | | 109 | 107 | | 2.2 |
| W-ICP-23 | Cadmium | | 110 | 109 | | 1.1 |
| W-ICP-23 | Calcium | | 108 | | | 1.9 |
| W-ICP-23 | Chromium | | 110 | 109 | | 0.6 |
| W-ICP-23 | Cobalt | | 106 | 102 | | 3.9 |
| W-ICP-23 | Copper | | 109 | 105 | | 3.6 |
| W-ICP-23 | Iron | | 112 | 112 | | 5.1 |
| W-ICP-23 | Magnesium | | 103 | | | 1.9 |
| W-ICP-23 | Manganese | | 109 | 107 | | 0.0 |
| W-ICP-23 | Nickel | | 110 | 108 | | 2.0 |
| W-ICP-23 | Potassium | | 99.3 | | | 4.1 |
| W-ICP-23 | Silver | | 105 | 103 | | 1.9 |
| W-ICP-23 | Sodium | | 99.1 | | | 1.9 |
| W-ICP-23 | Vanadium | | 107 | 106 | | 1.5 |
| W-ICP-23 | Zinc | | 111 | 108 | | 0.8 |
| W-ICPMS | Arsenic | | 103 | 103 | | 0.1 |
| W-ICPMS | Lead | | 106 | 105 | | 1.2 |
| W-ICPMS | Selenium | | 116 | 122 | | 4.9 |
| W-ICPMS | Thallium | | 105 | 106 | | 1.2 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

1 9 0144

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 18774
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW-1
Field ID/Name: ITGW-1 (Background)
Storet Station Number:
NPDES Number:

Collection Date: 6/25/97
Collection Time: 1700 hrs
Grab:
Composite Begin: End:

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | X TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: AJ Klei
Signature: Amy J. Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy J Klei

Field Parameters:
Depth (Feet): 29.8' BTOC
Chlorine, Total Residual - 50060 (mg/L): —
Dissolved Oxygen (Probe) -00299 (mg/L): —
pH - 00400 (Stnd. Units): 6.87
Salinity - 00480 (PPTh): NA
Turbidity (NTU)
~~Secchi Depth -00078 (M)~~: 37.7 NTU
Specific Conductance - 00094 (umho/cm): 446
Temperature - 00010 (C): 27

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 2 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 6 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 6 | Ice |
| TRPH | Brown Glass-1L | 3 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| sticides/PCBs | Brown Glass-1L | 2 | Ice |
| RPH | Brown Glass-1L | 1 | HCl |
| | | | |
| | | | |

# STATE OF FLORIDA
## DEPARTMENT OF ENVIRONMENTAL PROTECTION
## CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD



CERCLA SITE SCREENING

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 -012 |
| PROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Amy J. Klein | DATE: 6/25/97 |

| Field ID | ITGW-1 | ITGW-TRIP | | | | | | | | | | | | | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | | | | | | | | | | |
| LAB SPIKE | | | | | | | | | | | | | | | | | | |
| WATER | X | | | | | | | | | | | | | | X | | X | |
| SOIL/SEDIMENT | | | | | | | | | | | | | | | | X | | X |
| METALS | 1 | | | | | | | | | | | | | | P-1L | | HNO3 | |
| CYANIDE | 1 | | | | | | | | | | | | | | P-1L | | NaOH | |
| VOLATILES | 4 | 2 | | | | | | | | | | | | | G-40ml | G250ml | HCl | ICE |
| BNAs | 2 | | | | | | | | | | | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | 2 | | | | | | | | | | | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | | | | | | | | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | | | | | | | | | | G500m | | ICE |
| TRPH | 1 | | | | | | | | | | | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | | | | | | | | |
| TOTAL | 11 | 2 | | | | | | | | | | | | | | | | |
| Turbidity (NTU) | 37.7 | — | | | | | | | | | | | | | | | | |
| Temperature °C | 27 | — | | | | | | | | | | | | | | | | |
| pH-00400 | 6.87 | — | | | | | | | | | | | | | | | | |
| Conductance(umho/cm) | 446 | — | | | | | | | | | | | | | | | | |

COMMENTS: No matrix spike samples collected due to low productivity of well (ITGW-1/Background). Spike samples will be collected at another location (TBD).

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Amy J. Klein | 2: | 3: |
| Time/date | 1: 6/25/97 2020 | 2: | 3: |
| Method of Dispatch | 1: | 2: | 3: |
| Received By | 1: Amzad B. Shaikh | 2: | 3: |

19 0145

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUN-30-01 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 30-JUN-1997 10:32
Date Received: 30-JUN-1997 Customer ID: SSSS
Authorized: 11-AUG-1997 By: Liang T. Lin

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

BUREAU OF WASTE CLEANUP
AUG 29 1997
TECHNICAL REVIEW SECTION

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: TWF Date: 8/20/97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00027

Sample ID: 181835/97-JUN-30-01-01 Matrix: W-GROUND
Location: MW4B
Field ID: ITGW-3
Collected: 27-JUN-1997 14:00 By: A. KLEI
Authorized: 8-AUG-1997 By: Kerry Tate
Type: Grab Sample
Lab Comments: DEP TEMP=2DC.
Field Comments:

Analysis ID: W-VOC-SS
Volatiles in wtr by 624/5030-8260 for Superfund Group only
Prepared: NA By:
Analyzed: 10-JUL-1997 09:18 By: Joel Nagle
Authorized: 8-AUG-1997 By: Kerry Tate

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 81552 | Acetone | 100 U | ug/L |
| 78124 | Benzene | 5.0 U | ug/L |
| 32101 | Bromodichloromethane | 5.0 U | ug/L |
| 32104 | Bromoform | 5.0 U | ug/L |
| 34413 | Bromomethane | 5.0 U | ug/L |
| 81595 | 2-Butanone | 100 U | ug/L |
| 77041 | Carbon disulfide | 10 U | ug/L |
| 32102 | Carbon tetrachloride | 5.0 U | ug/L |
| 34301 | Chlorobenzene | 5.0 U | ug/L |
| 34311 | Chloroethane | 5.0 U | ug/L |
| 32106 | Chloroform | 5.0 U | ug/L |
| 34418 | Chloromethane | 5.0 U | ug/L |
| 32105 | Dibromochloromethane | 5.0 U | ug/L |
| 34496 | 1,1-Dichloroethane | 9.2 I | ug/L |
| 34531 | 1,2-Dichloroethane | 5.0 U | ug/L |
| 34501 | 1,1-Dichloroethene | 11 | ug/L |
| 77093 | cis-1,2-Dichloroethene | 9700 | ug/L |
| 34546 | trans-1,2-Dichloroethene | 18 | ug/L |
| 34541 | 1,2-Dichloropropane | 5.0 U | ug/L |
| 34704 | cis-1,3-Dichloropropene | 5.0 U | ug/L |
| 34699 | trans-1,3-Dichloropropene | 5.0 U | ug/L |
| 34371 | Ethylbenzene | 120 | ug/L |
| 77103 | 2-Hexanone | 100 U | ug/L |
| 78133 | 4-Methyl-2-Pentanone | 100 U | ug/L |
| 34423 | Methylene chloride | 5.0 U | ug/L |
| 77128 | Styrene | 10 U | ug/L |
| 34516 | 1,1,2,2-Tetrachloroethane | 5.0 U | ug/L |
| 34475 | Tetrachloroethene | 5.0 U | ug/L |
| 34506 | 1,1,1-Trichloroethane | 5.0 U | ug/L |
| 34511 | 1,1,2-Trichloroethane | 5.0 U | ug/L |
| 39180 | Trichloroethene | 5.0 U | ug/L |
| 78131 | Toluene | 1800 | ug/L |
| 39175 | Vinyl chloride | 520 | ug/L |
| 81551 | Xylenes (total) | 680 | ug/L |

Comments(1): The MDLs are elevated due to required dilution of the sample.

Sample ID: 181836/97-JUN-30-01-02 Matrix: W-GROUND
Location: ITPW-02
Field ID: ITPW-02
Collected: 27-JUN-1997 11:20 By: J. MCCARTHY/H. CHENG
Authorized: 8-AUG-1997 By: Kerry Tate
Type: Grab Sample
Lab Comments: DEP TEMP=2DC.
Field Comments:

Analysis ID: W-VOC-SS
Volatiles in wtr by 624/5030-8260 for Superfund Group only
Prepared: NA By:
Analyzed: 8-JUL-1997 22:06 By: Joel Nagle
Authorized: 8-AUG-1997 By: Kerry Tate

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 81552 | Acetone | 10 U | ug/L |
| 78124 | Benzene | 0.50 U | ug/L |
| 32101 | Bromodichloromethane | 0.50 U | ug/L |
| 32104 | Bromoform | 0.50 U | ug/L |
| 34413 | Bromomethane | 0.50 U | ug/L |
| 81595 | 2-Butanone | 10 U | ug/L |
| 77041 | Carbon disulfide | 1.0 U | ug/L |
| 32102 | Carbon tetrachloride | 0.50 U | ug/L |
| 34301 | Chlorobenzene | 0.50 U | ug/L |
| 34311 | Chloroethane | 0.50 U | ug/L |
| 32106 | Chloroform | 0.50 U | ug/L |
| 34418 | Chloromethane | 0.50 U | ug/L |
| 32105 | Dibromochloromethane | 0.50 U | ug/L |
| 34496 | 1,1-Dichloroethane | 0.50 U | ug/L |
| 34531 | 1,2-Dichloroethane | 0.50 U | ug/L |
| 34501 | 1,1-Dichloroethene | 0.50 U | ug/L |
| 77093 | cis-1,2-Dichloroethene | 1.0 U | ug/L |
| 34546 | trans-1,2-Dichloroethene | 0.50 U | ug/L |
| 34541 | 1,2-Dichloropropane | 0.50 U | ug/L |
| 34704 | cis-1,3-Dichloropropene | 0.50 U | ug/L |
| 34699 | trans-1,3-Dichloropropene | 0.50 U | ug/L |
| 34371 | Ethylbenzene | 0.50 U | ug/L |
| 77103 | 2-Hexanone | 10 U | ug/L |
| 78133 | 4-Methyl-2-Pentanone | 10 U | ug/L |
| 34423 | Methylene chloride | 0.50 U | ug/L |
| 77128 | Styrene | 1.0 U | ug/L |
| 34516 | 1,1,2,2-Tetrachloroethane | 0.50 U | ug/L |
| 34475 | Tetrachloroethene | 0.50 U | ug/L |
| 34506 | 1,1,1-Trichloroethane | 0.50 U | ug/L |
| 34511 | 1,1,2-Trichloroethane | 0.50 U | ug/L |
| 39180 | Trichloroethene | 0.50 U | ug/L |
| 78131 | Toluene | 0.50 U | ug/L |
| 39175 | Vinyl chloride | 0.50 U | ug/L |

 Continued on Page 4

 Continued from Page 3

00028

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 81551 | Xylenes (total) | 0.50 U | ug/L |

Comments(1): None

---

Sample ID: 181837/97-JUN-30-01-03 Matrix: W-GROUND
Location: ITPW-03
Field ID: ITPW-03
Collected: 27-JUN-1997 11:51 By: J. MCCARTHY/H. CHENG
Authorized: 8-AUG-1997 By: Kerry Tate
Type: Grab Sample
Lab Comments: DEP TEMP=2DC.
Field Comments:

Analysis ID: W-VOC-SS
Volatiles in wtr by 624/5030-8260 for Superfund Group only
Prepared: NA By:
Analyzed: 8-JUL-1997 22:49 By: Joel Nagle
Authorized: 8-AUG-1997 By: Kerry Tate

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 81552 | Acetone | 10 U | ug/L |
| 78124 | Benzene | 0.50 U | ug/L |
| 32101 | Bromodichloromethane | 0.50 U | ug/L |
| 32104 | Bromoform | 0.50 U | ug/L |
| 34413 | Bromomethane | 0.50 U | ug/L |
| 81595 | 2-Butanone | 10 U | ug/L |
| 77041 | Carbon disulfide | 3.7 U | ug/L |
| 32102 | Carbon tetrachloride | 0.50 U | ug/L |
| 34301 | Chlorobenzene | 0.50 U | ug/L |
| 34311 | Chloroethane | 0.50 U | ug/L |
| 32106 | Chloroform | 0.50 U | ug/L |
| 34418 | Chloromethane | 0.50 U | ug/L |
| 32105 | Dibromochloromethane | 0.50 U | ug/L |
| 34496 | 1,1-Dichloroethane | 0.50 U | ug/L |
| 34531 | 1,2-Dichloroethane | 0.50 U | ug/L |
| 34501 | 1,1-Dichloroethene | 0.50 U | ug/L |
| 77093 | cis-1,2-Dichloroethene | 6.6 | ug/L |
| 34546 | trans-1,2-Dichloroethene | 0.50 U | ug/L |
| 34541 | 1,2-Dichloropropane | 0.50 U | ug/L |
| 34704 | cis-1,3-Dichloropropene | 0.50 U | ug/L |
| 34699 | trans-1,3-Dichloropropene | 0.50 U | ug/L |
| 34371 | Ethylbenzene | 0.50 U | ug/L |
| 77103 | 2-Hexanone | 10 U | ug/L |
| 78133 | 4-Methyl-2-Pentanone | 10 U | ug/L |
| 34423 | Methylene chloride | 0.50 U | ug/L |
| 77128 | Styrene | 1.0 U | ug/L |
| 34516 | 1,1,2,2-Tetrachloroethane | 0.50 U | ug/L |

 Continued on Page 5

181837/97-JUN-30-01-03/W-VOC-SS Continued from Page 4

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 34475 | Tetrachloroethene | 0.50 U | ug/L |
| 34506 | 1,1,1-Trichloroethane | 0.50 U | ug/L |
| 34511 | 1,1,2-Trichloroethane | 0.50 U | ug/L |
| 39180 | Trichloroethene | 8.9 | ug/L |
| 78131 | Toluene | 0.50 U | ug/L |
| 39175 | Vinyl chloride | 0.50 U | ug/L |
| 81551 | Xylenes (total) | 0.50 U | ug/L |

Comments(1): None

---

Sample ID: 181838/97-JUN-30-01-04 Matrix: W-TRIP-BLK
Location: DEP LAB
Field ID: ITGW-TRIP3
Collected: 27-JUN-1997 13:00 By: A. KLEI
Authorized: 8-AUG-1997 By: Kerry Tate
Type: Grab Sample
Lab Comments: DEP TEMP=2DC.
Field Comments:

Analysis ID: W-VOC-SS
Volatiles in wtr by 624/5030-8260 for Superfund Group only
Prepared: NA By:
Analyzed: 8-JUL-1997 23:32 By: Joel Nagle
Authorized: 8-AUG-1997 By: Kerry Tate

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 81552 | Acetone | 10 U | ug/L |
| 78124 | Benzene | 0.50 U | ug/L |
| 32101 | Bromodichloromethane | 0.50 U | ug/L |
| 32104 | Bromoform | 0.50 U | ug/L |
| 34413 | Bromomethane | 0.50 U | ug/L |
| 81595 | 2-Butanone | 10 U | ug/L |
| 77041 | Carbon disulfide | 1.0 U | ug/L |
| 32102 | Carbon tetrachloride | 0.50 U | ug/L |
| 34301 | Chlorobenzene | 0.50 U | ug/L |
| 34311 | Chloroethane | 0.50 U | ug/L |
| 32106 | Chloroform | 0.50 U | ug/L |
| 34418 | Chloromethane | 0.50 U | ug/L |
| 32105 | Dibromochloromethane | 0.50 U | ug/L |
| 34496 | 1,1-Dichloroethane | 0.50 U | ug/L |
| 34531 | 1,2-Dichloroethane | 0.50 U | ug/L |
| 34501 | 1,1-Dichloroethene | 0.50 U | ug/L |
| 77093 | cis-1,2-Dichloroethene | 1.0 U | ug/L |
| 34546 | trans-1,2-Dichloroethene | 0.50 U | ug/L |
| 34541 | 1,2-Dichloropropane | 0.50 U | ug/L |
| 34704 | cis-1,3-Dichloropropene | 0.50 U | ug/L |
| 34699 | trans-1,3-Dichloropropene | 0.50 U | ug/L |

181838/97-JUN-30-01-04/W-VOC-SS Continued on Page 6

181838/97-JUN-30-01-04/W-VOC-SS Continued from Page 5

00029

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 34371 | Ethylbenzene | 0.50 U | ug/L |
| 77103 | 2-Hexanone | 10 U | ug/L |
| 78133 | 4-Methyl-2-Pentanone | 10 U | ug/L |
| 34423 | Methylene chloride | 0.50 U | ug/L |
| 77128 | Styrene | 1.0 U | ug/L |
| 34516 | 1,1,2,2-Tetrachloroethane | 0.50 U | ug/L |
| 34475 | Tetrachloroethene | 0.50 U | ug/L |
| 34506 | 1,1,1-Trichloroethane | 0.50 U | ug/L |
| 34511 | 1,1,2-Trichloroethane | 0.50 U | ug/L |
| 39180 | Trichloroethene | 0.50 U | ug/L |
| 78131 | Toluene | 0.50 U | ug/L |
| 39175 | Vinyl chloride | 0.50 U | ug/L |
| 81551 | Xylenes (total) | 0.50 U | ug/L |

Comments(1): None

1 9 0148

# QUALITY CONTROL REPORT
## Job ID: 97-JUN-30-01

| Test ID | Analyte | LFB %Rec | | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK,SMP |
|---|---|---|---|---|---|---|---|
| W-VOC-MS | Benzene | 103 | 105 | 107 | 106 | 2.0 | 0.8 |
| W-VOC-SS | Benzene | 110 | 105 | 105 | 109 | 4.6 | 3.6 |
| W-VOC-MS | Bromodichloromethane | 84.6 | 89.8 | 93.2 | 91.9 | 5.9 | 1.4 |
| W-VOC-SS | Bromodichloromethane | 94.7 | 91.3 | 95.6 | 92.0 | 3.7 | 3.9 |
| W-VOC-MS | Bromoform | 79.6 | 83.0 | 91.9 | 95.6 | 4.2 | 4.0 |
| W-VOC-SS | Bromoform | 92.6 | 83.9 | 91.4 | 91.1 | 9.9 | 0.3 |
| W-VOC-MS | Carbon tetrachloride | 94.7 | 99.0 | 98.3 | 97.5 | 4.4 | 0.8 |
| W-VOC-SS | Carbon tetrachloride | 103 | 94.9 | 98.4 | 101 | 8.0 | 2.7 |
| W-VOC-MS | Chlorobenzene | 89.2 | 95.7 | 100 | 101 | 7.0 | 0.1 |
| W-VOC-SS | Chlorobenzene | 98.3 | 95.3 | 99.4 | 102 | 3.1 | 2.4 |
| W-VOC-MS | Chloroform | 96.4 | 98.3 | 100 | 98.1 | 2.0 | 1.5 |
| W-VOC-SS | Chloroform | 103 | 100 | 101 | 104 | 3.5 | 3.1 |
| W-VOC-MS | Dibromochloromethane | 97.2 | 100 | 109 | 98.6 | 2.4 | 10.1 |
| W-VOC-SS | Dibromochloromethane | 85.7 | 101 | 99.2 | 108 | 16.6 | 8.8 |
| W-VOC-MS | 1,1-Dichloroethane | 101 | 103 | 104 | 101 | 2.1 | 2.8 |
| W-VOC-SS | 1,1-Dichloroethane | 105 | 102 | 103 | 110 | 2.2 | 6.0 |
| W-VOC-MS | 1,2-Dichloroethane | 93.2 | 96.6 | 103 | 103 | 3.5 | 0.0 |
| W-VOC-SS | 1,2-Dichloroethane | 104 | 98.8 | 104 | 104 | 4.7 | 0.2 |
| W-VOC-MS | 1,1-Dichloroethene | 95.4 | 100 | 95.4 | 95.7 | 5.0 | 0.3 |
| W-VOC-SS | 1,1-Dichloroethene | 102 | 99.0 | 98.2 | 104 | 3.4 | 5.4 |
| W-VOC-MS | trans-1,2-Dichloroethene | 93.0 | 99.4 | 95.2 | 96.9 | 6.7 | 1.7 |
| W-VOC-SS | trans-1,2-Dichloroethene | 100 | 98.1 | 98.2 | 103 | 2.2 | 4.9 |
| W-VOC-MS | 1,2-Dichloropropane | 97.8 | 101 | 102 | 103 | 3.5 | 0.2 |
| W-VOC-SS | 1,2-Dichloropropane | 105 | 101 | 100 | 108 | 3.6 | 7.1 |
| W-VOC-MS | cis-1,3-Dichloropropene | 93.4 | 98.3 | 105 | 104 | 5.1 | 1.0 |
| W-VOC-SS | cis-1,3-Dichloropropene | 103 | 93.0 | 104 | 100 | 10.4 | 3.7 |
| W-VOC-MS | trans-1,3-Dichloropropene | 91.7 | 95.9 | 106 | 105 | 4.5 | 1.6 |
| W-VOC-SS | trans-1,3-Dichloropropene | 102 | 90.3 | 100 | 98.7 | 12.0 | 1.4 |
| W-VOC-MS | Ethylbenzene | 70.2 | 75.1 | 85.1 | 86.6 | 6.7 | 1.8 |
| W-VOC-SS | Ethylbenzene | 87.8 | 78.7 | 89.2 | 93.0 | 11.0 | 4.3 |
| W-VOC-MS | Methylene chloride | 93.4 | 100 | 101 | 98.7 | 6.8 | 2.3 |
| W-VOC-SS | Methylene chloride | 105 | 98.0 | 102 | 105 | 7.2 | 2.7 |
| W-VOC-MS | 1,1,2,2-Tetrachloroethane | 75.7 | 80.8 | 93.4 | 95.0 | 6.4 | 1.7 |
| W-VOC-SS | 1,1,2,2-Tetrachloroethane | 90.0 | 84.3 | 95.0 | 93.2 | 6.5 | 1.9 |
| W-VOC-MS | Tetrachloroethene | 91.0 | 98.1 | 102 | 98.9 | 7.5 | 3.4 |
| W-VOC-SS | Tetrachloroethene | 96.5 | 91.7 | 93.0 | 96.9 | 5.1 | 4.2 |
| W-VOC-MS | 1,1,1-Trichloroethane | 102 | 110 | 113 | 112 | 7.1 | 0.9 |
| W-VOC-SS | 1,1,1-Trichloroethane | 113 | 111 | 103 | 114 | 1.8 | 10.2 |
| W-VOC-MS | 1,1,2-Trichloroethane | 89.3 | 95.0 | 105 | 106 | 6.2 | 0.6 |
| W-VOC-SS | 1,1,2-Trichloroethane | 100 | 96.2 | 99.5 | 96.8 | 3.4 | 2.8 |


Continued on Page 8

| Test ID | Analyte | LFB %Rec | | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK, SMP |
|---|---|---|---|---|---|---|---|
| W-VOC-MS | Trichloroethene | 97.2 | 100 | 102 | 100 | 2.6 | 1.9 |
| W-VOC-SS | Trichloroethene | 103 | 98.7 | 99.5 | 104 | 4.6 | 4.5 |
| W-VOC-MS | Toluene | 91.3 | 97.6 | 103 | 101 | 6.6 | 1.0 |
| W-VOC-SS | Toluene | 98.9 | 97.7 | 98.3 | 98.0 | 1.2 | 0.3 |
| W-VOC-MS | Xylenes (total) | 72.2 | 78.1 | 82.8 | 84.5 | 7.9 | 2.1 |
| W-VOC-SS | Xylenes (total) | 85.3 | 80.9 | 88.4 | 92.7 | 5.3 | 4.7 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

# Summary For Request ID: RQ-97-JUN-23-12

Reqested By: HANK CHENG
Customer...: SSSS
Division...: WSM
Project Name: ITT Thompson

Date of Request: 18-JUN-1997
Project.....: SUPERFUND
District.....: XX

Comments: Contact Hank when coolers are ready. Coolers will be picked up by E+E. Pre-preserved VOCs. Include 1+1 HNO3 in kit. Include 1 TB per VOC cooler + 1 extra TB. Include 1 FedEx waybill per cooler. Hank will provide field sheets.

Phone : 904-921-0858
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

Program Module Number: 0436
Priority.....: 3
Request Status.....: S
Request Reviewed By..: YUHHSU
Sampling Kit Required: YES
Sampling Kit Shipped.: YES
Kit Packed By.....: MARIA

Criminal Ivestigation: NO
Custody.....: YES
Base Project....: YES
Date Reviewed...: 18-JUN-1997
Date to Ship Kit: 16-JUN-1997
Kit Shipped.....: 19-JUN-1997
Receive Samples.: 23-JUN-1997

Group# 1 - METALS 18 Samples

| sis ID | Analysis Description |
|---|---|
| HG-H-W | - Mercury in liquid samples by Method 245.1 (modified) |
| H-ICP-23 | - ICP multielement analysis of aqueous samples by Method 200.7 |
| H-ICPMS | - ICPMS analysis of total metals in water by Method 200.8 |

Group# 1 - VOLATILE 18 Samples

| nalysis ID | Analysis Description |
|---|---|
| VOC-SS | - Volatiles in wtr by 624/5030-8260 for Superfund Group only |

Group# 1 - SM-VOLATIL 18 Samples

| alysis ID | Analysis Description |
|---|---|
| BNA-SS | - BNA in water by EPA 625 for Superfund Group only. |

Group# 1 - PSTHRB-GC 18 Samples

| lysis ID | Analysis Description |
|---|---|
| PCB-SS | - Cl-pesticides & PCBs in water by alt 608 for Superfund Group only. |

Group# 2 - METALS 8 Samples

| sis ID | Analysis Description |
|---|---|
| S | - Mercury in solids by Method 245.5, 7470 or 7471. |
| | - ICP multielement analysis for soil by Method 6010 |

ABS 6-26-97 1 Sample
1 T.Blk for V

JAN - (4) sites 6/27/97
JAN - (4) sites 6/30/97
JAN - (4) 7/1/97

Group# 2 - PSTHRB-GC 8 Samples

| ysis ID | Analysis Description |
|---|---|
| PCB-SS | - Cl-pest & PCBs in soil 3550/8080 dry wt for Superfund Group only |

Group# 2 - SM-VOLATIL 8 Samples

| lysis ID | Analysis Description |
|---|---|
| NA-SSSS | - BNA in soil or waste 3550/8270 dry wt for Superfund Group only. |

Group# 2 - VOLATILE 8 Samples

| ılysis ID | Analysis Description |
|---|---|
| /OC-SS | - Volatiles in soil or waste by 5030-8260 by dry wt for Superfund Group only |

Group Summary:

| | | |
|---|---|---|
| METALS | 18 | Samples |
| VOLATILE | 18 | Samples |
| SM-VOLATIL | 18 | Samples |
| PSTHRB-GC | 18 | Samples |

Additonal Comments:

Comments: NONE

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0150

Sample ID: 181835
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW 4B
Field ID/Name: ITGW-3
Storet Station Number: —
NPDES Number: —

Collection Date: 6-27-97
Collection Time: 1400 hrs
Grab: —
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Jo Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): 40
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 5.88
Salinity - 00480 (PPTh): NA
Turbidity (NTU)
~~Secchi Depth~~ - 00078 (M): 13.1 NTU
Specific Conductance - 00094 (umho/cm): 299
Temperature - 00010 (C): 27

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |

# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
## CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
equestor: SSSS
oject ID: ITT Thompson

1 9 - 0151

Sample ID: 161562 (Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: TRIP BLANK
Field ID/Name: ITGW - TRIP - 4
Storet Station Number:
NPDES Number:

Collection Date: 6/21/97
Collection Time: 14:30
Grab:
Composite Begin: End:

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | X__TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| ___GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature:
Sampled By: KEVIN HAYES
Signature: Kevin Hayes
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet):
Chlorine, Total Residual - 50060 (mg/L):
Dissolved Oxygen (Probe) -00299 (mg/L):
pH - 00400 (Stnd. Units):
Salinity - 00480 (PPTh):
Secchi Depth - 00078 (M):
Specific Conductance - 00094 (umho/cm):
Temperature - 00010 (C):

Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| W-VOC-SS | Brown Glass Vial-40mL | 2 | ICE / HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 2 | HCl |
| | | | |
| | | | |
| | | | |
| | | | |

id Final Report to : Hank Cheng, Bureau of Waste Cleanup

# STATE OF FLORIDA
## DEPARTMENT OF ENVIRONMENTAL PROTECTION
## CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD



CERCLA SITE SCREENING

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 - 12 |
| PROJECT NAME:ITT Thompson | SAMPLERS (SIGNATURES): Kevin Hayes, K. Stair – Jason Dias | DATE: 6/30/97 |

| Field ID | ITGW-4 | ITGW-4-DUP | ITGW-5 | ITGW-TRIP-4 | ITVP-14 | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | |
| LAB SPIKE | | | | | | | | | |
| WATER | X | X | X | X | X | X | | X | |
| SOIL/SEDIMENT | | | | | | | X | | X |
| METALS | 1 | 1 | 1 | | | P-1L | | HNO3 | |
| CYANIDE | 1 | 1 | 1 | | | P-1L | | NaOH | |
| VOLATILES | 4 | 4 | 4 | 2 | 4 | G-40ml | G250m | HCl | ICE |
| BNAs | 2 | 2 | 2 | | | G-1L | | ICE | |
| PESTICIDES/PCBs | 1* | 2 | 2 | | | G-1L | | ICE | |
| METALS/CYANIDE | | | | | | | G250m | | ICE |
| ~~BNA~~/PEST/PCB | | | | | | | G500m | | ICE |
| TRPH | 1 | 1 | 1 | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | P250ml | | HCl | |
| | | | | | | | | | |
| TOTAL | 10 | 11 | 11 | 2 | 4 | | | | |
| Turbidity | 4.45 | 4.95 | 3.65 | NA | NA | | | | |
| Temperature | DRK. | UNK. | 27 | NA | NA | | | | |
| pH-00400 | 3.83 | 3.83 | 3.75 | NA | NA | | | | |
| Conductance(umho/cm) | 497 | 497 | 1130 | NA | NA | | | | |

COMMENTS: * SHORT 1-BROWN 1-LITER AMBER FOR PESTICIDES

| | 1: | 2: | 3: |
|---|---|---|---|
| Relinquished By: | Kevin Hayes | | |
| Time/date | 6/30/97 21:00 | | |
| Method of Dispatch | HAND DELIVERY | | |
| Received By | Jason Newfield | | |

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson 1 9 0152

Sample ID: 141460 (Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW6
Field ID/Name: ITGW-5
Storet Station Number:
NPDES Number:

Collection Date: 6/30/97
Collection Time: 18:40
Grab: X
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: KEN STARLING — Ken Starling
Signature:
Sampled By: KEN STARLING — Ken Starling
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters:
Depth (Feet): 25' BTOC (TD)
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.75
Salinity - 00480 (PPTp): NA
TURBIDITY (NTUS) ~~Secchi Depth - 00078~~ (M): 3.65
Specific Conductance - 00094 (umho/cm): 1130
Temperature - 00010 (C): 27

Water:

| Analyses | Bottle Type | # Boules | Preservatives |
|---|---|---|---|
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| METALS | PLASTIC 1L | 1 | HNO3 |
| CYANIDE | PLASTIC 1L | 1 | NaOH |
| BNAs | BROWN GLASS-1L | 2 | ICE |
| PESTICIDES/PCBS | BROWN GLASS-1L | 2 | ICE |
| TRPH | BROWN GLASS-1L | 1 | HCl |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
*Requestor:* SSSS
Project ID: ITT Thompson

Sample ID: 161561
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: _____
Field ID/Name: ITVP-1A
Storet Station Number: _____
NPDES Number: _____

Collection Date: 6/30/97
Collection Time: 12:20
Grab: X 38-41' OPEN HOLE
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature: _____
Sampled By: KEVIN HAYES
Signature: Kevin Hayes
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet): _____
Chlorine, Total Residual - 50060 (mg/L): _____
Dissolved Oxygen (Probe) -00299 (mg/L): _____
pH - 00400 (Stnd. Units): _____
Salinity - 00480 (PPTh): _____
Secchi Depth - 00078 (M): _____
Specific Conductance - 00094 (umho/cm): _____
Temperature - 00010 (C): _____

## Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

19 0153

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUL-01-01 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 1-JUL-1997 10:14
Date Received: 1-JUL-1997 Customer ID: SSSS
Authorized: 11-AUG-1997 By: Liang T. Lin

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

BUREAU OF WASTE CLEANUP
AUG 29 1997
TECHNICAL REVIEW SECTION

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: TWF Date: 8/19/97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

Sample ID: 181859/97-JUL-01-01-02 Matrix: W-GROUND
Location: MW5B
Field ID: ITGW-4-DUP
Collected: 30-JUN-1997 12:30 By: K. STARLING
Authorized: 7-AUG-1997 By: Kerry Tate
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: W-VOC-SS
Volatiles in wtr by 624/5030-8260 for Superfund Group only
Prepared: NA By:
Analyzed: 10-JUL-1997 05:41 By: Joel Nagle
Authorized: 7-AUG-1997 By: Kerry Tate

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 81552 | Acetone | 100 U | ug/L |
| 78124 | Benzene | 5.0 U | ug/L |
| 32101 | Bromodichloromethane | 5.0 U | ug/L |
| 32104 | Bromoform | 5.0 U | ug/L |
| 34413 | Bromomethane | 5.0 U | ug/L |
| 81595 | 2-Butanone | 100 U | ug/L |
| 77041 | Carbon disulfide | 10 U | ug/L |
| 32102 | Carbon tetrachloride | 5.0 U | ug/L |
| 34301 | Chlorobenzene | 5.0 U | ug/L |
| 34311 | Chloroethane | 5.0 U | ug/L |
| 32106 | Chloroform | 5.0 U | ug/L |
| 34418 | Chloromethane | 5.0 U | ug/L |
| 32105 | Dibromochloromethane | 5.0 U | ug/L |
| 34496 | 1,1-Dichloroethane | 21 | ug/L |
| 34531 | 1,2-Dichloroethane | 5.0 U | ug/L |
| 34501 | 1,1-Dichloroethene | 22 | ug/L |
| 77093 | cis-1,2-Dichloroethene | 1.3E+04 | ug/L |
| 34546 | trans-1,2-Dichloroethene | 57 | ug/L |
| 34541 | 1,2-Dichloropropane | 5.0 U | ug/L |
| 34704 | cis-1,3-Dichloropropene | 5.0 U | ug/L |
| 34699 | trans-1,3-Dichloropropene | 5.0 U | ug/L |
| 34371 | Ethylbenzene | 190 | ug/L |
| 77103 | 2-Hexanone | 100 U | ug/L |
| 78133 | 4-Methyl-2-Pentanone | 100 U | ug/L |
| 34423 | Methylena chloride | 5.0 U | ug/L |
| 77128 | Styrene | 10 U | ug/L |
| 34516 | 1,1,2,2-Tetrachloroethane | 5.0 U | ug/L |
| 34475 | Tetrachloroethene | 5.0 U | ug/L |
| 34506 | 1,1,1-Trichloroethane | 5.0 U | ug/L |
| 34511 | 1,1,2-Trichloroethane | 5.0 U | ug/L |
| 39180 | Trichloroethene | 630 | ug/L |
| 78131 | Toluene | 1800 | ug/L |
| 39175 | Vinyl chloride | 1.4E+04 | ug/L |
| 81551 | Xylenes (total) | 690 | ug/L |

Comments(1): None

19 0155

Sample ID: 181861/97-JUL-01-01-04 Matrix: W-GROUND
Location: ITVP-1A
Field ID: ITVP-1A
Collected: 30-JUN-1997 12:20 By: K. HAYES
Authorized: 7-AUG-1997 By: Kerry Tate
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: W-VOC-SS
Volatiles in wtr by 624/5030-8260 for Superfund Group only
Prepared: NA By:
Analyzed: 9-JUL-1997 00:58 By: Joel Nagle
Authorized: 7-AUG-1997 By: Kerry Tate

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 81552 | Acetone | 58 A | ug/L |
| 78124 | Benzene | 0.50 U | ug/L |
| 32101 | Bromodichloromethane | 0.50 U | ug/L |
| 32104 | Bromoform | 0.50 U | ug/L |
| 34413 | Bromomethane | 0.50 U | ug/L |
| 81595 | 2-Butanone | 10 U | ug/L |
| 77041 | Carbon disulfide | 1.1 U | ug/L |
| 32102 | Carbon tetrachloride | 0.50 U | ug/L |
| 34301 | Chlorobenzene | 0.50 U | ug/L |
| 34311 | Chloroethane | 0.50 U | ug/L |
| 32106 | Chloroform | 0.50 U | ug/L |
| 34418 | Chloromethane | 0.50 U | ug/L |
| 32105 | Dibromochloromethane | 0.50 U | ug/L |
| 34496 | 1,1-Dichloroethane | 0.50 U | ug/L |
| 34531 | 1,2-Dichloroethane | 0.50 U | ug/L |
| 34501 | 1,1-Dichloroethene | 0.50 U | ug/L |
| 77093 | cis-1,2-Dichloroethene | 1.0 U | ug/L |
| 34546 | trans-1,2-Dichloroethene | 0.50 U | ug/L |
| 34541 | 1,2-Dichloropropane | 0.50 U | ug/L |
| 34704 | cis-1,3-Dichloropropene | 0.50 U | ug/L |
| 34699 | trans-1,3-Dichloropropene | 0.50 U | ug/L |
| 34371 | Ethylbenzene | 0.50 U | ug/L |
| 77103 | 2-Hexanone | 10 U | ug/L |
| 78133 | 4-Methyl-2-Pentanone | 10 U | ug/L |
| 34423 | Methylene chloride | 0.50 U | ug/L |
| 77128 | Styrene | 1.0 U | ug/L |
| 34516 | 1,1,2,2-Tetrachloroethane | 0.50 U | ug/L |
| 34475 | Tetrachloroethene | 0.50 U | ug/L |
| 34506 | 1,1,1-Trichloroethane | 0.50 U | ug/L |
| 34511 | 1,1,2-Trichloroethane | 0.50 U | ug/L |
| 39180 | Trichloroethene | 0.50 U | ug/L |
| 78131 | Toluene | 0.50 U | ug/L |
| 39175 | Vinyl chloride | 0.50 U | ug/L |
| 81551 | Xylenes (total) | 0.50 U | ug/L |

Comments(1): None

1 9 0156

# QUALITY CONTROL REPORT
## Job ID: 97-JUL-01-01

| Test ID | Analyte | LFB %Rec | | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK,SMP |
|---|---|---|---|---|---|---|---|
| W-VOC-MS | Benzene | 103 | 105 | 107 | 106 | 2.0 | 0.8 |
| W-VOC-SS | Benzene | 110 | 105 | 105 | 109 | 4.6 | 3.6 |
| W-VOC-MS | Bromodichloromethane | 84.6 | 89.8 | 93.2 | 91.9 | 5.9 | 1.4 |
| W-VOC-SS | Bromodichloromethane | 94.7 | 91.3 | 95.6 | 92.0 | 3.7 | 3.9 |
| W-VOC-MS | Bromoform | 79.6 | 83.0 | 91.9 | 95.6 | 4.2 | 4.0 |
| W-VOC-SS | Bromoform | 92.6 | 83.9 | 91.4 | 91.1 | 9.9 | 0.3 |
| W-VOC-MS | Carbon tetrachloride | 94.7 | 99.0 | 98.3 | 97.5 | 4.4 | 0.8 |
| W-VOC-SS | Carbon tetrachloride | 103 | 94.9 | 98.4 | 101 | 8.0 | 2.7 |
| W-VOC-MS | Chlorobenzene | 89.2 | 95.7 | 100 | 101 | 7.0 | 0.1 |
| W-VOC-SS | Chlorobenzene | 98.3 | 95.3 | 99.4 | 102 | 3.1 | 2.4 |
| W-VOC-MS | Chloroform | 96.4 | 98.3 | 100 | 98.1 | 2.0 | 1.5 |
| W-VOC-SS | Chloroform | 103 | 100 | 101 | 104 | 3.5 | 3.1 |
| W-VOC-MS | Dibromochloromethane | 97.2 | 100 | 109 | 98.6 | 2.4 | 10.1 |
| W-VOC-SS | Dibromochloromethane | 85.7 | 101 | 99.2 | 108 | 16.6 | 8.8 |
| W-VOC-MS | 1,1-Dichloroethane | 101 | 103 | 104 | 101 | 2.1 | 2.8 |
| W-VOC-SS | 1,1-Dichloroethane | 105 | 102 | 103 | 110 | 2.2 | 6.0 |
| W-VOC-MS | 1,2-Dichloroethane | 93.2 | 96.6 | 103 | 103 | 3.5 | 0.0 |
| W-VOC-SS | 1,2-Dichloroethane | 104 | 98.8 | 104 | 104 | 4.7 | 0.2 |
| W-VOC-MS | 1,1-Dichloroethene | 95.4 | 100 | 95.4 | 95.7 | 5.0 | 0.3 |
| W-VOC-SS | 1,1-Dichloroethene | 102 | 99.0 | 98.2 | 104 | 3.4 | 5.4 |
| W-VOC-MS | trans-1,2-Dichloroethene | 93.0 | 99.4 | 95.2 | 96.9 | 6.7 | 1.7 |
| W-VOC-SS | trans-1,2-Dichloroethene | 100 | 98.1 | 98.2 | 103 | 2.2 | 4.9 |
| W-VOC-MS | 1,2-Dichloropropane | 97.8 | 101 | 102 | 103 | 3.5 | 0.2 |
| W-VOC-SS | 1,2-Dichloropropane | 105 | 101 | 100 | 108 | 3.6 | 7.1 |
| W-VOC-MS | cis-1,3-Dichloropropene | 93.4 | 98.3 | 105 | 104 | 5.1 | 1.0 |
| W-VOC-SS | cis-1,3-Dichloropropene | 103 | 93.0 | 104 | 100 | 10.4 | 3.7 |
| W-VOC-MS | trans-1,3-Dichloropropene | 91.7 | 95.9 | 106 | 105 | 4.5 | 1.6 |
| W-VOC-SS | trans-1,3-Dichloropropene | 102 | 90.3 | 100 | 98.7 | 12.0 | 1.4 |
| W-VOC-MS | Ethylbenzene | 70.2 | 75.1 | 85.1 | 86.6 | 6.7 | 1.8 |
| W-VOC-SS | Ethylbenzene | 87.8 | 78.7 | 89.2 | 93.0 | 11.0 | 4.3 |
| W-VOC-MS | Methylene chloride | 93.4 | 100 | 101 | 98.7 | 6.8 | 2.3 |
| W-VOC-SS | Methylene chloride | 105 | 98.0 | 102 | 105 | 7.2 | 2.7 |
| W-VOC-MS | 1,1,2,2-Tetrachloroethane | 75.7 | 80.8 | 93.4 | 95.0 | 6.4 | 1.7 |
| W-VOC-SS | 1,1,2,2-Tetrachloroethane | 90.0 | 84.3 | 95.0 | 93.2 | 6.5 | 1.9 |
| W-VOC-MS | Tetrachloroethene | 91.0 | 98.1 | 102 | 98.9 | 7.5 | 3.4 |
| W-VOC-SS | Tetrachloroethene | 96.5 | 91.7 | 93.0 | 96.9 | 5.1 | 4.2 |
| W-VOC-MS | 1,1,1-Trichloroethane | 102 | 110 | 113 | 112 | 7.1 | 0.9 |
| W-VOC-SS | 1,1,1-Trichloroethane | 113 | 111 | 103 | 114 | 1.8 | 10.2 |
| W-VOC-MS | 1,1,2-Trichloroethane | 89.3 | 95.0 | 105 | 106 | 6.2 | 0.6 |
| W-VOC-SS | 1,1,2-Trichloroethane | 100 | 96.2 | 99.5 | 96.8 | 3.4 | 2.8 |


Continued on Page 8

1 9 0157

Summary For Request ID: RQ-97-JUN-23-12

Reqested By: HANK CHENG
Customer...: SSSS
Division...: WSM
Project Name: ITT Thompson

Date of Request: 18-JUN-1997
Project.....: SUPERFUND
District.....: XX

Comments: Contact Hank when coolers are ready. Coolers will be picked up by E+E. Pre-preserved VOCs. Include 1+1 HNO3 in kit. Include 1 TB per VOC cooler + 1 extra TB. Include 1 FedEx waybill per cooler. Hank will provide field sheets.

Phone : 904-921-0858
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

Program Module Number: 0436
Priority.....: 3
Request Status.....: S
Request Reviewed By..: YUHHSU
Sampling Kit Required: YES
Sampling Kit Shipped.: YES
Kit Packed By.....: MARIA

Criminal Ivestigation: NO
Custody.....: YES
Base Project....: YES
Date Reviewed...: 18-JUN-1997
Date to Ship Kit: 16-JUN-1997
Kit Shipped.....: 19-JUN-1997
Receive Samples.: 23-JUN-1997

ABS 6-26-97 1 Sample
1 T.Blk for VOC

Group# 1 - METALS 18 Samples

| ID | Analysis Description |
|---|---|
| .. W | - Mercury in liquid samples by Method 245.1 (modified) |
| CP-23 | - ICP multielement analysis of aqueous samples by Method 200.7 |
| CPMS | - ICPMS analysis of total metals in water by Method 200.8 |

FAW - (4) sites 6/27/97
FAW - (4) sites 6/30/97
FAW - (4) 7/1/97
FAW - (4) 7/2/97

Group# 1 - VOLATILE 18 Samples

| ysis ID | Analysis Description |
|---|---|
| C-SS | - Volatiles in wtr by 624/5030-8260 for Superfund Group only |

Group# 1 - SM-VOLATIL 18 Samples

| sis ID | Analysis Description |
|---|---|
| -SS | - BNA in water by EPA 625 for Superfund Group only. |

Group# 1 - PSTHRB-GC 18 Samples

| is ID | Analysis Description |
|---|---|
| B-SS | - Cl-pesticides & PCBs in water by alt 608 for Superfund Group only. |

Group# 2 - METALS 8 Samples

| ID | Analysis Description |
|---|---|
| | - Mercury in solids by Method 245.5, 7470 or 7471. |
| | - ICP multielement analysis for soil by Method 6010 |

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0158

Sample ID: 181858
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW5B
Field ID/Name: IT GW-4
Storet Station Number:
NPDES Number:

Collection Date: 6/30/97
Collection Time: 12:30
Grab: X
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| _X_GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: KEN STARLING - Kevin Hayes
Signature:
Sampled By: KEN STARLING - Kevin Hayes
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters:
Depth (Feet): TD @ 39.2' BTOC
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.83
Salinity - 00480 (PPTh): NA
TURBIDITY (NTUs) ~~Secchi Depth - 00078~~ (M): 4.45
Specific Conductance - 00094 (umho/cm): 497
Temperature - 00010 (C): — UNKNOWN TEMP FUNCTIONTHERMOMETER - NOT

ater:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 1 * | Ice |
| PH | Brown Glass-1L | 1 | HCl |
| | | | |

NOTE: SHORT 1 ~~L~~ 1-liter

CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0159

Sample ID: 162146
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location:
Field ID/Name: ITGW-72IP-5
Storet Station Number:
NPDES Number:

Collection Date: 4/21/97
Collection Time: 14:30
Grab:
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | X TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature:
Sampled By: Kevin Hayes KEVIN HAYES
Signature: Kevin Hayes
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet):
Chlorine, Total Residual - 50060 (mg/L):
Dissolved Oxygen (Probe) -00299 (mg/L):
pH - 00400 (Stnd. Units):
Salinity - 00480 (PPTh):
Secchi Depth - 00078 (M):
Specific Conductance - 00094 (umho/cm):
Temperature - 00010 (C):

ater:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 2 | HCl |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

end Final Report to : Hank Cheng, Bureau of Waste Cleanup

19 0160

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUL-02-17 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 2-JUL-1997 11:19
Date Received: 2-JUL-1997 Customer ID: SSSS
Authorized: 12-AUG-1997 By: Liang T. Lin

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

BUREAU OF CLEANUP
AUG 29 1997
TECHNICAL REVIEW SECTION

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: _____ Date: 8/19/97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

19 0161

# Summary For Request ID: RQ-97-JUN-23-12

Regested By: HANK CHENG
Customer....: SSSS
Division....: WSM
Project Name: ITT Thompson

Date of Request: 18-JUN-1997
Project.....: SUPERFUND
District.....: XX

Comments: Contact Hank when coolers are ready. Coolers will be picked up by E+E. Pre-preserved VOCs. Include 1+1 HNO3 in kit. Include 1 TB per VOC cooler + 1 extra TB. Include 1 FedEx waybill per cooler. Hank will provide field sheets.

Phone : 904-921-0858
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

Program Module Number: 0436
Priority.....: 3
Request Status.....: S
Request Reviewed By..: YUHHSU
Sampling Kit Required: YES
Sampling Kit Shipped.: YES
Kit Packed By.....: MARIA

Criminal Ivestigation: NO
Custody.....: YES
Base Project....: YES
Date Reviewed...: 18-JUN-1997
Date to Ship Kit: 16-JUN-1997
Kit Shipped.....: 19-JUN-1997
Receive Samples.: 23-JUN-1997

ABS 6.26.97 1 Sample 1 T.Blk for VOA
FHW 6/27/97 ④

Group# 1 - METALS 18 Samples

| ID | Analysis Description |
|---|---|
| W | - Mercury in liquid samples by Method 245.1 (modified) |
| -23 | - ICP multielement analysis of aqueous samples by Method 200.7 |
| MS | - ICPMS analysis of total metals in water by Method 200.8 |

Group# 1 - VOLATILE 18 Samples

| sis ID | Analysis Description |
|---|---|
| -SS | - Volatiles in wtr by 624/5030-8260 for Superfund Group only |

Group# 1 - SM-VOLATIL 18 Samples

| is ID | Analysis Description |
|---|---|
| SS | - BNA in water by EPA 625 for Superfund Group only. |

Group# 1 - PSTHRB-GC 18 Samples

| is ID | Analysis Description |
|---|---|
| 8-SS | - Cl-pesticides & PCBs in water by alt 608 for Superfund Group only. |

Group# 2 - METALS 8 Samples

| .s ID | Analysis Description |
|---|---|
| | - Mercury in solids by Method 245.5, 7470 or 7471. |

19 0162

Sample ID: 182148/97-JUL-02-17-02 Matrix: W-TRIP-BLK
Location: DEP LAB
Field ID: ITGW-TRIP-5
Collected: 1-JUL-1997 10:00 By: A. SHAIK
Authorized: 8-AUG-1997 By: Kerry Tate
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: W-VOC-SS
Volatiles in wtr by 624/5030-8260 for Superfund Group only
Prepared: NA By:
Analyzed: 9-JUL-1997 04:33 By: Joel Nagle
Authorized: 8-AUG-1997 By: Kerry Tate

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 81552 | Acetone | 10 U | ug/L |
| 78124 | Benzene | 0.50 U | ug/L |
| 32101 | Bromodichloromethane | 0.50 U | ug/L |
| 32104 | Bromoform | 0.50 U | ug/L |
| 34413 | Bromomethane | 0.50 U | ug/L |
| 81595 | 2-Butanone | 10 U | ug/L |
| 77041 | Carbon disulfide | 1.0 U | ug/L |
| 32102 | Carbon tetrachloride | 0.50 U | ug/L |
| 34301 | Chlorobenzene | 0.50 U | ug/L |
| 34311 | Chloroethane | 0.50 U | ug/L |
| 32106 | Chloroform | 0.50 U | ug/L |
| 34418 | Chloromethane | 0.50 U | ug/L |
| 32105 | Dibromochloromethane | 0.50 U | ug/L |
| 34496 | 1,1-Dichloroethane | 0.50 U | ug/L |
| 34531 | 1,2-Dichloroethane | 0.50 U | ug/L |
| 34501 | 1,1-Dichloroethene | 0.50 U | ug/L |
| 77093 | cis-1,2-Dichloroethene | 1.0 U | ug/L |
| 34546 | trans-1,2-Dichloroethene | 0.50 U | ug/L |
| 34541 | 1,2-Dichloropropane | 0.50 U | ug/L |
| 34704 | cis-1,3-Dichloropropene | 0.50 U | ug/L |
| 34699 | trans-1,3-Dichloropropene | 0.50 U | ug/L |
| 34371 | Ethylbenzene | 0.50 U | ug/L |
| 77103 | 2-Hexanone | 10 U | ug/L |
| 78133 | 4-Methyl-2-Pentanone | 10 U | ug/L |
| 34423 | Methylene chloride | 0.50 U | ug/L |
| 77128 | Styrene | 1.0 U | ug/L |
| 34516 | 1,1,2,2-Tetrachloroethane | 0.50 U | ug/L |
| 34475 | Tetrachloroethene | 0.50 U | ug/L |
| 34506 | 1,1,1-Trichloroethane | 0.50 U | ug/L |
| 34511 | 1,1,2-Trichloroethane | 0.50 U | ug/L |
| 39180 | Trichloroethene | 0.50 U | ug/L |
| 78131 | Toluene | 0.50 U | ug/L |
| 39175 | Vinyl chloride | 0.50 U | ug/L |
| 81551 | Xylenes (total) | 0.50 U | ug/L |

Comments(1): None

CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0163

Sample ID: 181863
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW5B
Field ID/Name: IT GW-4
Storet Station Number:
NPDES Number:

Collection Date: 6/30/97
Collection Time: 12:30
Grab: X
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: KEN STARLING - Jessie Dix
Signature:
Sampled By: KEN STARLING - Jessie Dix
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters:
Depth (Feet): TD @ 39.2' BTOC
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.83
Salinity - 00480 (PPTh): NA
TURBIDITY (NTUS) ~~Secchi Depth - 00078~~ (M): 4.45
Specific Conductance - 00094 (umho/cm): 497
Temperature - 00010 (C): — THERMOMETER - NOT UNKNOWN TEMP FUNCT

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 1 * | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |

NOTE: SHORT 1 ~~0.5~~ 1-liter amber

nd Final Report to : Hank Cheng, Bureau of Waste Cleanup

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 1518664
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MWSB
Field ID/Name: ITGW-4-DUP
Storet Station Number:
NPDES Number:

Collection Date: 6/30/97
Collection Time: 12:30
Grab: X
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: KEN STARLING - Jesus Diaz
Signature:
Sampled By: KEN STARLING - Jesus Diaz
Signature:
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters:
Depth (Feet): TD@ 39.2 ' BTOC
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.83
Salinity - 00480 (PPTh): NA
TURBIDITY (NTUs)
Secchi Depth - 00078 (M): 4.45
Specific Conductance - 00094 (umho/cm): 497
Temperature - 00010 (C): UNKNOWN
THERMOMETER NOT FUNCTIONAL

Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |

Chief, Bureau of Waste Cleanup

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 151965
(Lab Use Only)
1 9 0164
RQ- 97 - Jun - 23 - 12

Sample Location: MW6
Field ID/Name: ITGW-5
Storet Station Number:
NPDES Number:

Collection Date: 6/30/97
Collection Time: 18:40
Grab: X
Composite Begin: End:

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: KEN STARLING — Signature:
Sampled By: KEN STARLING — Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES — Signature: Kevin Hayes

Field Parameters:
Depth (Feet): 25' BTOC (TD)
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.75
Salinity - 00480 (PPTp): NA
TURBIDITY (NTUS)
~~Secchi Depth - 00078~~ (M): 3.65
Specific Conductance - 00094 (umho/cm): 1130
Temperature - 00010 (C): 27

Water:

| Analyses | Bottle Type | # Boules | Preservatives |
|---|---|---|---|
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| METALS | PLASTIC 1L | 1 | $HNO_3$ |
| CYANIDE | PLASTIC 1L | 1 | NaOH |
| BNAs | BROWN GLASS-1L | 2 | ICE |
| PESTICIDES/PCBS | BROWN GLASS-1L | 2 | ICE |
| TRPH | BROWN GLASS-1L | 1 | HCl |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page_____of_____

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 -002 |
| PROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Kevin Hayes | DATE: 6/30/97 |

| Field ID | ITGW-4 | ITGW-4-DUP | ITGW-5 | ITGW-TRIP-4 | ITVP-14 | | | | | | | | | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | | | | | | | | | |
| LAB SPIKE | | | | | | | | | | | | | | | | | |
| WATER | X | X | X | X | X | | | | | | | | | X | | X | |
| SOIL/SEDIMENT | | | | | | | | | | | | | | | X | | X |
| METALS | 1 | 1 | 1 | | | | | | | | | | | P-1L | | HNO3 | |
| CYANIDE | 1 | 1 | 1 | | | | | | | | | | | P-1L | | NaOH | |
| VOLATILES | 4 | 4 | 4 | 2 | 4 | | | | | | | | | G-40ml | G250m | HCl | ICE |
| BNAs | 2 | 2 | 2 | | | | | | | | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | 1* | 2 | 2 | | | | | | | | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | | | | | | | | | | | | | G250m | | ICE |
| ~~BNA~~/PEST/PCB | | | | | | | | | | | | | | | G500m | | ICE |
| TRPH | 1 | 1 | 1 | | | | | | | | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | | | | | | | |
| TOTAL | 10 | 11 | 11 | 2 | 4 | | | | | | | | | | | | |
| Turbidity | 4.45 | 4.45 | 3.65 | NA | NA | | | | | | | | | | | | |
| Temperature | UNK. | UNK. | 27 | NA | NA | | | | | | | | | | | | |
| pH-00400 | 3.83 | 3.83 | 3.75 | NA | NA | | | | | | | | | | | | |
| Conductance(umho/cm) | 497 | 497 | 1130 | NA | NA | | | | | | | | | | | | |
| COMMENTS: | * SHORT 1 - BROWN 1-LITER AMBER FOR PESTICIDES | | | | | | | | | | | | | | | | |

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin Hayes | 2: | 3: |
| Time/date | 1: 6/30/97 @ 21:00 | 2: | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: | 3: |
| Received By | 1: Jim Greenfield | 2: | 3: |

# Summary For Request ID: RQ-97-JUN-23-12

Reqested By: HANK CHENG
Customer...: SSSS
Division...: WSM
Project Name: ITT Thompson

Date of Request: 18-JUN-1997
Project.....: SUPERFUND
District.....: XX

Comments: Contact Hank when coolers are ready. Coolers will be picked up by E+E. Pre-preserved VOCs. Include 1+1 HNO3 in kit. Include 1 TB per VOC cooler + 1 extra TB. Include 1 FedEx waybill per cooler. Hank will provide field sheets.

Phone : 904-921-0858
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

Program Module Number: 0436
Priority.....: 3
Request Status.....: S
Request Reviewed By..: YUHHSU
Sampling Kit Required: YES
Sampling Kit Shipped.: YES
Kit Packed By.....: MARIA

Criminal Ivestigation: NO
Custody.....: YES
Base Project....: YES
Date Reviewed...: 18-JUN-1997
Date to Ship Kit: 16-JUN-1997
Kit Shipped.....: 19-JUN-1997
Receive Samples.: 23-JUN-1997

Group# 1 - METALS 18 Samples

| ysis ID | Analysis Description |
|---|---|
| -W | - Mercury in liquid samples by Method 245.1 (modified) |
| W-ICP-23 | - ICP multielement analysis of aqueous samples by Method 200.7 |
| W-ICPMS | - ICPMS analysis of total metals in water by Method 200.8 |

Group# 1 - VOLATILE 18 Samples

| Analysis ID | Analysis Description |
|---|---|
| -VOC-SS | - Volatiles in wtr by 624/5030-8260 for Superfund Group only |

Group# 1 - SM-VOLATIL 18 Samples

| alysis ID | Analysis Description |
|---|---|
| BNA-SS | - BNA in water by EPA 625 for Superfund Group only. |

Group# 1 - PSTHRB-GC 18 Samples

| alysis ID | Analysis Description |
|---|---|
| LPCB-SS | - Cl-pesticides & PCBs in water by alt 608 for Superfund Group only. |

Group# 2 - METALS 8 Samples

| sis ID | Analysis Description |
|---|---|
| -S | - Mercury in solids by Method 245.5, 7470 or 7471. |
| P | - ICP multielement analysis for soil by Method 6010 |

ABS 6-26-97 1 Sample
1 T.Blk for 1

JAN - (4) sites 6/27/97
JAN - (4) sites 6/30/97
JAN - (4) 7/1/97

Group# 2 - PSTHRB-GC 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| CLPCB-SS | - Cl-pest & PCBs in soil 3550/8080 dry wt for Superfund Group only |

Group# 2 - SM-VOLATIL 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| BNA-SSSS | - BNA in soil or waste 3550/6270 dry wt for Superfund Group only. |

Group# 2 - VOLATILE 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| S-VOC-SS | - Volatiles in soil or waste by 5030-8260 by dry wt for Superfund Group only |

Group Summary:

| | | |
|---|---|---|
| METALS | 18 | Samples |
| VOLATILE | 18 | Samples |
| SM-VOLATIL | 18 | Samples |
| PSTHRB-GC | 18 | Samples |

Additonal Comments:

Comments: NONE

00012

19 0166

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUN-30-02 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 30-JUN-1997 10:32
Date Received: 30-JUN-1997 Customer ID: SSSS
Authorized: 11-AUG-1997 By: Liang T. Lin

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

BUREAU OF WASTE CLEANUP
AUG 29 1997
TECHNICAL REVIEW SECTION

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: TWF Date: 8/20/97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00013

Sample ID: 181839/97-JUN-30-02-01 Matrix: W-GROUND
Location: MW4B
Field ID: ITGW-3
Collected: 27-JUN-1997 14:00 By: A. KLEI
Authorized: 8-AUG-1997 By: Kerry Tate
Type: Grab Sample
Lab Comments: DEP TEMP=2DC.
Field Comments:

Analysis ID: W-BNA-SS
BNA in water by EPA 625 for Superfund Group only.
Prepared: 3-JUL-1997 10:00 By: Hoor B. Shaik
Analyzed: 16-JUL-1997 05:39 By: Farzad Booeshaghi
Authorized: 8-AUG-1997 By: Kerry Tate

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 34205 | Acenaphthene | 0.96 U | ug/L |
| 34200 | Acenaphthylene | 0.96 U | ug/L |
| 34220 | Anthracene | 0.96 U | ug/L |
| 34526 | Benzo(a)anthracene | 0.96 U | ug/L |
| 34230 | Benzo(b)fluoranthene | 0.96 U | ug/L |
| 34242 | Benzo(k)fluoranthene | 0.96 U | ug/L |
| 34247 | Benzo(a)pyrene | 0.96 U | ug/L |
| 34521 | Benzo(g,h,i)perylene | 2.4 U | ug/L |
| 34292 | Butyl benzyl phthalate | 4.8 U | ug/L |
| 34273 | Bis(2-chloroethyl)ether | 0.96 U | ug/L |
| 34286 | Bis(2-chloroisopropyl)ether | 4.3 U | ug/L |
| 34278 | Bis(2-chloroethoxy)methane | 0.96 U | ug/L |
| 77571 | Carbazole | 0.96 U | ug/L |
| 77954 | 4-Chloroaniline | 0.96 U | ug/L |
| 34581 | 2-Chloronaphthalene | 0.96 U | ug/L |
| 34641 | 4-Chlorophenyl phenyl ether | 0.96 U | ug/L |
| 34320 | Chrysene | 0.96 U | ug/L |
| 34556 | Dibenzo(a,h)anthracene | 0.96 U | ug/L |
| 81302 | Dibenzofuran | 0.96 U | ug/L |
| 39110 | Di-n-butyl phthalate | 4.8 U | ug/L |
| 34536 | 1,2-Dichlorobenzene | 0.96 U | ug/L |
| 34566 | 1,3-Dichlorobenzene | 0.96 U | ug/L |
| 34571 | 1,4-Dichlorobenzene | 0.96 U | ug/L |
| 34631 | 3,3'-Dichlorobenzidine | 2.9 U | ug/L |
| 34336 | Diethyl phthalate | 0.96 U | ug/L |
| 34341 | Dimethyl phthalate | 0.96 U | ug/L |
| 34611 | 2,4-Dinitrotoluene | 0.96 U | ug/L |
| 34626 | 2,6-Dinitrotoluene | 0.96 U | ug/L |
| 34596 | Di-n-octyl phthalate | 0.96 U | ug/L |
| 34376 | Fluoranthene | 0.96 U | ug/L |
| 34381 | Fluorene | 0.96 U | ug/L |
| 39700 | Hexachlorobenzene | 0.96 U | ug/L |
| 34391 | Hexachlorobutadiene | 0.96 U | ug/L |
| 34396 | Hexachloroethane | 2.9 U | ug/L |
| 34386 | Hexachlorocyclopentadiene | 2.9 U | ug/L |


Continued on Page 3

181839/97-JUN-30-02-01/W-BNA-SS Continued from Page 2

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 34403 | Indeno(1,2,3-cd)pyrene | 3.8 U | ug/L |
| 34408 | Isophorone | 0.96 U | ug/L |
| 77416 | 2-Methylnaphthalene | 0.96 U | ug/L |
| 34696 | Naphthalene | 4.8 | ug/L |
| 78142 | 2-Nitroaniline | 0.96 U | ug/L |
| 78300 | 3-Nitroaniline | 0.96 U | ug/L |
| 73605 | 4-Nitroaniline | 0.96 U | ug/L |
| 34447 | Nitrobenzene | 0.96 U | ug/L |
| 34428 | N-Nitrosodi-n-propylamine | 0.96 U | ug/L |
| 34433 | N-Nitrosodiphenylamine | 0.96 U | ug/L |
| 34461 | Phenanthrene | 0.96 U | ug/L |
| 34469 | Pyrene | 0.96 U | ug/L |
| 34551 | 1,2,4-Trichlorobenzene | 0.96 U | ug/L |
| 34462 | 4-Chloro-3-methylphenol | 0.96 U | ug/L |
| 34586 | 2-Chlorophenol | 0.96 U | ug/L |
| 34601 | 2,4-Dichlorophenol | 0.96 U | ug/L |
| 34606 | 2,4-Dimethylphenol | 3.5 I | ug/L |
| 34616 | 2,4-Dinitrophenol | 14 U | ug/L |
| 34657 | 2-Methyl-4,6-dinitrophenol | 2.9 U | ug/L |
| 77152 | o-Cresol | 5.4 | ug/L |
| 77146 | m,p-Cresols | 61 | ug/L |
| 34591 | 2-Nitrophenol | 0.96 U | ug/L |
| 34646 | 4-Nitrophenol | 3.8 U | ug/L |
| 39032 | Pentachlorophenol | 2.9 U | ug/L |
| 34694 | Phenol | 86 | ug/L |
| 77687 | 2,4,5-Trichlorophenol | 0.96 U | ug/L |
| 34621 | 2,4,6-Trichlorophenol | 0.96 U | ug/L |

Comments (1) None

00014

# QUALITY CONTROL REPORT
## Job ID: 97-JUN-30-02

| Test ID | Analyte | LFB %Rec | | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK, SMP |
|---|---|---|---|---|---|---|---|
| W-BNA-SS | Acenaphthene | 82.4 | 85.2 | 87.4 | 75.0 | 3.3 | 15.2 |
| W-BNA-SS | 1,4-Dichlorobenzene | 60.6 | 65.9 | 72.8 | 57.7 | 8.4 | 23.1 |
| W-BNA-SS | 2,4-Dinitrotoluene | 84.5 | 87.5 | 92.9 | 86.2 | 3.5 | 7.5 |
| W-BNA-SS | N-Nitrosodi-n-propylamine | 83.3 | 85.8 | 90.2 | 74.3 | 2.9 | 19.4 |
| W-BNA-SS | Pyrene | 91.0 | 96.0 | 93.3 | 87.6 | 5.3 | 6.3 |
| W-BNA-SS | 1,2,4-Trichlorobenzene | 62.6 | 68.7 | 73.8 | 61.6 | 9.3 | 18.1 |
| W-BNA-SS | 4-Chloro-3-methylphenol | 82.7 | 86.4 | 89.3 | 82.8 | 4.4 | 7.5 |
| W-BNA-SS | 2-Chlorophenol | 76.8 | 79.3 | 78.4 | 67.2 | 3.3 | 15.3 |
| W-BNA-SS | 4-Nitrophenol | 40.7 | 40.8 | 48.3 | 44.2 | 0.2 | 9.0 |
| W-BNA-SS | Pentachlorophenol | 88.9 | 92.6 | 94.4 | 75.6 | 4.1 | 22.1 |
| W-BNA-SS | Phenol | 40.6 | 40.8 | 42.9 | 34.5 | 0.3 | 21.7 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0168

Sample ID: 181839
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW 4B
Field ID/Name: IT6W-3
Storet Station Number: —
NPDES Number: —

Collection Date: 6-27-97
Collection Time: 1400 hrs
Grab: —
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Jo Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): 40
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 5.88
Salinity - 00480 (PPTh): NA
Secchi Depth - 00078 (M): TUV turbidity (NTU) 13.1 NTU
Specific Conductance - 00094 (umho/cm): 299
Temperature - 00010 (C): 27

## Water:**( Full Scan )

| Analytes | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |

# STATE OF FLORIDA
## DEPARTMENT OF ENVIRONMENTAL PROTECTION
## CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING



| | | |
|---|---|---|
| SUBMITTING AGENCY / COMPANY NAME: Site Screening Superfund Subsection | CONTACT NAME AND PHONE#: Hank Cheng (904) 921-0858 | Request ID: RQ-97- Jun - 23 - 12 |
| PROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Kevin J. Hayes, Hank Cheng | DATE: 6-27-97 |

| Field ID | IT6W-TRIP3 | IT6W-3 | IT5D-03 | ITPW-02 | ITPW-03 | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | |
| LAB SPIKE | | | | | | | | | |
| WATER | X | X | | X | X | X | | X | |
| SOIL/SEDIMENT | | | X | | | | X | | X |
| METALS | | X[1] | X AK | | | P-1L | | HNO3 | |
| CYANIDE | | X[1] | | | | P-1L | | NaOH | |
| VOLATILES | X[2] | [4] | | X[4] | X[4] | G-40ml | G250m | HCl | ICE |
| BNAs | | X[2] | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | | X[2] | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | X[1] | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | G500m | | ICE |
| TRPH | | X[1] | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | P250ml | | HCl | |
| | | | | | | | | | |
| TOTAL | 2 | 11 | 1 | 4 | 4 | | | | |
| Turbidity | – | 13.1 | – | – | – | | | | |
| Temperature | – | 2[7] | – | – | – | | | | |
| pH-00400 | – | 5.88 | – | – | – | | | | |
| Conductance(umho/cm) | – | 299 | – | – | – | | | | |

COMMENTS: TEMP. BLANK INCLUDED

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin L. Hayes | 2: Hank Cheng | 3: |
| Time/date | 1: 16:00 6/27/97 | 2: 17:10 6/27/97 | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: ~~Hand~~ Hand deli- | 3: |

Summary For Request ID: RQ-97-JUN-23-12 1 9 0169

Reqested By: HANK CHENG
Customer...: SSSS
Division...: WSM
Project Name: ITT Thompson

Date of Request: 18-JUN-1997
Project.....: SUPERFUND
District.....: XX

Comments: Contact Hank when coolers are ready. Coolers will be picked up by E+E. Pre-preserved VOCs. Include 1+1 HNO3 in kit. Include 1 TB per VOC cooler + 1 extra TB. Include 1 FedEx waybill per cooler. Hank will provide field sheets.

Phone : 904-921-0858
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

Program Module Number: 0436
Priority.....: 3
Request Status.....: S
Request Reviewed By..: YUHHSU
Sampling Kit Required: YES
Sampling Kit Shipped.: YES
Kit Packed By.....: MARIA

Criminal Ivestigation: NO
Custody.....: YES
Base Project....: YES
Date Reviewed...: 18-JUN-1997
Date to Ship Kit: 16-JUN-1997
Kit Shipped.....: 19-JUN-1997
Receive Samples.: 23-JUN-1997

ABS 6-26-97 1 Sample 1 T.Blk for V

Group# 1 - METALS 18 Samples

| Analysis ID | Analysis Description |
|---|---|
| 4-W | - Mercury in liquid samples by Method 245.1 (modified) |
| ICP-23 | - ICP multielement analysis of aqueous samples by Method 200.7 |
| W-ICPMS | - ICPMS analysis of total metals in water by Method 200.8 |

JAN — (4) sites 6/27/97
JAN — (4) sites 6/30/9

Group# 1 - VOLATILE 18 Samples

| Analysis ID | Analysis Description |
|---|---|
| S-VOC-SS | - Volatiles in wtr by 624/5030-8260 for Superfund Group only |

Group# 1 - SM-VOLATIL 18 Samples

| Analysis ID | Analysis Description |
|---|---|
| -BNA-SS | - BNA in water by EPA 625 for Superfund Group only. |

Group# 1 - PSTHRB-GC 18 Samples

| Analysis ID | Analysis Description |
|---|---|
| CLPCB-SS | - Cl-pesticides & PCBs in water by alt 608 for Superfund Group only. |

Group# 2 - METALS 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| H-S | - Mercury in solids by Method 245.5, 7470 or 7471. |
| CP | - ICP multielement analysis for soil by Method 6010 |

Group# 2 - PSTHRB-GC 6 Samples

| Analysis ID | Analysis Description |
|---|---|
| S-CLPCB-SS | - Cl-pest & PCBs in soil 3550/8080 dry wt for Superfund Group only |

Group# 2 - SM-VOLATIL 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| S-BNA-SSSS | - BNA in soil or waste 3550/8270 dry wt for Superfund Group only. |

Group# 2 - VOLATILE 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| S-VOC-SS | - Volatiles in soil or waste by 5030-8260 by dry wt for Superfund Group only |

Group Summary:

| | | |
|---|---|---|
| METALS | 18 | Samples |
| VOLATILE | 18 | Samples |
| SM-VOLATIL | 18 | Samples |
| PSTHRB-GC | 18 | Samples |

Additonal Comments:

Comments: NONE

00016

19 0170

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUN-27-02 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 27-JUN-1997 08:59
Date Received: 27-JUN-1997 Customer ID: SSSS
Authorized: 11-AUG-1997 By: Liang T. Lin

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

BUREAU OF WASTE CLEANUP
AUG 29 1997
TECHNICAL REVIEW SECTION

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: TWF Date: 8/20/97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value repQrted is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00017

Sample ID: 181794/97-JUN-27-02-01 Matrix: W-GROUND
Location: MW-2
Field ID: ITGW-2
Collected: 26-JUN-1997 16:00 By: A. KLEI
Authorized: 8-AUG-1997 By: Kerry Tate
Type: Grab Sample
Lab Comments: DEP TEMP=5DC.
Field Comments:

Analysis ID: W-BNA-SS
BNA in water by EPA 625 for Superfund Group only.
Prepared: 3-JUL-1997 10:00 By: Hoor B. Shaik
Analyzed: 15-JUL-1997 23:38 By: Farzad Booeshaghi
Authorized: 8-AUG-1997 By: Kerry Tate

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 34205 | Acenaphthene | 0.93 U | ug/L |
| 34200 | Acenaphthylene | 0.93 U | ug/L |
| 34220 | Anthracene | 0.93 U | ug/L |
| 34526 | Benzo(a)anthracene | 0.93 U | ug/L |
| 34230 | Benzo(b)fluoranthene | 0.93 U | ug/L |
| 34242 | Benzo(k)fluoranthene | 0.93 U | ug/L |
| 34247 | Benzo(a)pyrene | 0.93 U | ug/L |
| 34521 | Benzo(g,h,i)perylene | 2.3 U | ug/L |
| 34292 | Butyl benzyl phthalate | 4.6 U | ug/L |
| 34273 | Bis(2-chloroethyl)ether | 0.93 U | ug/L |
| 34286 | Bis(2-chloroisopropyl)ether | 4.2 U | ug/L |
| 34278 | Bis(2-chloroethoxy)methane | 0.93 U | ug/L |
| 77571 | Carbazole | 0.93 U | ug/L |
| 77954 | 4-Chloroaniline | 0.93 U | ug/L |
| 34581 | 2-Chloronaphthalene | 0.93 U | ug/L |
| 34641 | 4-Chlorophenyl phenyl ether | 0.93 U | ug/L |
| 34320 | Chrysene | 0.93 U | ug/L |
| 34556 | Dibenzo(a,h)anthracene | 0.93 U | ug/L |
| 81302 | Dibenzofuran | 0.93 U | ug/L |
| 39110 | Di-n-butyl phthalate | 4.6 U | ug/L |
| 34536 | 1,2-Dichlorobenzene | 0.93 U | ug/L |
| 34566 | 1,3-Dichlorobenzene | 0.93 U | ug/L |
| 34571 | 1,4-Dichlorobenzene | 3.8 | ug/L |
| 34631 | 3,3'-Dichlorobenzidine | 2.8 U | ug/L |
| 34336 | Diethyl phthalate | 0.93 U | ug/L |
| 34341 | Dimethyl phthalate | 0.93 U | ug/L |
| 34611 | 2,4-Dinitrotoluene | 0.93 U | ug/L |
| 34626 | 2,6-Dinitrotoluene | 0.93 U | ug/L |
| 34596 | Di-n-octyl phthalate | 0.93 U | ug/L |
| 34376 | Fluoranthene | 0.93 U | ug/L |
| 34381 | Fluorene | 0.93 U | ug/L |
| 39700 | Hexachlorobenzene | 0.93 U | ug/L |
| 34391 | Hexachlorobutadiene | 0.93 U | ug/L |
| 34396 | Hexachloroethane | 2.8 U | ug/L |
| 34386 | Hexachlorocyclopentadiene | 2.8 U | ug/L |


Continued on Page 3

181794/97-JUN-27-02-01/W-BNA-SS Continued from Page 2

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 34403 | Indeno(1,2,3-cd)pyrene | 3.7 U | ug/L |
| 34408 | Isophorone | 0.93 U | ug/L |
| 77416 | 2-Methylnaphthalene | 0.93 U | ug/L |
| 34696 | Naphthalene | 0.93 U | ug/L |
| 78142 | 2-Nitroaniline | 0.93 U | ug/L |
| 78300 | 3-Nitroaniline | 0.93 U | ug/L |
| 73605 | 4-Nitroaniline | 0.93 U | ug/L |
| 34447 | Nitrobenzene | 0.93 U | ug/L |
| 34428 | N-Nitrosodi-n-propylamine | 0.93 U | ug/L |
| 34433 | N-Nitrosodiphenylamine | 0.93 U | ug/L |
| 34461 | Phenanthrene | 0.93 U | ug/L |
| 34469 | Pyrene | 0.93 U | ug/L |
| 34551 | 1,2,4-Trichlorobenzene | 0.93 U | ug/L |
| 34462 | 4-Chloro-3-methylphenol | 0.93 U | ug/L |
| 34586 | 2-Chlorophenol | 0.93 U | ug/L |
| 34601 | 2,4-Dichlorophenol | 0.93 U | ug/L |
| 34606 | 2,4-Dimethylphenol | 2.8 U | ug/L |
| 34616 | 2,4-Dinitrophenol | 14 U | ug/L |
| 34657 | 2-Methyl-4,6-dinitrophenol | 2.8 U | ug/L |
| 77152 | o-Cresol | 0.93 U | ug/L |
| 77146 | m,p-Cresols | 1.9 U | ug/L |
| 34591 | 2-Nitrophenol | 0.93 U | ug/L |
| 34646 | 4-Nitrophenol | 3.7 U | ug/L |
| 39032 | Pentachlorophenol | 2.8 U | ug/L |
| 34694 | Phenol | 0.93 U | ug/L |
| 77687 | 2,4,5-Trichlorophenol | 0.93 U | ug/L |
| 34621 | 2,4,6-Trichlorophenol | 0.93 U | ug/L |

Comments (1) None

---

Sample ID: 181795/97-JUN-27-02-02 Matrix: W-GROUND
Location: MW-7
Field ID: ITGW-6
Collected: 26-JUN-1997 17:40 By: A. KLEI
Authorized: 8-AUG-1997 By: Kerry Tate
Type: Grab Sample
Lab Comments: DEP TEMP=5DC.
Field Comments:

Analysis ID: W-BNA-SS
BNA in water by EPA 625 for Superfund Group only.
Prepared: 3-JUL-1997 10:00 By: Hoor B. Shaik
Analyzed: 16-JUL-1997 00:28 By: Farzad Booeshaghi
Authorized: 8-AUG-1997 By: Kerry Tate

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 34205 | Acenaphthene | 1.0 U | ug/L |

181795/97-JUN-27-02-02/W-BNA-SS Continued on Page 4

181795/97-JUN-27-02-02/W-BNA-SS Continued from Page 3

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| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 34200 | Acenaphthylene | 1.0 U | ug/L |
| 34220 | Anthracene | 1.0 U | ug/L |
| 34526 | Benzo(a)anthracene | 1.0 U | ug/L |
| 34230 | Benzo(b)fluoranthene | 1.0 U | ug/L |
| 34242 | Benzo(k)fluoranthene | 1.0 U | ug/L |
| 34247 | Benzo(a)pyrene | 1.0 U | ug/L |
| 34521 | Benzo(g,h,i)perylene | 2.5 U | ug/L |
| 34292 | Butyl benzyl phthalate | 5.0 U | ug/L |
| 34273 | Bis(2-chloroethyl)ether | 1.0 U | ug/L |
| 34286 | Bis(2-chloroisopropyl)ether | 4.5 U | ug/L |
| 34278 | Bis(2-chloroethoxy)methane | 1.0 U | ug/L |
| 77571 | Carbazole | 1.0 U | ug/L |
| 77954 | 4-Chloroaniline | 1.0 U | ug/L |
| 34581 | 2-Chloronaphthalene | 1.0 U | ug/L |
| 34641 | 4-Chlorophenyl phenyl ether | 1.0 U | ug/L |
| 34320 | Chrysene | 1.0 U | ug/L |
| 34556 | Dibenzo(a,h)anthracene | 1.0 U | ug/L |
| 81302 | Dibenzofuran | 1.0 U | ug/L |
| 39110 | Di-n-butyl phthalate | 5.0 U | ug/L |
| 34536 | 1,2-Dichlorobenzene | 1.0 U | ug/L |
| 34566 | 1,3-Dichlorobenzene | 1.0 U | ug/L |
| 34571 | 1,4-Dichlorobenzene | 1.0 U | ug/L |
| 34631 | 3,3'-Dichlorobenzidine | 3.0 U | ug/L |
| 34336 | Diethyl phthalate | 1.0 U | ug/L |
| 34341 | Dimethyl phthalate | 1.0 U | ug/L |
| 34611 | 2,4-Dinitrotoluene | 1.0 U | ug/L |
| 34626 | 2,6-Dinitrotoluene | 1.0 U | ug/L |
| 34596 | Di-n-octyl phthalate | 1.0 U | ug/L |
| 34376 | Fluoranthene | 1.0 U | ug/L |
| 34381 | Fluorene | 1.0 U | ug/L |
| 39700 | Hexachlorobenzene | 1.0 U | ug/L |
| 34391 | Hexachlorobutadiene | 1.0 U | ug/L |
| 34396 | Hexachloroethane | 3.0 U | ug/L |
| 34386 | Hexachlorocyclopentadiene | 3.0 U | ug/L |
| 34403 | Indeno(1,2,3-cd)pyrene | 4.0 U | ug/L |
| 34408 | Isophorone | 1.0 U | ug/L |
| 77416 | 2-Methylnaphthalene | 1.0 U | ug/L |
| 34696 | Naphthalene | 13 | ug/L |
| 78142 | 2-Nitroaniline | 1.0 U | ug/L |
| 78300 | 3-Nitroaniline | 1.0 U | ug/L |
| 73605 | 4-Nitroaniline | 1.0 U | ug/L |
| 34447 | Nitrobenzene | 1.0 U | ug/L |
| 34428 | N-Nitrosodi-n-propylamine | 1.0 U | ug/L |
| 34433 | N-Nitrosodiphenylamine | 1.0 U | ug/L |
| 34461 | Phenanthrene | 1.0 U | ug/L |
| 34469 | Pyrene | 1.0 U | ug/L |
| 34551 | 1,2,4-Trichlorobenzene | 1.0 U | ug/L |
| 34462 | 4-Chloro-3-methylphenol | 1.0 U | ug/L |
| 34586 | 2-Chlorophenol | 1.0 U | ug/L |
| 34601 | 2,4-Dichlorophenol | 1.0 U | ug/L |
| 34606 | 2,4-Dimethylphenol | 3.9 I | ug/L |
| 34616 | 2,4-Dinitrophenol | 15 U | ug/L |

 Continued on Page 5

181795/97-JUN-27-02-02/W-BNA-SS Continued from Page 4

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 34657 | 2-Methyl-4,6-dinitrophenol | 3.0 U | ug/L |
| 77152 | o-Cresol | 1.0 U | ug/L |
| 77146 | m,p-Cresols | 2.0 U | ug/L |
| 34591 | 2-Nitrophenol | 1.0 U | ug/L |
| 34646 | 4-Nitrophenol | 4.0 U | ug/L |
| 39032 | Pentachlorophenol | 3.0 U | ug/L |
| 34694 | Phenol | 1.0 U | ug/L |
| 77687 | 2,4,5-Trichlorophenol | 1.0 U | ug/L |
| 34621 | 2,4,6-Trichlorophenol | 1.0 U | ug/L |

Comments (1) None

---

Sample ID: 181796/97-JUN-27-02-03 Matrix: W-GROUND
Location: MW-11B
Field ID: ITGW-7
Collected: 26-JUN-1997 00:00 By: A. KLEI
Authorized: 8-AUG-1997 By: Kerry Tate
Type: Grab Sample
Lab Comments: DEP TEMP=5DC.
Field Comments:

Analysis ID: W-BNA-SS
BNA in water by EPA 625 for Superfund Group only.
Prepared: 3-JUL-1997 10:00 By: Hoor B. Shaik
Analyzed: 15-JUL-1997 22:48 By: Farzad Booeshaghi
Authorized: 8-AUG-1997 By: Kerry Tate

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 34205 | Acenaphthene | 0.97 U | ug/L |
| 34200 | Acenaphthylene | 0.97 U | ug/L |
| 34220 | Anthracene | 0.97 U | ug/L |
| 34526 | Benzo(a)anthracene | 0.97 U | ug/L |
| 34230 | Benzo(b)fluoranthene | 0.97 U | ug/L |
| 34242 | Benzo(k)fluoranthene | 0.97 U | ug/L |
| 34247 | Benzo(a)pyrene | 0.97 U | ug/L |
| 34521 | Benzo(g,h,i)perylene | 2.4 U | ug/L |
| 34292 | Butyl benzyl phthalate | 4.9 U | ug/L |
| 34273 | Bis(2-chloroethyl)ether | 0.97 U | ug/L |
| 34286 | Bis(2-chloroisopropyl)ether | 4.4 U | ug/L |
| 34278 | Bis(2-chloroethoxy)methane | 0.97 U | ug/L |
| 77571 | Carbazole | 0.97 U | ug/L |
| 77954 | 4-Chloroaniline | 0.97 U | ug/L |
| 34581 | 2-Chloronaphthalene | 0.97 U | ug/L |
| 34641 | 4-Chlorophenyl phenyl ether | 0.97 U | ug/L |
| 34320 | Chrysene | 0.97 U | ug/L |
| 34556 | Dibenzo(a,h)anthracene | 0.97 U | ug/L |
| 81302 | Dibenzofuran | 0.97 U | ug/L |

181796/97-JUN-27-02-03/W-BNA-SS Continued on Page 6

181796/97-JUN-27-02-03/W-BNA-SS Continued from Page 5

00019

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 39110 | Di-n-butyl phthalate | 4.9 U | ug/L |
| 34536 | 1,2-Dichlorobenzene | 0.97 U | ug/L |
| 34566 | 1,3-Dichlorobenzene | 0.97 U | ug/L |
| 34571 | 1,4-Dichlorobenzene | 0.97 U | ug/L |
| 34631 | 3,3'-Dichlorobenzidine | 2.9 U | ug/L |
| 34336 | Diethyl phthalate | 0.97 U | ug/L |
| 34341 | Dimethyl phthalate | 0.97 U | ug/L |
| 34611 | 2,4-Dinitrotoluene | 0.97 U | ug/L |
| 34626 | 2,6-Dinitrotoluene | 0.97 U | ug/L |
| 34596 | Di-n-octyl phthalate | 0.97 U | ug/L |
| 34376 | Fluoranthene | 0.97 U | ug/L |
| 34381 | Fluorene | 0.97 U | ug/L |
| 39700 | Hexachlorobenzene | 0.97 U | ug/L |
| 34391 | Hexachlorobutadiene | 0.97 U | ug/L |
| 34396 | Hexachloroethane | 2.9 U | ug/L |
| 34386 | Hexachlorocyclopentadiene | 2.9 U | ug/L |
| 34403 | Indeno(1,2,3-cd)pyrene | 3.9 U | ug/L |
| 34408 | Isophorone | 0.97 U | ug/L |
| 77416 | 2-Methylnaphthalene | 0.97 U | ug/L |
| 34696 | Naphthalene | 7.1 | ug/L |
| 78142 | 2-Nitroaniline | 0.97 U | ug/L |
| 78300 | 3-Nitroaniline | 0.97 U | ug/L |
| 73605 | 4-Nitroaniline | 0.97 U | ug/L |
| 34447 | Nitrobenzene | 0.97 U | ug/L |
| 34428 | N-Nitrosodi-n-propylamine | 0.97 U | ug/L |
| 34433 | N-Nitrosodiphenylamine | 0.97 U | ug/L |
| 34461 | Phenanthrene | 0.97 U | ug/L |
| 34469 | Pyrene | 0.97 U | ug/L |
| 34551 | 1,2,4-Trichlorobenzene | 0.97 U | ug/L |
| 34462 | 4-Chloro-3-methylphenol | 0.97 U | ug/L |
| 34586 | 2-Chlorophenol | 0.97 U | ug/L |
| 34601 | 2,4-Dichlorophenol | 0.97 U | ug/L |
| 34606 | 2,4-Dimethylphenol | 2.9 U | ug/L |
| 34616 | 2,4-Dinitrophenol | 15 U | ug/L |
| 34657 | 2-Methyl-4,6-dinitrophenol | 2.9 U | ug/L |
| 77152 | o-Cresol | 0.97 U | ug/L |
| 77146 | m,p-Cresols | 1.9 U | ug/L |
| 34591 | 2-Nitrophenol | 0.97 U | ug/L |
| 34646 | 4-Nitrophenol | 3.9 U | ug/L |
| 39032 | Pentachlorophenol | 2.9 U | ug/L |
| 34694 | Phenol | 0.97 U | ug/L |
| 77687 | 2,4,5-Trichlorophenol | 0.97 U | ug/L |
| 34621 | 2,4,6-Trichlorophenol | 0.97 U | ug/L |

Comments (1) None

QUALITY CONTROL REPORT
Job ID: 97-JUN-27-02

| Test ID | Analyte | LFB %Rec | | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK,SMP |
|---|---|---|---|---|---|---|---|
| W-BNA-SS | Acenaphthene | 82.4 | 85.2 | 87.4 | 75.0 | 3.3 | 15.2 |
| W-BNA-SS | 1,4-Dichlorobenzene | 60.6 | 65.9 | 72.8 | 57.7 | 8.4 | 23.1 |
| W-BNA-SS | 2,4-Dinitrotoluene | 84.5 | 87.5 | 92.9 | 86.2 | 3.5 | 7.5 |
| W-BNA-SS | N-Nitrosodi-n-propylamine | 83.3 | 85.8 | 90.2 | 74.3 | 2.9 | 19.4 |
| W-BNA-SS | Pyrene | 91.0 | 96.0 | 93.3 | 87.6 | 5.3 | 6.3 |
| W-BNA-SS | 1,2,4-Trichlorobenzene | 62.6 | 68.7 | 73.8 | 61.6 | 9.3 | 18.1 |
| W-BNA-SS | 4-Chloro-3-methylphenol | 82.7 | 86.4 | 89.3 | 82.8 | 4.4 | 7.5 |
| W-BNA-SS | 2-Chlorophenol | 76.8 | 79.3 | 78.4 | 67.2 | 3.3 | 15.3 |
| W-BNA-SS | 4-Nitrophenol | 40.7 | 40.8 | 48.3 | 44.2 | 0.2 | 9.0 |
| W-BNA-SS | Pentachlorophenol | 88.9 | 92.6 | 94.4 | 75.6 | 4.1 | 22.1 |
| W-BNA-SS | Phenol | 40.6 | 40.8 | 42.9 | 34.5 | 0.3 | 21.7 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0174

Sample ID: 181794
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW-2
Field ID/Name: ~~ITT~~ ITGW-2
Storet Station Number: —
NPDES Number: —

Collection Date: 6/26/97
Collection Time: 1600
Grab: X
Composite Begin: _____ End: _____

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Jo Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): 37' BTOC
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 6.19
Salinity - 00480 (PPTh): NA
Turbidity (NTU)
Secchi Depth ~~00078~~ (M): 9.3 NTU
Specific Conductance - 00094 (umho/cm): 339
Temperature - 00010 (C): 25°C

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 151795
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW 7
Field ID/Name: ITGW-6
Storet Station Number: —
NPDES Number: —

Collection Date: 6/26/1997
Collection Time: 1740
Grab: X
Composite Begin: _____ End: _____

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Jo Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): 12.5
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 6.11
Salinity - 00480 (PPTh): NA
Turbidity (NTU)
~~Secchi Depth - 00078~~ (M): 4.89
Specific Conductance - 00094 (umho/cm): 532
Temperature - 00010 (C): 25

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |

Bureau of Waste Cleanup

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson 19 0175

Sample ID: 151 46
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

mple Location: MW-11B
Field ID/Name: ITGW-7
Storet Station Number:
NPDES Number:

Collection Date: 6/26/97
Collection Time:
Grab:
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| _X_GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Klei
Signature: Amy J. Klein
Sampled By: Amy Jo Klei
Signature: Amy Jo Klein
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klein

Field Parameters:
Depth (Feet): ~24'
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.89
Salinity - 00480 (PPTh): N.A.
Turbidity (NTU)
Secchi Depth -00078 (M): 1.36 NTU
Specific Conductance - 00094 (umho/cm): 192
Temperature - 00010 (C): 26°C

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 2 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 6 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 6 | Ice |
| TRPH | Brown Glass-1L | 3 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 2 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 6 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 6 | Ice |
| TRPH | Brown Glass-1L | 3 | HCl |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

SPIKE IN LAB

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING



| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97-Jun - 23 12 |
| PROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Hei-Fong Cheng | DATE: 6-26-97 |

| Field ID | ITGW-7 | ITGW-7 | ITGW-6 | ITGW-TRIP2 | ITPW-1 | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | |
| LAB SPIKE | | X | | | | | | | |
| WATER | X | X | X | X | X | X | | X | |
| SOIL/SEDIMENT | | | | | | | X | | X |
| METALS | X | X | X | | | P-1L | | HNO3 | |
| CYANIDE | X | X | X | | | P-1L | | NaOH | |
| VOLATILES | X | X | X | X | X | G-40ml | G250m | HCl | ICE |
| BNAs | X | X | X | | | G-1L | | ICE | |
| PESTICIDES/PCBs | X | X | X | | | G-1L | | ICE | |
| METALS/CYANIDE | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | G500m | | ICE |
| TRPH | X | X | X | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | P250ml | | HCl | |
| | | | | | | | | | |
| TOTAL | | | | | | | | | |
| Turbidity (NTU) | 9.3 | 1,4 | | — | — | | | | |
| Temperature (°C) | 25 | 26 | | — | — | | | | |
| pH-00400 | 6.19 | 3.89 | | — | — | | | | |
| Conductance(umho/cm) | 339 | 192 | | — | — | | | | |

COMMENTS: ITGW-7 is LAB SPIKE.

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Hei-Fong Cheng | 2: Hei-Fong Cheng | 3: |
| Time/date | 1: 6/26/97 | 2: 6/26/97 | 3: |
| Method of Dispatch | 1: Hand Delivery | 2: Hand delivery | 3: |
| | 1: | 2: | 3: |

Summary For Request ID: RQ-97-JUN-23-12 1 9 0176

Reqested By: HANK CHENG
Customer...: SSSS
Division...: WSM
Project Name: ITT Thompson

Date of Request: 18-JUN-1997
Project.....: SUPERFUND
District.....: XX

Comments: Contact Hank when coolers are ready. Coolers will be picked up by E+E. Pre-preserved VOCs. Include 1+1 HNO3 in kit. Include 1 TB per VOC cooler + 1 extra TB. Include 1 FedEx waybill per cooler. Hank will provide field sheets.

Phone : 904-921-0858
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

Program Module Number: 0436
Priority.....: 3
Request Status.....: S
Request Reviewed By..: YUHHSU
Sampling Kit Required: YES
Sampling Kit Shipped.: YES
Kit Packed By.....: MARIA

Criminal Ivestigation: NO
Custody.....: YES
Base Project....: YES
Date Reviewed...: 18-JUN-1997
Date to Ship Kit: 16-JUN-1997
Kit Shipped.....: 19-JUN-1997
Receive Samples.: 23-JUN-1997

ABS 6.26.97 1 Sample 1 T.Blk for VOC
FAW 6/27/97 (4)

Group# 1 - METALS 18 Samples

| ID | Analysis Description |
|---|---|
| -H .. | - Mercury in liquid samples by Method 245.1 (modified) |
| ICP-23 | - ICP multielement analysis of aqueous samples by Method 200.7 |
| ICPMS | - ICPMS analysis of total metals in water by Method 200.8 |

Group# 1 - VOLATILE 18 Samples

| lysis ID | Analysis Description |
|---|---|
| OC-SS | - Volatiles in wtr by 624/5030-8260 for Superfund Group only |

Group# 1 - SM-VOLATIL 18 Samples

| lysis ID | Analysis Description |
|---|---|
| NA-SS | - BNA in water by EPA 625 for Superfund Group only. |

Group# 1 - PSTHRB-GC 18 Samples

| lysis ID | Analysis Description |
|---|---|
| LPCB-SS | - Cl-pesticides & PCBs in water by alt 608 for Superfund Group only. |

Group# 2 - METALS 8 Samples

| is ID | Analysis Description |
|---|---|
| H-S | - Mercury in solids by Method 245.5, 7470 or 7471. |
| CP | - ICP multielement analysis for soil by Method 6010 |

Group# 2 - PSTHRB-GC 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| S-CLPCB-SS | - Cl-pest & PCBs in soil 3550/8080 dry wt for Superfund Group only |

Group# 2 - SM-VOLATIL 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| S-BNA-SSSS | - BNA in soil or waste 3550/8270 dry wt for Superfund Group only. |

Group# 2 - VOLATILE 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| S-VOC-SS | - Volatiles in soil or waste by 5030-8260 by dry wt for Superfund Group only |

Group Summary:

| | | |
|---|---|---|
| METALS | 18 | Samples |
| VOLATILE | 18 | Samples |
| SM-VOLATIL | 18 | Samples |
| PSTHRB-GC | 18 | Samples |

Additonal Comments:

Comments: NONE

20002

19 0177

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUN-26-03 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 26-JUN-1997 09:36
Date Received: 26-JUN-1997 Customer ID: SSSS
Authorized: 15-AUG-1997 By: Liang T. Lin

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

BUREAU OF WASTE CLEANUP
AUG 29 1997
TECHNICAL REVIEW SECTION

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: TWF Date: 8/22/97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00003

Sample ID: 181710/97-JUN-26-03-01 Matrix: W-GROUND
Location: ITT THOMPSON (MW-1)
Field ID: ITGW-1 (B.GROUND)
Collected: 25-JUN-1997 17:00 By: AMY JO KLEI
Authorized: 15-AUG-1997 By: Adrian Niculescu
Type: Grab Sample
Lab Comments: TEMP=4DC
Field Comments: TURBIDITY (NTU) 37.7

Analysis ID: W-CLPCB-SS
Cl-pesticides & PCBs in water by alt 608 for Superfund Group only.
Prepared: 2-JUL-1997 09:00 By: Hoor B. Shaik
Analyzed: 8-JUL-1997 14:10 By: Michael Acton
Authorized: 15-AUG-1997 By: Adrian Niculescu

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 39330 | Aldrin | 0.012 U | ug/L |
| 39337 | Alpha-BHC | 0.012 U | ug/L |
| 39338 | Beta-BHC | 0.024 U | ug/L |
| 34259 | Delta-BHC | 0.012 U | ug/L |
| 39340 | Gamma-BHC | 0.012 U | ug/L |
| | Alpha-Chlordane | 0.012 U | ug/L |
| | Gamma-Chlordane | 0.012 U | ug/L |
| 39310 | DDD-p,p' | 0.024 U | ug/L |
| 39320 | DDE-p,p' | 0.024 U | ug/L |
| 39300 | DDT-p,p' | 0.024 U | ug/L |
| 39380 | Dieldrin | 0.024 U | ug/L |
| 34361 | Endosulfan I | 0.012 U | ug/L |
| 34356 | Endosulfan II | 0.012 U | ug/L |
| 34351 | Endosulfan Sulfate | 0.024 U | ug/L |
| 39390 | Endrin | 0.024 U | ug/L |
| 34366 | Endrin Aldehyde | 0.024 U | ug/L |
| | Endrin Ketone | 0.024 U | ug/L |
| 39410 | Heptachlor | 0.012 U | ug/L |
| 39420 | Heptachlor Epoxide | 0.012 U | ug/L |
| | Methoxychlor | 0.059 U | ug/L |
| 39400 | Toxaphene | 0.88 U | ug/L |
| 34671 | PCB-1016 | 0.24 U | ug/L |
| 39488 | PCB-1221 | 0.24 U | ug/L |
| 39492 | PCB-1232 | 0.24 U | ug/L |
| 39496 | PCB-1242 | 0.24 U | ug/L |
| 39500 | PCB-1248 | 0.24 U | ug/L |
| 39504 | PCB-1254 | 0.24 U | ug/L |
| 39508 | PCB-1260 | 0.24 U | ug/L |

Comment(1): None

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

1 9 0200

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T7-21762
Received: 01 JUL 97
Reported: 11 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA080/ITT-Thompson/SSSS
Sampled By: Client
Code: 115270722

REPORT OF RESULTS 

| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |
|---|---|
| 21762-3 | Method Blank |
| 21762-4 | Practical Quantitation Limit |
| 21762-5 | Lab Control Standard % Recovery |
| 21762-6 | Lab Control Standard Duplicate % Recovery |
| 21762-7 | Precision (%RPD) of LCS/LCSD |

| PARAMETER | 21762-3 | 21762-4 | 21762-5 | 21762-6 | 21762-7 |
|---|---|---|---|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | | | | | |
| Total Recoverable Petroleum Hydrocarbons (418.1), mg/l | <1.0 | 1.0 | 83 % | 74 % | 11 % |
| Dilution factor | 1.0 | --- | 1.0 | 1.0 | --- |
| Date Extracted | 07.01.97 | --- | 07.01.97 | 07.01.97 | --- |
| Date Analyzed | 07.02.97 | --- | 07.02.97 | 07.02.97 | --- |
| Batch ID | 0701P | --- | 0701P | 0701P | --- |

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T7-21762
Received: 01 JUL 97
Reported: 11 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA080/ITT-Thompson/SSSS
Sampled By: Client
Code: 115270722

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |
|---|---|
| 21762-8 | LCS Accuracy Control Limit (%R) |
| 21762-9 | LCS Precision Control Limit (Advisory) %RPD |
| 21762-10 | Expected Value, LCS/LCSD |
| 21762-11 | Extraction Analyst |
| 21762-12 | Method Analyst |

| PARAMETER | 21762-8 | 21762-9 | 21762-10 | 21762-11 | 21762-12 |
|---|---|---|---|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | | | | | |
| Total Recoverable Petroleum Hydrocarbons (418.1), % | 60-140 % | <30 % | 5.0/5.0 | L.JOHNSON | J.STEPP |

Method: EPA 40 CFR Part 136
HRS Certification No(s).: E81005
FDEP CompQAP No.: 890142G

Laura B Snead for
Elizabeth L. Schneider, Project Manager

1 9 0201

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 181713
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW-1
Field ID/Name: ITGW-1 (Background)
Storet Station Number:
NPDES Number:

Collection Date: 6/25/97
Collection Time: 1700 hrs
Grab:
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | X TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: AJ Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): 29.8' BTOC
Chlorine, Total Residual - 50060 (mg/L): —
Dissolved Oxygen (Probe) -00299 (mg/L): —
pH - 00400 (Stnd. Units): 6.87
Salinity - 00480 (PPTh): NA
Turbidity (NTU)
~~Secchi Depth - 00078~~ (M): 37.7 NTU
Specific Conductance - 00094 (umho/cm): 446
Temperature - 00010 (C): 27

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 2 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 6 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 6 | Ice |
| TRPH | Brown Glass-1L | 3 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| sticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |
| | | | |

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page 1 of 1

00001

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 - 12 |
| PROJECT NAME:ITT Thompson | SAMPLERS (SIGNATURES): Amy J. Klein | DATE: 6/25/97 |

| Field ID | ITGW-1 | ITGW-TRIP | | | | | | | | | | | | | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | | | | | | | | | | |
| LAB SPIKE | | | | | | | | | | | | | | | | | | |
| WATER | X | | | | | | | | | | | | | | X | | X | |
| SOIL/SEDIMENT | | | | | | | | | | | | | | | | X | | X |
| METALS | 1 | | | | | | | | | | | | | | P-1L | | HNO3 | |
| CYANIDE | 1 | | | | | | | | | | | | | | P-1L | | NaOH | |
| VOLATILES | 4 | 2 | | | | | | | | | | | | | G-40ml | G250m | HCl | ICE |
| BNAs | 2 | | | | | | | | | | | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | 2 | | | | | | | | | | | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | | | | | | | | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | | | | | | | | | | G500m | | ICE |
| TRPH | 1 | | | | | | | | | | | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | | | | | | | | |
| TOTAL | 11 | 2 | | | | | | | | | | | | | | | | |
| Turbidity (NTU) | 37.7 | — | | | | | | | | | | | | | | | | |
| Temperature °C | 27 | — | | | | | | | | | | | | | | | | |
| pH-00400 | 6.87 | — | | | | | | | | | | | | | | | | |
| Conductance(umho/cm) | 446 | — | | | | | | | | | | | | | | | | |

COMMENTS: No matrix spike samples collected due to low productivity of well (ITGW-1/Background). Spike samples will be collected at another location (TBD).

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Amy J. Klein | 2: | 3: |
| Time/date | 1: 6/25/97 2020 | 2: | 3: |
| Method of Dispatch | 1: | 2: | 3: |

BUREAU OF WASTE CLEANUP

JUL 25 1997

TECHNICAL REVIEW SECTION

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUL-02-20 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 2-JUL-1997 11:19
Date Received: 2-JUL-1997 Customer ID: SSSS
Authorized: 16-JUL-1997 By: Kate Brackett

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: Han Date: 7-18-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00002

Sample ID: 182151/97-JUL-02-20-01 Matrix: W-EQPMT-BK
Location: ITGW-RB
Field ID: ITGW-RB
Collected: 1-JUL-1997 10:00 By: K. HAYES
Authorized: 16-JUL-1997 By: Kate Brackett
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: OV-TRPH
Total recoverable petroleum hydrocarbons by EPA 418.1/9073 (IR analy
Prepared: NA By:
Analyzed: 11-JUL-1997 00:00 By: Savannah Laboratory
Authorized: 16-JUL-1997 By: Kate Brackett

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 45501 | TRPH | < 1.0 | |
| Comment | None | | |

********** END OF REPORT **********

Job LV
97-JUL-02-20
19 0203

SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T7-21792A
Received: 03 JUL 97
Reported: 14 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA082/ITT-Thompson/SSSS
Sampled By: Client
Code: 151670714

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/ TIME SAMPLED |
|---|---|---|
| 21792A-1 | 181871 | 06-30-97/1230 |
| 21792A-2 | 181872 | 06-30-97/1230 |
| 21792A-3 | 181873 | 06-30-97/1840 |
| 21792A-4 | 182151 | 07-01-97/1000 |

| PARAMETER | 21792A-1 | 21792A-2 | 21792A-3 | 21792A-4 |
|---|---|---|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | | | | |
| Total Recoverable Petroleum Hydrocarbons (418.1), mg/l | <1.0 | <1.0 | <1.0 | <1.0 |
| Date Extracted | 07.09.97 | 07.09.97 | 07.09.97 | 07.09.97 |
| Date Analyzed | 07.11.97 | 07.11.97 | 07.11.97 | 07.11.97 |
| Batch ID | 0709P | 0709P | 0709P | 0709P |

JUL 16 1997

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T7-21792A
Received: 03 JUL 97
Reported: 14 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA082/ITT-Thompson/SSSS
Sampled By: Client
Code: 151670714

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/ TIME SAMPLED |
|---|---|---|
| 21792A-5 | 182224 | 07-01-97/0850 |
| 21792A-6 | 182225 | 07-01-97/0930 |

| PARAMETER | 21792A-5 | 21792A-6 |
|---|---|---|
| Total Rec. Petroleum Hydrocarbons (9073) | | |
| Petroleum Hydrocarbons (EPA 9073), mg/kg dw | 360 | 640 |
| Date Extracted | 07.08.97 | 07.08.97 |
| Date Analyzed | 07.09.97 | 07.09.97 |
| Batch ID | 0708X | 0708X |
| Percent Solids, % | 60 | 69 |

JUL 16 1997

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

1 9 0204

LOG NO: T7-21792A
Received: 03 JUL 97
Reported: 14 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA082/ITT-Thompson/SSSS
Sampled By: Client
Code: 151670714

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |
|---|---|
| 21792A-7 | Method Blank |
| 21792A-8 | Practical Quantitation Limit |
| 21792A-9 | Lab Control Standard % Recovery |
| 21792A-10 | Lab Control Standard Duplicate % Recovery |
| 21792A-11 | Precision (%RPD) of LCS/LCSD |

| PARAMETER | 21792A-7 | 21792A-8 | 21792A-9 | 21792A-10 | 21792A-11 |
|---|---|---|---|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | | | | | |
| Total Recoverable Petroleum Hydrocarbons (418.1), mg/l | <1.0 | 1.0 | 71 % | 76 % | 6.8 % |
| Date Extracted | 07.09.97 | --- | 07.09.97 | 07.09.97 | --- |
| Date Analyzed | 07.11.97 | --- | 07.11.97 | 07.11.97 | --- |
| Batch ID | 0709P | --- | 0709P | 0709P | --- |

JUL 16 1997

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T7-21792A
Received: 03 JUL 97
Reported: 14 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA082/ITT-Thompson/SSSS
Sampled By: Client
Code: 151670714

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |
|---|---|
| 21792A-12 | LCS Accuracy Control Limit (%R) |
| 21792A-13 | LCS Precision Control Limit (Advisory) %RPD |
| 21792A-14 | Expected Value, LCS/LCSD |
| 21792A-15 | Extraction Analyst |
| 21792A-16 | Method Analyst |

| PARAMETER | 21792A-12 | 21792A-13 | 21792A-14 | 21792A-15 | 21792A-16 |
|---|---|---|---|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | | | | | |
| Total Recoverable Petroleum Hydrocarbons (418.1), mg/l | 60-140 % | <30 % | 2.5/2.5 | L. Johnson | J. Stepp |

JUL 16 1997

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

1 9 0205

LOG NO: T7-21792A
Received: 03 JUL 97
Reported: 14 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA082/ITT-Thompson/SSSS
Sampled By: Client
Code: 151670714

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |
|---|---|
| 21792A-17 | Method Blank |
| 21792A-18 | Practical Quantitation Limit |
| 21792A-19 | Lab Control Standard % Recovery |
| 21792A-20 | Lab Control Standard Duplicate % Recovery |
| 21792A-21 | Precision (%RPD) of LCS/LCSD |

| PARAMETER | 21792A-17 | 21792A-18 | 21792A-19 | 21792A-20 | 21792A-21 |
|---|---|---|---|---|---|
| otal Rec. Petroleum Hydrocarbons (9073) | | | | | |
| Petroleum Hydrocarbons (EPA 9073), mg/kg dw | <10 | 10 | 104 % | 104 % | 0 % |
| Date Extracted | 07.08.97 | --- | 07.08.97 | 07.08.97 | --- |
| Date Analyzed | 07.09.97 | --- | 07.09.97 | 07.09.97 | --- |
| Batch ID | 0708X | --- | 0708X | 0708X | --- |

JUL 16 1997

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& ENVIRONMENTAL SERVICES, INC.

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LOG NO: T7-21792A
Received: 03 JUL 97
Reported: 14 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA082/ITT-Thompson/SSSS
Sampled By: Client
Code: 151670714

REPORT OF RESULTS 

| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |
|---|---|
| 21792A-22 | LCS Accuracy Control Limit (%R) |
| 21792A-23 | LCS Precision Control Limit (Advisory) %RPD |
| 21792A-24 | Expected Value, LCS/LCSD |
| 21792A-25 | Extraction Analyst |
| 21792A-26 | Method Analyst |

| PARAMETER | 21792A-22 | 21792A-23 | 21792A-24 | 21792A-25 | 21792A-26 |
|---|---|---|---|---|---|
| Total Rec. Petroleum Hydrocarbons (9073) | | | | | |
| Petroleum Hydrocarbons (EPA 9073), % | 60-140 % | <50 % | 83/83 | L. Johnson | J. Stepp |

Method: EPA SW-846, EPA 40 CFR Part 136
Florida Dept. of Health Certification No.: E81005
FDEP CompQAP No.: 890142G

Laura B Schneider for
Elizabeth L. Schneider, Project Manager

JUL 16 1997

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 192151
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

19 0206

Sample Location: _____
Field ID/Name: ITGW-RB
Storet Station Number: _____
NPDES Number: _____

Collection Date: 7/1/97
Collection Time: 10:00 A
Grab: _____
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | X EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature: _____
Sampled By: KEVIN HAYES
Signature: Kevin Hayes
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet): _____
Chlorine, Total Residual - 50060 (mg/L): _____
Dissolved Oxygen (Probe) -00299 (mg/L): _____
pH - 00400 (Stnd. Units): _____
Salinity - 00480 (PPTh): _____
Secchi Depth - 00078 (M): _____
Specific Conductance - 00094 (umho/cm): _____
Temperature - 00010 (C): _____

Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| See Below | | | |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| METALS | 1 LITER POLY | 1 | $HNO_3$ |
| CYANIDE | 1 LITER POLY | 1 | NaOH |
| BNAs | 2 LITER AMBER | 2 | ICE |
| PESTICIDES/PCBS | 1 LITER AMBER | 2 | ICE |
| TRPHs | 1 LITER AMBER | 1 | HCl |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page 1 of 1

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 - ~~13~~ 12 |
| PROJECT NAME: ~~Bert Morsch~~ ITT THOMPSON | SAMPLERS (SIGNATURES): Kevin Hayes, Ken Starling | DATE: |

| Field ID | ITSD-1A | ITSD-2A | ITGW-RB | ITGW-TRIP-5 | ~~FRANCIS MUNICIPAL WELL~~ | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | |
| LAB SPIKE | | | | | | | | | |
| WATER | | | X | X | X | x | | x | |
| SOIL/SEDIMENT | X | X | | | | | x | | x |
| METALS | | | 1 | | 1 | P-1L | | HNO3 | |
| CYANIDE | | | 1 | | | P-1L | | NaOH | |
| VOLATILES | 1 | 1 | 4 | 2 | 4 | G-40ml | G250m | HCl | ICE |
| BNAs | | | 2 | | 2 | G-1L | | ICE | |
| PESTICIDES/PCBs | ~~1~~ 1 | | 2 | | 2 | G-1L | | ICE | |
| METALS/CYANIDE | 1 | 1 | | | | | G250m | | ICE |
| BNA/PEST/PCB | 1 | 1 | | | | | G500m | | ICE |
| TRPH | 1 | 1 | 1 | | 1 | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | P250ml | | HCl | |
| | | | | | | | | | |
| TOTAL | 4 | 4 | 11 | 2 | | | | | |
| Turbidity | NA | NA | NA | NA | NA | | | | |
| Temperature | | | | | | | | | |
| pH-00400 | | | | | | | | | |
| Conductance(umho/cm) | | | | | | | | | |

COMMENTS: FRANCIS MUNICIPAL WELL NOT SAMPLED DUE TO PRESENCE OF FREE PRODUCT.
KRH 7/1/97

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin Hayes | 2: | 3: |
| Time/date | 1: 7/1/97 | 2: | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: | 3: |
| Received By | 1: [illegible] | 2: | 3: |

BUREAU OF WASTE CLEANUP

AUG 01 1997

TECHNICAL REVIEW SECTION



19 0207

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUL-03-14 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 3-JUL-1997 11:33
Date Received: 3-JUL-1997 Customer ID: SSSS
Authorized: 25-JUL-1997 By: Kate Brackett

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: _____ Date: 7-25-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00007

Sample ID: 182299/97-JUL-03-14-01 Matrix: W-EQPMT-BK
Location: ITT THOMPSON
Field ID: ITSD-RB
Collected: 2-JUL-1997 10:50 By: KEVIN HAYES
Authorized: 25-JUL-1997 By: Kate Brackett
Type: Grab Sample
Lab Comments: TEMP=3DC
Field Comments:

Analysis ID: OV-TRPH
Total recoverable petroleum hydrocarbons by EPA 418.1/9073 (IR analy
Prepared: NA By:
Analyzed: 11-JUL-1997 00:00 By: Savannah Laboratory
Authorized: 16-JUL-1997 By: Kate Brackett

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 45501 | TRPH | 1.0 K | |
| Comment | K - Value is known to be less than 1.0 mg/L. | | |

********** END OF REPORT **********

Job ID
97-JUL-03.14
19 0208

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T7-21811
Received: 08 JUL 97
Reported: 14 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA085/ITT Thompson/SSSS
Sampled By: Client
Code: 151670714

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/ TIME SAMPLED |
|---|---|---|
| 21811-1 | 182299 | 07-02-97/1050 |

| PARAMETER | 21811-1 |
|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | |
| Total Recoverable Petroleum Hydrocarbons (418.1), mg/l | <1.0 |
| Date Extracted | 07.09.97 |
| Date Analyzed | 07.11.97 |
| Batch ID | 0709P |

JUL 16 1997

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-950

LOG NO: T7-21811
Received: 08 JUL 97
Reported: 14 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA085/ITT Thompson/SSSS
Sampled By: Client
Code: 151670714

REPORT OF RESULTS 

| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |
|---|---|
| 21811-7 | LCS Accuracy Control Limit (%R) |
| 21811-8 | LCS Precision Control Limit (Advisory) %RPD |
| 21811-9 | Expected Value, LCS/LCSD |
| 21811-10 | Extraction Analyst |
| 21811-11 | Method Analyst |

| PARAMETER | 21811-7 | 21811-8 | 21811-9 | 21811-10 | 21811-11 |
|---|---|---|---|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | | | | | |
| Total Recoverable Petroleum Hydrocarbons (418.1), mg/l | 60-140 % | <30 % | 2.5/2.5 | L. Johnson | J. Stepp |

Method: EPA 40 CFR Part 136
Florida Dept. of Health Certification No.: E81005
FDEP CompQAP No.: 890142G

Louise B Sneed for
Elizabeth L. Schneider, Project Manager

JUL 16 1997

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0209

Sample ID: 182299
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: _____
Field ID/Name: ITSD-RB
Storet Station Number: _____
NPDES Number: _____

Collection Date: 7/2/97
Collection Time: 10:50
Grab: _____
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| KH X GROUND | | X EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature: _____
Sampled By: KEVIN HAYES
Signature: Kevin Hayes
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet): _____
Chlorine, Total Residual - 50060 (mg/L): _____
Dissolved Oxygen (Probe) -00299 (mg/L): _____
pH - 00400 (Stnd. Units): _____
Salinity - 00480 (PPTh): _____
Secchi Depth - 00078 (M): _____
Specific Conductance - 00094 (umho/cm): _____
Temperature - 00010 (C): _____

Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| SEE BELOW | | | |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| METALS | 1 LITER POLY | 1 | $HNO_3$ |
| CYANIDE | 1 LITER POLY | 1 | NaOH |
| BNAs | 1 LITER AMBER | 2 | ICE |
| PESTICIDES/PCBS | 1 LITER AMBER | 2 | ICE |
| TRPHS | 1 LITER AMBER | 1 | HCl |
| | | | |

Send Final Report to: Hank Cheng, Bureau of Waste Cleanup

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page_____of____

| | | |
|---|---|---|
| SUBMITTING AGENCY / COMPANY NAME: Site Screening Superfund Subsection | CONTACT NAME AND PHONE#: Hank Cheng (904) 921-0858 | Request ID: RQ-97- Jun - 23 - ~~13~~ 1200 |
| PROJECT NAME: ~~Bert Morsch~~ ITT THOMPSON | SAMPLERS (SIGNATURES): Kevin Hayes | DATE: 7/2/97 |

| Field ID | ITVP-4A(8') | ITVP-4B(25') | ITVP-4B-DUP (25) | ITSD-RB | ITVP-RB | UNKNOWN WELL | ITVP-TRIP | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | | | |
| LAB SPIKE | | | | | | | | | | | |
| WATER | X | X | X | X | X | X | X | X | | X | |
| SOIL/SEDIMENT | | | | | | | | | X | | X |
| METALS | | | | 1 | | | | P-1L | | HNO3 | |
| CYANIDE | | | | 1 | | | | P-1L | | NaOH | |
| VOLATILES | ~~4~~ | 4 | 4 | 4 | 4 | 4 | 2 | G-40ml | G250m | HCl | ICE |
| BNAs | | | | 2 | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | | | | 2 | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | | | G500m | | ICE |
| TRPH | | | | 1 | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | |
| TOTAL | 4 | 4 | 4 | 16 | 4 | 4 | 2 | | | | |
| Turbidity | | | | | | | | | | | |
| Temperature | | | | | | | | | | | |
| pH-00400 | | | | | | | | | | | |
| Conductance(umho/cm) | | | | | | | | | | | |

COMMENTS:

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin Hayes | 2: | 3: |
| Time/date | 1: 7/3/97 11:00 A | 2: | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: | 3: |
| Received By | 1: Angela B S | 2: | 3: |

1 9 0210

BUREAU OF WASTE CLEANUP

JUL 25 1997

TECHNICAL REVIEW SECTION

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUL-02-29 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 2-JUL-1997 11:42
Date Received: 2-JUL-1997 Customer ID: SSSS
Authorized: 16-JUL-1997 By: Kate Brackett

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: _____ Date: 7-18-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00010

Sample ID: 182224/97-JUL-02-29-01 Matrix: S-FRHWTRSD
Location: N.E. QUADRANT OF POND S.W. OF SITE
Field ID: ITSD-1A
Collected: 1-JUL-1997 08:50 By: K. STARLING
Authorized: 16-JUL-1997 By: Kate Brackett
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: OV-TRPH
Total recoverable petroleum hydrocarbons by EPA 418.1/9073 (IR analy
Prepared: NA By:
Analyzed: 9-JUL-1997 00:00 By: Savannah Laboratory
Authorized: 16-JUL-1997 By: Kate Brackett

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 45501 | TRPH | 360 | |
| Comment | None | | |

---

Sample ID: 182225/97-JUL-02-29-02 Matrix: S-FRHWTRSD
Location: S.E. QUADRANT OF POND S.W. OF POND
Field ID: ITSD-2A
Collected: 1-JUL-1997 09:30 By: K. STARLING
Authorized: 16-JUL-1997 By: Kate Brackett
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: OV-TRPH
Total recoverable petroleum hydrocarbons by EPA 418.1/9073 (IR analy
Prepared: NA By:
Analyzed: 9-JUL-1997 00:00 By: Savannah Laboratory
Authorized: 16-JUL-1997 By: Kate Brackett

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 45501 | TRPH | 640 | |
| Comment | None | | |

---

********** END OF REPORT **********

Job ID
97-Jul-02-29
19 0211

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T7-21792A
Received: 03 JUL 97
Reported: 14 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA082/ITT-Thompson/SSSS
Sampled By: Client
Code: 151670714

REPORT OF RESULTS 

| LOG NO | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/ TIME SAMPLED |
|---|---|---|
| 21792A-5 | 182224 | 07-01-97/0850 |
| 21792A-6 | 182225 | 07-01-97/0930 |

| PARAMETER | 21792A-5 | 21792A-6 |
|---|---|---|
| Total Rec. Petroleum Hydrocarbons (9073) | | |
| Petroleum Hydrocarbons (EPA 9073), mg/kg dw | 360 | 640 |
| Date Extracted | 07.08.97 | 07.08.97 |
| Date Analyzed | 07.09.97 | 07.09.97 |
| Batch ID | 0708X | 0708X |
| Percent Solids, % | 60 | 69 |

JUL 16 1997

SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

1 9 0212

LOG NO: T7-21792A
Received: 03 JUL 97
Reported: 14 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA082/ITT-Thompson/SSSS
Sampled By: Client
Code: 151670714

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/ TIME SAMPLED |
|---|---|---|
| 21792A-1 | 181871 | 06-30-97/1230 |
| 21792A-2 | 181872 | 06-30-97/1230 |
| 21792A-3 | 181873 | 06-30-97/1840 |
| 21792A-4 | 182151 , | 07-01-97/1000 |

| PARAMETER | 21792A-1 | 21792A-2 | 21792A-3 | 21792A-4 |
|---|---|---|---|---|
| otal Recoverable Petroleum Hydrocarbons (418.1) | | | | |
| Total Recoverable Petroleum Hydrocarbons (418.1), mg/l | <1.0 | <1.0 | <1.0 | <1.0 |
| Date Extracted | 07.09.97 | 07.09.97 | 07.09.97 | 07.09.97 |
| Date Analyzed | 07.11.97 | 07.11.97 | 07.11.97 | 07.11.97 |
| Batch ID | 0709P | 0709P | 0709P | 0709P |

JUL 16 1997

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T7-21792A
Received: 03 JUL 97
Reported: 14 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA082/ITT-Thompson/SSSS
Sampled By: Client
Code: 151670714

REPORT OF RESULTS 

| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |
|---|---|
| 21792A-7 | Method Blank |
| 21792A-8 | Practical Quantitation Limit |
| 21792A-9 | Lab Control Standard % Recovery |
| 21792A-10 | Lab Control Standard Duplicate % Recovery |
| 21792A-11 | Precision (%RPD) of LCS/LCSD |

| PARAMETER | 21792A-7 | 21792A-8 | 21792A-9 | 21792A-10 | 21792A-11 |
|---|---|---|---|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | | | | | |
| Total Recoverable Petroleum Hydrocarbons (418.1), mg/l | <1.0 | 1.0 | 71 % | 76 % | 6.8 % |
| Date Extracted | 07.09.97 | --- | 07.09.97 | 07.09.97 | --- |
| Date Analyzed | 07.11.97 | --- | 07.11.97 | 07.11.97 | --- |
| Batch ID | 0709P | --- | 0709P | 0709P | --- |

JUL 16 1997

1 9 0213

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T7-21792A
Received: 03 JUL 97
Reported: 14 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA082/ITT-Thompson/SSSS
Sampled By: Client
Code: 151670714

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |
|---|---|
| 21792A-12 | LCS Accuracy Control Limit (%R) |
| 21792A-13 | LCS Precision Control Limit (Advisory) %RPD |
| 21792A-14 | Expected Value, LCS/LCSD |
| 21792A-15 | Extraction Analyst |
| 21792A-16 | Method Analyst |

| PARAMETER | 21792A-12 | 21792A-13 | 21792A-14 | 21792A-15 | 21792A-16 |
|---|---|---|---|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | | | | | |
| Total Recoverable Petroleum Hydrocarbons (418.1), mg/l | 60-140 % | <30 % | 2.5/2.5 | L. Johnson | J. Stepp |

JUL 16 1997

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T7-21792A
Received: 03 JUL 97
Reported: 14 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA082/ITT-Thompson/SSSS
Sampled By: Client
Code: 151670714

REPORT OF RESULTS 

| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |
|---|---|
| 21792A-17 | Method Blank |
| 21792A-18 | Practical Quantitation Limit |
| 21792A-19 | Lab Control Standard % Recovery |
| 21792A-20 | Lab Control Standard Duplicate % Recovery |
| 21792A-21 | Precision (%RPD) of LCS/LCSD |

| PARAMETER | 21792A-17 | 21792A-18 | 21792A-19 | 21792A-20 | 21792A-21 |
|---|---|---|---|---|---|
| Total Rec. Petroleum Hydrocarbons (9073) | | | | | |
| Petroleum Hydrocarbons (EPA 9073), mg/kg dw | <10 | 10 | 104 % | 104 % | 0 % |
| Date Extracted | 07.08.97 | --- | 07.08.97 | 07.08.97 | --- |
| Date Analyzed | 07.09.97 | --- | 07.09.97 | 07.09.97 | --- |
| Batch ID | 0708X | --- | 0708X | 0708X | --- |

JUL 16 1997

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& ENVIRONMENTAL SERVICES, INC.

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1 9 0214

LOG NO: T7-21792A
Received: 03 JUL 97
Reported: 14 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA082/ITT-Thompson/SSSS
Sampled By: Client
Code: 151670714

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |
|---|---|
| 21792A-22 | LCS Accuracy Control Limit (%R) |
| 21792A-23 | LCS Precision Control Limit (Advisory) %RPD |
| 21792A-24 | Expected Value, LCS/LCSD |
| 21792A-25 | Extraction Analyst |
| 21792A-26 | Method Analyst |

| PARAMETER | 21792A-22 | 21792A-23 | 21792A-24 | 21792A-25 | 21792A-26 |
|---|---|---|---|---|---|
| Total Rec. Petroleum Hydrocarbons (9073) | | | | | |
| Petroleum Hydrocarbons (EPA 9073), % | 60-140 % | <50 % | 83/83 | L. Johnson | J. Stepp |

Method: EPA SW-846, EPA 40 CFR Part 136
Florida Dept. of Health Certification No.: E81005
FDEP CompQAP No.: 890142G

Laura B Schneider for
Elizabeth L. Schneider, Project Manager

JUL 16 1997

# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
## CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 148224 (Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: N.E. quadrant of pond S.W. of site
Field ID/Name: ITSD-1 ~~(Background)~~
Storet Station Number:
NPDES Number:

Collection Date: 7/1/97
Collection Time: 08:50
Grab: X
Composite Begin: End:

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | X FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| ___GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: N/A
Signature:
Sampled By: Ken Starling
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet):
Chlorine, Total Residual - 50060 (mg/L):
Dissolved Oxygen (Probe) -00299 (mg/L):
pH - 00400 (Stnd. Units):
Salinity - 00480 (PPTh):
Secchi Depth - 00078 (M):
Specific Conductance - 00094 (umho/cm):
Temperature - 00010 (C):

### Soil/Sediment:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| HG-H-S<br>S-ICP<br>S-CN | Glass Jar-250mL | 1 | ICE |
| S-VOC-SS | Glass Jar-250mL | 1 | ICE |
| S-CLPCB-SS<br>S-BNA-SSSS | Glass Jar-500mL | 1 | ICE |
| TRPH | Glass Jar-250mL | 1 | ICE |

### For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals/Cyanide | Glass Jar-250mL | 1 | Ice |
| Volatiles | Glass Jar-250mL | 1 | Ice |
| BNAs/Pesticides/PCBs | Glass Jar-500mL | 1 | Ice |
| TRPH | Glass Jar-250mL | 1 | Ice |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup *** SPIKE IN LAB***

1 9 0215

# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
## CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 152225
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: S.E. quandrent of pond S.W. of pond
Field ID/Name: ITSD-2A
Storet Station Number:
NPDES Number:

Collection Date: 7/1/97
Collection Time: 0930
Grab: X
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | X FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| ___GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: NA
Signature:
Sampled By: KEN STARLING
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters: NA
Depth (Feet):
Chlorine, Total Residual - 50060 (mg/L):
Dissolved Oxygen (Probe) -00299 (mg/L):
pH - 00400 (Stnd. Units):
Salinity - 00480 (PPTh):
Secchi Depth - 00078 (M):
Specific Conductance - 00094 (umho/cm):
Temperature - 00010 (C):

### Soil/Sediment:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| HG-H-S<br>S-ICP<br>S-CN | Glass Jar-250mL | 1 | ICE |
| S-VOC-SS | Glass Jar-250mL | 1 | ICE |
| S-CLPCB-SS<br>S-BNA-SSSS | Glass Jar-500mL | 1 | ICE |
| TRPH | Glass Jar-250mL | 1 | ICE |

### For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals/Cyanide | Glass Jar-250mL | 1 | Ice |
| Volatiles | Glass Jar-250mL | 1 | Ice |
| BNAs/Pesticides/PCBs | Glass Jar-500mL | 1 | Ice |
| TRPH | Glass Jar-250mL | 1 | Ice |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page 1 of 1

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: 000412 |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 ~~-18~~ |
| PROJECT NAME: ~~Bert Morsch~~ ITT THOMPSON | SAMPLERS (SIGNATURES): Kevin Hayes, Ken Standley | DATE: |

| Field ID | ITSD-1A | ITSD-2A | ITGW-RB | ITGW-MIP-S | FRANCIS MUNICIPAL WELL | | | | | | | | | | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | | | | | | | | | | |
| LAB SPIKE | | | | | | | | | | | | | | | | | | |
| WATER | | | X | X | X | | | | | | | | | | X | | X | |
| SOIL/SEDIMENT | X | X | | | | | | | | | | | | | | X | | X |
| METALS | | | 1 | | 1 | | | | | | | | | | P-1L | | HNO3 | |
| CYANIDE | | | 1 | | | | | | | | | | | | P-1L | | NaOH | |
| VOLATILES | 1 | 1 | 4 | 2 | 4 | | | | | | | | | | G-40ml | G250m | HCl | ICE |
| BNAs | | | 2 | | 2 | | | | | | | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | 1 KRK | | 2 | | 2 | | | | | | | | | | G-1L | | ICE | |
| METALS/CYANIDE | 1 | 1 | | | | | | | | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | 1 | 1 | | | | | | | | | | | | | | G500m | | ICE |
| TRPH | 1 | 1 | 1 | | 1 | | | | | | | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | | | | | | | | |
| TOTAL | 4 | 4 | 11 | 2 | | | | | | | | | | | | | | |
| Turbidity | NA | NA | NA | NA | NA | | | | | | | | | | | | | |
| Temperature | ↓ | ↓ | ↓ | ↓ | ↓ | | | | | | | | | | | | | |
| pH-00400 | | | | | | | | | | | | | | | | | | |
| Conductance(umho/cm) | | | | | | | | | | | | | | | | | | |

COMMENTS: FRANCIS MUNICIPAL WELL NOT SAMPLED DUE TO PRESENCE OF FREE PRODUCT. KRK 7/1/97

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin Hayes | 2: | 3: |
| Time/date | 1: 7/1/97 | 2: | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: | 3: |

19 0216
BUREAU OF WASTE CLEANUP
JUL 25 1997
TECHNICAL REVIEW SECTION

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUL-01-05 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 1-JUL-1997 10:14
Date Received: 1-JUL-1997 Customer ID: SSSS
Authorized: 16-JUL-1997 By: Kate Brackett

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: Yhan Date: 7-18-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00005

Sample ID: 181871/97-JUL-01-05-01 Matrix: W-GROUND
Location: MW5B
Field ID: ITGW-4
Collected: 30-JUN-1997 12:30 By: K. STARLING
Authorized: 16-JUL-1997 By: Kate Brackett
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: OV-TRPH
Total recoverable petroleum hydrocarbons by EPA 418.1/9073 (IR analy
Prepared: NA By:
Analyzed: 11-JUL-1997 00:00 By: Savannah Laboratory
Authorized: 16-JUL-1997 By: Kate Brackett

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 45501 | TRPH | < 1.0 | |
| Comment | None | | |

---

Sample ID: 181872/97-JUL-01-05-02 Matrix: W-GROUND
Location: MW5B
Field ID: ITGW-4-DUP
Collected: 30-JUN-1997 12:30 By: K. STARLING
Authorized: 16-JUL-1997 By: Kate Brackett
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: OV-TRPH
Total recoverable petroleum hydrocarbons by EPA 418.1/9073 (IR analy
Prepared: NA By:
Analyzed: 11-JUL-1997 00:00 By: Savannah Laboratory
Authorized: 16-JUL-1997 By: Kate Brackett

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 45501 | TRPH | < 1.0 | |
| Comment | None | | |

19 0217

Sample ID: 181873/97-JUL-01-05-03 Matrix: W-GROUND
Location: MW6
Field ID: ITGW-5
Collected: 30-JUN-1997 18:40 By: K. STARLING
Authorized: 16-JUL-1997 By: Kate Brackett
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: OV-TRPH
Total recoverable petroleum hydrocarbons by EPA 418.1/9073 (IR analy
Prepared: NA By:
Analyzed: 11-JUL-1997 00:00 By: Savannah Laboratory
Authorized: 16-JUL-1997 By: Kate Brackett

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 45501 | TRPH | < 1.0 | |
| Comment | None | | |

********** END OF REPORT **********

Job ID
97-JUL-01-05
19 0218

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

1846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T7-21792A
Received: 03 JUL 97
Reported: 14 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA082/ITT-Thompson/SSSS
Sampled By: Client
Code: 151670714

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/ TIME SAMPLED |
|---|---|---|
| 21792A-1 | 181871 | 06-30-97/1230 |
| 21792A-2 | 181872 | 06-30-97/1230 |
| 21792A-3 | 181873 | 06-30-97/1840 |
| 21792A-4 | 182151 | 07-01-97/1000 |

| PARAMETER | 21792A-1 | 21792A-2 | 21792A-3 | 21792A-4 |
|---|---|---|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | | | | |
| Total Recoverable Petroleum Hydrocarbons (418.1), mg/l | <1.0 | <1.0 | <1.0 | <1.0 |
| Date Extracted | 07.09.97 | 07.09.97 | 07.09.97 | 07.09.97 |
| Date Analyzed | 07.11.97 | 07.11.97 | 07.11.97 | 07.11.97 |
| Batch ID | 0709P | 0709P | 0709P | 0709P |

RECEIVED
JUL 16 1997

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T7-21792A
Received: 03 JUL 97
Reported: 14 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA082/ITT-Thompson/SSSS
Sampled By: Client
Code: 151670714

REPORT OF RESULTS 

| LOG NO | SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES | DATE/ TIME SAMPLED |
|---|---|---|
| 21792A-5 | 182224 | 07-01-97/0850 |
| 21792A-6 | 182225 | 07-01-97/0930 |

| PARAMETER | 21792A-5 | 21792A-6 |
|---|---|---|
| Total Rec. Petroleum Hydrocarbons (9073) | | |
| Petroleum Hydrocarbons (EPA 9073), mg/kg dw | 360 | 640 |
| Date Extracted | 07.08.97 | 07.08.97 |
| Date Analyzed | 07.09.97 | 07.09.97 |
| Batch ID | 0708X | 0708X |
| Percent Solids, % | 60 | 69 |

JUL 16 1997

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

1 9 0219

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T7-21792A
Received: 03 JUL 97
Reported: 14 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA082/ITT-Thompson/SSSS
Sampled By: Client
Code: 151670714

REPORT OF RESULTS 

| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |
|---|---|
| 21792A-7 | Method Blank |
| 21792A-8 | Practical Quantitation Limit |
| 21792A-9 | Lab Control Standard % Recovery |
| 21792A-10 | Lab Control Standard Duplicate % Recovery |
| 21792A-11 | Precision (%RPD) of LCS/LCSD |

| PARAMETER | 21792A-7 | 21792A-8 | 21792A-9 | 21792A-10 | 21792A-11 |
|---|---|---|---|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | | | | | |
| Total Recoverable Petroleum Hydrocarbons (418.1), mg/l | <1.0 | 1.0 | 71 % | 76 % | 6.8 % |
| Date Extracted | 07.09.97 | --- | 07.09.97 | 07.09.97 | --- |
| Date Analyzed | 07.11.97 | --- | 07.11.97 | 07.11.97 | --- |
| Batch ID | 0709P | --- | 0709P | 0709P | --- |

JUL 16 1997

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

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LOG NO: T7-21792A
Received: 03 JUL 97
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Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA082/ITT-Thompson/SSSS
Sampled By: Client
Code: 151670714

REPORT OF RESULTS 

| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |
|---|---|
| 21792A-12 | LCS Accuracy Control Limit (%R) |
| 21792A-13 | LCS Precision Control Limit (Advisory) %RPD |
| 21792A-14 | Expected Value, LCS/LCSD |
| 21792A-15 | Extraction Analyst |
| 21792A-16 | Method Analyst |

| PARAMETER | 21792A-12 | 21792A-13 | 21792A-14 | 21792A-15 | 21792A-16 |
|---|---|---|---|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | | | | | |
| Total Recoverable Petroleum Hydrocarbons (418.1), mg/l | 60-140 % | <30 % | 2.5/2.5 | L. Johnson | J. Stepp |

JUL 16 1997

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

19 0220

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T7-21792A
Received: 03 JUL 97
Reported: 14 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA082/ITT-Thompson/SSSS
Sampled By: Client
Code: 151670714

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |
|---|---|
| 21792A-17 | Method Blank |
| 21792A-18 | Practical Quantitation Limit |
| 21792A-19 | Lab Control Standard % Recovery |
| 21792A-20 | Lab Control Standard Duplicate % Recovery |
| 21792A-21 | Precision (%RPD) of LCS/LCSD |

| PARAMETER | 21792A-17 | 21792A-18 | 21792A-19 | 21792A-20 | 21792A-21 |
|---|---|---|---|---|---|
| Total Rec. Petroleum Hydrocarbons (9073) | | | | | |
| Petroleum Hydrocarbons (EPA 9073), mg/kg dw | <10 | 10 | 104 % | 104 % | 0 % |
| Date Extracted | 07.08.97 | --- | 07.08.97 | 07.08.97 | --- |
| Date Analyzed | 07.09.97 | --- | 07.09.97 | 07.09.97 | --- |
| Batch ID | 0708X | --- | 0708X | 0708X | --- |

JUL 16 1997

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9501

LOG NO: T7-21792A
Received: 03 JUL 97
Reported: 14 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA082/ITT-Thompson/SSSS
Sampled By: Client
Code: 151670714

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR SOLID/SEMISOLID |
|---|---|
| 21792A-22 | LCS Accuracy Control Limit (%R) |
| 21792A-23 | LCS Precision Control Limit (Advisory) %RPD |
| 21792A-24 | Expected Value, LCS/LCSD |
| 21792A-25 | Extraction Analyst |
| 21792A-26 | Method Analyst |

| PARAMETER | 21792A-22 | 21792A-23 | 21792A-24 | 21792A-25 | 21792A-26 |
|---|---|---|---|---|---|
| Total Rec. Petroleum Hydrocarbons (9073) | | | | | |
| Petroleum Hydrocarbons (EPA 9073), % | 60-140 % | <50 % | 83/83 | L. Johnson | J. Stepp |

Method: EPA SW-846, EPA 40 CFR Part 136
Florida Dept. of Health Certification No.: E81005
FDEP CompQAP No.: 890142G

Laura B Schneider for
Elizabeth L. Schneider, Project Manager

JUL 16 1997

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0221

Sample ID: 151871
(Lab Use Only)
RQ-97- Jun - 23 - 12

Sample Location: MWSB
Field ID/Name: IT GW-4
Storet Station Number:
NPDES Number:

Collection Date: 6/30/97
Collection Time: 12:30
Grab: X
Composite Begin: End:

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: KEN STARLING — Kevin Davis
Signature:
Sampled By: KEN STARLING — Kevin Davis
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters:
Depth (Feet): TD @ 39.2' BTOC
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.83
Salinity - 00480 (PPTh): NA
TURBIDITY (NTUs)
~~Secchi Depth - 00078~~ (M): 4.45
Specific Conductance - 00094 (umho/cm): 497
Temperature - 00010 (C): — THERMOMETER-NOT UNKNOWN TEMP FOUND

ater:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 1 * | Ice |
| TPH | Brown Glass-1L | 1 | HCl |
| | | | |

NOTE: SHORT 1 ~~LS~~ 1-liter

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 18187 (Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MWSB
Field ID/Name: ITGW-4-DUP
Storet Station Number:
NPDES Number:

Collection Date: 6/30/97
Collection Time: 12:30
Grab: X
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| _X_ GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: KEN STARLING - Jesus Diaz
Signature:
Sampled By: KEN STARLING - Jesus Diaz
Signature:
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters:
Depth (Feet): TD@ 39.2 ' BTOC
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.83
Salinity - 00480 (PPTh): NA
TURBIDITY (NTUS)
Secchi Depth - 00078 (M): 4.45
Specific Conductance - 00094 (umho/cm): 4.97
Temperature - 00010 (C): UNKNOWN
THERMOMETER NOT FUNCTION

Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |

Hank Cheng, Bureau of Waste Cleanup

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0222

Sample ID: 141473
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW6
Field ID/Name: ITGW-5
Storet Station Number:
NPDES Number:

Collection Date: 6/30/97
Collection Time: 18:40
Grab: X
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: KEN STARLING — Jesse Davis
Signature:
Sampled By: KEN STARLING — Jesse Davis
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters:
Depth (Feet): 25' BTOC (TD)
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.75
Salinity - 00480 (PPTh): NA
~~Secchi Depth - 00078~~ TURBIDITY (NTUS) (M): 3.65
Specific Conductance - 00094 (umho/cm): 1130
Temperature - 00010 (C): 27

Water:

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| METALS | PLASTIC 1L | 1 | $HNO_3$ |
| CYANIDE | PLASTIC 1L | 1 | NaOH |
| BNAs | BROWN GLASS-1L | 2 | ICE |
| PESTICIDES/PCBS | BROWN GLASS-1L | 2 | ICE |
| TRPH | BROWN GLASS-1L | 1 | HCl |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page_____of_____

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 -12 |
| PROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Karin L Hayes<br>K K Stasa - Jennifer Dias | DATE: 6/30/97 |

| Field ID | ITGW-4 | ITGW-4-DUP | ITGW-5 | ITGW-TRIP-4 | ITVP-14 | | | | | | | | | | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | | | | | | | | | | |
| LAB SPIKE | | | | | | | | | | | | | | | | | | |
| WATER | X | X | X | X | X | | | | | | | | | | X | | X | |
| SOIL/SEDIMENT | | | | | | | | | | | | | | | | X | | X |
| METALS | 1 | 1 | 1 | | | | | | | | | | | | P-1L | | HNO3 | |
| CYANIDE | 1 | 1 | 1 | | | | | | | | | | | | P-1L | | NaOH | |
| VOLATILES | 4 | 4 | 4 | 2 | 4 | | | | | | | | | | G-40ml | G250m | HCl | ICE |
| BNAs | 2 | 2 | 2 | | | | | | | | | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | 1* | 2 | 2 | | | | | | | | | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | | | | | | | | | | | | | | G250m | | ICE |
| ~~GW~~/PEST/PCB | | | | | | | | | | | | | | | | G500m | | ICE |
| TRPH | 1 | 1 | 1 | | | | | | | | | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | | | | | | | | |
| TOTAL | 10 | 11 | 11 | 2 | 4 | | | | | | | | | | | | | |
| Turbidity | 4.45 | 4.45 | 3.65 | NA | NA | | | | | | | | | | | | | |
| Temperature | UNK. | UNK. | 27 | NA | NA | | | | | | | | | | | | | |
| pH-00400 | 3.83 | 3.83 | 3.75 | NA | NA | | | | | | | | | | | | | |
| Conductance(umho/cm) | 497 | 457 | 1130 | NA | NA | | | | | | | | | | | | | |

COMMENTS: * SHORT 1 - BROWN 1-LITER AMBER FOR PESTICIDES

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Karin Hayes | 2: | 3: |
| Time/date | 1: 6/30/97 @ 21:00 | 2: | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: | 3: |
| Received By | 1: Jim Greenfield | 2: | 3: |

19 0223

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUN-27-04 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 27-JUN-1997 08:59
Date Received: 27-JUN-1997 Customer ID: SSSS
Authorized: 11-JUL-1997 By: Kate Brackett

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

BUREAU OF WASTE CLEANUP
JUL 17 1997
TECHNICAL REVIEW SECTION

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: TWF Date: 7/15/97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00005

Sample ID: 181800/97-JUN-27-04-01 Matrix: W-GROUND
Location: MW-2
Field ID: ITGW-2
Collected: 26-JUN-1997 16:00 By: A. KLEI
Authorized: 11-JUL-1997 By: Kate Brackett
Type: Grab Sample
Lab Comments: DEP TEMP=5DC.
Field Comments:

Analysis ID: OV-TRPH
Total recoverable petroleum hydrocarbons by EPA 418.1/9073 (IR analy
Prepared: NA By:
Analyzed: 2-JUL-1997 00:00 By: Savannah Laboratory
Authorized: 11-JUL-1997 By: Kate Brackett

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 45501 | TRPH | 1.0 U | |

Sample ID: 181801/97-JUN-27-04-02 Matrix: W-GROUND
Location: MW-7
Field ID: ITGW-6
Collected: 26-JUN-1997 17:40 By: A. KLEI
Authorized: 11-JUL-1997 By: Kate Brackett
Type: Grab Sample
Lab Comments: DEP TEMP=5DC.
Field Comments:

Analysis ID: OV-TRPH
Total recoverable petroleum hydrocarbons by EPA 418.1/9073 (IR analy
Prepared: NA By:
Analyzed: 2-JUL-1997 00:00 By: Savannah Laboratory
Authorized: 11-JUL-1997 By: Kate Brackett

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 45501 | TRPH | 1.0 U | |

19 0224

Sample ID: 181802/97-JUN-27-04-03 Matrix: W-GROUND
Location: MW-11B
Field ID: ITGW-7
Collected: 26-JUN-1997 00:00 By: A. KLEI
Authorized: 11-JUL-1997 By: Kate Brackett
Type: Grab Sample
Lab Comments: DEP TEMP=5DC.
Field Comments:

Analysis ID: OV-TRPH
Total recoverable petroleum hydrocarbons by EPA 418.1/9073 (IR analy
Prepared: NA By:
Analyzed: 2-JUL-1997 00:00 By: Savannah Laboratory
Authorized: 11-JUL-1997 By: Kate Brackett

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 45501 | TRPH | 1.0 U | |

********** END OF REPORT **********

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

19 0225

LOG NO: T7-21754
Received: 30 JUN 97
Reported: 07 JUL 97

Ms. Rebecca Northup
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA079/ITT-Thompson/SSSS
Sampled By: Client
Code: 15207077

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/ TIME SAMPLED |
|---|---|---|
| 21754-1 | 181800 | 06-26-97/1600 |
| 21754-2 | 181801 | 06-26-97/1740 |
| 21754-3 | 181802 | 06-26-97 |

| PARAMETER | | 21754-1 | 21754-2 | 21754-3 |
|---|---|---|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | | | | |
| Total Recoverable Petroleum Hydrocarbons (418.1) | mg/l | <1.0 | <1.0 | <1.0 |
| Date Extracted | | 07.01.97 | 07.01.97 | 07.01.97 |
| Date Analyzed | | 07.02.97 | 07.02.97 | 07.02.97 |
| Batch ID | | 0701P | 0701P | 0701P |

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JUL 09 1997
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CHEMISTRY SECTION

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T7-21754
Received: 30 JUN 97
Reported: 07 JUL 97

Ms. Rebecca Northup
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA079/ITT-Thompson/SSSS
Sampled By: Client
Code: 15207077

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |
|---|---|
| 21754-4 | Method Blank |
| 21754-5 | Practical Quantitation Limit |
| 21754-6 | Lab Control Standard % Recovery |
| 21754-7 | Lab Control Standard Duplicate % Recovery |
| 21754-8 | Precision (%RPD) of LCS/LCSD |

| PARAMETER | 21754-4 | 21754-5 | 21754-6 | 21754-7 | 21754-8 |
|---|---|---|---|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | | | | | |
| Total Recoverable Petroleum Hydrocarbons (418.1), mg/l | <1.0 | 1.0 | 83 % | 74 % | 11 % |
| Date Extracted | 07.01.97 | --- | 07.01.97 | 07.01.97 | --- |
| Date Analyzed | 07.02.97 | --- | 07.02.97 | 07.02.97 | --- |
| Batch ID | 0701P | --- | 0701P | 0701P | --- |

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JUL 0 9 1997
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SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

1 9 0226

LOG NO: T7-21754
Received: 30 JUN 97
Reported: 07 JUL 97

Ms. Rebecca Northup
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA079/ITT-Thompson/SSSS
Sampled By: Client
Code: 15207077

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |
|---|---|
| 21754-9 | LCS Accuracy Control Limit (%R) |
| 21754-10 | LCS Precision Control Limit (Advisory) %RPD |
| 21754-11 | Expected Value, LCS/LCSD |
| 21754-12 | Extraction Analyst |
| 21754-13 | Method Analyst |

| PARAMETER | 21754-9 | 21754-10 | 21754-11 | 21754-12 | 21754-13 |
|---|---|---|---|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | | | | | |
| Total Recoverable Petroleum Hydrocarbons (418.1), % | 60-140 % | <30 % | 25/25 | L. Johnson | J. Stepp |

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& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T7-21754
Received: 30 JUN 97
Reported: 07 JUL 97

Ms. Rebecca Northup
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA079/ITT-Thompson/SSSS
Sampled By: Client
Code: 15207077

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |
|---|---|
| 21754-14 | Matrix Spike Result (181802) |
| 21754-15 | Matrix Spike Duplicate Result (181802) |

| PARAMETER | | 21754-14 | 21754-15 |
|---|---|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | | | |
| Total Recoverable Petroleum Hydrocarbons (418.1) | mg/l | 0.928 | 2.13 |
| Date Extracted | | 07.01.97 | 07.01.97 |
| Date Analyzed | | 07.02.97 | 07.02.97 |
| Batch ID | | 0701P | 0701P |

RECEIVED
JUL 09 1997
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& ENVIRONMENTAL SERVICES, INC.

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1 9 0227

LOG NO: T7-21754
Received: 30 JUN 97
Reported: 07 JUL 97

Ms. Rebecca Northup
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA079/ITT-Thompson/SSSS
Sampled By: Client
Code: 15207077

REPORT OF RESULTS 

| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |
|---|---|
| 21754-16 | Expected Value, MS |
| 21754-17 | Matrix Spike % Recovery |
| 21754-18 | Matrix Spike Duplicate % Recovery |
| 21754-19 | MS Accuracy Advisory Limit (%R) |
| 21754-20 | Precision (%RPD) MS/MSD |

| PARAMETER | 21754-16 | 21754-17 | 21754-18 | 21754-19 | 21754-20 |
|---|---|---|---|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | | | | | |
| Total Recoverable Petroleum Hydrocarbons (418.1), mg/l | 2.38 | 39%*F99 | 89 % | 60-140 % | 78%*F99 |

JUL 0 8 1997

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T7-21754
Received: 30 JUN 97
Reported: 07 JUL 97

Ms. Rebecca Northup
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA079/ITT-Thompson/SSSS
Sampled By: Client
Code: 15207077

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |
|---|---|
| 21754-21 | MS Precision Advisory Limit (%RPD) |

| PARAMETER | 21754-21 |
|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | |
| Total Recoverable Petroleum Hydrocarbons (418.1), % | <30 % |

Method: EPA 40 CFR Part 136
HRS Certification No(s).: E81005
FDEP CompQAP No.: 890142G

*F99 The matrix spike recovery was outside advisory limits, while the MS duplicate recovery was within limits. The resultant high RPD was outside advisory limits. No sample remained for re-extraction. Lab control standards met control criteria.

Laura B Snead for
Elizabeth L. Schneider, Project Manager

RECEIVED
JUL 0 9 1997

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

19 0228

Sample ID: 191600
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW-2
Field ID/Name: ~~IT~~ ITGW-2
Storet Station Number: —
NPDES Number: —

Collection Date: 6/26/97
Collection Time: 1600
Grab: X
Composite Begin: _____ End: _____

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Jo Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): 37' BTOC
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 6.19
Salinity - 00480 (PPTh): NA
Turbidity (NTU)
~~Secchi Depth - 00078~~ (M): 9.3 NTU
Specific Conductance - 00094 (umho/cm): 339
Temperature - 00010 (C): 25°C

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |

Send Final Report to: Hank Cheng, Bureau of Waste Cleanup

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

?MAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 14 14 01
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: mw 7
Field ID/Name: ITGW-6
Storet Station Number: —
NPDES Number: —

Collection Date: 6/26/97
Collection Time: 1740
Grab: X
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Jo Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): 12.5
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 6.11
Salinity - 00480 (PPTh): NA
Turbidity (NTU)
~~Secchi Depth - 00078~~ (M): 4.89
Specific Conductance - 00094 (umho/cm): 532
Temperature - 00010 (C): 25

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |

Bureau of Waste Cleanup

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0229

Sample ID: 161402
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW-11B
Field ID/Name: ITGW-7
Storet Station Number:
NPDES Number:

Collection Date: 6/26/97
Collection Time:
Grab:
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): ~24'
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.89
Salinity - 00480 (PPTh): NA
Turbidity (NTU)
Secchi Depth -00078 (M): 1.36 NTU
Specific Conductance - 00094 (umho/cm): 192
Temperature - 00010 (C): 26°C

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | x2 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | x6 | Ice |
| W-CLPCB-SS | Brown Glass-1L | x6 | Ice |
| TRPH | Brown Glass-1L | x3 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 2 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 6 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 6 | Ice |
| TRPH | Brown Glass-1L | 3 | HCl |
| | | | |

SPIKE IN LAB

Send Final Report to: Hank Cheng, Bureau of Waste Cle...

# STATE OF FLORIDA
## DEPARTMENT OF ENVIRONMENTAL PROTECTION
## CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD

CERCLA SITE SCREENING



00004

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 - 12 |
| PROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Amy J. Kei | DATE: 6-26-97 |

| Field ID | ITGW-2 | ITGW-7 | ITGW-6 | ITGW-TRIP2 | ITPW-1 | | | | | | | | | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | | | | | | | | | |
| LAB SPIKE | | X | | | | | | | | | | | | | | | |
| WATER | X | X | X | X | X | | | | | | | | | X | | X | |
| SOIL/SEDIMENT | | | | | | | | | | | | | | | X | | X |
| METALS | X | X | X | | | | | | | | | | | P-1L | | HNO3 | |
| CYANIDE | X | X | X | | | | | | | | | | | P-1L | | NaOH | |
| VOLATILES | X | X | X | X | X | | | | | | | | | G-40ml | G250m | HCl | ICE |
| BNAs | X | X | X | | | | | | | | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | X | X | X | | | | | | | | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | | | | | | | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | | | | | | | | | G500m | | ICE |
| TRPH | X | X | X | | | | | | | | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | | | | | | | |
| TOTAL | | | | | | | | | | | | | | | | | |
| Turbidity (NTU) | 9.3 | 1.4 | | — | — | | | | | | | | | | | | |
| Temperature (°C) | 25 | 26 | | — | — | | | | | | | | | | | | |
| pH-00400 | 6.19 | 3.81 | | — | — | | | | | | | | | | | | |
| Conductance(umho/cm) | 334 | 192 | | — | — | | | | | | | | | | | | |

COMMENTS: ITGW-7 is LAB SPIKE.

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Amy J. Kei | 2: Hei-Fong Cheng | 3: |
| Time/date | 1: 6/26/97 | 2: 6/26/97 | 3: |
| Method of Dispatch | 1: Hand Delivery | 2: Hand delivery | 3: |
| Received By | 1: | 2: | 3: |

1 9 0230

# Summary For Request ID: RQ-97-JUN-23-12

Reqested By: HANK CHENG
Customer...: SSSS
Division...: WSM
Project Name: ITT Thompson

Date of Request: 18-JUN-1997
Project.....: SUPERFUND
District.....: XX

Comments: Contact Hank when coolers are ready. Coolers will be picked up by E+E. Pre-preserved VOCs. Include 1+1 HNO3 in kit. Include 1 TB per VOC cooler + 1 extra TB. Include 1 FedEx waybill per cooler. Hank will provide field sheets.

Phone : 904-921-0858
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

Program Module Number: 0436
Priority.....: 3
Request Status.....: S
Request Reviewed By..: YUHHSU
Sampling Kit Required: YES
Sampling Kit Shipped.: YES
Kit Packed By.....: MARIA

Criminal Ivestigation: NO
Custody.....: YES
Base Project....: YES
Date Reviewed...: 18-JUN-1997
Date to Ship Kit: 16-JUN-1997
Kit Shipped.....: 19-JUN-1997
Receive Samples.: 23-JUN-1997

Group# 1 - METALS 18 Samples

APS 6.26.97 1 Sample 1 T.Blk for VOC

FAX 6/27/97 (4)

| ...s ID | Analysis Description |
|---|---|
| H-W | - Mercury in liquid samples by Method 245.1 (modified) |
| CP-23 | - ICP multielement analysis of aqueous samples by Method 200.7 |
| CPMS | - ICPMS analysis of total metals in water by Method 200.8 |

Group# 1 - VOLATILE 18 Samples

| lysis ID | Analysis Description |
|---|---|
| OC-SS | - Volatiles in wtr by 624/5030-8260 for Superfund Group only |

Group# 1 - SM-VOLATIL 18 Samples

| lysis ID | Analysis Description |
|---|---|
| VA-SS | - BNA in water by EPA 625 for Superfund Group only. |

Group# 1 - PSTHRB-GC 18 Samples

| ysis ID | Analysis Description |
|---|---|
| PCB-SS | - Cl-pesticides & PCBs in water by alt 608 for Superfund Group only. |

Group# 2 - METALS 8 Samples

| ysis ID | Analysis Description |
|---|---|
| -S | - Mercury in solids by Method 245.5, 7470 or 7471. |

Group# 2 - PSTHRB-GC 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| S-CLPCB-SS | - Cl-pest & PCBs in soil 3550/8080 dry wt for Superfund Group only |

Group# 2 - SM-VOLATIL 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| S-BNA-SSSS | - BNA in soil or waste 3550/8270 dry wt for Superfund Group only. |

Group# 2 - VOLATILE 8 Samples

| *Analysis ID* | *Analysis Description* |
|---|---|
| S-VOC-SS | - Volatiles in soil or waste by 5030-8260 by dry wt for Superfund Group only |

Group Summary:

| | | |
|---|---|---|
| METALS | 18 | Samples |
| VOLATILE | 18 | Samples |
| SM-VOLATIL | 18 | Samples |
| PSTHRB-GC | 18 | Samples |

Additonal Comments:

Comments: NONE

00005

BUREAU OF WASTE CLEANUP



AUG 01 1997

TECHNICAL REVIEW SECTION 19 0231

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUN-30-04 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 30-JUN-1997 10:32
Date Received: 30-JUN-1997 Customer ID: SSSS
Authorized: 24-JUL-1997 By: Kate Brackett

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: _____ Date: 7-25-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00006

Sample ID: 181841/97-JUN-30-04-01 Matrix: W-GROUND
Location: MW4B
Field ID: ITGW-3
Collected: 27-JUN-1997 14:00 By: A. KLEI
Authorized: 24-JUL-1997 By: Kate Brackett
Type: Grab Sample
Lab Comments: DEP TEMP=2DC.
Field Comments:

Analysis ID: OV-TRPH
Total recoverable petroleum hydrocarbons by EPA 418.1/9073 (IR analy
Prepared: NA By:
Analyzed: 2-JUL-1997 00:00 By: Savannah Laboratory
Authorized: 24-JUL-1997 By: Kate Brackett

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 45501 | TRPH | 1.0 K | |
| Comment | K - Value is known to be less than 1.0 mg/L. | | |

********** END OF REPORT **********

Job ID
97-JUN-30-04
19 0232

SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T7-21762
Received: 01 JUL 97
Reported: 11 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA080/ITT-Thompson/SSSS
Sampled By: Client
Code: 115270722

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION, LIQUID SAMPLES | DATE/ TIME SAMPLED |
|---|---|---|
| 21762-1 | 181713 | 06-25-97/1700 |
| 21762-2 | 181841 | 06-27-97/1400 |

| PARAMETER | 21762-1 | 21762-2 |
|---|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | | |
| Total Recoverable Petroleum Hydrocarbons (418.1), mg/l | <1.0 | <1.0 |
| Dilution factor | 1.0 | 1.0 |
| Date Extracted | 07.01.97 | 07.01.97 |
| Date Analyzed | 07.02.97 | 07.02.97 |
| Batch ID | 0701P | 0701P |

Rec'd 7/22/97 H-1 del. by KL.

SL SAVANNAH LABORATORIES & ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

19 0233

LOG NO: T7-21762
Received: 01 JUL 97
Reported: 11 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA080/ITT-Thompson/SSSS
Sampled By: Client
Code: 115270722

REPORT OF RESULTS



| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |
|---|---|
| 21762-3 | Method Blank |
| 21762-4 | Practical Quantitation Limit |
| 21762-5 | Lab Control Standard % Recovery |
| 21762-6 | Lab Control Standard Duplicate % Recovery |
| 21762-7 | Precision (%RPD) of LCS/LCSD |

| PARAMETER | 21762-3 | 21762-4 | 21762-5 | 21762-6 | 21762-7 |
|---|---|---|---|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | | | | | |
| Total Recoverable Petroleum Hydrocarbons (418.1), mg/l | <1.0 | 1.0 | 83 % | 74 % | 11 % |
| Dilution factor | 1.0 | --- | 1.0 | 1.0 | --- |
| Date Extracted | 07.01.97 | --- | 07.01.97 | 07.01.97 | --- |
| Date Analyzed | 07.02.97 | --- | 07.02.97 | 07.02.97 | --- |
| Batch ID | 0701P | --- | 0701P | 0701P | --- |

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

7846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

LOG NO: T7-21762
Received: 01 JUL 97
Reported: 11 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA080/ITT-Thompson/SSSS
Sampled By: Client
Code: 115270722

REPORT OF RESULTS 

| LOG NO | SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES |
|---|---|
| 21762-8 | LCS Accuracy Control Limit (%R) |
| 21762-9 | LCS Precision Control Limit (Advisory) %RPD |
| 21762-10 | Expected Value, LCS/LCSD |
| 21762-11 | Extraction Analyst |
| 21762-12 | Method Analyst |

| PARAMETER | 21762-8 | 21762-9 | 21762-10 | 21762-11 | 21762-12 |
|---|---|---|---|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | | | | | |
| Total Recoverable Petroleum Hydrocarbons (418.1), % | 60-140 % | <30 % | 5.0/5.0 | L.JOHNSON | J.STEPP |

Method: EPA 40 CFR Part 136
HRS Certification No(s).: E81005
FDEP CompQAP No.: 890142G

Laura B Schneider for
Elizabeth L. Schneider, Project Manager

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

19 0234

Sample ID: 181841
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW4B
Field ID/Name: ITGW-3
Storet Station Number: —
NPDES Number: —

Collection Date: 6-27-97
Collection Time: 1400 hrs
Grab: —
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| _X_GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Jo Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): 40
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 5.88
Salinity - 00480 (PPTh): NA
Secchi Depth - 00078 (M): Turbidity (NTU) 13.1 NTU
Specific Conductance - 00094 (umho/cm): 299
Temperature - 00010 (C): 27

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page 1 of 1

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 - 12 |
| PROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Amy J. Klein / Kevin P. Hayes / Hank Cheng | DATE: 6-27-97 |

| Field ID | IT6W-MIP3 | IT6W-3 | IT5D-03 | ITPW-02 | ITPW-03 | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | |
| LAB SPIKE | | | | | | | | | |
| WATER | X | X | | X | X | X | | X | |
| SOIL/SEDIMENT | | | X | | | | X | | X |
| METALS | | X[1] | X[1] AK | | | P-1L | | HNO3 | |
| CYANIDE | | X[1] | | | | P-1L | | NaOH | |
| VOLATILES | X[2] | [4] | | X[4] | X[4] | G-40ml | G250m | HCl | ICE |
| BNAs | | X[2] | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | | X[2] | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | X[1] | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | G500m | | ICE |
| TRPH | | X[1] | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | P250ml | | HCl | |
| | | | | | | | | | |
| TOTAL | 2 | 11 | 1 | 4 | 4 | | | | |
| Turbidity | — | 13.1 | — | — | — | | | | |
| Temperature | — | 27 | — | — | — | | | | |
| pH-00400 | — | 5.88 | — | — | — | | | | |
| Conductance(umho/cm) | — | 299 | — | — | — | | | | |

COMMENTS: TEMP. BLANK INCLUDED

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin P. Hayes | 2: Hank Cheng | 3: |
| Time/date | 1: 16:00 6/27/97 | 2: 17:10 6/27/97 | 3: |

# QUALITY CONTROL REPORT
## Job ID: 97-JUN-26-03

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK, SMP |
|---|---|---|---|---|---|---|
| W-PEST-GC | Aldrin | 103 | 79.2 | 66.9 | | 16.8 |
| W-PEST-GC | Alpha-BHC | 113 | 86.1 | 73.2 | | 16.2 |
| W-PEST-GC | Beta-BHC | 115 | 87.6 | 75.7 | | 14.7 |
| W-PEST-GC | Delta-BHC | 118 | 95.0 | 81.4 | | 15.4 |
| W-PEST-GC | Gamma-BHC | 117 | 111 | 94.9 | | 15.3 |
| W-PEST-GC | Alpha-Chlordane | 115 | 93.5 | 75.9 | | 20.8 |
| W-PEST-GC | DDD-p,p' | 119 | 99.2 | 81.7 | | 19.4 |
| W-PEST-GC | DDE-p,p' | 118 | 93.1 | 73.5 | | 23.5 |
| W-PEST-GC | DDT-p,p' | 119 | 102 | 81.3 | | 22.2 |
| W-PEST-GC | Dieldrin | 119 | 96.2 | 80.8 | | 17.3 |
| W-PEST-GC | Endosulfan I | 109 | 88.2 | 73.7 | | 17.9 |
| W-PEST-GC | Endosulfan II | 119 | 98.7 | 81.0 | | 19.7 |
| W-PEST-GC | Endosulfan Sulfate | 125 | 106 | 89.2 | | 17.1 |
| W-PEST-GC | Endrin | 144 | 120 | 98.0 | | 20.3 |
| W-PEST-GC | Endrin Aldehyde | 133 | 111 | 93.8 | | 17.0 |
| W-PEST-GC | Heptachlor | 106 | 93.3 | 75.0 | | 21.7 |
| W-PEST-GC | Heptachlor Epoxide | 119 | 106 | 94.2 | | 11.4 |
| W-PEST-GC | Methoxychlor | 123 | 102 | 84.0 | | 19.5 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0179

Sample ID: 181710
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW - 1
Field ID/Name: ITGW-1 (Background)
Storet Station Number:
NPDES Number:

Collection Date: 6/25/97
Collection Time: 1700 hrs
Grab:
Composite Begin: End:

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | X TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: AJ Kki
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): 29.8' BTOC
Chlorine, Total Residual - 50060 (mg/L): —
Dissolved Oxygen (Probe) -00299 (mg/L): —
pH - 00400 (Stnd. Units): 6.87
Salinity - 00480 (PPTh): NA
Turbidity (NTU)
~~Secchi Depth - 00078~~ ~~(M)~~: 37.7 NTU
Specific Conductance - 00094 (umho/cm): 446
Temperature - 00010 (C): 27

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 2 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 6 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 6 | Ice |
| TRPH | Brown Glass-1L | 3 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TPH | Brown Glass-1L | 1 | HCl |
| | | | |
| | | | |

# STATE OF FLORIDA
## DEPARTMENT OF ENVIRONMENTAL PROTECTION
## CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING



00000

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 - 12 |
| PROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Amy D. Klein | DATE: 6/25/97 |

| Field ID | ITGW-1 | ITGW-TRIP | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | |
| LAB SPIKE | | | | | | |
| WATER | X | | X | | X | |
| SOIL/SEDIMENT | | | | X | | X |
| METALS | 1 | | P-1L | | HNO3 | |
| CYANIDE | 1 | | P-1L | | NaOH | |
| VOLATILES | 4 | 2 | G-40ml | G250ml | HCl | IC |
| BNAs | 2 | | G-1L | | ICE | |
| PESTICIDES/PCBs | 2 | | G-1L | | ICE | |
| METALS/CYANIDE | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | G500m | | ICE |
| TRPH | 1 | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | P250ml | | HCl | |
| | | | | | | |
| TOTAL | 11 | 2 | | | | |
| Turbidity (NTU) | 37.7 | — | | | | |
| Temperature °C | 27 | — | | | | |
| pH-00400 | 6.87 | — | | | | |
| Conductance(umho/cm) | 446 | — | | | | |

COMMENTS: No matrix spike samples collected due to low productivity of well (ITGW-1/Background). Spike samples will be collected at another location (TBD).

| | 1: | 2: | 3: |
|---|---|---|---|
| Relinquished By: | Amy D. Klein | | |
| Time/date | 6/25/97 2020 | | |
| Method of Dispatch | | | |
| | Amzad B. Shaikh | | |

# Summary For Request ID: RQ-97-JUN-23-12

Reqested By: HANK CHENG
Customer...: SSSS
Division...: WSM
Project Name: ITT Thompson

Date of Request: 18-JUN-1997
Project.....: SUPERFUND
District.....: XX

Comments: Contact Hank when coolers are ready. Coolers will be picked up by E+E. Pre-preserved VOCs. Include 1+1 HNO3 in kit. Include 1 TB per VOC cooler + 1 extra TB. Include 1 FedEx waybill per cooler. Hank will provide field sheets.

Phone : 904-921-0858
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

Program Module Number: 0436
Priority.....: 3
Request Status.....: S
Request Reviewed By..: YUHHSU
Sampling Kit Required: YES
Sampling Kit Shipped.: YES
Kit Packed By.....: MARIA

Criminal Ivestigation: NO
Custody.....: YES
Base Project....: YES
Date Reviewed...: 18-JUN-1997
Date to Ship Kit: 16-JUN-1997
Kit Shipped.....: 19-JUN-1997
Receive Samples.: 23-JUN-1997

ABS 6-26-97 1 Sample 1 T.Blk for

Group# 1 - METALS 18 Samples

| lysis ID | Analysis Description |
|---|---|
| -H-W | - Mercury in liquid samples by Method 245.1 (modified) |
| W-ICP-23 | - ICP multielement analysis of aqueous samples by Method 200.7 |
| W-ICPMS | - ICPMS analysis of total metals in water by Method 200.8 |

Group# 1 - VOLATILE 18 Samples

| Analysis ID | Analysis Description |
|---|---|
| W-VOC-SS | - Volatiles in wtr by 624/5030-8260 for Superfund Group only |

Group# 1 - SM-VOLATIL 18 Samples

| Analysis ID | Analysis Description |
|---|---|
| W-BNA-SS | - BNA in water by EPA 625 for Superfund Group only. |

Group# 1 - PSTHRB-GC 18 Samples

| nalysis ID | Analysis Description |
|---|---|
| I-CLPCB-SS | - Cl-pesticides & PCBs in water by alt 608 for Superfund Group only. |

Group# 2 - METALS 8 Samples

| lysis ID | Analysis Description |
|---|---|
| 3-H-S | - Mercury in solids by Method 245.5, 7470 or 7471. |
| ICP | - ICP multielement analysis for soil by Method 6010 |

Group# 2 - PSTHRB-GC 8 Samples

| ysis ID | Analysis Description |
|---|---|
| PCB-SS | - Cl-pest & PCBs in soil 3550/8080 dry wt for Superfund Group only |

Group# 2 - SM-VOLATIL 8 Samples

| lysis ID | Analysis Description |
|---|---|
| NA-SSSS | - BNA in soil or waste 3550/8270 dry wt for Superfund Group only. |

Group# 2 - VOLATILE 8 Samples

| alysis ID | Analysis Description |
|---|---|
| VOC-SS | - Volatiles in soil or waste by 5030-8260 by dry wt for Superfund Group only |

00001

Group Summary:

| | | |
|---|---|---|
| METALS | 18 | Samples |
| VOLATILE | 18 | Samples |
| SM-VOLATIL | 18 | Samples |
| PSTHRB-GC | 18 | Samples |

Additonal Comments:

Comments: NONE

19 0181

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUN-27-03 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 27-JUN-1997 08:59
Date Received: 27-JUN-1997 Customer ID: SSSS
Authorized: 15-AUG-1997 By: Liang T. Lin

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

BUREAU OF WASTE CLEANUP
AUG 29 1997
TECHNICAL REVIEW SECTION

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: TWF Date: 8/22/97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00002

Sample ID: 181797/97-JUN-27-03-01 Matrix: W-GROUND
Location: MW-2
Field ID: ITGW-2
Collected: 26-JUN-1997 16:00 By: A. KLEI
Authorized: 15-AUG-1997 By: Adrian Niculescu
Type: Grab Sample
Lab Comments: DEP TEMP=5DC.
Field Comments:

Analysis ID: W-CLPCB-SS
Cl-pesticides & PCBs in water by alt 608 for Superfund Group only.
Prepared: 2-JUL-1997 10:00 By: Hoor B. Shaik
Analyzed: 8-JUL-1997 14:10 By: Michael Acton
Authorized: 15-AUG-1997 By: Adrian Niculescu

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 39330 | Aldrin | 0.0095 U | ug/L |
| 39337 | Alpha-BHC | 0.0095 U | ug/L |
| 39338 | Beta-BHC | 0.019 U | ug/L |
| 34259 | Delta-BHC | 0.0095 U | ug/L |
| 39340 | Gamma-BHC | 0.0095 U | ug/L |
| | Alpha-Chlordane | 0.0095 U | ug/L |
| | Gamma-Chlordane | 0.0095 U | ug/L |
| 39310 | DDD-p,p' | 0.019 U | ug/L |
| 39320 | DDE-p,p' | 0.019 U | ug/L |
| 39300 | DDT-p,p' | 0.019 U | ug/L |
| 39380 | Dieldrin | 0.019 U | ug/L |
| 34361 | Endosulfan I | 0.0095 U | ug/L |
| 34356 | Endosulfan II | 0.0095 U | ug/L |
| 34351 | Endosulfan Sulfate | 0.019 U | ug/L |
| 39390 | Endrin | 0.019 U | ug/L |
| 34366 | Endrin Aldehyde | 0.019 U | ug/L |
| | Endrin Ketone | 0.019 U | ug/L |
| 39410 | Heptachlor | 0.0095 U | ug/L |
| 39420 | Heptachlor Epoxide | 0.0095 U | ug/L |
| | Methoxychlor | 0.048 U | ug/L |
| 39400 | Toxaphene | 0.71 U | ug/L |
| 34671 | PCB-1016 | 0.19 U | ug/L |
| 39488 | PCB-1221 | 0.19 U | ug/L |
| 39492 | PCB-1232 | 0.19 U | ug/L |
| 39496 | PCB-1242 | 0.19 U | ug/L |
| 39500 | PCB-1248 | 0.19 U | ug/L |
| 39504 | PCB-1254 | 0.19 U | ug/L |
| 39508 | PCB-1260 | 0.19 U | ug/L |

Comment(1): None

19 0182

Sample ID: 181798/97-JUN-27-03-02 Matrix: W-GROUND
Location: MW-7
Field ID: ITGW-6
Collected: 26-JUN-1997 17:40 By: A. KLEI
Authorized: 15-AUG-1997 By: Adrian Niculescu
Type: Grab Sample
Lab Comments: DEP TEMP-5DC.
Field Comments:

Analysis ID: W-CLPCB-SS
Cl-pesticides & PCBs in water by alt 608 for Superfund Group only.
Prepared: 2-JUL-1997 10:00 By: Hoor B. Shaik
Analyzed: 8-JUL-1997 14:10 By: Michael Acton
Authorized: 15-AUG-1997 By: Adrian Niculescu

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 39330 | Aldrin | 0.0097 U | ug/L |
| 39337 | Alpha-BHC | 0.0097 U | ug/L |
| 39338 | Beta-BHC | 0.019 U | ug/L |
| 34259 | Delta-BHC | 0.0097 U | ug/L |
| 39340 | Gamma-BHC | 0.0097 U | ug/L |
| | Alpha-Chlordane | 0.0097 U | ug/L |
| | Gamma-Chlordane | 0.0097 U | ug/L |
| 39310 | DDD-p,p' | 0.019 U | ug/L |
| 39320 | DDE-p,p' | 0.019 U | ug/L |
| 39300 | DDT-p,p' | 0.019 U | ug/L |
| 39380 | Dieldrin | 0.019 U | ug/L |
| 34361 | Endosulfan I | 0.0097 U | ug/L |
| 34356 | Endosulfan II | 0.0097 U | ug/L |
| 34351 | Endosulfan Sulfate | 0.019 U | ug/L |
| 39390 | Endrin | 0.019 U | ug/L |
| 34366 | Endrin Aldehyde | 0.019 U | ug/L |
| | Endrin Ketone | 0.019 U | ug/L |
| 39410 | Heptachlor | 0.0097 U | ug/L |
| 39420 | Heptachlor Epoxide | 0.0097 U | ug/L |
| | Methoxychlor | 0.049 U | ug/L |
| 39400 | Toxaphene | 0.73 U | ug/L |
| 34671 | PCB-1016 | 0.19 U | ug/L |
| 39488 | PCB-1221 | 0.19 U | ug/L |
| 39492 | PCB-1232 | 0.19 U | ug/L |
| 39496 | PCB-1242 | 0.19 U | ug/L |
| 39500 | PCB-1248 | 0.19 U | ug/L |
| 39504 | PCB-1254 | 0.19 U | ug/L |
| 39508 | PCB-1260 | 0.19 U | ug/L |

Comment(1): None

00003

Sample ID: 181799/97-JUN-27-03-03 Matrix: W-GROUND
Location: MW-11B
Field ID: ITGW-7
Collected: 26-JUN-1997 00:00 By: A. KLEI
Authorized: 15-AUG-1997 By: Adrian Niculescu
Type: Grab Sample
Lab Comments: DEP TEMP=5DC.
Field Comments:

Analysis ID: W-CLPCB-SS
Cl-pesticides & PCBs in water by alt 608 for Superfund Group only.
Prepared: 2-JUL-1997 10:00 By: Hoor B. Shaik
Analyzed: 8-JUL-1997 14:10 By: Michael Acton
Authorized: 15-AUG-1997 By: Adrian Niculescu

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 39330 | Aldrin | 0.0098 U | ug/L |
| 39337 | Alpha-BHC | 0.0098 U | ug/L |
| 39338 | Beta-BHC | 0.020 U | ug/L |
| 34259 | Delta-BHC | 0.0098 U | ug/L |
| 39340 | Gamma-BHC | 0.0098 U | ug/L |
| | Alpha-Chlordane | 0.0098 U | ug/L |
| | Gamma-Chlordane | 0.0098 U | ug/L |
| 39310 | DDD-p,p' | 0.020 U | ug/L |
| 39320 | DDE-p,p' | 0.020 U | ug/L |
| 39300 | DDT-p,p' | 0.020 U | ug/L |
| 39380 | Dieldrin | 0.020 U | ug/L |
| 34361 | Endosulfan I | 0.0098 U | ug/L |
| 34356 | Endosulfan II | 0.0098 U | ug/L |
| 34351 | Endosulfan Sulfate | 0.020 U | ug/L |
| 39390 | Endrin | 0.020 U | ug/L |
| 34366 | Endrin Aldehyde | 0.020 U | ug/L |
| | Endrin Ketone | 0.020 U | ug/L |
| 39410 | Heptachlor | 0.0098 U | ug/L |
| 39420 | Heptachlor Epoxide | 0.0098 U | ug/L |
| | Methoxychlor | 0.049 U | ug/L |
| 39400 | Toxaphene | 0.74 U | ug/L |
| 34671 | PCB-1016 | 0.20 U | ug/L |
| 39488 | PCB-1221 | 0.20 U | ug/L |
| 39492 | PCB-1232 | 0.20 U | ug/L |
| 39496 | PCB-1242 | 0.20 U | ug/L |
| 39500 | PCB-1248 | 0.20 U | ug/L |
| 39504 | PCB-1254 | 0.20 U | ug/L |
| 39508 | PCB-1260 | 0.20 U | ug/L |

Comment(1): None

1 9 0183

QUALITY CONTROL REPORT
Job ID: 97-JUN-27-03

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK, SMP |
|---|---|---|---|---|---|---|
| W-PEST-GC | Aldrin | 103 | 79.2 | 66.9 | | 16.8 |
| W-PEST-GC | Alpha-BHC | 113 | 86.1 | 73.2 | | 16.2 |
| W-PEST-GC | Beta-BHC | 115 | 87.6 | 75.7 | | 14.7 |
| W-PEST-GC | Delta-BHC | 118 | 95.0 | 81.4 | | 15.4 |
| W-PEST-GC | Gamma-BHC | 117 | 111 | 94.9 | | 15.3 |
| W-PEST-GC | Alpha-Chlordane | 115 | 93.5 | 75.9 | | 20.8 |
| W-PEST-GC | DDD-p,p' | 119 | 99.2 | 81.7 | | 19.4 |
| W-PEST-GC | DDE-p,p' | 118 | 93.1 | 73.5 | | 23.5 |
| W-PEST-GC | DDT-p,p' | 119 | 102 | 81.3 | | 22.2 |
| W-PEST-GC | Dieldrin | 119 | 96.2 | 80.8 | | 17.3 |
| W-PEST-GC | Endosulfan I | 109 | 88.2 | 73.7 | | 17.9 |
| W-PEST-GC | Endosulfan II | 119 | 98.7 | 81.0 | | 19.7 |
| W-PEST-GC | Endosulfan Sulfate | 125 | 106 | 89.2 | | 17.1 |
| W-PEST-GC | Endrin | 144 | 120 | 98.0 | | 20.3 |
| W-PEST-GC | Endrin Aldehyde | 133 | 111 | 93.8 | | 17.0 |
| W-PEST-GC | Heptachlor | 106 | 93.3 | 75.0 | | 21.7 |
| W-PEST-GC | Heptachlor Epoxide | 119 | 106 | 94.2 | | 11.4 |
| W-PEST-GC | Methoxychlor | 123 | 102 | 84.0 | | 19.5 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

19 0184

Sample ID: 141799
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW-11B
Field ID/Name: ITT-W-7
Storet Station Number:
NPDES Number:

Collection Date: 6/26/97
Collection Time:
Grab:
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Klein
Signature: Amy J. Klein
Sampled By: Amy Jo Klein
Signature: Amy J. Klein
Field Report Prepared By: Amy Jo Klein
Signature: Amy J. Klein

Field Parameters:
Depth (Feet): ~24'
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.89
Salinity - 00480 (PPTh): NA
Turbidity (NTU)
Secchi Depth - 00078 (M): 1.36 NTU
Specific Conductance - 00094 (umho/cm): 192
Temperature - 00010 (C): 26°C

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | X 2 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | X 6 | Ice |
| W-CLPCB-SS | Brown Glass-1L | X 6 | Ice |
| TRPH | Brown Glass-1L | X 3 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 2 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 6 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 6 | Ice |
| TRPH | Brown Glass-1L | 3 | HCl |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

SPIKE IN LAB

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING



| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 - 12 |
| PROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Amy J. Kei | DATE: 6-26-97 |

| Field ID | ITGW-2 | ITGW-7 AC | ITGW-6 | ITGW-Trip2 | ITPW-1 | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | |
| LAB SPIKE | | X | | | | | | | |
| WATER | X | X | X | X | X | X | | X | |
| SOIL/SEDIMENT | | | | | | | X | | X |
| METALS | X | X | X | | | P-1L | | HNO3 | |
| CYANIDE | X | X | X | | | P-1L | | NaOH | |
| VOLATILES | X | X | X | X | X | G-40ml | G250m | HCl | ICE |
| BNAs | X | X | X | | | G-1L | | ICE | |
| PESTICIDES/PCBs | X | X | X | | | G-1L | | ICE | |
| METALS/CYANIDE | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | G500m | | ICE |
| TRPH | X | X | X | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | P250ml | | HCl | |
| | | | | | | | | | |
| TOTAL | | | | | | | | | |
| Turbidity (NTU) | 9.3 | 1.4 | | — | — | | | | |
| Temperature (°C) | 25 | 26 | | — | — | | | | |
| pH-00400 | 6.19 | 3.81 | | — | — | | | | |
| Conductance(umho/cm) | 334 | 192 | | — | — | | | | |

COMMENTS: ITGW-7 is LAB SPIKE.

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Amy J. Kei | 2: Hei-Fong Cheng | 3: |
| Time/date | 1: 6/26/97 | 2: 6/26/97 | 3: |
| Method of Dispatch | 1: Hand Delivery | 2: Hand Delivery | 3: |
| Received By | 1: Hei-Fong Cheng | 2: [illegible] | 3: |

Summary For Request ID: RQ-97-JUN-23-12 19 0185

Regested By: HANK CHENG
Customer...: SSSS
Division...: WSM
Project Name: ITT Thompson

Date of Request: 18-JUN-1997
Project.....: SUPERFUND
District.....: XX

Comments: Contact Hank when coolers are ready. Coolers will be picked up by E+E. Pre-preserved VOCs. Include 1+1 HNO3 in kit. Include 1 TB per VOC cooler + 1 extra TB. Include 1 FedEx waybill per cooler. Hank will provide field sheets.

Phone : 904-921-0858
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

Program Module Number: 0436
Priority.....: 3
Request Status.....: S
Request Reviewed By..: YUHHSU
Sampling Kit Required: YES
Sampling Kit Shipped.: YES
Kit Packed By.....: MARIA

Criminal Ivestigation: NO
Custody.....: YES
Base Project....: YES
Date Reviewed...: 18-JUN-1997
Date to Ship Kit: 16-JUN-1997
Kit Shipped.....: 19-JUN-1997
Receive Samples.: 23-JUN-1997

APS 6-26-97 1 Sample 1 T.Blk for VOC

FAX 6/27/97 (4)

Group# 1 - METALS 18 Samples

| ID | Analysis Description |
|---|---|
| -W | - Mercury in liquid samples by Method 245.1 (modified) |
| P-23 | - ICP multielement analysis of aqueous samples by Method 200.7 |
| PMS | - ICPMS analysis of total metals in water by Method 200.8 |

Group# 1 - VOLATILE 18 Samples

| ysis ID | Analysis Description |
|---|---|
| C-SS | - Volatiles in wtr by 624/5030-8260 for Superfund Group only |

Group# 1 - SM-VOLATIL 18 Samples

| ysis ID | Analysis Description |
|---|---|
| A-SS | - BNA in water by EPA 625 for Superfund Group only. |

Group# 1 - PSTHRB-GC 18 Samples

| sis ID | Analysis Description |
|---|---|
| CB-SS | - Cl-pesticides & PCBs in water by alt 608 for Superfund Group only. |

Group# 2 - METALS 8 Samples

| is ID | Analysis Description |
|---|---|
| S | - Mercury in solids by Method 245.5, 7470 or 7471. |
| | - ICP multielement analysis for soil by Method 6010 |

Group# 2 - PSTHRB-GC 8 Samples

| lysis ID | Analysis Description |
|---|---|
| LPCB-SS | - Cl-pest & PCBs in soil 3550/8080 dry wt for Superfund Group only |

Group# 2 - SM-VOLATIL 8 Samples

| alysis ID | Analysis Description |
|---|---|
| BNA-SSSS | - BNA in soil or waste 3550/8270 dry wt for Superfund Group only. |

Group# 2 - VOLATILE 8 Samples

| nalysis ID | Analysis Description |
|---|---|
| ;-VOC-SS | - Volatiles in soil or waste by 5030-8260 by dry wt for Superfund Group only |

00001

Group Summary:

| | | |
|---|---|---|
| METALS | 18 | Samples |
| VOLATILE | 18 | Samples |
| SM-VOLATIL | 18 | Samples |
| PSTHRB-GC | 18 | Samples |

Additonal Comments:

Comments: NONE

1 9 0186

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUN-30-03 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 30-JUN-1997 10:32
Date Received: 30-JUN-1997 Customer ID: SSSS
Authorized: 15-AUG-1997 By: Liang T. Lin

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

BUREAU OF WASTE CLEANUP
AUG 29 1997
TECHNICAL REVIEW SECTION

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: TWF Date: 8/22/97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00002

Sample ID: 181840/97-JUN-30-03-01 Matrix: W-GROUND
Location: MW4B
Field ID: ITGW-3
Collected: 27-JUN-1997 14:00 By: A. KLEI
Authorized: 15-AUG-1997 By: Adrian Niculescu
Type: Grab Sample
Lab Comments: DEP TEMP=2DC.
Field Comments:

Analysis ID: W-CLPCB-SS
Cl-pesticides & PCBs in water by alt 608 for Superfund Group only.
Prepared: 2-JUL-1997 10:00 By: Hoor B. Shaik
Analyzed: 8-JUL-1997 14:10 By: Michael Acton
Authorized: 15-AUG-1997 By: Adrian Niculescu

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 39330 | Aldrin | 0.0093 U | ug/L |
| 39337 | Alpha-BHC | 0.0093 U | ug/L |
| 39338 | Beta-BHC | 0.019 U | ug/L |
| 34259 | Delta-BHC | 0.0093 U | ug/L |
| 39340 | Gamma-BHC | 0.0093 U | ug/L |
| | Alpha-Chlordane | 0.0093 U | ug/L |
| | Gamma-Chlordane | 0.0093 U | ug/L |
| 39310 | DDD-p,p' | 0.019 U | ug/L |
| 39320 | DDE-p,p' | 0.019 U | ug/L |
| 39300 | DDT-p,p' | 0.019 U | ug/L |
| 39380 | Dieldrin | 0.019 U | ug/L |
| 34361 | Endosulfan I | 0.0093 U | ug/L |
| 34356 | Endosulfan II | 0.0093 U | ug/L |
| 34351 | Endosulfan Sulfate | 0.019 U | ug/L |
| 39390 | Endrin | 0.019 U | ug/L |
| 34366 | Endrin Aldehyde | 0.019 U | ug/L |
| | Endrin Ketone | 0.019 U | ug/L |
| 39410 | Heptachlor | 0.0093 U | ug/L |
| 39420 | Heptachlor Epoxide | 0.0093 U | ug/L |
| | Methoxychlor | 0.046 U | ug/L |
| 39400 | Toxaphene | 0.69 U | ug/L |
| 34671 | PCB-1016 | 0.19 U | ug/L |
| 39488 | PCB-1221 | 0.19 U | ug/L |
| 39492 | PCB-1232 | 0.19 U | ug/L |
| 39496 | PCB-1242 | 0.19 U | ug/L |
| 39500 | PCB-1248 | 0.19 U | ug/L |
| 39504 | PCB-1254 | 0.19 U | ug/L |
| 39508 | PCB-1260 | 0.19 U | ug/L |

Comment(1): None

19 0187

# QUALITY CONTROL REPORT
## Job ID: 97-JUN-30-03

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK, SMP |
|---|---|---|---|---|---|---|
| W-PEST-GC | Aldrin | 103 | 79.2 | 66.9 | | 16.8 |
| W-PEST-GC | Alpha-BHC | 113 | 86.1 | 73.2 | | 16.2 |
| W-PEST-GC | Beta-BHC | 115 | 87.6 | 75.7 | | 14.7 |
| W-PEST-GC | Delta-BHC | 118 | 95.0 | 81.4 | | 15.4 |
| W-PEST-GC | Gamma-BHC | 117 | 111 | 94.9 | | 15.3 |
| W-PEST-GC | Alpha-Chlordane | 115 | 93.5 | 75.9 | | 20.8 |
| W-PEST-GC | DDD-p,p' | 119 | 99.2 | 81.7 | | 19.4 |
| W-PEST-GC | DDE-p,p' | 118 | 93.1 | 73.5 | | 23.5 |
| W-PEST-GC | DDT-p,p' | 119 | 102 | 81.3 | | 22.2 |
| W-PEST-GC | Dieldrin | 119 | 96.2 | 80.8 | | 17.3 |
| W-PEST-GC | Endosulfan I | 109 | 88.2 | 73.7 | | 17.9 |
| W-PEST-GC | Endosulfan II | 119 | 98.7 | 81.0 | | 19.7 |
| W-PEST-GC | Endosulfan Sulfate | 125 | 106 | 89.2 | | 17.1 |
| W-PEST-GC | Endrin | 144 | 120 | 98.0 | | 20.3 |
| W-PEST-GC | Endrin Aldehyde | 133 | 111 | 93.8 | | 17.0 |
| W-PEST-GC | Heptachlor | 106 | 93.3 | 75.0 | | 21.7 |
| W-PEST-GC | Heptachlor Epoxide | 119 | 106 | 94.2 | | 11.4 |
| W-PEST-GC | Methoxychlor | 123 | 102 | 84.0 | | 19.5 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0188

Sample ID: 181840
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW 4B
Field ID/Name: ITGW-3
Storet Station Number: —
NPDES Number: —

Collection Date: 6-27-97
Collection Time: 1400 hrs
Grab: —
Composite Begin: _____ End: _____

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: Amy Jo Klei
Signature: Amy Jo Klei
Sampled By: Amy Jo Klei
Signature: Amy Jo Klei
Field Report Prepared By: Amy Jo Klei
Signature: Amy Jo Klei

Field Parameters:
Depth (Feet): 40
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 5.88
Salinity - 00480 (PPTh): NA
Turbidity (NTU)
~~Secchi Depth~~ - 00078 (M): 13.1 NTU
Specific Conductance - 00094 (umho/cm): 299
Temperature - 00010 (C): 27

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page 1 of 1

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 - 12 |
| PROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Amy J. Klein Hank Cheng | DATE: 6-27-97 |

| Field ID | IT6W-TRIP3 | IT6W-3 | IT5D-03 | ITPW-02 | ITPW-03 | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | |
| LAB SPIKE | | | | | | | | | |
| WATER | X | X | | X | X | X | | X | |
| SOIL/SEDIMENT | | | X | | | | X | | X |
| METALS | | X[1] | [illegible] | | | P-1L | | HNO3 | |
| CYANIDE | | X[1] | | | | P-1L | | NaOH | |
| VOLATILES | X[2] | [4] | | X[4] | X[4] | G-40ml | G250m | HCl | ICE |
| BNAs | | X[2] | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | | X[2] | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | X[1] | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | G500m | | ICE |
| TRPH | | X[1] | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | P250ml | | HCl | |
| | | | | | | | | | |
| TOTAL | 2 | 11 | 1 | 4 | 4 | | | | |
| Turbidity | — | 13.1 | — | — | — | | | | |
| Temperature | — | 27 | — | — | — | | | | |
| pH-00400 | — | 5.88 | — | — | — | | | | |
| Conductance(umho/cm) | — | 299 | — | — | — | | | | |

COMMENTS: TEMP. BLANK INCLUDED

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin L. Hayes | 2: Hank Cheng | 3: |
| Time/date | 1: 16:00 6/27/97 | 2: 17:10 6/27/97 | 3: |
| | | 2: Hand deli- | 3: |

Summary For Request ID: RQ-97-JUN-23-12 1 9 0189

Reqested By: HANK CHENG
Customer...: SSSS
Division...: WSM
Project Name: ITT Thompson

Date of Request: 18-JUN-1997
Project.....: SUPERFUND
District.....: XX

Comments: Contact Hank when coolers are ready. Coolers will be picked up by E+E. Pre-preserved VOCs. Include 1+1 HNO3 in kit. Include 1 TB per VOC cooler + 1 extra TB. Include 1 FedEx waybill per cooler. Hank will provide field sheets.

Phone : 904-921-0858
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

Program Module Number: 0436
Priority.....: 3
Request Status.....: S
Request Reviewed By..: YUHHSU
Sampling Kit Required: YES
Sampling Kit Shipped.: YES
Kit Packed By.....: MARIA

Criminal Ivestigation: NO
Custody.....: YES
Base Project....: YES
Date Reviewed...: 18-JUN-1997
Date to Ship Kit: 16-JUN-1997
Kit Shipped.....: 19-JUN-1997
Receive Samples.: 23-JUN-1997

Group# 1 - METALS 18 Samples

| ysis ID | Analysis Description |
|---|---|
| H-W | - Mercury in liquid samples by Method 245.1 (modified) |
| W-ICP-23 | - ICP multielement analysis of aqueous samples by Method 200.7 |
| W-ICPMS | - ICPMS analysis of total metals in water by Method 200.8 |

Group# 1 - VOLATILE 18 Samples

| nalysis ID | Analysis Description |
|---|---|
| -VOC-SS | - Volatiles in wtr by 624/5030-8260 for Superfund Group only |

Group# 1 - SM-VOLATIL 18 Samples

| alysis ID | Analysis Description |
|---|---|
| BNA-SS | - BNA in water by EPA 625 for Superfund Group only. |

Group# 1 - PSTHRB-GC 18 Samples

| lysis ID | Analysis Description |
|---|---|
| LPCB-SS | - Cl-pesticides & PCBs in water by alt 608 for Superfund Group only. |

Group# 2 - METALS 8 Samples

| ysis ID | Analysis Description |
|---|---|
| -S | - Mercury in solids by Method 245.5, 7470 or 7471. |
| P | - ICP multielement analysis for soil by Method 6010 |

ABS 6-26-97 1 Sample
1 T.Blk for W

JAW - (4) sites 6/27/97
JAW - (4) sites 6/30/97

Group# 2 - PSTHRB-GC 8 Samples

| ysis ID | Analysis Description |
|---|---|
| PCB-SS | - Cl-pest & PCBs in soil 3550/8080 dry wt for Superfund Group only |

Group# 2 - SM-VOLATIL 8 Samples

| lysis ID | Analysis Description |
|---|---|
| NA-SSSS | - BNA in soil or waste 3550/8270 dry wt for Superfund Group only. |

Group# 2 - VOLATILE 8 Samples

| alysis ID | Analysis Description |
|---|---|
| VOC-SS | - Volatiles in soil or waste by 5030-8260 by dry wt for Superfund Group only |

00001

Group Summary:

| | | |
|---|---|---|
| METALS | 18 | Samples |
| VOLATILE | 18 | Samples |
| SM-VOLATIL | 18 | Samples |
| PSTHRB-GC | 18 | Samples |

Additonal Comments:

Comments: NONE

1 9 0190

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUL-01-04 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 1-JUL-1997 10:14
Date Received: 1-JUL-1997 Customer ID: SSSS
Authorized: 15-AUG-1997 By: Liang T. Lin

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

BUREAU OF WASTE CLEANUP
AUG 29 1997
TECHNICAL REVIEW SECTION

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: TWF Date: 8/22/97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00002

Sample ID: 181868/97-JUL-01-04-01 Matrix: W-GROUND
Location: MW5B
Field ID: ITGW-4
Collected: 30-JUN-1997 12:30 By: K. STARLING
Authorized: 15-AUG-1997 By: Adrian Niculescu
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: W-CLPCB-SS
Cl-pesticides & PCBs in water by alt 608 for Superfund Group only.
Prepared: 2-JUL-1997 10:00 By: Hoor B. Shaik
Analyzed: 8-JUL-1997 14:10 By: Michael Acton
Authorized: 15-AUG-1997 By: Adrian Niculescu

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 39330 | Aldrin | 0.0096 U | ug/L |
| 39337 | Alpha-BHC | 0.0096 U | ug/L |
| 39338 | Beta-BHC | 0.019 U | ug/L |
| 34259 | Delta-BHC | 0.0096 U | ug/L |
| 39340 | Gamma-BHC | 0.0096 U | ug/L |
| | Alpha-Chlordane | 0.0096 U | ug/L |
| | Gamma-Chlordane | 0.0096 U | ug/L |
| 39310 | DDD-p,p' | 0.019 U | ug/L |
| 39320 | DDE-p,p' | 0.019 U | ug/L |
| 39300 | DDT-p,p' | 0.019 U | ug/L |
| 39380 | Dieldrin | 0.019 U | ug/L |
| 34361 | Endosulfan I | 0.0096 U | ug/L |
| 34356 | Endosulfan II | 0.0096 U | ug/L |
| 34351 | Endosulfan Sulfate | 0.019 U | ug/L |
| 39390 | Endrin | 0.019 U | ug/L |
| 34366 | Endrin Aldehyde | 0.019 U | ug/L |
| | Endrin Ketone | 0.019 U | ug/L |
| 39410 | Heptachlor | 0.0096 U | ug/L |
| 39420 | Heptachlor Epoxide | 0.0096 U | ug/L |
| | Methoxychlor | 0.048 U | ug/L |
| 39400 | Toxaphene | 0.72 U | ug/L |
| 34671 | PCB-1016 | 0.19 U | ug/L |
| 39488 | PCB-1221 | 0.19 U | ug/L |
| 39492 | PCB-1232 | 0.19 U | ug/L |
| 39496 | PCB-1242 | 0.19 U | ug/L |
| 39500 | PCB-1248 | 0.19 U | ug/L |
| 39504 | PCB-1254 | 0.19 U | ug/L |
| 39508 | PCB-1260 | 0.19 U | ug/L |

Comment(1): None

Sample ID: 181869/97-JUL-01-04-02 Matrix: W-GROUND
Location: MW5B
Field ID: ITGW-4-DUP
Collected: 30-JUN-1997 12:30 By: K. STARLING
Authorized: 15-AUG-1997 By: Adrian Niculescu
Type: Grab Sample
Lab Comments: DEP TEMP-3DC.
Field Comments:

Analysis ID: W-CLPCB-SS
Cl-pesticides & PCBs in water by alt 608 for Superfund Group only.
Prepared: 2-JUL-1997 10:00 By: Hoor B. Shaik
Analyzed: 8-JUL-1997 14:10 By: Michael Acton
Authorized: 15-AUG-1997 By: Adrian Niculescu

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 39330 | Aldrin | 0.010 U | ug/L |
| 39337 | Alpha-BHC | 0.010 U | ug/L |
| 39338 | Beta-BHC | 0.020 U | ug/L |
| 34259 | Delta-BHC | 0.010 U | ug/L |
| 39340 | Gamma-BHC | 0.010 U | ug/L |
| | Alpha-Chlordane | 0.010 U | ug/L |
| | Gamma-Chlordane | 0.010 U | ug/L |
| 39310 | DDD-p,p' | 0.020 U | ug/L |
| 39320 | DDE-p,p' | 0.020 U | ug/L |
| 39300 | DDT-p,p' | 0.020 U | ug/L |
| 39380 | Dieldrin | 0.020 U | ug/L |
| 34361 | Endosulfan I | 0.010 U | ug/L |
| 34356 | Endosulfan II | 0.010 U | ug/L |
| 34351 | Endosulfan Sulfate | 0.020 U | ug/L |
| 39390 | Endrin | 0.020 U | ug/L |
| 34366 | Endrin Aldehyde | 0.020 U | ug/L |
| | Endrin Ketone | 0.020 U | ug/L |
| 39410 | Heptachlor | 0.010 U | ug/L |
| 39420 | Heptachlor Epoxide | 0.010 U | ug/L |
| | Methoxychlor | 0.050 U | ug/L |
| 39400 | Toxaphene | 0.75 U | ug/L |
| 34671 | PCB-1016 | 0.20 U | ug/L |
| 39488 | PCB-1221 | 0.20 U | ug/L |
| 39492 | PCB-1232 | 0.20 U | ug/L |
| 39496 | PCB-1242 | 0.20 U | ug/L |
| 39500 | PCB-1248 | 0.20 U | ug/L |
| 39504 | PCB-1254 | 0.20 U | ug/L |
| 39508 | PCB-1260 | 0.20 U | ug/L |

Comment(1): None

00003

Sample ID: 181870/97-JUL-01-04-03 Matrix: W-GROUND
Location: MW6
Field ID: ITGW-5
Collected: 30-JUN-1997 18:40 By: K. STARLING
Authorized: 15-AUG-1997 By: Adrian Niculescu
Type: Grab Sample
Lab Comments: DEP TEMP=3DC.
Field Comments:

Analysis ID: W-CLPCB-SS
Cl-pesticides & PCBs in water by alt 608 for Superfund Group only.
Prepared: 2-JUL-1997 10:00 By: Hoor B. Shaik
Analyzed: 8-JUL-1997 14:10 By: Michael Acton
Authorized: 15-AUG-1997 By: Adrian Niculescu

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 39330 | Aldrin | 0.0095 U | ug/L |
| 39337 | Alpha-BHC | 0.0095 U | ug/L |
| 39338 | Beta-BHC | 0.019 U | ug/L |
| 34259 | Delta-BHC | 0.0095 U | ug/L |
| 39340 | Gamma-BHC | 0.0095 U | ug/L |
| | Alpha-Chlordane | 0.0095 U | ug/L |
| | Gamma-Chlordane | 0.0095 U | ug/L |
| 39310 | DDD-p,p' | 0.019 U | ug/L |
| 39320 | DDE-p,p' | 0.019 U | ug/L |
| 39300 | DDT-p,p' | 0.019 U | ug/L |
| 39380 | Dieldrin | 0.019 U | ug/L |
| 34361 | Endosulfan I | 0.0095 U | ug/L |
| 34356 | Endosulfan II | 0.0095 U | ug/L |
| 34351 | Endosulfan Sulfate | 0.019 U | ug/L |
| 39390 | Endrin | 0.019 U | ug/L |
| 34366 | Endrin Aldehyde | 0.019 U | ug/L |
| | Endrin Ketone | 0.019 U | ug/L |
| 39410 | Heptachlor | 0.0095 U | ug/L |
| 39420 | Heptachlor Epoxide | 0.0095 U | ug/L |
| | Methoxychlor | 0.048 U | ug/L |
| 39400 | Toxaphene | 0.71 U | ug/L |
| 34671 | PCB-1016 | 0.19 U | ug/L |
| 39488 | PCB-1221 | 0.19 U | ug/L |
| 39492 | PCB-1232 | 0.19 U | ug/L |
| 39496 | PCB-1242 | 0.19 U | ug/L |
| 39500 | PCB-1248 | 0.19 U | ug/L |
| 39504 | PCB-1254 | 0.19 U | ug/L |
| 39508 | PCB-1260 | 0.19 U | ug/L |

Comment(1): None

1 9 0192

# QUALITY CONTROL REPORT
## Job ID: 97-JUL-01-04

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK,SMP |
|---|---|---|---|---|---|---|
| W-PEST-GC | Aldrin | 103 | 79.2 | 66.9 | | 16.8 |
| W-PEST-GC | Alpha-BHC | 113 | 86.1 | 73.2 | | 16.2 |
| W-PEST-GC | Beta-BHC | 115 | 87.6 | 75.7 | | 14.7 |
| W-PEST-GC | Delta-BHC | 118 | 95.0 | 81.4 | | 15.4 |
| W-PEST-GC | Gamma-BHC | 117 | 111 | 94.9 | | 15.3 |
| W-PEST-GC | Alpha-Chlordane | 115 | 93.5 | 75.9 | | 20.8 |
| W-PEST-GC | DDD-p,p' | 119 | 99.2 | 81.7 | | 19.4 |
| W-PEST-GC | DDE-p,p' | 118 | 93.1 | 73.5 | | 23.5 |
| W-PEST-GC | DDT-p,p' | 119 | 102 | 81.3 | | 22.2 |
| W-PEST-GC | Dieldrin | 119 | 96.2 | 80.8 | | 17.3 |
| W-PEST-GC | Endosulfan I | 109 | 88.2 | 73.7 | | 17.9 |
| W-PEST-GC | Endosulfan II | 119 | 98.7 | 81.0 | | 19.7 |
| W-PEST-GC | Endosulfan Sulfate | 125 | 106 | 89.2 | | 17.1 |
| W-PEST-GC | Endrin | 144 | 120 | 98.0 | | 20.3 |
| W-PEST-GC | Endrin Aldehyde | 133 | 111 | 93.8 | | 17.0 |
| W-PEST-GC | Heptachlor | 106 | 93.3 | 75.0 | | 21.7 |
| W-PEST-GC | Heptachlor Epoxide | 119 | 106 | 94.2 | | 11.4 |
| W-PEST-GC | Methoxychlor | 123 | 102 | 84.0 | | 19.5 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

1 9 0193

Sample ID: 181868
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

nple Location: MWSB
ield ID/Name: IT GW - 4
Storet Station Number:
NPDES Number:

Collection Date: 6/30/97
Collection Time: 12:30
Grab: X
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: KEN STARLING - Kevin Hayes
Signature:
Sampled By: KEN STARLING - Kevin Hayes
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters:
Depth (Feet): TD @ 39.2' BTOC
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.83
Salinity - 00480 (PPTh): NA
TURBIDITY (NTUS) ~~Secchi Depth - 00078~~ (M): 4.45
Specific Conductance - 00094 (umho/cm): 497
Temperature - 00010 (C): — THERMOMETER - NOT UNKNOWN TEMP FUNCTIO

ıter:**( Full Scan )

| ıalyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| NAs | Brown Glass-1L | 2 | Ice |
| esticides/PCBs | Brown Glass-1L | 1 * | Ice |
| RPH | Brown Glass-1L | 1 | HCl |
| | | | |

NOTE: SHORT 1 ~~[illegible]~~ 1-liter amber

d Final Report to : Hank Cheng, Bureau of Waste Cleanup

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson

Sample ID: 161869
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MWSB
Field ID/Name: ITGW-4-DUP
Storet Station Number:
NPDES Number:

Collection Date: 6/30/97
Collection Time: 12:30
Grab: X
Composite Begin: End:

| WATER | | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: KEN STARLING - Jesus Diaz
Signature:
Sampled By: KEN STARLING - Jesus Diaz
Signature:
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters:
Depth (Feet): TD @ 39.2 ± BTOC
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.83
Salinity - 00480 (PPTh): NA
TURBIDITY (NTUS)
Secchi Depth - 00078 (M): 4-45
Specific Conductance - 00094 (umho/cm): 497
Temperature - 00010 (C): UNKNOWN
THERMOMETER NOT FUNCTIO.

## Water:**( Full Scan )

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| AS-G-W<br>HG-H-W<br>PB-G-W<br>SE-H-W<br>TL-G-W<br>W-ICP-23 | Plastic-1L | 1 | $HNO_3$ |
| W-CN | Plastic-1L | 1 | AsAcidNaOH |
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |
| W-BNA-SS | Brown Glass-1L | 2 | Ice |
| W-CLPCB-SS | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |

## For Contractor Use:

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Metals | Plastic-1L | 1 | $HNO_3$ |
| Cyanide | Plastic-1L | 1 | NaOH |
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| BNAs | Brown Glass-1L | 2 | Ice |
| Pesticides/PCBs | Brown Glass-1L | 2 | Ice |
| TRPH | Brown Glass-1L | 1 | HCl |
| | | | |

Hank Cheng, Bureau of Waste Cleanup

# CENTRAL LABORATORY SAMPLE SUBMITTAL FORM

PMAS NO.: 0436
Requestor: SSSS
Project ID: ITT Thompson 1 9 0194

Sample ID: 181870
(Lab Use Only)
RQ- 97 - Jun - 23 - 12

Sample Location: MW6
Field ID/Name: ITGW-5
Storet Station Number:
NPDES Number:

Collection Date: 6/30/97
Collection Time: 18:40
Grab: X
Composite Begin: End:

| WATER | BLANKS | SOIL/SEDIMENT | TISSUE | CHEMICAL WASTE |
|---|---|---|---|---|
| ___SURFACE (FRESH) | ___INFLUENT | ___TRIP BLANK | ___SOIL | ___PLANT | |
| ___SURFACE (SALT) | ___EFFLUENT | ___FIELD BLANK | ___FRESHWATER SEDIMENT | ___FISH | ___CHEM WASTE |
| X GROUND | | ___EQUIPMENT BLANK | ___MARINE SEDIMENT | ___SHELLFISH | |
| ___DRINKING | | | ___SLUDGE | ___OTHER | |

Field Parameters Measured By: KEN STARLING — [signature]
Signature:
Sampled By: KEN STARLING — [signature]
Signature: Ken Starling
Field Report Prepared By: KEVIN HAYES
Signature: Kevin Hayes

Field Parameters:
Depth (Feet): 25' BTOC (TD)
Chlorine, Total Residual - 50060 (mg/L): NA
Dissolved Oxygen (Probe) -00299 (mg/L): NA
pH - 00400 (Stnd. Units): 3.75
Salinity - 00480 (PPTh): NA
~~Secchi Depth - 00078~~ TURBIDITY (NTU) (M): 3.65
Specific Conductance - 00094 (umho/cm): 1130
Temperature - 00010 (C): 27

**Water:**

| Analyses | Bottle Type | # Bottles | Preservatives |
|---|---|---|---|
| W-VOC-SS | Brown Glass Vial-40mL | 4 | Ice/HCl |

**For Contractor Use:**

| Analyses | Container Type | # Containers | Preservatives |
|---|---|---|---|
| Volatiles | Brown Glass Vial-40mL | 4 | HCl |
| METALS | PLASTIC 1L | 1 | $HNO_3$ |
| CYANIDE | PLASTIC 1L | 1 | NaOH |
| BNAs | BROWN GLASS-1L | 2 | ICE |
| PESTICIDES/PCBS | BROWN GLASS-1L | 2 | ICE |
| TEPH | BROWN GLASS-1L | 1 | HCl |
| | | | |

Send Final Report to : Hank Cheng, Bureau of Waste Cleanup

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY CHAIN-OF-CUSTODY RECORD
CERCLA SITE SCREENING

Page_____of_____

| SUBMITTING AGENCY / COMPANY NAME: | CONTACT NAME AND PHONE#: | Request ID: |
|---|---|---|
| Site Screening Superfund Subsection | Hank Cheng (904) 921-0858 | RQ-97- Jun - 23 - 12 |
| PROJECT NAME: ITT Thompson | SAMPLERS (SIGNATURES): Kevin R Hayes X K. Stack - [illegible] | DATE: 6/30/97 |

| Field ID | ITGW-4 | ITGW-4-DUP | ITGW-5 | ITGW-TRIP-4 | ITVP-1A | | | | | | | | | | Container Type | | Preservatives | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab ID (Lab Use Only) | | | | | | | | | | | | | | | | | | |
| LAB SPIKE | | | | | | | | | | | | | | | | | | |
| WATER | X | X | X | X | X | | | | | | | | | | X | | X | |
| SOIL/SEDIMENT | | | | | | | | | | | | | | | | X | | X |
| METALS | 1 | 1 | 1 | | | | | | | | | | | | P-1L | | HNO3 | |
| CYANIDE | 1 | 1 | 1 | | | | | | | | | | | | P-1L | | NaOH | |
| VOLATILES | 4 | 4 | 4 | 2 | 4 | | | | | | | | | | G-40ml | G250m | HCl | ICE |
| BNAs | 2 | 2 | 2 | | | | | | | | | | | | G-1L | | ICE | |
| PESTICIDES/PCBs | 1* | 2 | 2 | | | | | | | | | | | | G-1L | | ICE | |
| METALS/CYANIDE | | | | | | | | | | | | | | | | G250m | | ICE |
| BNA/PEST/PCB | | | | | | | | | | | | | | | | G500m | | ICE |
| TRPH | 1 | 1 | 1 | | | | | | | | | | | | G-1L | G250m | HCl | ICE |
| NITRITE/NITRATE | | | | | | | | | | | | | | | P250ml | | HCl | |
| | | | | | | | | | | | | | | | | | | |
| TOTAL | 10 | 11 | 11 | 2 | 4 | | | | | | | | | | | | | |
| Turbidity | 4.45 | 4.45 | 3.65 | NA | NA | | | | | | | | | | | | | |
| Temperature | UNK | UNK. | 27 | NA | NA | | | | | | | | | | | | | |
| pH-00400 | 3.83 | 3.83 | 3.75 | NA | NA | | | | | | | | | | | | | |
| Conductance(umho/cm) | 497 | 497 | 1130 | NA | NA | | | | | | | | | | | | | |

COMMENTS: * SHORT 1 - BROWN 1-LITER AMBER FOR PESTICIDES

| | | | |
|---|---|---|---|
| Relinquished By: | 1: Kevin Hayes | 2: | 3: |
| Time/date | 1: 6/30/97 / 21:00 | 2: | 3: |
| Method of Dispatch | 1: HAND DELIVERY | 2: | 3: |
| | 1: [illegible] | 2: | 3: |

# Summary For Request ID: RQ-97-JUN-23-12

Reqested By: HANK CHENG
Customer...: SSSS
Division...: WSM
Project Name: ITT Thompson

Date of Request: 18-JUN-1997
Project.....: SUPERFUND
District.....: XX

Comments: Contact Hank when coolers are ready. Coolers will be picked up by E+E. Pre-preserved VOCs. Include 1+1 HNO3 in kit. Include 1 TB per VOC cooler + 1 extra TB. Include 1 FedEx waybill per cooler. Hank will provide field sheets.

Phone : 904-921-0858
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

Program Module Number: 0436
Priority.....: 3
Request Status.....: S
Request Reviewed By..: YUHHSU
Sampling Kit Required: YES
Sampling Kit Shipped.: YES
Kit Packed By.....: MARIA

Criminal Ivestigation: NO
Custody.....: YES
Base Project....: YES
Date Reviewed...: 18-JUN-1997
Date to Ship Kit: 16-JUN-1997
Kit Shipped.....: 19-JUN-1997
Receive Samples.: 23-JUN-1997

Group# 1 - METALS 18 Samples

| sis ID | Analysis Description |
|---|---|
| R-W | - Mercury in liquid samples by Method 245.1 (modified) |
| W-ICP-23 | - ICP multielement analysis of aqueous samples by Method 200.7 |
| W-ICPMS | - ICPMS analysis of total metals in water by Method 200.8 |

Group# 1 - VOLATILE 18 Samples

| nalysis ID | Analysis Description |
|---|---|
| -VOC-SS | - Volatiles in wtr by 624/5030-8260 for Superfund Group only |

Group# 1 - SM-VOLATIL 18 Samples

| alysis ID | Analysis Description |
|---|---|
| BNA-SS | - BNA in water by EPA 625 for Superfund Group only. |

Group# 1 - PSTHRB-GC 18 Samples

| lysis ID | Analysis Description |
|---|---|
| LPCB-SS | - Cl-pesticides & PCBs in water by alt 608 for Superfund Group only. |

Group# 2 - METALS 8 Samples

| sis ID | Analysis Description |
|---|---|
| -S | - Mercury in solids by Method 245.5, 7470 or 7471. |
| P | - ICP multielement analysis for soil by Method 6010 |

ABS 6-26-97 1 Sample
1 T.Blk for V

JAN - (4) sites 6/27/97
JAN - (4) sites 6/30/97
JAN - (4) 7/1/97

Group# 2 - PSTHRB-GC 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| 5-CLPCB-SS | - Cl-pest & PCBs in soil 3550/8080 dry wt for Superfund Group only |

Group# 2 - SM-VOLATIL 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| S-BNA-SSSS | - BNA in soil or waste 3550/8270 dry wt for Superfund Group only. |

Group# 2 - VOLATILE 8 Samples

| Analysis ID | Analysis Description |
|---|---|
| S-VOC-SS | - Volatiles in soil or waste by 5030-8260 by dry wt for Superfund Group only |

00002

## Group Summary:

| | | |
|---|---|---|
| METALS | 18 | Samples |
| VOLATILE | 18 | Samples |
| SM-VOLATIL | 18 | Samples |
| PSTHRB-GC | 18 | Samples |

## Additonal Comments:

Comments: NONE

1 9 0196

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUL-02-19 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 2-JUL-1997 11:19
Date Received: 2-JUL-1997 Customer ID: SSSS
Authorized: 15-AUG-1997 By: Liang T. Lin

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

BUREAU OF WASTE CLEANUP
AUG 20 1997
TECHNICAL REVIEW SECTION

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: TWF Date: 8/22/97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00003

Sample ID: 182150/97-JUL-02-19-01 Matrix: W-EQPMT-BK
Location: ITGW-RB
Field ID: ITGW-RB
Collected: 1-JUL-1997 10:00 By: K. HAYES
Authorized: 15-AUG-1997 By: Adrian Niculescu
Type: Grab Sample
Lab Comments: DEP TEMP-3DC.
Field Comments:

Analysis ID: W-CLPCB-SS
Cl-pesticides & PCBs in water by alt 608 for Superfund Group only.
Prepared: 2-JUL-1997 10:00 By: Hoor B. Shaik
Analyzed: 8-JUL-1997 14:10 By: Michael Acton
Authorized: 15-AUG-1997 By: Adrian Niculescu

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 39330 | Aldrin | 0.0095 U | ug/L |
| 39337 | Alpha-BHC | 0.0095 U | ug/L |
| 39338 | Beta-BHC | 0.019 U | ug/L |
| 34259 | Delta-BHC | 0.0095 U | ug/L |
| 39340 | Gamma-BHC | 0.0095 U | ug/L |
| | Alpha-Chlordane | 0.0095 U | ug/L |
| | Gamma-Chlordane | 0.0095 U | ug/L |
| 39310 | DDD-p,p' | 0.019 U | ug/L |
| 39320 | DDE-p,p' | 0.019 U | ug/L |
| 39300 | DDT-p,p' | 0.019 U | ug/L |
| 39380 | Dieldrin | 0.019 U | ug/L |
| 34361 | Endosulfan I | 0.0095 U | ug/L |
| 34356 | Endosulfan II | 0.0095 U | ug/L |
| 34351 | Endosulfan Sulfate | 0.019 U | ug/L |
| 39390 | Endrin | 0.019 U | ug/L |
| 34366 | Endrin Aldehyde | 0.019 U | ug/L |
| | Endrin Ketone | 0.019 U | ug/L |
| 39410 | Heptachlor | 0.0095 U | ug/L |
| 39420 | Heptachlor Epoxide | 0.0095 U | ug/L |
| | Methoxychlor | 0.048 U | ug/L |
| 39400 | Toxaphene | 0.71 U | ug/L |
| 34671 | PCB-1016 | 0.19 U | ug/L |
| 39488 | PCB-1221 | 0.19 U | ug/L |
| 39492 | PCB-1232 | 0.19 U | ug/L |
| 39496 | PCB-1242 | 0.19 U | ug/L |
| 39500 | PCB-1248 | 0.19 U | ug/L |
| 39504 | PCB-1254 | 0.19 U | ug/L |
| 39508 | PCB-1260 | 0.19 U | ug/L |

Comment(1): None

1 9 0197

# QUALITY CONTROL REPORT
Job ID: 97-JUL-02-19

| Test ID | Analyte | LFB %Rec | Matrix Spike %Rec | | Precision %RPD LFB | Precision %RPD SPK, SMP |
|---|---|---|---|---|---|---|
| W-PEST-GC | Aldrin | 103 | 79.2 | 66.9 | | 16.8 |
| W-PEST-GC | Alpha-BHC | 113 | 86.1 | 73.2 | | 16.2 |
| W-PEST-GC | Beta-BHC | 115 | 87.6 | 75.7 | | 14.7 |
| W-PEST-GC | Delta-BHC | 118 | 95.0 | 81.4 | | 15.4 |
| W-PEST-GC | Gamma-BHC | 117 | 111 | 94.9 | | 15.3 |
| W-PEST-GC | Alpha-Chlordane | 115 | 93.5 | 75.9 | | 20.8 |
| W-PEST-GC | DDD-p,p' | 119 | 99.2 | 81.7 | | 19.4 |
| W-PEST-GC | DDE-p,p' | 118 | 93.1 | 73.5 | | 23.5 |
| W-PEST-GC | DDT-p,p' | 119 | 102 | 81.3 | | 22.2 |
| W-PEST-GC | Dieldrin | 119 | 96.2 | 80.8 | | 17.3 |
| W-PEST-GC | Endosulfan I | 109 | 88.2 | 73.7 | | 17.9 |
| W-PEST-GC | Endosulfan II | 119 | 98.7 | 81.0 | | 19.7 |
| W-PEST-GC | Endosulfan Sulfate | 125 | 106 | 89.2 | | 17.1 |
| W-PEST-GC | Endrin | 144 | 120 | 98.0 | | 20.3 |
| W-PEST-GC | Endrin Aldehyde | 133 | 111 | 93.8 | | 17.0 |
| W-PEST-GC | Heptachlor | 106 | 93.3 | 75.0 | | 21.7 |
| W-PEST-GC | Heptachlor Epoxide | 119 | 106 | 94.2 | | 11.4 |
| W-PEST-GC | Methoxychlor | 123 | 102 | 84.0 | | 19.5 |

* Precision results are derived from duplicate samples (SMP), duplicate matrix spikes (SPK) or duplicate lab fortified blanks (LFB).

********** END OF REPORT **********

BUREAU OF WASTE CLEANUP



AUG 01 1997

TECHNICAL REVIEW SECTION

19 0198

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CENTRAL LABORATORY
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32399-2400

# CHEMICAL ANALYSIS REPORT

Request ID: RQ-97-JUN-23-12 CompQAP# 870688G
Job ID: 97-JUN-26-06 Project: SUPERFUND
Job Name: ITT Thompson - Job created on 26-JUN-1997 09:36
Date Received: 26-JUN-1997 Customer ID: SSSS
Authorized: 24-JUL-1997 By: Kate Brackett

Submitted By: Bureau of Waste Cleanup, Site Screening S
Twin Tower Bldg.
2600 Blairstone Road
Tallahassee, Florida 32301
Attn: Hank Cheng

For Additional Information, Please Contact
Timothy W. Fitzpatrick
Yuh-Hsu Pan, Ph.D.
Julio Arrecis, Ph.D.
Liang-Tsair Lin, Ph.D.
Suncom 277-2571
(904) 487-2571

Certified By: _____ Date: 7-25-97

Abbreviations & Storet Codes:

A - Value reported is the mean of two or more determinations
B - Results based on colony counts outside the acceptable range.
I - Value reported is less than the minimum quantitation limit, and greater than or equal to the minimum detection limit.
J - Estimated value
K - Actual value is known to be less than value given
L - Actual value is known to be greater than value given
N - Presumptive evidence of presence of material.
O - Sampled, but analysis lost or not performed.
Q - Sample held beyond normal holding time.
T - Value reported is less than the criterion of detection.
U - Material was analyzed for but not detected; The value reported is the minimum detection limit.
V - Analyte was detected in both sample and method blank.
Z - Colonies were too numerous to count (TNTC).

00000

Sample ID: 181713/97-JUN-26-06-01 Matrix: W-GROUND
Location: ITT THOMPSON (MW-1)
Field ID: ITGW-1 (B.GROUND)
Collected: 25-JUN-1997 17:00 By: AMY JO KLEI
Authorized: 24-JUL-1997 By: Kate Brackett
Type: Grab Sample
Lab Comments: TEMP=4DC
Field Comments: TURBIDITY (NTU) 37.7

Analysis ID: OV-TRPH
Total recoverable petroleum hydrocarbons by EPA 418.1/9073 (IR analy
Prepared: NA By:
Analyzed: 2-JUL-1997 00:00 By: Savannah Laboratory
Authorized: 24-JUL-1997 By: Kate Brackett

| Storet# | Analyte | Value | Units |
|---|---|---|---|
| 45501 | TRPH | 1.0 K | |
| Comment | K - Value is known to be less than 1.0 mg/L. | | |

********** END OF REPORT **********

J.1 ID 97-JUN-26-06

SL SAVANNAH LABORATORIES
& ENVIRONMENTAL SERVICES, INC.

2846 Industrial Plaza Drive (32301) • P.O. Box 13056 • Tallahassee, FL 32317-3056 • (904) 878-3994 • Fax (904) 878-9504

1 9 0199

LOG NO: T7-21762
Received: 01 JUL 97
Reported: 11 JUL 97

Ms. Kate Brackett
DEP-Chemistry Section
2600 Blairstone Road
Tallahassee, FL 32399-2400

Project: LAB006/SA080/ITT-Thompson/SSSS
Sampled By: Client
Code: 115270722

REPORT OF RESULTS

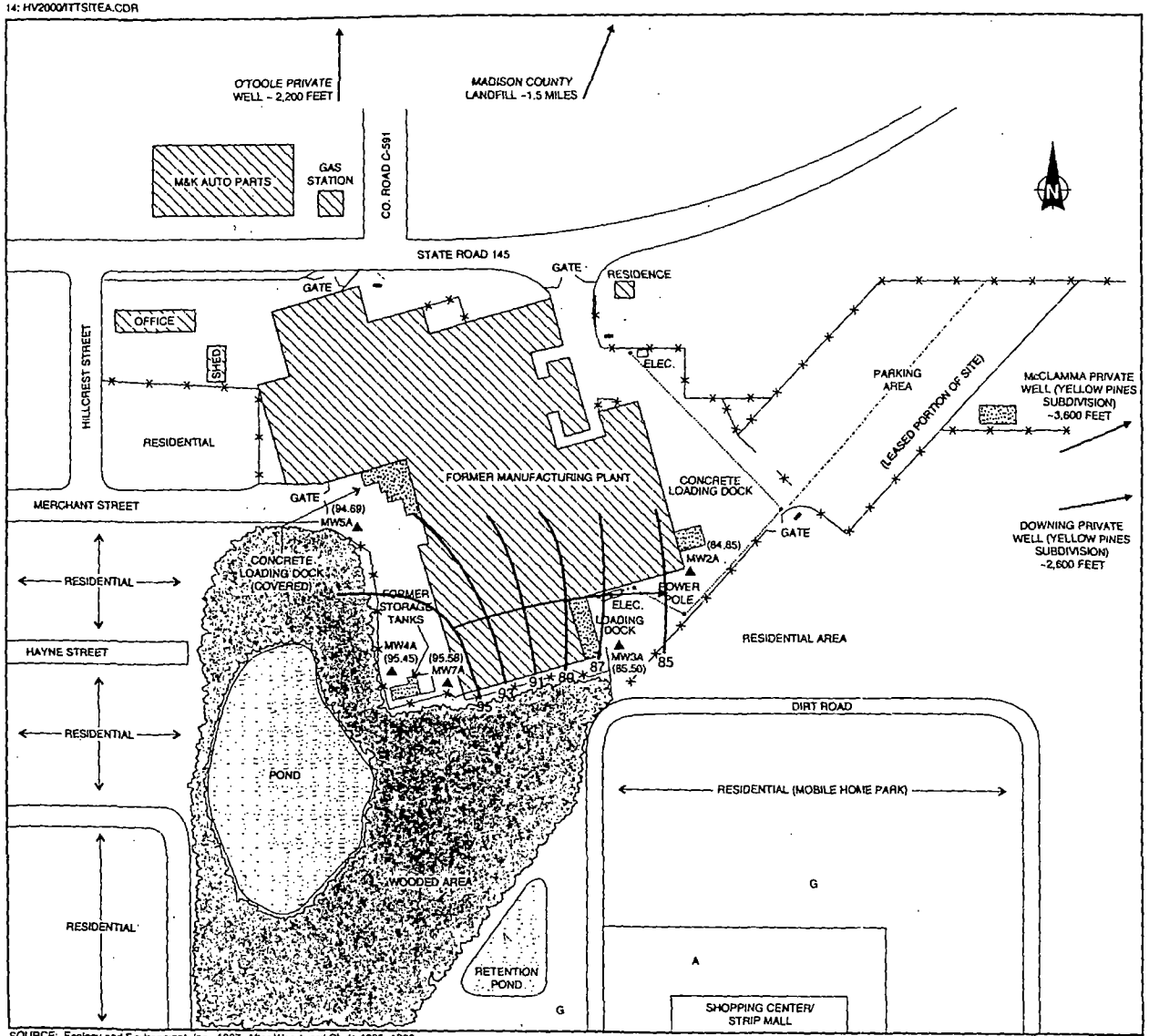


| LOG NO | SAMPLE DESCRIPTION , LIQUID SAMPLES | DATE/ TIME SAMPLED |
|---|---|---|
| 21762-1 | 181713 | 06-25-97/1700 |
| 21762-2 | 181841 | 06-27-97/1400 |

| PARAMETER | 21762-1 | 21762-2 |
|---|---|---|
| Total Recoverable Petroleum Hydrocarbons (418.1) | | |
| Total Recoverable Petroleum Hydrocarbons (418.1), mg/l | <1.0 | <1.0 |
| Dilution factor | 1.0 | 1.0 |
| Date Extracted | 07.01.97 | 07.01.97 |
| Date Analyzed | 07.02.97 | 07.02.97 |
| Batch ID | 0701P | 0701P |

Rec'd 7/22/97 Hand del. by KL.

14: HV2000\ITTSITEA.CDR




SOURCE: Ecology and Environment, Inc., 1997, After Woodward-Clyde 1995, 1996.

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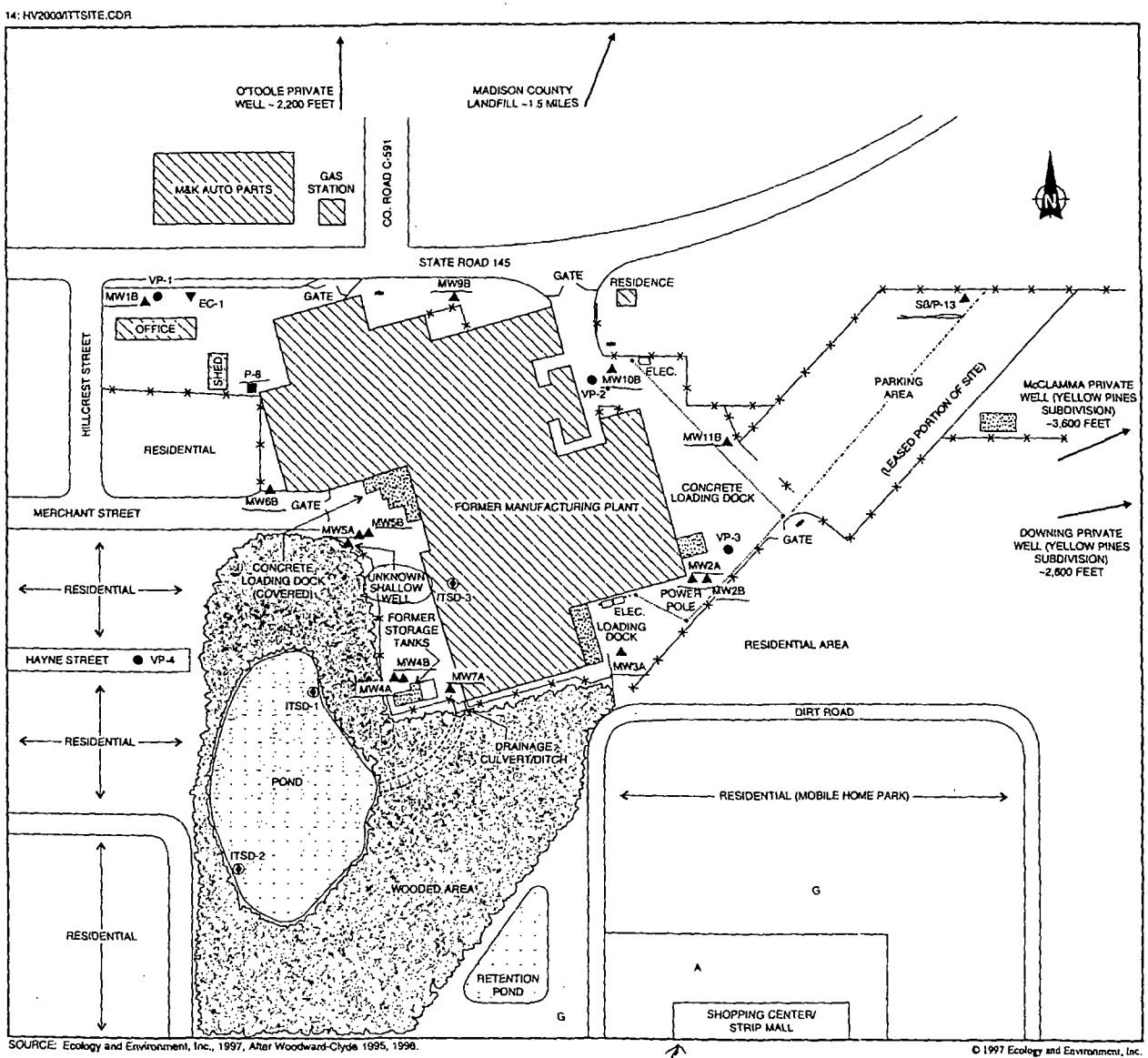
KEY:

- Building
- Asphalt
- Concrete
- Fire Hydrant
- Fence
- Power Line
- Monitoring Well
- 89 — Water Level Elevation Isopleth (in feet relative to an arbitrary datum)
- (85.50) Water Level Elevation (in feet relative to an arbitrary datum)
- Approximate Groundwater Flow Direction
- G Grass
- A Asphalt

NOTE: Location of water level elevation isopleths and direction of groundwater flow are based on water level data collected from monitoring wells designated as "A" Zone Wells in previous site investigation reports (50, 51, 73, 74)

SCALE
0 100 200 Feet

Figure 3 **WATER LEVEL ELEVATION ISOPLETH – "A" WATER-BEARING ZONE (JULY 2, 1997) ITT THOMPSON SITE, MADISON, MADISON COUNTY, FLORIDA**




KEY:

- Building
- Asphalt
- Concrete
- Fire Hydrant
- Fence
- Power Line
- Sediment Sample
- Monitoring Well
- Piezometer
- Vertical Profiling Location
- Enviro-Core Boring Location
- G Grass
- A Asphalt
- Drainage Ditch

It should be noted that due to the thick vegetation cover southwest of the site, the exact drainage path to the pond is unknown.

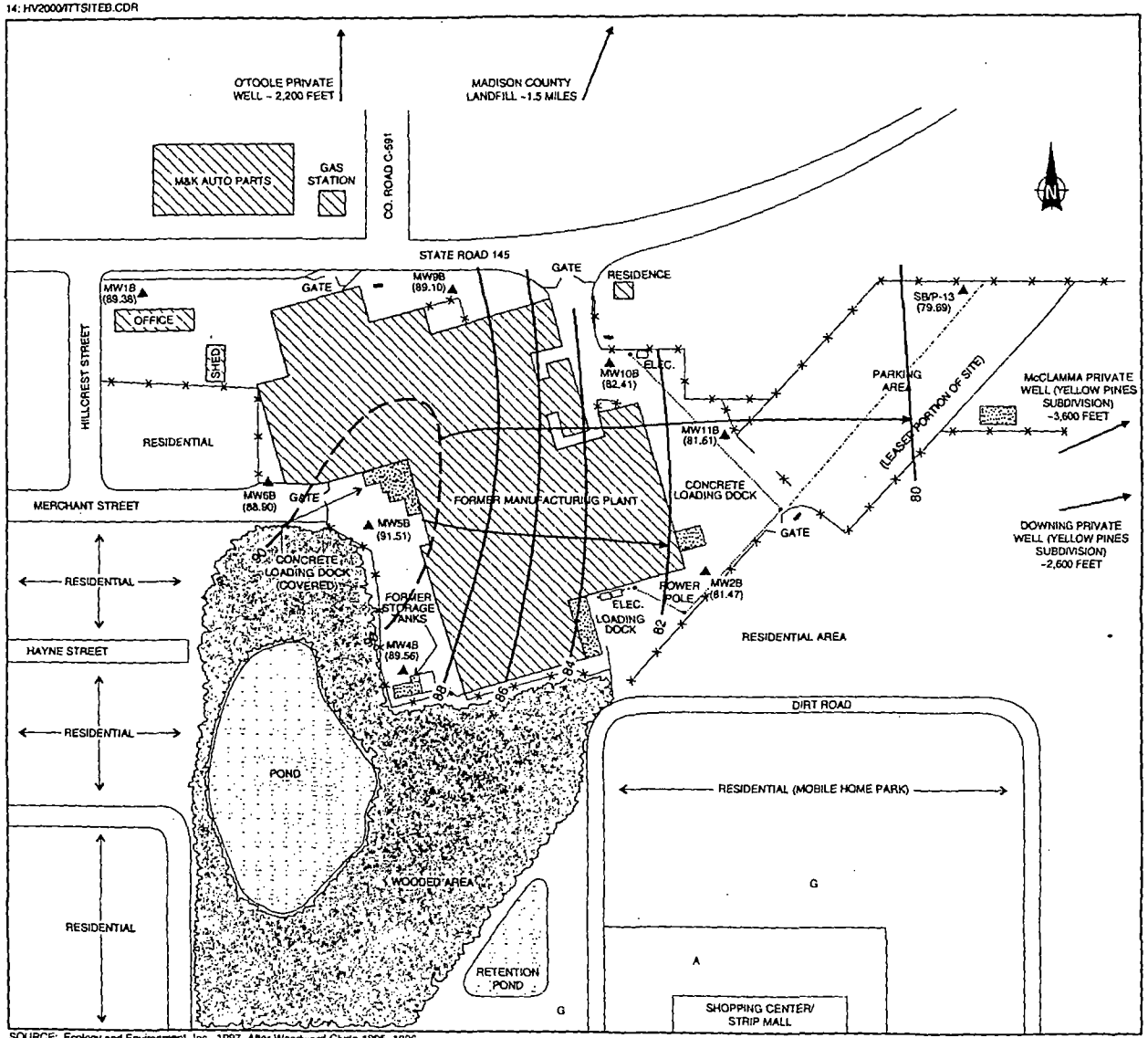
*NOTE: Vertical Profile VP-2 Not Installed

SCALE
0 100 200 Feet

**Figure 2** SITE MAP AND SAMPLING LOCATIONS FOR ITT THOMPSON SITE MADISON, MADISON COUNTY, FLORIDA

P-3-1

14: HV2000/ITTSITEB.CDR




SOURCE: Ecology and Environment, Inc., 1997, After Woodward-Clyde 1995, 1996.

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KEY:

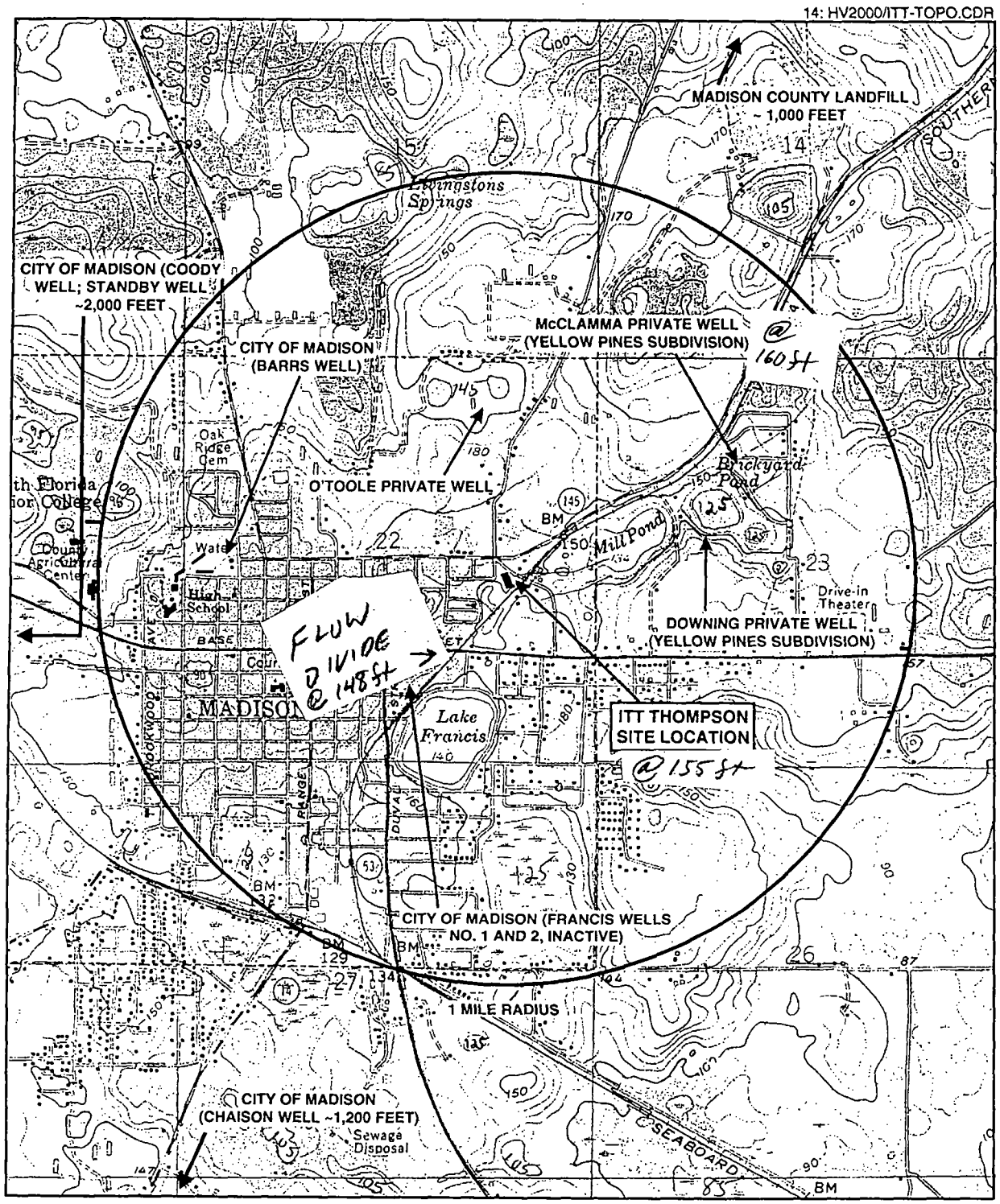
- Building
- Asphalt
- Concrete
- Fire Hydrant
- Fence
- Power Line
- ▲ Monitoring Well
- —84— Water Level Elevation Isopleth (in feet relative to an arbitrary datum; dashed where inferred)
- (81.61) Water Level Elevation (in feet relative to an arbitrary datum)
- → Approximate Groundwater Flow Direction
- G Grass
- A Asphalt

NOTE: Location of water level elevation isopleths and direction of groundwater flow are based on water level data collected from monitoring wells designated as "B" Zone Wells in previous site investigation reports [51, 73, 74]

WL CONTOURS

0 100 200 Feet

**Figure 4** **WATER LEVEL ELEVATION ISOPLETH – "B" WATER-BEARING ZONE (JULY 2, 1997) ITT THOMPSON SITE, MADISON, MADISON COUNTY, FLORIDA**




SOURCE: U.S.G.S. 7.5 Minute Series (Topographic) Quadrangle: Madison, Florida 1959.

SCALE

0 .5 1 MILE

0 1000 2000 3000 4000 5000 FEET

**Figure 1** **LOCATION MAP FOR THE ITT THOMPSON SITE, MADISON, MADISON COUNTY, FLORIDA**

F.O.I.A.
EXEMPTION 5

HV2901_T1337

DRAFT COPY
SUBJECT TO CHANGE

Approving Official _____ Date 4/14/98

# Hazard Ranking System Evaluation for the ITT Thompson Site, Madison, Madison County, Florida FLD043047653

February 1998

**Prepared for:**

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**
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recycled paper

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# 1 Introduction

This draft Hazard Ranking System (HRS) evaluation for the ITT Thompson site has been prepared by Ecology and Environment, Inc. (E & E) for the Florida Department of Environmental Protection (FDEP) under Contract Number HW-363. The draft HRS score, completed on HRS SI score sheets provided by FDEP, was calculated using field information collected during the June-July 1997 site inspection (SI) at the ITT Thompson site and the available site file information. The draft HRS evaluation and score for the site are subject to change pending receipt of additional information and/or quality assurance review by the United States Environmental Protection Agency (EPA).

# 2 Site Background/History

The ITT Thompson site is located at 800 Livingston Street (State Road 145), Madison, Madison County, Florida; latitude 30° 28' 12" N/longitude 83° 24' 22" W in Section 22, Township 1 North, Range 9 East. The site occupies approximately 3 acres and includes approximately 107,725 square feet of manufacturing space under roof, an office trailer, and a small storage shed. The portions of the site not occupied by structures are paved with asphalt or concrete [50, 63, 64]. In the southwestern corner of the site, a concrete containment area exists, which reportedly contained storage tanks of paint thinner. Information regarding the volumes and removal dates of these storage tanks is currently unavailable [27, 63, 64]. An approximately 0.5-acre pond is located near the southwestern border of the site; a smaller pond is located approximately 200 feet south of the site.

The ITT Thompson site operated from approximately 1970 to 1991 [50, 63, 67]. ITT Thompson reportedly manufactured wheel ornamentation for cars, including wheel covers and wire wheel products, at the facility between 1970 and 1989. Thompson International, Inc. reportedly occupied the property from sometime in 1989 to 1991 [63, 67]. Very little information regarding Thompson International's activities at the site has been located. However, it has been reported that their activities included metal pressing [52].

Electroplating operations, including cathodic cleaning, were reportedly conducted at the facility as part of ITT Thompson's manufacturing process. Tetrachloroethylene (PCE) was reportedly used as a degreaser at the facility. Based on a letter from an attorney for Thompson International, Inc. to FDEP, trichloroethylene (TCE) was not used at the facility by Thompson International during their tenancy; however, TCE may have been used by ITT Thompson at the facility prior to approximately 1974 [67]. Raw material storage, cathodic cleaning operations, and drum storage were located on the southwest side of the plant. The two paint thinner tanks, mentioned previously, were also located on the southwestern portion of the facility. The types and volumes of raw materials and wastes at the plant, as well as the construction details of the storage vessels, are not described in the site file information.

Waste solvents and buffing compounds from operations at the facility were sporadically disposed of at the Madison County Landfill, located approximately 1.5 miles north-northeast of the site [2, 63], between 1971 and 1980. In addition, a waste removal contractor hired by ITT Thompson disposed of acid wash water from the facility at the Madison County Landfill between 1971 and 1974 [29].

According to an FDEP memorandum to the site file, information gathered by word of mouth indicates that ITT Thompson may have dumped chemicals into a pit on the site property [38]. During the SI field activities, an interview was conducted with Ms. Shirley Yates, a resident in the neighborhood immediately west of the site and a former night shift employee at the ITT Thompson facility. Ms. Yates indicated that chemicals and waste materials from the facility were disposed of in the pond immediately southwest of the site. Ms. Yates observed at least one fish kill in the pond following a waste disposal episode. She indicated that local residents consume fish caught in the pond.

In September 1994, water samples collected by the Madison County Public Health Unit (MCPHU) from private wells in the Yellow Pines subdivision, located approximately 0.6 to 0.8 miles east of the site, exhibited concentrations of TCE above the maximum contaminant level [35]. Reported well depths for the Floridan aquifer system private wells range between 145 and 195 feet BGS [63]. In December 1994, FDEP indicated that the ITT Thompson site was the most likely source of the contamination and recommended that ITT Thompson be required to conduct an assessment of the site. FDEP's sampling effort in the subdivision in February 1995 indicated that 49 of the 144 wells sampled contained elevated concentrations of TCE, with another 24 of the wells exhibiting trace concentrations of TCE. Since the discovery of TCE in the wells, the City of Madison has extended municipal water lines into the subdivision as an alternate source of potable water [52, 63]. Site assessment activities have been conducted at the ITT Thompson site by Woodward Clyde from 1995 to the present.

The City of Madison utilizes two main municipal supply wells (Barrs and Chason wells) and one standby well (Coody well), all located within a 2-mile radius of the site. The Barrs, Chason, and Coody wells are located approximately 0.7 miles west, 1.8 miles south-southwest, and 1.7 miles west of the site, respectively. The City of Madison Water Department serves approximately 6,300 people [2, 20, 21, 22, 63]. More detailed information, including site description, history, environmental setting, and the results of previous site investigations, is presented in the SI Report.

# 3 Hazard Ranking System Evaluation/Score

## 3.1 Hazardous Waste Quantity and Sources

Site file information indicates that raw material storage, electroplating (cathodic cleaning) operations, and drum storage at the site were located in the southwestern portion of the facility. Generally, the types and volumes of raw materials and wastes at the facility, as well as the construction details of the storage vessels, are not described in the file information; however, the file information does indicate that PCE and possibly TCE [67] were used as degreasers at the facility. Two above-ground storage tanks, reportedly containing paint thinner, were located within a concrete containment area on the southwestern portion of the site [29, 63, 64]. However, volumes and construction information regarding the storage tanks is not currently available. Local residents and former employees indicate that chemicals and waste materials from the facility were disposed of in the pond immediately southwest of the site [77]. At least one fish kill was observed in the pond following one disposal episode [77]. The number of disposals and volumes involved is unknown. Soil samples collected during previous site investigations [50, 51, 74] indicate that elevated concentrations of chlorinated and nonchlorinated volatile organic compounds (VOCs) are present in site soils; however, the extent of soils containing elevated VOCs has not been determined. Based on incomplete information regarding potential sources, an HWQ value of 10 (default value) was used in the scoring calculations (see Page C-7 of the scoring sheets). It should be noted that including the 0.5-acre pond located southwest of the site as a surface impoundment (potential source) results in an HWQ value of 100.

## 3.2 Groundwater Migration Pathway

Several VOCs, including vinyl chloride, cis-1,2-dichloroethylene (cis-1,2-DCE), 1,1-dichloroethylene (1,1-DCE), trichloroethylene (TCE), benzene, and toluene, were detected in

site groundwater samples collected during the SI at concentrations significantly exceeding background levels as well as federal and state MCLs. The groundwater samples were collected from the "A" and "B" water-bearing zones overlying the Floridan aquifer system; however, significantly elevated chlorinated VOC concentrations have been detected to a depth of at least 70 feet BGS (the depth to the Floridan aquifer system is estimated to be between 90 and 100 feet BGS based on site-specific and regional hydrogeologic information [15, 19]). The Floridan aquifer system was evaluated for the HRS score using several scenarios. First, the Likelihood of Release (LR) was calculated using an interconnected aquifers scenario (karst topography and sinkhole features in the immediate site area; Observed Release scenario: LR = 550). This scenario was used because regional geologic conditions suggest the possibility of interconnected aquifers in the immediate vicinity. However, interconnectedness on the site cannot be clearly documented. The Floridan aquifer system targets (T) included only the municipal targets because of uncertainty regarding private well usage for potable water (Yellow Pines wells and municipal water supply lines run to subdivision). Using a toxicity × mobility value of 10,000 (vinyl chloride detected in on-site groundwater), a Waste Characteristics (WC) score of 18 was calculated. It should be noted that vinyl chloride is a biodegradation/ transformation product of parent compounds that include TCE, PCE, cis-1,2-DCE, and trans-1,2-DCE. The following score was calculated for the Floridan aquifer system using the interconnected aquifers scenario:

- Likelihood of Release (LR) = 550; Targets (T) = 541.4; Waste Characteristics (WC) = 18; Groundwater Pathway Score = 64.97.

A second scenario for the Floridan aquifer system using the Potential to Release calculated an LR of 500 based on the location of the site in karst terrain and a depth to the aquifer of concern of less than 70 feet (elevated VOCs detected in site groundwater at 70 feet BGS and estimated depth to the Floridan aquifer system of 90 to 100 feet BGS; see No. 2 of Likelihood of Release Section; Page C-15 of scoring sheets). Using the same T and WC values determined for the first scenario, the following score for the Floridan aquifer system was calculated:

- LR = 500; T = 541.4; WC = 18; Groundwater Pathway Score = 59.06.

Using the Potential to Release calculations described in HRS Section 3 (see Groundwater Migration Pathway Scoresheet following Page C-14 of scoring sheets), a third scenario

for the Floridan aquifer system was evaluated. Using the calculated LR of 430 and the same T and WC values calculated previously, the following score for the Floridan aquifer system was calculated:

- LR = 430; T = 541.4; WC = 18; Groundwater Pathway Score = 50.79.

It should be noted that including the estimated private well targets in the site vicinity to the Potential to Release scenario does not significantly affect the groundwater pathway score. The population served by private wells has been estimated to the 1-mile radius surrounding the site; private wells between the 1- and 4-mile radius have not been evaluated. For the Potential to Release scenario to reach a value of 57 (the minimum score needed to score the site on groundwater pathway alone), a T value of approximately 607.56 (population value sum of 6,075.6; see Page C-17 of scoring sheets) is required. To achieve the necessary T value, a drinking water population of greater than 1,000 people must be located within either the 2- to 3-mile radius or the 3- to 4-mile radius, with a minimum population of at least 101 within the other radius (2- to 3-mile or 3- to 4-mile radius). Adding the private well population to the 1- to 2-mile radius total would probably not affect the population value (population of 3,445 with a population range of 3,001 to 10,000, yielding a population value of 2,607). Populations of this size within the required distance are unlikely considering the rural areas surrounding the site and the population of Madison County (15,213 persons) [7]. The City of Madison Water Department supplies water to 6,300 people (who have been included in the calculations); the Town of Lee, located approximately 7 to 8 miles southeast of the site, has a population of 306 [7].

If the 0.5-acre pond, which reportedly received chemicals and waste materials from the ITT Thompson site, is included as a potential contamination source (HWQ = 100; WC = 32), the following groundwater pathway score for the Floridan aquifer system is calculated using the Potential to Release scenario:

- LR = 430; T = 541.4; WC = 32; Groundwater Pathway Score = 90.30.

Including the pond in the HWQ/WC calculations results in a groundwater pathway score of 90.30, which exceeds the 57 cutoff required to score the site (using one pathway).

If the Floridan aquifer system is scored attributing contamination in the Yellow Pines subdivision wells to the ITT Thompson site, the evaluation becomes more complex and some assumptions regarding use of the private wells must be made. The scenario includes an LR

value of 550 based on an observed release to the Floridan aquifer system (Yellow Pines wells open to upper portion of the Floridan aquifer system). TCE was detected in the Yellow Pines wells during the 1994-1995 sampling at concentrations exceeding background levels and federal and state MCLs [32, 34, 35, 39, 53, 54]. TCE and cis-1,2-DCE were detected in a Yellow Pines subdivision well (Downing well) during the SI investigation at concentrations exceeding background levels; the TCE concentration also exceeded the federal and state MCLs for the compound. The Targets (T) score for the scenario is 1,267.40, which includes the following: a known private well population within a 1-mile radius of the site; an estimate of 20 wells with Level I concentrations (20 × 2.75/persons per household [7] = 55 persons) and 53 wells with Level II concentrations (53 × 2.75 = approximately 146 persons; the fact that 73 wells in the subdivision exhibited detectable concentrations of TCE in the 1994-1995 sampling [32, 34, 35, 39]); and a potential contamination target score of 521.4 (which includes the known uncontaminated private and municipal wells) and a nearest well value of 50. According to the HRS scoring rule, the toxicity × mobility value of vinyl chloride (10,000) can be used to score the groundwater scenario including the private wells based on the presence of the contaminant in site groundwater. Using the toxicity × mobility value of vinyl chloride (10,000) and an HWQ value of 10 results in a WC value of 18 and the following score for the scenario:

- LR = 550; T = 1,267.40; WC = 18; Groundwater Pathway Score = 152.09

This score (152.09, subject to a maximum of 100) exceeds the cutoff of 57 required to score the site (on one pathway).

## 3.3 Surface Water Migration Pathway

The surface water migration pathway consists of three separate threat scores: the Drinking Water Threat Score, the Human Food Chain Threat Score, and the Environmental Threat Score. Each of the threat scores was evaluated assuming an observed release of site contaminants to the closed depression ponds located in the site vicinity: the pond immediately southwest of the site; and Mill Pond and Brickyard Pond, located east-northeast of the site (worst-case scenario; LR = 550 for all three threat scores). Sediment samples collected in the pond southwest of the site contained metals at concentrations exceeding EPA ecotoxicity levels, which may be attributable to metal plating operations at the site; however, no site-specific background sediment sample exists for the site because no appropriate

background sampling location exists. For the worst-case scenario, the presence of chromium, lead, and benzene were assumed to be present in the pond sediments above background levels.

Calculated T and WC values for the Drinking Water Threat portion of the surface water evaluation were 0 and 18, respectively. The WC value was based on an HWQ value of 10 and a toxicity × persistence value of 10,000 for both chromium and lead. The following assumed score was calculated for the Drinking Water Threat portion of the surface water migration pathway:

- LR = 550 (assumed); T = 0; WC = 18; Drinking Water Threat Score = 0.

For the Human Food Chain Threat portion of the pathway, a Targets (T) score of 20 was calculated based on an assumed release of a substance with a bioaccumulation factor greater than or equal to 500 (benzene has a bioaccumulation factor of 5,000; freshwater value). Using an HWQ value of 10 and a toxicity × persistence × bioaccumulation value of $5 \times 10^5$ (values for lead, assuming worst case scenario), a WC score of 32 was calculated for the evaluation. The following assumed score was calculated for the Human Food Chain Threat portion of the surface water pathway:

- LR = 550 (assumed); T = 20; WC = 32; Human Food Chain Threat Score = 4.27.

For the Environmental Threat portion of the pathway, a T score of 2.5 was calculated based on an estimated 1 mile of wetland area surrounding the closed depression ponds receiving surface water runoff from the site [2, 63]. A WC value of 56 was calculated for the site based on the ecotoxicity × persistence × ecobioaccumulation value for lead ($5 \times 10^6$; using lead value as worst case scenario) and an HWQ value of 10. The following assumed score was calculated for the Environmental Threat:

- LR = 550 (assumed); T = 2.5; WC = 56; Environmental Threat Score = 0.93.

The following assumed surface water migration pathway score was calculated for the site:

- Drinking Water Threat + Human Food Chain Threat + Environmental Threat Score = 5.20.

Including the 0.5-acre pond as a potential contamination source (surface impoundment; HWQ = 100) did not significantly increase the surface water migration pathway score (SW Score = 9.13).

Addition of the assumed surface water migration pathway scores (HWQ = 10 or HWQ = 100 scenarios) did not significantly influence the overall HRS score for the site. Further, because the SW pathway score scenarios were based on worst-case assumptions (e.g., observed release), it is unlikely that these score scenarios could be supported.

## 3.4 Soil Exposure Route

The soil exposure route consists of two separate threat scores: the Resident Population Threat Score and the Nearby Population Threat Score. For the ITT Thompson site, the soil exposure route score was based on elevated concentrations of VOCs in site soil samples. As a worst-case scenario, it was assumed that vinyl chloride was present above background concentrations in site soils between ground surface and 2 feet BGS. No background soil samples have been collected at the site. It should be noted that several VOC compounds, including chlorinated and nonchlorinated VOCs, have been detected in site soils at significantly elevated concentrations (samples collected between ground surface and approximately 14 feet BGS) [50, 51, 74]. Although vinyl chloride has not been detected in site soil samples, detection limits for the compound have been elevated to levels as high as 5,000 $\mu$g/kg because of the presence of other VOCs at high concentrations. The horizontal and vertical extent of site soils containing elevated VOC concentrations has not been completely assessed; no soil samples have been collected to the west and south of the site in the vicinity of the pond (potential waste disposal area).

For the Resident Population Threat, a Likelihood of Exposure (LE) value of 550 was used in the scoring calculations based on the presence of elevated concentrations of VOCs in site soils between ground surface and 2 feet BGS (assuming vinyl chloride is present in site soils at concentrations exceeding background levels). A Targets (T) score of 5 was calculated based on the approximate number of workers currently using the facility (during SI field activities, the number of workers at the site at any given time was typically fewer than five). For the Nearby Population Threat, an LE value of 5 was calculated assuming site accessibility with no public recreation use (assuming the gates to the site are typically not secure) and a contaminated soil area greater than 5,000 square feet but less than 125,000 square feet. The number of persons within a 1-mile radius of the site was estimated assuming the local residents served by the City of Madison Water Department (6,300) are all located within 1

mile of the site and are evenly distributed (T=14.9). A WC value of 18 was used in both the Resident Population and Nearby Population Threat scores based on the assumption that vinyl chloride (toxicity value = 10,000) is present in site soils above background levels. Based on the previously mentioned assumptions, the following assumed score was developed:

- Resident Population Threat Score: Likelihood of Exposure (LE) = 550; T = 5; WC = 18; Score = 0.6.
- Nearby Population Threat Score: LE = 5; T = 14.9; WC = 18; Score = 0.016.
- Soil Exposure Pathway Score: Resident Population Threat + Nearby Population Threat; Score = 0.616.

The addition of this assumed soil exposure pathway score does not significantly influence the overall HRS score for the site. Further, because the soil exposure route score is based on assumptions intended to exhibit the worst-case scenario, it is unlikely that this score could be supported.

## 3.5 Air Migration Pathway

The air migration pathway was not scored for the site. Most of the site is paved or covered, with buildings reducing the potential for volatilization of VOCs to the atmosphere; however, soils in the wooded areas to the west and south of the site (potential waste disposal areas) have not been assessed. Although elevated metals concentrations may be present in site soils (possibly the result of electroplating operations at the site), airborne dust does not appear to be a concern at the site because of the paved and building-covered areas on site and the heavily wooded areas to the west and south.

# 4 Summary

The results of this HRS evaluation indicate that activities at the ITT Thompson site have significantly affected groundwater at the site to depths of at least 70 feet BGS. Based on an interconnected aquifers scenario (LR = 550), the groundwater pathway (Floridan aquifer system) scores a 64.97, which scores the site based on the groundwater migration pathway alone. Using an LR of 500 under the Potential to Release scenario for the Floridan aquifer system (site located in karst terrain and depth to aquifer of less than 70 feet), the groundwater pathway scores a 59.06, also sufficient to score the site based on the groundwater pathway alone. Including the private wells in the Yellow Pines Subdivision (actual contamination) and using the toxicity × mobility value for vinyl chloride in an observed release scenario to the Floridan aquifer system results in a groundwater pathway score of 152.09 (subject to a maximum of 100), which is sufficient to score the site on the single pathway. The private wells were used as sole sources of potable water prior to the connection of the subdivision to city water supplies.

The groundwater pathway scores a 50.79 (below the pathway score needed to score the site) using the Potential to Release evaluation described in HRS Section 3. If the Potential to Release to the Floridan aquifer system scoring scenario includes the 0.5-acre pond as a potential contaminant source (surface impoundment; HWQ = 100; WC = 32), the groundwater pathway scores a 90.3, which is sufficient to score the site on the single pathway.

The surface water and soil exposure pathway scores, each calculated using several different assumptions, did not contribute significantly to the overall HRS score for the site and were not included in the final site score calculation. The air migration pathway was not evaluated for the site.

Based on this draft HRS evaluation/score, further action at the site under the Comprehensive Environmental Response, Compensation, and Liability Act is warranted on a high-priority basis.

# APPENDIX C

## SITE INSPECTION WORKSHEETS

This appendix consists of worksheets that can be used to generate an SI site score. Completion of these worksheets is not required, but the SI investigator must evaluate an SI score, either by these worksheets, *PREscore*, or other Regional scoring tools.

The worksheets consist of instructions and data tables to be filled in with scores from HRS reference tables. The data tables may also call for Data Type and References.

DATA TYPE: The Data Type columns should be filled in with an H, Q, or + if the data are HRS quality and well documented. The Data Type column should be filled in with an E, X, or - if the data represent estimates, approximations, or are not fully documented. This type identifies data gaps for the expanded SI to investigate.

REFERENCES: The Reference columns should be filled in with coded reference numbers. The numbered reference list should be attached or the numbering should be cross-referenced to the SI Narrative Report.

The SI investigator will need the current Superfund Chemical Data Matrix (SCDM) OSWER Directive 9345.1-13 (revised semi-annually) to complete these worksheets.

Site Name: I I I THOMPSON

Location: MADISON, MADISON COUNTY, FLORIDA

# SOIL EXPOSURE PATHWAY SCORESHEET
(continued)

| Factor Categories and Factors | | Maximum Value | Value Assigned | |
|---|---|---|---|---|
| NEARBY POPULATION THREAT. (continued) | | | | |
| | Targets | | | |
| 18. | Nearby Individual | 1 | 1 | |
| 19. | Population Within 1 Mile | b | 13.9 | |
| 20. | Targets (lines 18 + 19) | b | | 14.9 |
| | Nearby Population Threat Score | | | |
| 21. | Nearby Population Threat (lines 14 x 17 x 20) | b | | 0.016* |
| SOIL EXPOSURE PATHWAY SCORE | | | Nearby Population Threat (Default Value) | |
| 22. | Soil Exposure Pathway Score[c] ($S_s$), (lines [11 + 21] subject to a maximum of 100) | 100 | | 0.616* |

* ASSUMING VINYL CHLORIDE (TOXICITY = 10,000) IS PRESENT IN SITE SOILS (0-2' BGS) AT CONCENTRATIONS EXCEEDING BACKGROUND LEVELS

*- NO BACKGROUND SOIL SAMPLE FOR SITE.

[a] Maximum value applies to waste characteristics category.
[b] Maximum value not applicable.
[c] No specific maximum value applies to factor. However pathway score based solely on sensitive environments is limited to maximum of 60.
[d] Do not round to nearest integer.

Site Name: ITT THOMPSON

Location: MADISON, MADISON COUNTY, FLORIDA

* ASSUMING OBSERVED RELEASE OF SITE CONTAMINANTS TO SURFACE WATER

## SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
(continued)

| Factor Categories and Factors | | Maximum Value | Value Assigned | |
|---|---|---|---|---|
| **ENVIRONMENTAL THREAT, (concluded)** | | | | |
| Waste Characteristics | | | | |
| 23. Ecosystem Toxicity/Persistence/Bioaccumulation | | a | $5 \times 10^6$ (LEAD) | |
| 24. Hazardous Waste Quantity | | a | 10 | |
| 25. Waste Characteristics | | 1,000 | | 56 |
| 26. Sensitive Environments | | | | |
| 26a. Level I Concentrations | | b | | |
| 26b. Level II Concentrations | | b | | |
| 26c. Potential Contamination | | b | 2.5 | |
| 26d. Sensitive Environments (lines 26a + 26b + 26c) | | b | 2.5 | |
| Targets | | | | |
| 27. Targets (value from line 26d) | | | | 2.5 |
| Environmental Threat Score | | | | |
| 28. Environmental Threat Score [(lines 22 x 25 x 27)/82,500, subject to a maximum of 60] | | 60 | | 0.93 |
| **SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORE FOR A WATERSHED** | | | | |
| 29. Watershed Score[c] (lines 13 + 21 + 28, subject to a mixiumum of 100) | | 100 | | 5.2* |
| **SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORE** | | | | |
| 30. Component Score ($S_{of}$)[c] (highest score from line 29 for all watersheds evaluated, subject to a maximum of 100) | | 100 | | |

[a] Maximum value applies to waste characteristics category.
[b] Maximum value not applicable.
[c] Do not round to nearest integer.

Site Name: ITT THOMPSON

Location: MADISON, MADISON COUNTY, FLORIDA

# SOIL EXPOSURE PATHWAY SCORESHEET

| Factor Categories and Factors | | Maximum Value | Value Assigned | |
|---|---|---|---|---|
| **RESIDENT POPULATION THREAT** | | | | |
| Likelihood of Exposure | | | | |
| 1. Likelihood of Exposure | | 550 | | 550 |
| Waste Characteristics | | | | |
| 2. Toxicity | | a | 10,000 (VINYL CHLORIDE)* | |
| 3. Hazardous Waste Quantity | | a | 10 | |
| 4. Waste Characteristics | | 100 | | 18 |
| Targets | | | | |
| 5. Resident Individual | | 50 | | |
| 6. Resident Population | | | | |
| 6a. | Level I Concentrations | b | | |
| 6b. | Level II Concentrations | b | | |
| 6c. | Resident Population (lines 6a + 6b) | b | | |
| 7. Workers | | 15 | 5 | |
| 8. Resources | | 5 | | |
| 9. Terrestrial Sensitive Environments | | c | | |
| 10. Targets (lines 5 + 6c + 7 + 8 + 9) | | b | | 5 |
| Resident Population Threat Score | | | | |
| 11. Resident Population Threat (lines 1 x 4 x 10)/82,500 | | b | | 0.6 |
| **NEARBY POPULATION THREAT** | | | | |
| Likelihood of Exposure | | | | |
| 12. Attractiveness/Accessibility | | 100 | 10 | |
| 13. Area of Contamination | | 100 | 20 | |
| 14. Likelihood of Exposure | | 500 | | 5 |
| Waste Characteristics | | | | |
| 15. Toxicity | | a | 10,000 (VINYL CHLORIDE)* | |
| 16. Hazardous Waste Quantity | | a | 10 | |
| 17. Waste Characteristics | | 100 | | 18 |

* ASSUMING VINYL CHLORIDE (TOXICITY = 10,000) IS PRESENT IN SITE SOILS (0-2' BGS) AT CONCENTRATIONS EXCEEDING BACKGROUND LEVELS

* NO BACKGROUND SOIL SAMPLE S FOR SITE

Site Name: ITT THOMPSON

Location: MADISON, MADISON COUNTY, FLORIDA

* ASSUMING OBSERVED RELEASE OF SITE CONTAMINANTS TO SURFACE WATER

# SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET

| Factor Categories and Factors | | Maximum Value | Value Assigned | |
|---|---|---|---|---|
| **DRINKING WATER THREAT** | | | | |
| Likelihood of Release | | | | |
| 1. | Observed Release | 550 | 550* | |
| 2. | Potential Release by Overland Flow | | | |
| 2a. | Containment | 10 | | |
| 2b. | Runoff | 25 | | |
| 2c. | Distance to Surface Water | 25 | | |
| 2d. | Potential to Release by Overland Flow {lines 2a x (2b + 2c)} | 500 | | |
| 3. | Potential to Release by Flood | | | |
| 3a. | Containment (Flood) | 10 | | |
| 3b. | Flood Frequency | 50 | | |
| 3c. | Potential to Release by Flood (lines 3a x 3b) | 500 | | |
| 4. | Potential to Release (lines 2d + 3c, subject to a maximum of 500) | 500 | | |
| 5. | Likelihood of Release (higher of lines 1 and 4) | 550 | | 550* |
| Waste Characteristics | | | | |
| 6. | Toxicity/Presistence | a | 10,000 CHROMIUM LEAD | |
| 7. | Hazardous Waste Quantity | a | 10 | |
| 8. | Waste Characteristics | 100 | | 18 |
| Targets | | | | |
| 9. | Nearest Intake | 50 | | |
| 10. | Population | | | |
| 10a. | Level I Concentrations | b | | |
| 10b. | Level II Concentrations | b | | |
| 10c. | Potential Contamination | b | | |
| 10d. | Population (lines 10a + 10b + 10c) | b | | |
| 11. | Resources | 5 | | |
| 12. | Targets (lines 9 + 10d + 11) | b | | 0 |
| Drinking Water Threat Score | | | | |
| 13. | Drinking Water Threat Score [(lines 5 x 8 x 12)/82,500, subject to a maximum of 100) | 100 | | 0 |

Site Name: ITT THOMPSON

Location: MADISON, MADISON COUNTY, FLORIDA

* ASSUMING OBSERVED RELEASE OF SITE CONTAMINANTS TO SURFACE WATER

## SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET
(continued)

| Factor Categories and Factors | | Maximum Value | Value Assigned | |
|---|---|---|---|---|
| **HUMAN FOOD CHAIN THREAT** | | | | |
| Likelihood of Release | | | | |
| 14. | Likelihood of Release (same value as line 5) | 550 | | 550 * |
| Waste Characteristics | | | | |
| 15. | Toxicity/Persistence/Bioaccumulation | a | 500,000 (LEAD) | |
| 16. | Hazardous Waste Quantity | a | 10 | |
| 17. | Waste Characteristics | 1,000 | | 32 |
| Targets | | | | |
| 18. | Food Chain Individual | 50 | | |
| 19. | Population | | | |
| | 19a. Level I Concentrations | b | | |
| | 19b. Level II Concentrations | b | | |
| | 19c. Potential Human Food Chain Contamination | b | 20 | |
| | 19d. Population (lines 19a + 19b + 19c) | b | 20 | |
| 20. | Targets (lines 18 + 19d) | | | 20 |
| Human Food Chain Threat Score | | | | |
| 21. | Human Food Chain Threat Score ((lines 14 x 17 x 20)/82,5000, subject to a maximum of 100) | 100 | | 4.27 |
| **ENVIRONMENTAL THREAT** | | | | |
| Likelihood of Release | | | | |
| 22. | Likelihood of Release (same value as line 5) | 550 | | 550* |



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Site Name: ITT THOMPSON

Location: MADISON, MADISON COUNTY, FLORIDA

FLORIDAN AQUIFER SYSTEM OBSERVED RELEASE INCLUDING ACTUAL CONTAMINATION IN YELLOW PINES SUBDIVISION PRIVATE WELLS

# GROUND WATER MIGRATION PATHWAY SCORESHEET

FACTOR CATEGORIES AND FACTORS

| Likelihood of Release to an Aquifer | Maximum Value | Value Assigned | |
|---|---|---|---|
| 1. Observed Release | 550 | 550 | |
| 2. Potential to Release | | | |
| 2a. Containment | 10 | | |
| 2b. Net Precipitation | 10 | | |
| 2c. Depth to Aquifer | 5 | | |
| 2d. Travel Time | 35 | | |
| 2e. Potential to Release [lines 2a x (2b + 2c + 2d)] | 500 | | |
| Likelihood of Release (higher of lines 1 and 2e) | 550 | | 550 |
| **Waste Characteristics** | | | |
| 4. Toxicity/Mobility | a | 10,000 (VINYL CHLORIDE) | |
| 5. Hazardous Waste Quantity | a | 10 | |
| 6. Waste Characteristics | 100 | | 18 |
| **Targets** | | | |
| 7. Nearest Well | (50) | 50 (LEVEL I CONTAMINATION) | |
| 8. Population | | | |
| 8a. Level I Concentrations | b | 550 | |
| 8b. Level II Concentrations | b | 146 | |
| 8c. Potential Contamination | b | 521.4 | |
| 8d. Population (lines 8a + 8b + 8c) | b | 1217.4 | |
| 9. Resources | 5 | — | |
| 10. Wellhead Protection Area | 20 | — | |
| 11. Targets (lines 7 + 8d + 9 + 10) | b | | 1,267.4 |
| **Ground Water Migration Score for an Aquifer** | | | |
| 12. Aquifer Score [(lines 3 x 6 x 11)/82,500][c] | 100 | | (152.09) 100 |
| **Ground Water Migration Pathway Score** | | | |
| 13. Pathway Score ($S_{gw}$), (highest value from line 12 for all aquifers evaluated)[c] | 100 | | 100 |

[a] Maximum value applies to waste characteristics category.

[b] Maximum value not applicable.

[c] Do not round to nearest integer.

Site Name: ITT THOMPSON

Location: MADISON, MADISON COUNTY, FLORIDA

# GROUND WATER MIGRATION PATHWAY SCORESHEET

FLORIDAN AQUIFER SYSTEM: POTENTIAL TO RELEASE - HRS SECTION 3 EVALUATION

| FACTOR CATEGORIES AND FACTORS | Maximum Value | Value Assigned | |
|---|---|---|---|
| *Likelihood of Release to an Aquifer* | | | |
| 1. Observed Release | 550 | | |
| 2. Potential to Release | | | |
| 2a. Containment | 10 | 10 | |
| 2b. Net Precipitation | 10 | 3 | |
| 2c. Depth to Aquifer | 5 | 5 | |
| 2d. Travel Time | 35 | 35 | |
| 2e. Potential to Release [lines 2a x (2b + 2c + 2d)] | 500 | 430 | |
| Likelihood of Release (higher of lines 1 and 2e) | 550 | | 430 |
| Waste Characteristics | | | |
| 4. Toxicity/Mobility | a | 10,000 (VINYL CHLORIDE) | |
| 5. Hazardous Waste Quantity | a | 10 | |
| 6. Waste Characteristics | 100 | | 18 |
| Targets | | | |
| 7. Nearest Well | 50 | 20 | |
| 8. Population | | | |
| 8a. Level I Concentrations | b | | |
| 8b. Level II Concentrations | b | | |
| 8c. Potential Contamination | b | 521.4 | |
| 8d. Population (lines 8a + 8b + 8c) | b | 521.4 | |
| 9. Resources | 5 | | |
| 10. Wellhead Protection Area | 20 | | |
| 11. Targets (lines 7 + 8d + 9 + 10) | b | | 541.4 |
| Ground Water Migration Score for an Aquifer | | | |
| 12. Aquifer Score [(lines 3 x 6 x 11)/82,500][c] | 100 | | 50.79 |
| Ground Water Migration Pathway Score | | | |
| 13. Pathway Score ($S_{gw}$), (highest value from line 12 for all aquifers evaluated)[c] | 100 | | |

[a] Maximum value applies to waste characteristics category.

[b] Maximum value not applicable.

[c] Do not round to nearest integer.



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Site Name: ITT THOMPSON

Location: MADISON, MADISON COUNTY, FLORIDA

# GROUND WATER MIGRATION PATHWAY SCORESHEET

FACTOR CATEGORIES AND FACTORS — FLORIDAN AQUIFER SYSTEM – INTERCONNECTED AQUIFERS SCENARIO

| Likelihood of Release to an Aquifer | Maximum Value | Value Assigned | |
|---|---|---|---|
| 1. Observed Release | 550 | 550 | |
| 2. Potential to Release | | | |
| 2a. Containment | 10 | | |
| 2b. Net Precipitation | 10 | | |
| 2c. Depth to Aquifer | 5 | | |
| 2d. Travel Time | 35 | | |
| 2e. Potential to Release [lines 2a x (2b + 2c + 2d)] | 500 | | |
| Likelihood of Release (higher of lines 1 and 2e) | 550 | | 550 |
| **Waste Characteristics** | | | |
| 4. Toxicity/Mobility | a | 10,000 (VINYL CHLORIDE) | |
| 5. Hazardous Waste Quantity | a | 10 | |
| 6. Waste Characteristics | 100 | | 18 |
| **Targets** | | | |
| 7. Nearest Well | 50 | 20 | |
| 8. Population | | | |
| 8a. Level I Concentrations | b | | |
| 8b. Level II Concentrations | b | | |
| 8c. Potential Contamination | b | 521.4 | |
| 8d. Population (lines 8a + 8b + 8c) | b | 521.4 | |
| 9. Resources | 5 | | |
| 10. Wellhead Protection Area | 20 | | |
| 11. Targets (lines 7 + 8d + 9 + 10) | b | | 541.4 |
| **Ground Water Migration Score for an Aquifer** | | | |
| 12. Aquifer Score [(lines 3 x 6 x 11)/82,500][c] | 100 | | 64.97 |
| **Ground Water Migration Pathway Score** | | | |
| 13. Pathway Score ($S_{gw}$), (highest value from line 12 for all aquifers evaluated)[c] | 100 | | |

[a] Maximum value applies to waste characteristics category.

[b] Maximum value not applicable.

[c] Do not round to nearest integer.

Site Name: ITT THOMPSON

Location: MADISON, MADISON COUNTY, FLORIDA

# GROUND WATER MIGRATION PATHWAY SCORESHEET

FLORIDAN AQUIFER SYSTEM: POTENTIAL TO RELEASE – SITE LOCATED IN KARST AREA AND DEPTH TO AQUIFER < 70 FEET

| FACTOR CATEGORIES AND FACTORS | | Maximum Value | Value Assigned | |
|---|---|---|---|---|
| **Likelihood of Release to an Aquifer** | | | | |
| 1. | Observed Release | 550 | | |
| 2. | Potential to Release | | | |
| 2a. | Containment | 10 | | |
| 2b. | Net Precipitation | 10 | | |
| 2c. | Depth to Aquifer | 5 | | |
| 2d. | Travel Time | 35 | | |
| 2e. | Potential to Release [lines 2a x (2b + 2c + 2d)] | 500 | 500 | |
| | Likelihood of Release (higher of lines 1 and 2e) | 550 | | 500 |
| **Waste Characteristics** | | | | |
| 4. | Toxicity/Mobility | a | 10,000 (VINYL CHLORIDE) | |
| 5. | Hazardous Waste Quantity | a | 10 | |
| 6. | Waste Characteristics | 100 | | 18 |
| **Targets** | | | | |
| 7. | Nearest Well | 50 | 20 | |
| 8. | Population | | | |
| 8a. | Level I Concentrations | b | | |
| 8b. | Level II Concentrations | b | | |
| 8c. | Potential Contamination | b | 521.4 | |
| 8d. | Population (lines 8a + 8b + 8c) | b | 521.4 | |
| 9. | Resources | 5 | | |
| 10. | Wellhead Protection Area | 20 | | |
| 11. | Targets (lines 7 + 8d + 9 + 10) | b | | 541.4 |
| **Ground Water Migration Score for an Aquifer** | | | | |
| 12. | Aquifer Score [(lines 3 x 6 x 11)/82,500][c] | 100 | | 59.06 |
| **Ground Water Migration Pathway Score** | | | | |
| 13. | Pathway Score ($S_{gw}$), (highest value from line 12 for all aquifers evaluated)[c] | 100 | | |

a Maximum value applies to waste characteristics category.

b Maximum value not applicable.

c Do not round to nearest integer.



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## AIR PATHWAY

### Air Pathway Observed Substances Summary Table

On SI Table 21, list the hazardous substances detected in air samples of a release from the site. Include only those substances with concentrations significantly greater than background levels. Obtain benchmark, cancer risk, and reference dose concentrations from SCDM. For NAAQS/NESHAPS benchmarks, determine the highest percentage of benchmark obtained for any substance. For cancer risk and reference dose, sum the percentages for the substances listed. If benchmark, cancer risk, or reference dose concentrations are not available for a particular substance, enter N/A for the percentage. If the highest benchmark percentage or the percentage sum calculated for cancer risk or reference dose equals or exceeds 100%, evaluate targets in the distance category from which the sample was taken and any closer distance categories as Level I. If the percentages are less than 100% or all are N/A, evaluate targets in that distance category and any closer distance categories that are not Level I as Level II.

F.O.I.A.
EXEMPTION 5

| SITE SCORE CALCULATION | S | $S^2$ |
|---|---|---|
| GROUND WATER PATHWAY SCORE ($S_{GW}$) | 64.97[a] / 100[b] | 4,221.1[a] / 10,000[b] |
| SURFACE WATER PATHWAY SCORE ($S_{SW}$) | — | — |
| SOIL EXPOSURE ($S_S$) | — | — |
| AIR PATHWAY SCORE ($S_A$) | — | — |
| SITE SCORE $\sqrt{\frac{S_{GW}^2+S_{SW}^2+S_S^2+S_A^2}{4}}$ = | | $\sqrt{\frac{4221.1}{4}}$[a] = 32.49[a] |

[b] $S_{GW}$ | $\frac{S}{152.09}$ MAX $\frac{100}{}$ | $\frac{S^2}{10,000}$ | $\sqrt{\frac{10000}{4}}$ = 50[b]

Borrowing Official — Date

COMMENTS

[a] INTERCONNECTED AQUIFERS SCENARIO; LR = 550 (OBSERVED RELEASE) SITE SCORES ON GROUNDWATER PATHWAY ALONE

- USING THE POTENTIAL TO RELEASE FOR GROUNDWATER PATHWAY AND PRESENCE OF KARST TERRAIN IN AREA AND DEPTH TO AQUIFER (FLORIDAN) FROM CONTAMINATION IS < 70 FEET LR = 500; G.W. PATHWAY SCORES 59.06 SITE SCORES 29.53 ON G.W. PATHWAY ALONE.

- USING POTENTIAL TO RELEASE FOR G.W. PATHWAY (BASED ON HRS SECTION 3) LR = 430; G.W. PATHWAY SCORES 50.79 - WILL NOT SCORE SITE ON G.W. PATHWAY ALONE.

THE ESTIMATED SURFACE WATER PATHWAY AND SOIL EXPOSURE EVALUATIONS (CALCULATED USING SEVERAL WORST-CASE SCENARIO ASSUMPTIONS) DID NOT CONTRIBUTE SIGNIFICANTLY TO OVERALL SITE SCORE AND WERE NOT INCLUDED IN THE FINAL SITE SCORE CALCULATION.

[b] OBSERVED RELEASE TO FLORIDAN AQUIFER SYSTEM SCENARIO INCLUDING ACTUAL CONTAMINATION OF PRIVATE WELLS IN YELLOW PINES SUBDIVISION; SCORES ON GROUNDWATER PATHWAY ALONE.

## SI TABLE 19 (HRS TABLE 5-8): NEARBY POPULATION LIKELIHOOD OF EXPOSURE FACTOR VALUES

| AREA OF CONTAMINATION FACTOR VALUE | ATTRACTIVENESS/ACCESSIBILITY FACTOR VALUE | | | | | | |
|---|---|---|---|---|---|---|---|
| | 100 | 75 | 50 | 25 | 10 | 5 | 0 |
| 100 | 500 | 500 | 375 | 250 | 125 | 50 | 0 |
| 80 | 500 | 375 | 250 | 125 | 50 | 25 | 0 |
| 60 | 375 | 250 | 125 | 50 | 25 | 5 | 0 |
| 40 | 250 | 125 | 50 | 25 | 5 | 5 | 0 |
| 20 | 125 | 50 | 25 | 5 | (5) | 5 | 0 |
| 5 | 50 | 25 | 5 | 5 | 5 | 5 | 0 |



## SI TABLE 20 (HRS TABLE 5-10): DISTANCE-WEIGHTED POPULATION VALUES FOR NEARBY POPULATION THREAT

| Travel Distance Category (miles) | Pop. | Number of people within the travel distance category | | | | | | | | | | | | Pop. Value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 1 to 10 | 11 to 30 | 31 to 100 | 101 to 300 | 301 to 1,000 | 1,001 to 3,000 | 3,001 to 10,001 | 10,001 to 30,000 | 30,001 to 100,000 | 100,001 to 300,000 | 300,001 to 1,000,000 | |
| Greater than 0 to $\frac{1}{4}$ | 1,575 | 0 | 0.1 | 0.4 | 1.0 | 4 | 13 | (41) | 130 | 408 | 1,303 | 4,081 | 13,034 | 41 |
| Greater than $\frac{1}{4}$ to $\frac{1}{2}$ | 3,150 | 0 | 0.05 | 0.2 | 0.7 | 2 | 7 | 20 | (65) | 204 | 652 | 2,041 | 6,517 | 65 |
| Greater than $\frac{1}{2}$ to 1 | 6,300 | 0 | 0.02 | 0.1 | 0.3 | 1 | 3 | 10 | (33) | 102 | 326 | 1,020 | 3,258 | 33 |
| | | | | | | | | | | | | | Sum = | 139 |

Reference(s) 21,

# SOIL EXPOSURE PATHWAY WORKSHEET (concluded)

## WASTE CHARACTERISTICS

| | | |
|---|---|---|
| 10. | Assign the hazardous waste quantity score calculated for soil exposure | 10 |
| 11. | Assign the highest toxicity value from SI Table 16 | 10,000 |
| 12. | Multiply the toxicity and hazardous waste quantity scores. Assign the Waste Characteristics score from the table below: | WC = 18 |

| Product | WC Score |
|---|---|
| 0 | 0 |
| >0 to <10 | 1 |
| 10 to <100 | 2 |
| 100 to <1,000 | 3 |
| 1,000 to < 10,000 | 6 |
| 10,000 to <1E + 05 | 10 |
| 1E + 05 to <1E + 06 | 18 |
| 1E + 06 to <1E + 07 | 32 |
| 1E + 07 to <1E + 08 | 56 |
| 1E + 08 or greater | 100 |

**RESIDENT POPULATION THREAT SCORE:**

(Likelihood of Exposure, Question 1; Targets = Sum of Questions 2, 3, 4, 5, 6)

$$\frac{L \times T \times WC}{82,500}$$

$$\frac{550 \times 5 \times 18}{82,500} = 0.6$$

0.6

**NEARBY POPULATION THREAT SCORE:**

(Likelihood of Exposure, Question 7; Targets = Sum of Questions 8, 9)

$$\frac{L \times T \times WC}{82,500}$$

$$\frac{5 \times 14.9 \times 18}{82,500} = 0.016$$

0.016

**SOIL EXPOSURE PATHWAY SCORE:**
Resident Population Threat + Nearby Population Threat

0.616
(Maximum of 100)



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# SOIL EXPOSURE PATHWAY WORKSHEET
## NEARBY POPULATION THREAT

| LIKELIHOOD OF EXPOSURE | | Score | Data Type | Ref. |
|---|---|---|---|---|
| 7. Attractiveness/Accessibility (from SI Table 17 or HRS Table 5-6) | Value 10[a] | | | |
| Area of Contamination (from SI Table 18 or HRS Table 5-7) | Value 20[b] | | | |
| Likelihood of Exposure (from SI Table 19 or HRS Table 5-8) | | | | |
| | LE = | 5 | | |

| TARGETS | Score | Data Type | Ref. |
|---|---|---|---|
| 8. Assign a score of 0 if Level I or Level II resident individual has been evaluated or if no individuals live within 1/4 mile travel distance of an area of observed contamination. Assign a score of 1 if nearby population is within 1/4 mile travel distance and no Level I or Level II resident population has been evaluated. | 1 | | |
| 9. Determine the population within 1 mile travel distance that is not exposed to a hazardous substance from the site (*i.e.*, properties that are not determined to be Level I or Level II); record the population for each distance category in SI Table 20 (HRS Table 5-10). Sum the population values and multiply by 0.1. | 13.9[c] | | |
| | T = 14.9 | | |

a Assuming Gates to Site are not secure

b Assuming Soil Contamination Area >5,000 to 125,000 $ft^2$ (incomplete soil assessment at site)

c Population values estimated based on number of residents supplied with municipal water (6,300) [21]. Assumed entire 6,300 located within 1-mile of site; evenly distributed within 1-mile radius

## SI TABLE 17 (HRS TABLE 5-6): ATTRACTIVENESS/ACCESSIBILITY VALUES

| Area of Observed Contamination | Assigned Value |
|---|---|
| Designated recreational area | 100 |
| Regularly used for public recreation (for example, vacant lots in urban area) | 75 |
| Accessible and unique recreational area (for example, vacant lots in urban area) | 75 |
| Moderately accessible (may have some access improvements–for example, gravel road) with some public recreation use | 50 |
| Slightly accessible (for example, extremely rural area with no road improvement) with some public recreation use | 25 |
| Accessible with no public recreation use | 10 |
| Surrounded by maintained fence or combination of maintained fence and natural barriers | 5 |
| Physically inaccessible to public, with no evidence of public recreation use | 0 |

## SI TABLE 18 (HRS TABLE 5-7): AREA OF CONTAMINATION FACTOR VALUES

| Total area of the areas of observed contamination (square feet) | Assigned Value |
|---|---|
| ≤ to 5,000 | 5 |
| > 5,000 to 125,000 | 20 |
| > 125,000 to 250,000 | 40 |
| > 250,000 to 375,000 | 60 |
| > 375,000 to 500,000 | 80 |
| > 500,000 | 100 |



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# SOIL EXPOSURE PATHWAY WORKSHEET
## RESIDENT POPULATION THREAT

| LIKELIHOOD OF EXPOSURE | Score | Data Type | Refs |
|---|---|---|---|
| 1. OBSERVED CONTAMINATION: If evidence indicates presence of observed contamination (depth of 2 feet or less), assign a score of 550; otherwise, assign a 0. Note that a likelihood of exposure score of 0 results in a soil exposure pathway score of 0. | 550 | | |
| LE = | 550 | | |

TARGETS

| | | | |
|---|---|---|---|
| 2. RESIDENT POPULATION: Determine the number of people occupying residences or attending school or day care on or within 200 feet of areas of observed contamination (HRS section 5.1.3).<br><br>Level I: _____ people x 10 = _____<br>Level II: _____ people x 1 = _____ Sum = | | | |
| 3. RESIDENT INDIVIDUAL: Assign a score of 50 if any Level I resident population exists. Assign a score of 45 if there are Level II targets but no Level I targets. If no resident population exists (*i.e.*, no Level I or Level II targets), assign 0 (HRS Section 5.1.3). | 0 | | |
| 4. WORKERS: Assign a score from the table below for the total number of workers at the site and nearby facilities with areas of observed contamination associated with the site. | 5 | | |

| Number of Workers | Score |
|---|---|
| 0 | 0 |
| 1 to 100 | 5 |
| 101 to 1,000 | 10 |
| >1,000 | 15 |

| | | | |
|---|---|---|---|
| 5. TERRESTRIAL SENSITIVE ENVIRONMENTS: Assign a value for each terrestrial sensitive environment (SI Table 16) in an area of observed contamination. NA | | | |

| Terrestrial Sensitive Environment Type | Value |
|---|---|
| | |
| | |
| | |
| | |

Sum =

| | | | |
|---|---|---|---|
| 6. RESOURCES: Assign a score of 5 if any one or more of the following resources is present on an area of observed contamination at the site; assign 0 if none applies.<br>• Commercial agriculture<br>• Commercial silviculture<br>• Commercial livestock production or commercial livestock grazing | | | |
| Total of Targets T= | 5 | | |

# SI TABLE 16 (HRS TABLE 5-5): SOIL EXPOSURE PATHWAY TERRESTRIAL SENSITIVE ENVIRONMENT VALUES

| TERRESTRIAL SENSITIVE ENVIRONMENT | ASSIGNED VALUE |
|---|---|
| Terrestrial critical habitat for Federal designated endangered or threatened species<br>National Park<br>Designated Federal Wilderness Area<br>National Monument | 100 |
| Terrestrial habitat known to be used by Federal designated or proposed threatened or endangered species<br>National Preserve (terrestrial)<br>National or State terrestrial Wildlife Refuge<br>Federal land designated for protection of natural ecosystems<br>Administratively proposed Federal Wilderness Area<br>Terrestrial areas utilized by large or dense aggregations of animals (vertebrate species) for breeding | 75 |
| Terrestrial habitat used by State designated endangered or threatened species<br>Terrestrial habitat used by species under review for Federal designated endangered or threatened status | 50 |
| State lands designated for wildlife or game management<br>State designated Natural Areas<br>Particular areas, relatively small in size, important to maintenance of unique biotic communities | 25 |



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## SOIL EXPOSURE PATHWAY

If there is no observed contamination (e.g., ground water plume with no known surface source), do not evaluate the soil exposure pathway. Discuss evidence for no soil exposure pathway.

### Soil Exposure Resident Population Targets Summary

For each property (duplicate page 35 as necessary):

If there is an area of observed contamination on the property and within 200 feet of a residence, school, or day care center, enter on Table 15 each hazardous substance by sample ID. Record the detected concentration. Obtain cancer risk, and reference dose concentrations from SCDM. Sum the cancer risk and reference dose percentages for the substances listed. If cancer risk or reference dose concentrations are not available for a particular substance, enter N/A for the percentage. If the percentage sum calculated for cancer risk or reference dose equals or exceeds 100%, evaluate the residents and students as Level I. If both percentages are less than 100% or all are N/A, evaluate the targets as Level II.

**Soil Exposure Pathway - Observed Contamination**

| Sample ID | Hazardous Substance | Concentration (mg/kg) | Background Concentration (mg/kg) | Toxicity Value | References |
|---|---|---|---|---|---|
| SB-21 (3') | CIS-1,2-DCE | 17.4 | —a | 100 | 74 |
| SB-21 (3') | TCE | 6,490 | —a | 10 | 74 |
| SB-21 (3') | VINYL CHLORIDE* | <5 | —a | 10,000 | 74 |
| MW-4A (0-2') | TOLUENE | 33 | —a | 10 | 50 |
| MW-4A (0-2') | ETHYLBENZENE | 56 | —a | 10 | 50 |
| MW-4A (0-2') | TOTAL XYLENES | 330 | —a | 10 | 50 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

* ASSUMING VINYL CHLORIDE PRESENT IN SITE SOILS - ELEVATED DETECTION LIMITS IN SAMPLES <5,000 µg/kg [74]

* ASSUMING VINYL CHLORIDE PRESENT IN SITE SOIL 0-2 FEET BGS



a NO BACKGROUND SAMPLE FOR SOILS

## SI TABLE 15: SOIL EXPOSURE RESIDENT POPULATION TARGETS

Residence ID: _____ Level I _____ Level II _____ Population _____

| Sample ID | Hazardous Substance | Conc. (mg/kg) | Cancer Risk Concentration | % of Cancer Risk Conc. | RfD | % of RfD | Toxicity Value | References |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | Highest Percent | | Sum of Percents | | Sum of Percents | |

Residence ID: _____ Level I _____ Level II _____ Population _____

| Sample ID | Hazardous Substance | Conc. (mg/kg) | Cancer Risk Concentration | % of Cancer Risk Conc. | RfD | % of RfD | Toxicity Value | References |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | Highest Percent | | Sum of Percents | | Sum of Percents | |

Residence ID: _____ Level I _____ Level II _____ Population _____

| Sample ID | Hazardous Substance | Conc. (mg/kg) | Cancer Risk Concentration | % of Cancer Risk Conc. | RfD | % of RfD | Toxicity Value | References |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | Highest Percent | | Sum of Percents | | Sum of Percents | |



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## SI TABLE 13 (HRS TABLE 4-23): SURFACE WATER AND AIR SENSITIVE ENVIRONMENTS VALUES

| SENSITIVE ENVIRONMENT | ASSIGNED VALUE |
|---|---|
| Critical habitat for Federal designated endangered or threatened species<br>Marine Sanctuary<br>National Park<br>Designated Federal Wilderness Area<br>Ecologically important areas identified under the Coastal Zone Wilderness Act<br>Sensitive Areas identified under the National Estuary Program or Near Coastal Water Program of the Clean Water Act<br>Critical Areas identified under the Clean Lakes Program of the Clean Water Act (subareas in lakes or entire small lakes)<br>National Monument (air pathway only)<br>National Seashore Recreation Area<br>National Lakeshore Recreation Area | 100 |
| Habitat known to be used by Federal designated or proposed endangered or threatened species<br>National Preserve<br>National or State Wildlife Refuge<br>Unit of Coastal Barrier Resources System<br>Coastal Barrier (undeveloped)<br>Federal land designated for the protection of natural ecosystems<br>Administratively Proposed Federal Wilderness Area<br>Spawning areas critical for the maintenance of fish/shellfish species within a river system, bay, or estuary<br>Migratory pathways and feeding areas critical for the maintenance of anadromous fish species within river reaches or areas in lakes or coastal tidal waters in which the fish spend extended periods of time<br>Terrestrial areas utilized by large or dense aggregations of vertebrate animals (semi-aquatic foragers) for breeding<br>National river reach designated as recreational | 75 |
| Habitat known to be used by State designated endangered or threatened species<br>Habitat known to be used by a species under review as to its Federal endangered or threatened status<br>Coastal Barrier (partially developed)<br>Federally designated Scenic or Wild River | 50 |
| State land designated for wildlife or game management<br>State designated Scenic or Wild River<br>State designated Natural Area<br>Particular areas, relatively small in size, important to maintenance of unique biotic communities | 25 |
| State designated areas for the protection or maintenance of aquatic life under the Clean Water Act | 5 |
| Wetlands — See SI Table 14 (Surface Water Pathway) or SI Table 23 (Air Pathway) | |

## SI TABLE 14 (HRS TABLE 4-24): SURFACE WATER WETLANDS FRONTAGE VALUES

| Total Length of Wetlands | Assigned Value |
|---|---|
| Less than 0.1 mile | 0 |
| 0.1 to 1 mile | 25 |
| Greater than 1 to 2 miles | 50 |
| Greater than 2 to 3 miles | 75 |
| Greater than 3 to 4 miles | 100 |
| Greater than 4 to 8 miles | 150 |
| Greater than 8 to 12 miles | 250 |
| Greater than 12 to 16 miles | 350 |
| Greater than 16 to 20 miles | 450 |
| Greater than 20 miles | 500 |

## SURFACE WATER PATHWAY (concluded)
## WASTE CHARACTERISTICS, THREAT, AND PATHWAY SCORE SUMMARY

| WASTE CHARACTERISTICS | | Score |
|---|---|---|
| 14. | If an Actual Contamination Target (drinking water, human food chain, or environmental threat) exists for the watershed, assign the calculated hazardous waste quantity score, or a score of 100, whichever is greater. | |
| 15. | Assign the highest value from SI Table 7 (observed release) or SI Table 3 (no observed release) for the hazardous substance waste characterization factors below. Multiply each by the surface water hazardous waste quantity score and determine the waste characteristics score for each threat. | |

| | Substance Value | | HWQ | | Product | WC Score (From Table) |
|---|---|---|---|---|---|---|
| CHROMIUM* LEAD* Drinking Water Threat Toxicity/Persistence | 10,000 | x | 10 | = | $1 \times 10^5$ | 18 |
| LEAD* Food Chain Threat Toxicity/Persistence/ Bioaccumulation | 500,000 | x | 10 | = | $5 \times 10^6$ | 32 |
| LEAD* Environmental Threat Ecotoxicity/Persistence/ Ecobioaccumulation | $5 \times 10^6$ | x | 10 | = | $5 \times 10^7$ | 56 |

| Product | WC Score |
|---|---|
| 0 | 0 |
| >0 to <10 | 1 |
| 10 to <100 | 2 |
| 100 to <1,000 | 3 |
| 1,000 to < 10,000 | 6 |
| 10,000 to <1E + 05 | 10 |
| 1E + 05 to <1E + 06 | 18 |
| 1E + 06 to <1E + 07 | 32 |
| 1E + 07 to <1E + 08 | 56 |
| 1E + 08 to <1E + 09 | 100 |
| 1E + 09 to <1E + 10 | 180 |
| 1E + 10 to <1E + 11 | 320 |
| 1E + 11 to <1E + 12 | 560 |
| 1E + 12 or greater | 1000 |

### SURFACE WATER PATHWAY THREAT SCORES

| Threat | Likelihood of Release (LR) Score | Targets (T) Score | Pathway Waste Characteristics (WC) Score (determined above) | Threat Score $\frac{LR \times T \times WC}{82,500}$ |
|---|---|---|---|---|
| Drinking Water | 550* | 0 | 18 | (maximum of 100) 0 |
| Human Food Chain | 550* | 20 | 32 | (maximum of 100) 4.27 |
| Environmental | 550* | 2.5 | 56 | (maximum of 60) 0.93 |

**SURFACE WATER PATHWAY SCORE** (Drinking Water Threat + Human Food Chain Threat + Environmental Threat): (maximum of 100) **5.2***

* ASSUMING OBSERVED RELEASE



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# SURFACE WATER PATHWAY (continued)
# ENVIRONMENTAL THREAT WORKSHEET

When measuring length of wetlands that are located on both sides of a surface water body, sum both frontage lengths. For a sensitive environment that is more than one type, assign a value for each type.

| ENVIRONMENTAL THREAT TARGETS | Score | Data Type | Refs |
|---|---|---|---|
| Record the water body type and flow for each surface water sensitive environment within the target distance (see SI Table 12). If there is no sensitive environment within the target distance limit, assign a score of 0 at the bottom of the page. | | | |

| Environment Name | Water Body Type | Flow |
|---|---|---|
| WETLANDS | CLOSED DEPRESSION PONDS | — cfs |
| | | cfs |
| | | cfs |
| | | cfs |
| | | cfs |

9. ACTUAL CONTAMINATION SENSITIVE ENVIRONMENTS: If sampling data or direct observation indicate any sensitive environment has been exposed to a hazardous substance from the site, record this information on SI Table 11, and assign a factor value for the environment (SI Tables 13 and 14).

| Environment Name | Environment Type and Value (SI Tables 13 & 14) | Multiplier (10 for Level I, 1 for Level II) | Product |
|---|---|---|---|
| | | x = | |
| | | x = | |
| | | x = | |
| | | x = | |
| | | Sum = | |

10. POTENTIAL CONTAMINATION SENSITIVE ENVIRONMENTS:

| Flow | Dilution Weight (SI Table 12) | Environment Type and Value (SI Tables 13 & 14) | Pot. Cont. | Product |
|---|---|---|---|---|
| — cfs | 1 x | 25 x | 0.1 = | 2.5* |
| cfs | x | x | 0.1 = | |
| cfs | x | x | 0.1 = | |
| cfs | x | x | 0.1 = | |
| cfs | x | x | 0.1 = | |
| | | Sum = | | |

T = 2.5

* ESTIMATING ~ 1 MILE OF WETLANDS SURROUNDING CLOSED DEPRESSION PONDS DOWNSLOPE OF SITE C-29

## SI TABLE 12 (HRS Table 4-13): SURFACE WATER DILUTION WEIGHTS

| Type of Surface Water Body | | Assigned Dilution Weight |
|---|---|---|
| **Descriptor** | **Flow Characteristics** | |
| Minimal stream | < 10 cfs | 1 |
| Small to moderate stream | 10 to 100 cfs | 0.1 |
| Moderate to large stream | > 100 to 1,000 cfs | 0.01 |
| Large stream to river | > 1,000 to 10,000 cfs | 0.001 |
| Large river | > 10,000 to 100,000 cfs | 0.0001 |
| Very large river | > 100,000 cfs | 0.00001 |
| Coastal tidal waters | Flow not applicable; depth not applicable | 0.0001 |
| Shallow ocean zone or Great Lake | Flow not applicable; depth less than 20 feet | 0.0001 |
| Moderate depth ocean zone or Great Lake | Flow not applicable; depth 20 to 200 feet | 0.00001 |
| Deep ocean zone or Great Lake | Flow not applicable; depth greater than 200 feet | 0.000005 |
| 3-mile mixing zone in quiet flowing river | 10 cfs or greater | 0.5 |



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## SI TABLE 10: HUMAN FOOD CHAIN ACTUAL CONTAMINATION TARGETS FOR WATERSHED

Fishery ID: _____ Sample Type _____ Level I _____ Level II _____ References _____

| Sample ID | Hazardous Substance | Conc. (mg/kg) | Benchmark Concentration (FDAAL) | % of Benchmark | Cancer Risk Concentration | % of Cancer Risk Concentration | RfD | % of RfD |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | Highest Percent | | Sum of Percents | | Sum of Percents | |

## SI TABLE 11: SENSITIVE ENVIRONMENT ACTUAL CONTAMINATION TARGETS FOR WATERSHED

Environment ID: _____ Sample Type _____ Level I _____ Level II _____ Environment Value _____

| Sample ID | Hazardous Substance | Conc. (µg/L) | Benchmark Concentration (AWQC or AMLAC) | % of Benchmark | References |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | Highest Percent | | |

Environment ID: _____ Sample Type _____ Level I _____ Level II _____ Environment Value _____

| Sample ID | Hazardous Substance | Conc. (µg/L) | Benchmark Concentration (AWQC or AMLAC) | % of Benchmark | References |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | Highest Percent | | |

# SURFACE WATER PATHWAY (continued)
# HUMAN FOOD CHAIN THREAT WORKSHEET

| HUMAN FOOD CHAIN THREAT TARGETS | Score | Data Type | Ref's |
|---|---|---|---|

Record the water body type and flow for each fishery within the target distance limit. If there is no fishery within the target distance limit, assign a score of 0 at the bottom of this page.

Fishery Name GENERAL* Water Body _____ Flow _____ cfs

Species _____ Production _____ lbs/yr
Species _____ Production _____ lbs/yr

Fishery Name _____ Water Body _____ Flow _____ cfs

Species _____ Production _____ lbs/yr
Species _____ Production _____ lbs/yr

Fishery Name _____ Water Body _____ Flow _____ cfs

Species _____ Production _____ lbs/yr
Species _____ Production _____ lbs/yr

FOOD CHAIN INDIVIDUAL

7. ACTUAL CONTAMINATION FISHERIES:

If analytical evidence indicates that a fishery has been exposed to a hazardous substance with a bioaccumulation factor greater than or equal to 500 (SI Table 10), assign a score of 50 if there is a Level I fishery. Assign 45 if there is a Level II fishery, but no Level I fishery.

8. POTENTIAL CONTAMINATION FISHERIES:

If there is a release of a substance with a bioaccumulation factor greater than or equal to 500 to a watershed containing fisheries within the target distance limit, but there are no Level I or Level II fisheries, assign a score of 20.

If there is no observed release to the watershed, assign a value for potential contamination fisheries from the table below using the lowest flow at all fisheries within the target distance limit:

| Lowest Flow | FCI Value |
|---|---|
| <10 cfs | 20 |
| 10 to 100 cfs | 2 |
| >100 cfs, coastal tidal waters, oceans, or Great Lakes | 0 |
| 3-mile mixing zone in quiet flowing river | 10 |

FCI Value = 20*

SUM OF TARGETS T = 20*

* ASSUMING FISHERIES PRESENT IN CLOSED DEPRESSION PONDS & OBSERVED RELEASE OF BENZENE

C-28

## SI TABLE 9 (From HRS Table 4-14): DILUTION-WEIGHTED POPULATION VALUES FOR POTENTIAL CONTAMINATION FOR SURFACE WATER MIGRATION PATHWAY (NA)

| Type of Surface Water Body | Pop. | Nearest Intake | Number of people | | | | | | | | | Pop. Value |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0 | 1 to 10 | 11 to 30 | 31 to 100 | 101 to 300 | 301 to 1,000 | 1,001 to 3,000 | 3,001 to 10,000 | 10,001 to 30,000 | |
| Minimal Stream (<10 cfs) | | 20 | 0 | 4 | 17 | 53 | 164 | 522 | 1,633 | 5,214 | 16,325 | |
| Small to moderate stream (10 to 100 cfs) | | 2 | 0 | 0.4 | 2 | 5 | 16 | 52 | 163 | 521 | 1,633 | |
| Moderate to large stream (> 100 to 1,000 cfs) | | 0 | 0 | 0.04 | 0.2 | 0.5 | 2 | 5 | 16 | 52 | 163 | |
| Large Stream to river (>1,000 to 10,000 cfs) | | 0 | 0 | 0.004 | 0.02 | 0.05 | 0.2 | 0.5 | 2 | 5 | 16 | |
| Large River (> 10,000 to 100,000 cfs) | | 0 | 0 | 0 | 0.002 | 0.005 | 0.02 | 0.05 | 0.2 | 0.5 | 16 | |
| Very Large River (>100,000 cfs) | | 0 | 0 | 0 | 0 | 0.001 | 0.002 | 0.005 | 0.02 | 0.05 | 0.2 | |
| Shallow ocean zone or Great Lake (depth < 20 feet) | | 0 | 0 | 0 | 0.002 | 0.005 | 0.02 | 0.05 | 0.2 | 0.5 | 2 | |
| Moderate ocean zone or Great Lake (Depth 20 to 200 feet) | | 0 | 0 | 0 | 0 | 0.001 | 0.002 | 0.005 | 0.02 | 0.05 | 0.2 | |
| Deep ocean zone or Great Lake (depth > 200 feet) | | 0 | 0 | 0 | 0 | 0 | 0.001 | 0.003 | 0.008 | 0.03 | 0.08 | |
| 3-mile mixing zone in quiet flowing river (≥ 10 cfs) | | 10 | 0 | 2 | 9 | 26 | 82 | 261 | 817 | 2,607 | 8,163 | |
| Nearest Intake = | | | | | | | | | | | Sum = | |

References

## SURFACE WATER PATHWAY

### Human Food Chain Actual Contamination Targets Summary Table

On SI Table 10, list the hazardous substances detected in sediment, aqueous, sessile benthic organi tissue, or fish tissue samples (taken from fish caught within the boundaries of the observed release) b sample ID and concentration. Evaluate fisheries within the boundaries of observed releases detected sediment or aqueous samples as Level II, if at least one observed release substance has a bioaccumulation potential factor value of 500 or greater (see SI Table 7). Obtain benchmark, cancer ris and reference dose concentrations from SCDM. For FDAAL benchmarks, determine the highest percentage of benchmark obtained for any substance. For cancer risk and reference dose, sum the percentages for the substances listed. If benchmark, cancer risk, or reference dose concentrations are not available for a particular substance, enter N/A for the percentage. If the highest benchmark percentage sum calculated for cancer risk or reference dose equals or exceeds 100%, evaluate this portion of the fishery as subject to Level I concentrations. If the percentages are less than 100% or all a N/A, evaluate the fishery as a Level II target.

### Sensitive Environment Actual Contamination Targets Summary Table

On SI Table 11, list each hazardous substance detected in aqueous or sediment samples at or beyond wetlands or a surface water sensitive environment by sample ID. Record the concentration. If contaminated sediments or tissues are detected at or beyond a sensitive environment, evaluate the sensitive environment as Level II. Obtain benchmark concentrations from SCDM. For AWQC/AALAC benchmarks, determine the highest percentage of benchmark of the substances detected in aqueous samples. If benchmark concentrations are not available for a particular substance, enter N/A for the percentage. If the highest benchmark percentage equals or exceeds 100%, evaluate that part of the sensitive environment subject to Level I concentrations. If the percentage is less than 100%, or all are N/A, evaluate the sensitive environment as Level II.



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* ASSUMING OBSERVED RELEASE

# SURFACE WATER PATHWAY

## LIKELIHOOD OF RELEASE AND DRINKING WATER THREAT WORKSHEET

| LIKELIHOOD OF RELEASE- OVERLAND/FLOOD MIGRATION | Score | Data Type | Refs |
|---|---|---|---|
| 1. OBSERVED RELEASE: If sampling data or direct observation support a release to surface water in the watershed, assign a score of 550. Record observed release substances on SI Table 7. | 550* | | |
| 2. POTENTIAL TO RELEASE: Distance to surface water: ____(feet) If sampling data do not support a release to surface water in the watershed, use the table below to assign a score from the table below based on distance to surface water and flood frequency. | | | |
| Distance to surface water <2500 feet: 500 | | | |
| Distance to surface water >2500 feet, and: | | | |
| Site in annual or 10-yr floodplain: 500 | | | |
| Site in 100-yr floodplain: 400 | | | |
| Site in 500-yr floodplain: 300 | | | |
| Site outside 500-yr floodplain: 100 | | | |
| Optionally, evaluate surface water potential to release according to HRS Section 4.1.2.1.2 | | | |
| LR = | 550* | | |

| LIKELIHOOD OF RELEASE GROUND WATER TO SURFACE WATER MIGRATION | Score | Data Type | Refs |
|---|---|---|---|
| 1. OBSERVED RELEASE: If sampling data or direct observation support a release to surface water in the watershed, assign a score of 550. Record observed release substances on SI Table 7. | | | |
| NOTE: Evaluate ground water to surface water migration only for a surface water body that meets all of the following conditions: | | | |
| 1) A portion of the surface water is within 1 mile of site sources having a containment factor greater than 0. | | | |
| 2) No aquifer discontinuity is established between the source and the above portion of the surface water body. | | | |
| 3) The top of the uppermost aquifer is at or above the bottom of the surface water. | | | |
| Elevation of top of uppermost aquifer _____ | | | |
| Elevation of bottom of surface water body _____ | | | |
| 2. POTENTIAL TO RELEASE: Use the ground water potential to release. Optionally, evaluate surface water potential to release according to HRS Section 3.1.2. | | | |
| LR' = | | | |

# SURFACE WATER PATHWAY
## LIKELIHOOD OF RELEASE AND DRINKING WATER THREAT WORKSHEET (CONTINUED)

| DRINKING WATER THREAT TARGETS | Score | Data Type | Refs |
|---|---|---|---|
| Record the water body type, flow, and number of people served by each drinking water intake within the target distance limit in the watershed. If there is no drinking water intake within the target distance limit, assign 0 to factors 3, 4, and 5.<br><br>Intake Name / Water Body Type / Flow / People Served<br>_____ / _____ / _____ / _____<br>_____ / _____ / _____ / _____<br>_____ / _____ / _____ / _____<br><br>Are any intakes part of a blended system? Yes _____ No _____<br>If yes, attach a page to show apportionment calculations.<br><br>3. ACTUAL CONTAMINATION TARGETS: If analytical evidence indicates a drinking water intake has been exposed to a hazardous substance from the site, list the intake name and evaluate the factor score for the drinking water population (SI Table 8).<br><br>_____ , _____<br><br>Level I: _____ people x 10 = _____<br>Level II: _____ people x 1 = _____ Total = | | | |
| 4. POTENTIAL CONTAMINATION TARGETS: Determine the number of people served by drinking water intakes for the watershed that have not been exposed to a hazardous substance from the site. Assign the population values from SI Table 9. Sum the values and multiply by 0.1. | | | |
| 5. NEAREST INTAKE: Assign a score of 50 for any Level I Actual Contamination Drinking Water Targets for the watershed. Assign a score of 45 if there are Level II targets for the watershed, but no Level I targets. If no Actual Contamination Drinking Water Targets exist, assign a score for the intake nearest the PPE from SI Table 9. If no drinking water intakes exist, assign 0. | | | |
| 6. RESOURCES: Assign a score of 5 if one or more surface water resource applies; assign 0 if none applies.<br>• Irrigation (5 acre minimum) of commercial food crops or commercial forage crops<br>• Watering of commercial livestock<br>• Ingredient in commercial food preparation<br>• Major or designated water recreation area, excluding drinking water use | | | |
| SUM OF TARGETS T= | ~0 | | |



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* ASSUMING OBSERVED RELEASE TO SURFACE WATER

Site Name: ITT THOMPSON

Location: MADISON, MADISON COUNTY, FLORIDA

# SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET

| Factor Categories and Factors | Maximum Value | Value Assigned | Reference |
|---|---|---|---|
| **DRINKING WATER THREAT** | | | |
| Likelihood of Release | | | |
| 1. Observed Release | 550 | 550* | |
| 2. Potential Release by Overland Flow | | | |
| 2a. Containment (Table 4-2) | 10 | | |
| 2b. Runoff (Table 4-6) | 25 | | |
| 2c. Distance to Surface Water (Table 4-7) | 25 | | |
| 2d. Potential to Release by Overland Flow [lines 2a x (2b + 2c)] | 500 | | |
| 3. Potential to Release by Flood | | | |
| 3a. Containment (Flood) (Table 4-8) | 10 | | |
| 3b. Flood Frequency (Table 4-9) | 50 | | |
| 3c. Potential to Release by Flood (lines 3a x 3b) | 500 | | |
| 4. Potential to Release (lines 2d + 3c, subject to a maximum of 500) | 500 | | |
| 5. Likelihood of Release (higher of lines 1 and 4) | 550 | | 550* |

Site Name: _____

Location: _____

# SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET

| Factor Categories and Factors | Maximum Value | Value Assigned | Reference |
|---|---|---|---|
| **DRINKING WATER THREAT** | | | |
| **Likelihood of Release** | | | |
| 1. Observed Release | 550 | | |
| 2. Potential Release by Overland Flow | | | |
| 2a. Containment (Table 4-2) | 10 | | |
| 2b. Runoff (Table 4-6) | 25 | | |
| 2c. Distance to Surface Water (Table 4-7) | 25 | | |
| 2d. Potential to Release by Overland Flow [lines 2a x (2b + 2c)] | 500 | | |
| 3. Potential to Release by Flood | | | |
| 3a. Containment (Flood) (Table 4-8) | 10 | | |
| 3b. Flood Frequency (Table 4-9) | 50 | | |
| 3c. Potential to Release by Flood (lines 3a x 3b) | 500 | | |
| 4. Potential to Release (lines 2d + 3c, subject to a maximum of 500) | 500 | | |
| 5. Likelihood of Release (higher of lines 1 and 4) | 550 | | |

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# SURFACE WATER PATHWAY

Sketch of the Surface Water Migration Route:
Label all surface water bodies. Include runoff route and drainage direction, probable point of entry, and 15-mile target distance limit. Mark sample locations, intakes, fisheries, and sensitive environments. Indicate flow directions, tidal influence, and rate.

SEE FIGURES 1 AND 2.

NOTE: SURFACE WATER PATHWAY SCORE CALCULATED ASSUMING AN OBSERVED RELEASE TO SEE IF THE PATHWAY MIGHT CONTRIBUTE TO THE SITE SCORE.

* ASSUME OBSERVED RELEASE OF SITE CONTAMINANTS TO SURFACE WATER — NO BACKGROUND CONCENTRATIONS FOR METALS DETECTED IN POND SAMPLES (SEDIMENT)

– NO VOCs DETECTED IN POND SAMPLES (SEDIMENT)

** ASSUMING BENZENE PRESENT IN SEDIMENT SAMPLE

a FOOD CHAIN
b ENVIRONMENTAL

## SI TABLE 7: SURFACE WATER OBSERVED RELEASE SUBSTANCES

| Sample ID | Hazardous Substance | Bckgrd. Conc. | Toxicity/ Persistence | Toxicity/ Persis./ Bioaccum | Ecotoxicity/ Persis/ Ecobioaccum | References |
|---|---|---|---|---|---|---|
| ITSD-1A | CHROMIUM | NA | 10,000 | 50,000 | 50,000 | |
| ITSD-1A | LEAD | NA | 10,000 | ~~500,000~~[a] ~~$5\times10^7$~~[b] | ~~50,000~~[a] ~~$5\times10^4$~~[b] | |
| ** | **BENZENE | NA | 40 | 200,000[a] 20,000[b] | 200,000[a] 20,000[b] | 63,73,74 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | Highest Values | | | | | |

## SI TABLE 8: SURFACE WATER DRINKING WATER ACTUAL CONTAMINATION TARGETS

Intake ID: _____ Sample Type _____ Level I _____ Level II _____ Population Served _____ References _____

| Sample ID | Hazardous Substance | Conc. (µg/L) | Benchmark Conc. (MCL or MCLG) | % of Benchmark | Cancer Risk Conc. | % of Cancer Risk Conc. | RfD | % of RfD |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | Highest Percent | | Sum of Percents | | Sum of Percents | |

Intake ID: _____ Sample Type _____ Level I _____ Level II _____ Population Served _____ References _____

| Sample ID | Hazardous Substance | Conc. (µg/L) | Benchmark Conc. (MCL or MCLG) | % of Benchmark | Cancer Risk Conc. | % of Cancer Risk Conc. | RfD | % of RfD |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | Highest Percent | | Sum of Percents | | Sum of Percents | |

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# GROUND WATER PATHWAY WORKSHEET (concluded)

| WASTE CHARACTERISTICS | | Score | Data Type | Do not Ado |
|---|---|---|---|---|
| 8. | If any Actual Contamination Targets exist for the aquifer or overlying aquifers, assign the calculated hazardous waste quantity score or a score of 100, whichever is greater; if no Actual Contamination Targets exist, assign the hazardous waste quantity score calculated for sources available to migrate to ground water. | 10 | | |
| 9. | Assign the highest ground water toxicity/mobility value from SI Table 3 or 4. | 10,000 (VINYL CHLORIDE) | | |
| 10. | Multiply the ground water toxicity/mobility and hazardous waste quantity scores. Assign the Waste Characteristics score from the table below: (from HRS Table 2-7) | | | |

100,000 (1E+5)

| Product | WC Score |
|---|---|
| 0 | 0 |
| >0 to <10 | 1 |
| 10 to <100 | 2 |
| 100 to <1,000 | 3 |
| 1,000 to < 10,000 | 6 |
| 10,000 to <1E + 05 | 10 |
| 1E + 05 to <1E + 06 | 18 |
| 1E + 06 to <1E + 07 | 32 |
| 1E + 07 to <1E + 08 | 56 |
| 1E + 08 or greater | 100 |

WC = 18

Multiply LR by T and by WC. Divide the product by 82,500 to obtain the ground water pathway score for each aquifer. Select the highest aquifer score. If the pathway score is greater than 100, assign 100.

GROUND WATER PATHWAY SCORE: $\frac{LR \times T \times WC}{82,500}$

(Maximum a: 100)

FLORIDAN AQUIFER SYSTEM

(1) INTERCONNECTED AQUIFERS/OBSERVED RELEASE TO FLORIDAN SCENARIO:

LR=550; T= 541.4; WC=18 $\quad \frac{550 \times 541.4 \times 18}{82,500} = \boxed{64.97}$

(2) POTENTIAL TO RELEASE: KARST TERRAIN AND DEPTH TO AQUIFER FROM CONTAMINATION <70 FT:

LR=500; T=541.4; WC=18 $\quad \frac{500 \times 541.4 \times 18}{82,500} = \boxed{59.06}$

(3) POTENTIAL TO RELEASE (BASED ON HRS SECTION 3):

$\frac{430 \times 541.4 \times 18}{} = \boxed{\quad}$

GROUNDWATER PATHWAY SCORE:

FLORIDAN AQUIFER SYSTEM (CONTINUED)

(4) OBSERVED RELEASE TO FLORIDAN INCORPORATING ACTUAL CONTAMINATION IN YELLOW PINES SUBDIVISION PRIVATE WELLS:

LR = 550; T = 1,267.40; WC = 18

$$\frac{550 \times 1{,}267.40 \times 18}{82{,}500} = 152.09$$

152.09 SUBJECT TO MAXIMUM OF 100

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS
AMPAD

OBSERVED RELEASE: INCLUDES ACTUAL CONTAMINATION SCENARIO OF YELLOW PINES SUBDIVISION WELLS

# GROUND WATER PATHWAY WORKSHEET

| LIKELIHOOD OF RELEASE | Score | Data Type | Refs |
|---|---|---|---|
| 1. OBSERVED RELEASE. If sampling data or direct observation support a release to the aquifer, assign a score of 550. Record observed release substances on SI Table 4 | 550 | | |
| 2. POTENTIAL TO RELEASE. Depth to aquifer: _____ feet. If sampling data do not support a release to the aquifer, and the site is in karst terrain or the depth to aquifer is 70 feet or less, assign a score of 500; otherwise, assign a score of 340. Optionally, evaluate potential to release according to HRS Section 3. | | | |
| LR = | 550 | | |

TARGETS

Are any wells part of a blended system? Yes____ No____
If yes, attach a page to show apportionment calculations.
YELLOW PINES SUBDIVISION WELLS

3. ACTUAL CONTAMINATION TARGETS: If analytical evidence indicates that any target drinking water well for the aquifer has been exposed to a hazardous substance from the site, evaluate the factor score for the number of people served (SI Table 5).

20 WELLS Level I: 55 people x 10 = 550
53 WELLS Level II: 146 people x 1 = 146 Total = 696

| | | | |
|---|---|---|---|
| 4. POTENTIAL CONTAMINATION TARGETS: Determine the number of people served by drinking water wells for the aquifer or overlying aquifers that are not exposed to a hazardous substance from the site: record the population for each distance category in SI Table 6a or 6b. Sum the population values and multiply by 0.1. | 521.4 | | 21, 22, 63 |
| 5. NEAREST WELL: Assign a score of 50 for any Level I Actual Contamination Targets for the aquifer or overlying aquifer. Assign a score of 45 if there are Level II targets but no Level I targets. If no Actual Contamination Targets exist, assign the Nearest Well score from SI Table 6a or 6b. If no drinking water wells exist within 4 miles, assign 0. | 50 | | |
| 6. WELLHEAD PROTECTION AREA (WHPA): If any source lies within or above a WHPA for the aquifer, or if a ground water observed release has occurred within a WHPA, assign a score of 20; assign 5 if neither condition applies but a WHPA is within 4 miles; otherwise assign 0. | / | | |
| 7. RESOURCES: Assign a score of 5 if one or more ground water resource applies; assign 0 if none applies.<br>• Irrigation (5 acre minimum) of commercial food crops or commercial forage crops<br>• Watering of commercial livestock<br>• Ingredient in commercial food preparation<br>• Supply for commercial aquaculture<br>• Supply for a major or designated water recreation area, excluding drinking water use | | | |
| Sum of Targets T= | 1267.4 | | |

SI TABLE 6 (From HRS TABLE 3-12): VALUES FOR POTENTIAL CONTAMINATION GROUND WATER TARGET POPULATIONS (continued)

SI Table 6b: Karst Aquifers

FLORIDAN AQUIFER SYSTEM
NOTE: INCLUDING ONLY MUNICIPAL WELLS

| Distance from Site | Pop. | Nearest Well (choose highest) | Population Served by Wells within Distance Category: 1 to 10 | 11 to 30 | 31 to 100 | 101 to 300 | 301 to 1000 | 1001 to 3000 | 3001 to 10,000 | 10,001 to 30,000 | 30,001 to 100,000 | 100,001 to 300,000 | 300,001 to 1,000,000 | 1,000,000 to 3,000,000 | Pop. Value | Ref. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 to $\frac{1}{4}$ mile | | 20 | 4 | 17 | 53 | 164 | 522 | 1,633 | 5,214 | 16,325 | 52,137 | 163,246 | 521,360 | 1,632,455 | | |
| > $\frac{1}{4}$ to $\frac{1}{2}$ mile | | 20 | 2 | 11 | 33 | 102 | 324 | 1,013 | 3,233 | 10,122 | 32,325 | 101,213 | 323,243 | 1,012,122 | | |
| > $\frac{1}{2}$ to 1 mile | 3,150 | (20) | 2 | 9 | 26 | 82 | 261 | 817 | (2,607) | 8,163 | 26,068 | 81,623 | 260,680 | 816,227 | 2,607 | 21,22, 63 |
| > 1 to 2 miles | 3150 | 20 | 2 | 9 | 26 | 82 | 261 | 817 | (2,607) | 8,163 | 26,068 | 81,623 | 260,680 | 816,227 | 2,607 | 21,22, 63 |
| > 2 to 3 miles | | 20 | 2 | 9 | 26 | 82 | 261 | 817 | 2,607 | 8,163 | 26,068 | 81,623 | 260,680 | 816,227 | | |
| >3 to 4 miles | | 20 | 2 | 9 | 26 | 82 | 261 | 817 | 2,607 | 8,163 | 26,068 | 81,623 | 260,680 | 816,227 | | |
| Nearest Well = | | 20 | | | | | | | | | | | | Sum = | 5,214 | |

## Table 1

## ESTIMATED DISTRIBUTION OF POTABLE WELLS WITHIN 4 MILES OF ITT THOMPSON SITE MADISON, MADISON COUNTY, FLORIDA

| WELL DESCRIPTION | 0 to 0.25 mile (# wells/population served) | 0.25 to 0.5 mile (# wells/population served) | 0.5 to 1 mile (# wells/population served) | 1 to 2 miles (# wells/population served) | 2 to 3 miles (# wells/population served) | 3 to 4 miles (# wells/population served) |
|---|---|---|---|---|---|---|
| Municipal[a] | 0/0 | 0/0 | 1/3,150 | 1/3,150 | 0/0 | 0/0 |
| Community/Commercial | 0/0 | 0/0 | 1/100 | 1/60 | 0/0 | 0/0 |
| Private[b] | 0/0 | 10/28 | 144/396 | NE | NE | NE |
| Totals | 0/0 | 10/28 | 146/3,646 | 2/3,210 | 0/0 | 0/0 |

Notes: After FDEP 1997 [63].
Wells are open to the Floridan aquifer system.

[a] City of Madison The City of Madison and limited outlying areas are provided water by the Madison Water Department. This system currently consists of two main wells (Barrs and Chason Wells) and a standby well (Coody Well). These wells are open to the upper portion of the Floridan aquifer system and are located between 0.7 mile (Barrs Well) and 1.8 miles (Chason Well) from the ITT Thompson site. Two former standby wells (Francis Wells 1 & 2), located approximately 0.25 mile from the site, are no longer in operation. the Madison Water Department currently serves 6,300 people (1,900 service connection) [2, 20, 21, 22]. Apportionment = 6,300/2 (Main wells only) = 3,150 people per well [63].

[b] During the Preliminary Assessment [63], private well estimates were conducted out to 1 mile from the site. This area included areas not serviced by the City of Madison Water Department (topographic housecount) and the Yellow Pines subdivision. Most potable supply wells in the area are open to the upper 100 feet of the Floridan aquifer system. Reported well depths for some of the Yellow Pines Subdivision wells range from 145 to 195 feet. As a result of the TCE contamination, the City of Madison has extended water lines into the subdivision as an alternate source of potable water. The average persons per household in Madison County is 2.75 (U.S. 1990 Census) [2, 7, 15, 22, 27, 32, 35, 36, 39, 40, 52, 63].

Key:

NE = Not evaluated.

# GROUND WATER PATHWAY WORKSHEET

| LIKELIHOOD OF RELEASE | Score | Data Type | Refs |
|---|---|---|---|
| 1. OBSERVED RELEASE. If sampling data or direct observation support a release to the aquifer, assign a score of 550. Record observed release substances on SI Table 4 | 550[a] | | 1, 15, 18, 39, 63 |
| 2. POTENTIAL TO RELEASE: Depth to aquifer: <20[b] feet. If sampling data do not support a release to the aquifer, and the site is in karst terrain or the depth to aquifer is 70 feet or less, assign a score of 500; otherwise, assign a score of 340. Optionally, evaluate potential to release according to HRS Section 3. | 500[d]/430 | | 4, 50, 51, 63, 74 |
| [d] POTENTIAL TO RELEASE BASED ON KARST TERRAIN AND DEPTH TO AQUIFER < 70 FEET (SEE ABOVE) LR = | | | |

**TARGETS**

| | | | |
|---|---|---|---|
| Are any wells part of a blended system? Yes____ No____<br>If yes, attach a page to show apportionment calculations.<br><br>3. ACTUAL CONTAMINATION TARGETS: If analytical evidence indicates that any target drinking water well for the aquifer has been exposed to a hazardous substance from the site, evaluate the factor score for the number of people served (SI Table 5).<br><br>Level I: _____ people x 10 = _____<br>Level II: _____ people x 1 = _____ Total = | | | |
| 4. POTENTIAL CONTAMINATION TARGETS: Determine the number of people served by drinking water wells for the aquifer or overlying aquifers that are not exposed to a hazardous substance from the site; record the population for each distance category in SI Table 6a or 6b. Sum the population values and multiply by 0.1. | 521.4[c] | | 21, 63 |
| 5. NEAREST WELL: Assign a score of 50 for any Level I Actual Contamination Targets for the aquifer or overlying aquifer. Assign a score of 45 if there are Level II targets but no Level I targets. If no Actual Contamination Targets exist, assign the Nearest Well score from SI Table 6a or 6b. If no drinking water wells exist within 4 miles, assign 0. | 20 | | 22, 63 |
| 6. WELLHEAD PROTECTION AREA (WHPA): If any source lies within or above a WHPA for the aquifer, or if a ground water observed release has occurred within a WHPA, assign a score of 20; assign 5 if neither condition applies but a WHPA is within 4 miles; otherwise assign 0. | | | |
| 7. RESOURCES: Assign a score of 5 if one or more ground water resource applies; assign 0 if none applies.<br><br>• Irrigation (5 acre minimum) of commercial food crops or commercial forage crops<br>• Watering of commercial livestock<br>• Ingredient in commercial food preparation<br>• Supply for commercial aquaculture<br>• Supply for a major or designated water recreation area, excluding drinking water use | | | |
| [c] INCLUDES ONLY MUNICIPAL WELLS Sum of Targets T= | 541.4 | | |

[a] BASED ON KARST TOPOGRAPHY/POTENTIAL INTERCONNECTIVITY OF AQUIFERS (SURF. & INTERMED. FLORIDAN) AND/OR PRESENCE OF TCE (POTENTIALLY ATTRIBUTABLE TO SITE) IN YELLOW PINES SUBDIVISION PRIVATE FLORIDAN WELLS.

# GROUND WATER PATHWAY
# GROUND WATER USE DESCRIPTION

Describe Ground Water Use within 4 Miles of the Site:
Describe generalized stratigraphy, aquifers, municipal and private wells

A DETAILED DESCRIPTION OF GROUNDWATER USE AND THE GEOLOGY/HYDROGEOLOG OF THE SITE AREA IS INCLUDED IN THE SI REPORT. THE CITY OF MADISON UTILIZES TWO FLORIDAN AQUIFER SYSTEM SUPPLY WELLS: THE BARRS WELL IS LOCATED ~ 0.7 MILES WEST OF THE SITE; THE CHASON WELL IS LOCATED ~ 1.8 MILES SOUTH-SOUTHWEST OF THE SITE. THE CITY OF MADISON SERVES ~ 6,300 PEOPLE [2,20,21,22,63]. PRIVATE FLORIDAN WELLS IN THE YELLOW PINES SUBDIVISION, ESTIMATED AT 144 WELLS AND LOCATED BETWEEN ~ 0.6 AND 0.8 MILES TO THE EAST OF THE SITE, HAVE EXHIBITED TCE CONCENTRATIONS POTENTIALLY ATTRIBUTABLE TO THE SITE. SEE TABLE 1 FOR THE ESTIMATED NUMBER OF WELLS AND POPULATION SERVED WITHIN A 4-MILE RADIUS OF THE SITE. [2,20,21,22,63].

Show Calculations of Ground Water Drinking Water Populations for each Aquifer:
Provide apportionment calculations for blended supply systems.
County average number of persons per household: 2.75 Reference 7

MUNICIPAL SUPPLY WELL APPORTIONMENT CALCULATIONS:
(FLORIDAN AQUIFER SYSTEM)

$$\frac{6{,}300 \text{ PEOPLE SERVED}}{2 \text{ ACTIVE WELLS}} = 3{,}150 \text{ PEOPLE/WELL}$$

[BARRS & CHASON WELLS]

SEE TABLE 1 FOR DRINKING WATER POPULATIONS.

Site Name: ITT THOMPSON
Location: MADISON, MADISON COUNTY, FLORIDA

FLORIDAN AQUIFER SYSTEM

# GROUND WATER MIGRATION PATHWAY SCORESHEET

## FACTOR CATEGORIES AND FACTORS

| Likelihood of Release to an Aquifer | Maximum Value | Value Assigned | | Reference |
|---|---|---|---|---|
| 1. Observed Release | 550 | 550[a] | | 1,15,18,39,63 |
| 2. Potential to Release | | | | |
| 2a. Containment (Table 3-2) | 10 | 10[b] | | 4,50,51,63,74 |
| 2b. Net Precipitation (Figure 3-2) | 10 | 3 | | 4 |
| 2c. Depth to Aquifer (Table 3-5) | 5 | 5 | (KARST AREA AND VOCs AT AT LEAST 70' BGS) | 15,18,74 |
| 2d. Travel Time (Table 3-6, 3-7) | 35 | 35[c] | | 74 |
| 2e. Potential to Release [lines 2a x (2b + 2c + 2d)] | 500 | 430 | | |
| Likelihood of Release (higher of lines 1 and 2c) | 550 | | | |

D ON POTENTIAL INTERCONNECTIVITY OF SURFICIAL AQUIFER SYSTEM AND FLORIDAN AQUIFER SYSTEM IN SITE AREA (KARST TOPOGRAPHY/SINKHOLE FEATURES IN IMMEDIATE SITE VICINITY) AND/OR PRESENCE OF TCE CONTAMINATION IN YELLOW PINES SUBDIVISION FLORIDAN AQUIFER SYSTEM PRIVATE WELLS (POTENTIALLY ATTRIBUTABLE TO SITE)

DENCE F VOC SOIL CONTAMINATION; REPORTED WASTE DI SAL OFF-SITE IN VICINITY OF POND [77,74]

F BASED ON EXCESSIVE VOC CONCENTRATIONS AT AT LEAST 70' BGS; INTERBEDDED NATURE OF SEDIMENTS (BEDDING < 3' IN THICKNESS)

## Ground Water Observed Release Substances Summary Table

On SI Table 4, list the hazardous substances associated with the site detected in ground water samples for that aquifer. Include only those substances directly observed or with concentrations significantly greater than background levels. Obtain toxicity values from the Superfund Chemical Data Matrix (SCDM). Assign mobility a value of 1 for all observed release substances regardless of the aquifer being evaluated. For each substance, multiply the toxicity by the mobility to obtain the toxicity/mobility factor value; enter the highest toxicity/mobility value for the aquifer in the space provided.

## Ground Water Actual Contamination Targets Summary Table

If there is an observed release at a drinking water well, enter each hazardous substance meeting the requirements for an observed release by well and sample ID on SI Table 5 and record the detected concentration. Obtain benchmark, cancer risk, and reference dose concentrations from SCDM. For MCL and MCLG benchmarks, determine the highest percentage of benchmark obtained for any substance. For cancer risk and reference dose, sum the percentages for the substances listed. If benchmark, cancer risk, or reference dose concentrations are not available for a particular substance, enter N/A for the percentage. If the highest benchmark percentage or the percentage sum calculated for cancer risk or reference dose equals or exceeds 100%, evaluate the population using the well as a Level I target. If these percentages are less than 100% or all are N/A, evaluate the population using the well as a Level II target for that aquifer.

## SI TABLE 4: GROUND WATER OBSERVED RELEASE SUBSTANCES (BY AQUIFER)

SURFICIAL AQUIFER SYSTEM
AND
INTERMEDIATE AQUIFER SYSTEM
ON-SITE WELLS
("A" ZONE AND "B" ZONE WELLS

| Sample ID | Hazardous Substance | Bckgrd. Conc. | Toxicity/ Mobility | References |
|---|---|---|---|---|
| ITGW-2,3,4,4-DUP | BENZENE | 0.5U | 100 | SI |
| ITGW-2,4,4-DUP | 1,1-DICHLOROETHANE | 0.5U | 10 | SI |
| ITGW-3,4,4-DUP | 1,2-Dichloroethylene | 0.5U | 100 | SI |
| ITGW-2,3,4,4-DUP | CIS-1,2-Dichloroethylene | 1.0U | 100 | SI |
| ITGW-3,4,4-DUP | TRANS-1,2-Dichloroethylene | 0.5U | 100 | SI |
| ITGW-3,4,4-DUP | ETHYLBENZENE | 0.5U | 10 | SI |
| ITGW-4,4-DUP | TRICHLOROETHYLENE | 0.5U | 10 | SI |
| ITGW-2,3,4,4-DUP | VINYL CHLORIDE | 0.5U | 10,000 | SI |
| ITGW-3,4,4-DUP | TOLUENE | 0.5U | 10 | SI |
| ITGW-2,3,4,4-DUP & 6 AND 7 | TOTAL XYLENES | Highest Toxicity/Mobility | 10,000 ← VINYL CHLORIDE | |
| | | 0.5U | 10 | SI |

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## SI TABLE 5: GROUND WATER ACTUAL CONTAMINATION TARGETS

Well ID: _____ Level I _____ Level II _____ Population Served _____ References _____

| Sample ID | Hazardous Substance | Conc. (µg/L) | Benchmark Conc. (MCL or MCLG) | % of Benchmark | Cancer Risk Conc. | % of Cancer Risk Conc. | RfD | % of RfD |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | Highest Percent | | Sum of Percents | | Sum of Percents | |

Well ID: _____ Level I _____ Level II _____ Population Served _____ References _____

| Sample ID | Hazardous Substance | Conc. (µg/L) | Benchmark Conc. (MCL or MCLG) | % of Benchmark | Cancer Risk Conc. | % of Cancer Risk Conc. | RfD | % of RfD |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | Highest Percent | | Sum of Percents | | Sum of Percents | |



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# HAZARDOUS WASTE QUANTITY (HWQ) CALCULATION

For each migration pathway, evaluate HWQ associated with sources that are available (i.e., incompletely contained) to migrate to that pathway. (Note: If *Actual Contamination Targets* exist for ground water, surface water, or air migration pathways, assign the calculated HWQ score or 100, whichever is greater, as the HWQ score for that pathway.) For each source, evaluate HWQ for one or more of the four tiers (SI Table 1; HRS Table 2-5) for which data exist: constituent quantity, wastestream quantity, source volume, and source area. Select the tier that gives the highest value as the source HWQ. Select the source volume HWQ rather than source area HWQ if data for both tiers are available.

Column 1 of SI Table 1 indicates the quantity tier. Column 2 lists source types for the four tiers. Columns 3, 4, 5, and 6 provide ranges of waste amount for sites with only one source, corresponding to HWQ scores at the tops of the columns. Column 7 provides formulas to obtain source waste quantity values at sites with multiple sources.

1. Identify each source type.
2. Examine all waste quantity data available for each source. Record constituent quantity and waste stream mass or volume. Record dimensions of each source.
3. Convert source measurements to appropriate units for each tier to be evaluated.
4. For each source, use the formulas in the last column of SI Table 1 to determine the waste quantity value for each tier that can be evaluated. Use the waste quantity value obtained from the highest tier as the quantity value for the source.
5. Sum the values assigned to each source to determine the total site waste quantity.
6. Assign HWQ score from SI Table 2 (HRS Table 2-6).

Note these exceptions to evaluate soil exposure pathway HWQ (see HRS Table 5-2):

- The divisor for the area (square feet) of a landfill is 34,000.
- The divisor for the area (square feet) of a pile is 34.
- Wet surface impoundments and tanks and non-drum containers are the only sources for which volume measurements are evaluated for the soil exposure pathway.

SI TABLE 2: HWQ SCORES FOR SITES

| Site WQ Total | HWQ Score |
|---|---|
| 0 | 0 |
| 1[a] to 100 | 1[b] |
| > 100 to 10,000 | 100 |
| > 10,000 to 1 million | 10,000 |
| > 1 million | 1,000,000 |

[a] If the WQ total is between 0 and 1, round it to 1.

[b] If the hazardous constituent quantity data are not complete, assign the score of 10.

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# SI TABLE 3: WASTE CHARACTERIZATION WORKSHEET

Site Name: ITT THOMPSON

References 1, 27, 29, 63, 64, 73, 74

Sources:

1. ABOVE GROUND STORAGE TANKS / DRUM/RAW MATERIAL STORAGE VOC SOIL CONTAMINATION
2. WASTE DISPOSAL (SW CORNER OF SITE/POND)
3. ELECTRO PLATING (CATHODIC CLEANING) OPERATION
5.
6.
7.
8.
9.

| SOURCE | HAZARDOUS SUBSTANCE | TOXICITY | GROUND WATER PATHWAY | | SURFACE WATER PATHWAY | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | OVERLAND/FLOOD MIGRATION | | | | | | | GROUND WATER TO SURFACE WATER NA | | | |
| | | | GW Mobility (HRS Table 3-8) | Tox/ Mobility Value (HRS Table 3-9) | Per (HRS Tables 4-10 and 4-11) | Tox/Per Value (HRS Table 4-12) | Bioac Pot. (HRS Table 4-15) | Tox/ Pers/ Bioac Value (HRS Table 4-16) | Ecotox (HRS Table 4-19) | Ecotox/ Pers (HRS Table 4-20) | Ecotox/ Pers/ Bioacc Value (HRS Table 4-21) | Tox/ Mob/ Pers Value (HRS Table 4-26) | Tox/ Mob/ Pers/ Bioacc Value (HRS Table 4-28) | Ecotox/ Mob/ Pers Value (HRS Table 4-29) | Ecotox/ Mob/ Pers/ Bioacc Value (HRS Table 4-30) |
| 1,2,4 | VINYL CHLORIDE | 10,000 | 1 | 10,000 | 0.07 | 700 | 5 | 3,500 | — | — | — | | | | |
| 1,2,4 | TCE | 10 | 1 | 10 | 1 | 10 | 50 | 500 | 100 | 100 | 5,000 | | | | |
| 1,2,4 | CIS-1,2-DCE | 100 | 1 | 100 | 1 | 100 | 5 | 500 | — | — | — | | | | |
| 1,2,4 | TRANS-1,2-DCE | 100 | 1 | 100 | 1 | 100 | 50 | 5,000 | 1 | 1 | 50 | | | | |
| 1,2,4 | TOLUENE | 10 | 1 | 10 | 0.4 | 4 | 50 | 200 | 100 | 40 | 2,000 | | | | |
| 1,2,4 | BENZENE | 100 | 1 | 100 | 0.4 | 40 | 5000 a / 600 b | 200,000 a / 20,000 b | 100 | 40 | 200,000 a / 20,000 b | | | | |
| 1,2,4 | ETHYLBENZENE | 10 | 1 | 10 | 0.4 | 4 | 50 | 200 | 100 | 40 | 2,000 | | | | |
| 1,2,4 | TOTAL XYLENES | 10 | 1 | 10 | 1 | 10 | 50 | 500 | 100 | 100 | 5,000 | | | | |
| | | | | | | | | | | | | | | | |
| 2,3 | CHROMIUM | 10,000 | | | 1 | 10,000 | 5 | 50,000 | 10,000 | 10,000 | 50,000 | | | | |
| 2,3 | LEAD | 10,000 | | | 1 | 10,000 | 50 a / 5000 b | 600,000 a / 5 x 10⁶ b | 1,000 | 1,000 | 50,000 a / 5 x 10⁶ b | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

* NO BACKGROUND SAMPLE COLLECTED (SEDIMENT)

a FOOD CHAIN BIOACCUMULATION (FRESH WATER)

b ENVIRONMENTAL BIOACCUMULATION (FRESH WATER)



ecology and environment

SI TABLE 1: HAZARDOUS WASTE QUANTITY (HWQ) SCORES FOR SINGLE SOURCE SITES AND FORMULAS FOR MULTIPLE SOURCE SITES

| | | Single Source Sites (assigned HWQ scores) | |
|---|---|---|---|
| (Column 1) TIER | (Column 2) Source Type | (Column 3) HWQ = 10 | (Column 4) HWQ = 100 |
| A Hazardous Constituent Quantity | N/A | HWQ = 1 if Hazardous Constituent Quantity data are complete<br>HWQ = 10 if Hazardous Constituent Quantity data are not complete | >100 to 10,000 lbs |
| B Hazardous Wastestream Quantity | N/A | ≤ 500,000 lbs | >500,000 to 50 million lbs |
| C Volume | Landfill | ≤ 6.75 million ft³<br>≤ 250,000 yd³ | >6.75 million to 675 million ft³<br>>250,000 to 25 million yd³ |
| | Surface impoundment | ≤6,750 ft³<br>≤250 yd³ | >6,750 to 675,000 ft³<br>>250 to 25,000 yd³ |
| | Drums | ≤1,000 drums | >1,000 to 100,000 drums |
| | Tanks and non-drum containers | ≤50,000 gallons | >50,000 to 5 million gallons |
| | Contaminated soil | ≤6.75 million ft³<br>≤250,000 yd³ | >6.75 million to 675 million ft³<br>>250,000 to 25 million yd³ |
| | Pile | ≤6,750 ft³<br>≤250 yd³ | >6,750 to 675,000 ft³<br>>250 to 25,000 yd³ |
| | Other | ≤6,750 ft³<br>≤250 yd³ | >6,750 to 675,000 ft³<br>>250 to 25,000 yd³ |
| D Area | Landfill | ≤340,000 ft²<br>≤7.8 acres | >340,000 to 34 million ft²<br>>7.8 to 780 acres |
| | Surface impoundment | ≤1,300 ft²<br>≤0.029 acres | >1,300 to 130,000 ft²<br>>0.029 to 2.9 acres |
| | Contaminated soil | ≤3.4 million ft²<br>≤78 acres | >3.4 million to 340 million ft²<br>>78 to 7,800 acres |
| | Pile | ≤1,300 ft²<br>≤0.029 acres | >1,300 to 130,000 ft²<br>>0.029 to 2.9 acres |
| | Land treatment | ≤27,000 ft²<br>≤0.62 acres | >27,000 to 2.7 million ft²<br>>0.62 to 62 acres |

TABLE 1 (CONTINUED)

| Single Source Sites (assigned HWQ scores) | | Multiple Source Sites | | |
|---|---|---|---|---|
| (Column 5) HWQ = 10,000 | (Column 6) HWQ = 1,000,000 | (Column 7) Divisors for Assigning Source WQ Values | (Column 2) Source Type | (Column 1) TIER |
| >10,000 to 1 million lbs | > 1 million lbs | lbs ÷ 1 | N/A | A Hazardous Constituent Quantity |
| >50 million to 5 billion lbs | > 5 billion lbs | lbs ÷ 5,000 | N/A | B Hazardous Wastestream Quantity |
| >675 million to 67.5 billion ft³<br>>25 million to 2.5 billion yd³ | > 67.5 billion ft³<br>> 2.5 billion yd³ | ft³ ÷ 67,500<br>yd³ ÷ 2,500 | Landfill | C Volume |
| >675,000 to 67.5 million ft³<br>>25,000 to 2.5 million yd³ | > 67.5 million ft³<br>> 2.5 million yd³ | ft³ ÷ 67.5<br>yd³ ÷ 2.5 | Surface Impoundment | |
| >100,000 to 10 million drums | > 10 million drums | drums ÷ 10 | Drums | |
| >5 million to 500 million gallons | > 500 million gallons | gallons ÷ 500 | Tanks and non-drum containers | |
| >675 million to 67.5 billion ft³<br>>25 million to 2.5 billion yd³ | > 67.5 billion ft³<br>> 2.5 billion yd³ | ft³ ÷ 67,500<br>yd³ ÷ 2,500 | Contaminated Soil | |
| >675,000 to 67.5 million ft³<br>>25,000 to 2.5 million yd³ | > 67.5 million ft³<br>> 2.5 million yd³ | ft³ ÷ 67.5<br>yd³ ÷ 2.5 | Pile | |
| >675,000 to 67.5 million ft³<br>>25,000 to 2.5 million yd³ | > 67.5 million ft³<br>> 2.5 million yd³ | ft³ ÷ 67.5<br>yd³ ÷ 2.5 | Other | |
| >34 million to 3.4 billion ft²<br>>780 to 78,000 acres | > 3.4 billion ft²<br>>78,000 acres | ft² ÷ 3,400<br>acres ÷ 0.078 | Landfill | D Area |
| >130,000 to 13 million ft²<br>>2.9 to 290 acres | > 13 million ft²<br>> 290 acres | ft² ÷ 13<br>acres ÷ 0.00029 | Surface Impoundment | |
| > 340 million to 34 billion ft²<br>> 7,800 to 780,000 acres | > 34 billion ft²<br>> 780,000 acres | ft² ÷ 34,000<br>acres ÷ 0.78 | Contaminated Soil | |
| > 130,000 to 13 million ft²<br>> 2.9 to 290 acres | > 13 million ft²<br>> 290 acres | ft² ÷ 13<br>acres ÷ 0.00029 | Pile | |
| >2.7 million to 270 million ft²<br>>62 to 6,200 acres | > 270 million ft²<br>> 6,200 acres | ft² ÷ 270<br>acres ÷ 0.0062 | Land Treatment | |