RO-17

CAPSULE® ENVIRONMENTAL ENGINEERING, INC.

ENVIRONMENTAL PROTECTION
99 DEC -7 AM 10: 12

November 30, 1999

Mr. Scott Seery, CHMM
Environmental Protection Division, Suite 250
Alameda County Environmental Health Department
1131 Harbor Bay Parkway
Alameda, California 94502

Re: Critical Area Investigation Report Transmittal

Dear Mr. Seery:

On behalf of Ingersoll-Rand Equipment Sales, Capsule Environmental Engineering has prepared the enclosed report for the critical area and anomalies investigation, which was called for in the March 10, 1999 Alameda County letter to Mr. Robert Heindl.

If you have questions or comments, please call me at 1-800-328-8246.

Sincerely,

CAPSULE ENVIRONMENTAL ENGINEERING, INC.

John J. McDermott
Hydrogeologist

JJM: dmn
Enclosure

cc: Kevin Graves/ Regional Water Quality Control Board, Oakland, CA
Robert Heindl/Ingersoll-Rand Equipment Sales, Bethlehem, PA (w/o enclosure)
Tim Tinsley/Ingersoll-Rand Equipment Sales, San Leandro, CA (w/o enclosure)
Michael Bakaldin/San Leandro Fire Department, San Leandro, CA
Dave Jones/Ingersoll-Rand, Cassapolis, MI (w/o enclosure)
Jim Ray/Ingersoll-Rand, Woodcliff Lake, NJ

1970 Oakcrest Avenue, Suite 215 • St Paul, MN 55113-2624 • (651) 636-2644 • Fax (651) 636-3106
Toll Free 1-800-328-8246 • e-mail cee1@pclink.com

Critical Area Investigation

Prepared For:

Ingersoll-Rand
Equipment Sales
San Leandro, California

November 1, 1999

CRITICAL AREA INVESTIGATION
INGEROLL-RAND EQUIPMENT SALES FACILITY
SAN LEANDRO, CALIFORNIA

Prepared For:

Ingersoll-Rand Equipment Sales
1944 Marina Boulevard
San Leandro, California

November 1, 1999

Prepared By:

1970 Oakcrest Avenue, Suite 215
St. Paul, Minnesota 55113
(651) 636-2644

TABLE OF CONTENTS

1.0 INTRODUCTION

This report summarizes the investigation methods and findings of the subsurface investigation performed at the Ingersoll-Rand Equipment Sales facility, 1944 Marina Boulevard, San Leandro, California. Field activities were conducted during the week of July 11, 1999. General background information and proposed investigation methods were described in Capsule Environmental Engineering's Critical Area Investigation Work Plan (Work Plan), submitted to Alameda County, dated May 21, 1999.

1.1 BACKGROUND

The Ingersoll-Rand Equipment Sales facility (Facility) has been operating at 1944 Marina Boulevard since 1974. The facility has been conducting corrective action activities to address impacted soil and ground water associated with the 1989 removal of a leaking gasoline underground storage tank. The major activities included the:

- June 1989 installation of three monitoring wells
- October 1990 installation and pump testing of MW-4
- October 1994 installation of vapor extraction points to upgrade the soil vapor extraction system
- June 1995 on and off-site ground water investigation
- October 1995 to mid 1997 operation of the soil vapor extraction system
- September 1997 SVE Closure recommendation
- October 1997 RBCA performed
- Periodic groundwater sampling

In a letter dated March 10, 1999, the Alameda County Environmental Health Department directed the Facility to prepare a work plan to address several geophysical anomalies identified during a 1998 geophysical investigation at the facility and evaluate ground water conditions in a general area identified as critical.

The Work Plan was submitted to Alameda County on May 21, 1999. The Work Plan was approved by Alameda County in their June 7, 1999 letter.

2.0 INVESTIGATION ACTIVITIES

Figure 1 provides an overview of the area of investigation, the approximate boundaries of the geophysical anomalies, and the locations of the probe points installed during the Critical Area Investigation. The Figure also includes probe point locations and TPH as gasoline results from previous investigations. See Report Section 3.2 for additional information about these points.

Probe points for both the anomalies and ground water investigation were designated with CAGP, (Critical Area Geoprobe Point) and a number. As described in the Work Plan, some probe holes served both to investigate an anomaly and to collect a ground water sample.

2.1 ANOMALIES INVESTIGATION

During the 1998 surface geophysical investigation, performed by Subtronic Corporation, several geophysical anomalies were identified. Subtronic recommended intrusive investigation to determine the nature of the anomalies.

On July 14, 1999 the first activity of the anomalies investigation was to define the previously identified anomalies. The Subtronic geophysicist who performed the 1998 investigation returned to the Facility and re-identified the general boundaries of the anomalies. The areas were surveyed with a Fischer TW-6 M-scope and a Schonstedt GA-72CV (magnetic locator). These were the same types and models of instruments used during the 1998 investigation.

The boundaries of the anomalies were outlined with water-based marking chalk. Generally, the anomalies detected during the 1998 investigation were confirmed during the 1999 survey work.

Within the center of each anomaly a stake was placed as the location for a probe point.

On July 15 earth probe points were installed at each of the anomalies. Gregg Drilling (Martinez, California) provided the crew and a hydraulically driven, push-type sampler, mounted on a Marl Technologies drilling rig. The Work Plan called for the sampler to be pushed to predetermined depths or obstruction. The predetermined depths were listed in the Work Plan and were planned based upon the geophysical instruments' penetration limit.

The anomalies were investigated in the following order:

Anomaly	Probe Point	Probe Depth (ft)
1	CAGP-4	16
B	CAGP-2	12
3	CAGP-6	20
2	CAGP-5	20
A	CAGP-1	25

All downhole tools were cleaned between anomaly locations by washing in an Alconox solution, rinsing in clean water, and air drying.

2.2 GROUNDWATER INVESTIGATION

The Work Plan identified several locations for the collection of ground water samples. These locations were selected because of an absence of information in the area. Ground water quality data were available for the east and west sides of the area, but none was available for the central portion.

To retrieve ground water samples, a probe was advanced to approximately 20 to 25 feet. The downhole tools were retrieved and the holes were temporarily cased with 10 feet of 0.75 inch PVC threaded screen and sufficient blank PVC casing to bring it above land surface. The cased probe hole was allowed to produce water and then sampled with a stainless steel bailer.

An attempt was made to retrieve a ground water sample from CAGP-5. While the hole depth was the same as other location, temporarily cased and allowed to set throughout the workday. No water entered the hole.

Samples were collected for analysis by EPA methods 8260 and 8015M/8020 for gasoline. The EPA method 8260 samples were collected for consistency of approach with the 1995 ground water investigation. A trip blank accompanied the samples and a rinse blank was prepared at CAGP-1 by pouring laboratory-provided distilled water through the stainless steel bailer after cleaning it.

Sample bottles were labeled immediately prior to sampling. Samples from each location were placed in a ziplock bag and packed into an iced cooler. A chain of custody was completed. The samples were sent to Clayton Laboratory Services (Pleasanton, California) for analysis. Chromalab, Inc. (Pleasanton, California) performed the EPA method 8015M/8020. Samples were collected from the following locations:

Location	Ground Water Sample ID
1	CAGP-1
7	CAGP-7
8	CAGP-8
9	CAGP-9
10	CAGP-10

Location 10 was not proposed in the Work Plan. The location was added based upon field observations of gasoline during the installation of CAGP-1, CAGP-7, and CAGP-8.

Prior to demobilizing from the Facility, Gregg Drilling removed the temporary casing from the probe holes. Both the ground water sample locations and anomaly holes were grouted.

3.0 FINDINGS

3.1 ANOMALIES INVESTIGATION

While the geophysical instruments indicated several anomalies, no obstructions were encountered during the probing work. The probe tools were readily pushed to their target depths. Obstructions would have suggested buried metallic objects.

According to Subtronic, anomalies can be caused by proximity to fences and buried metal. The investigated area is near the Facility chain link fence and a railroad track is shallowly buried in the investigation area.

3.2 GROUND WATER INVESTIGATION

Table 1 provides a summary of the detected EPA method 8260 and 8015M/8020 analytes in the ground water samples. Gasoline constituent volatile organic compounds (VOCs) were detected in all five samples. During the investigation gasoline odors and slight sheens were observed in CAGP-1, 8, 9, and 10.

Figure 2 was prepared using the Critical Area Investigation data. Additionally, ground water data from the following sources were used:

Data Point	Data Source
NFGP-1	North Fence Investigation Report
GP-1, GP-2, GP-13	October 1995 Quarterly Report
VW-8, VW-9	October 1995 Quarterly Report

3.2.1 METHOD 8260 ANALYTICAL DATA

3.2.1.1 BENZENE

Benzene was detected in CAGP-8 at 280 µg/l. It was not detected in the other four samples. It is recognized that the other four samples had varying detection limits. The highest detection limit was 100 µg/l.

3.2.1.2 ETHYLBENZENE

Ethylbenzene was detected in all five samples. Concentrations range 18 to 10,000 µg/l. The lowest concentration was observed in CAGP-7. The highest was measured in CAGP-1. It is recognized that the other four samples had varying detection limits.

3.2.1.3 TOULENE

Toluene was detected in two of the five samples. CAGP-7 had 2 µg/l and CAGP-10 had 250 µg/l. It is recognized that the other three samples had varying detection limits.

3.2.1.4 M,P-XYLENES

M.p-xylenes were detected in all five samples in concentrations ranging from 20 to 24,000 µg/l. The lowest concentration was detected in CAGP-7. The highest was observed in CAGP-1.

3.2.1.5 O-XYLENE

O-xylene was detected in two of five samples in concentrations. CAGP-1 had 300 µg/l and CAGP-10 had 1,200 µg/l. It is recognized that the other three samples had varying detection limits. The highest of these detection limits was 50 µg/l.

3.2.1.6 OTHER GASOLINE CONSTITUENTS

As Table 1 indicates isopropylbenzene, 1,2,4-trimethylbenzene and 1,3,5 - trimethylebenzene were detected in all five samples. The lowest concentrations were detected in CAGP-7 and the highest were detected in CAGP-1.

3.3 TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE

TPH as gasoline was detected in all five samples. Concentrations ranged from 800 to 270,000 µg/l. The lowest concentration was observed in CAGP-7. The highest was observed in CAGP-1.

3.4 GASOLINE VOLUME IN PLUME

An amount of gasoline in the plume can be estimated. Using a conservative average TPH as gasoline concentration of 100,000 µg/l, a plume length of 250 feet, a width of 50 feet and a thickness of 15 feet, it is estimated that there are 15 gallons of weathered gasoline in the plume volume. For this estimate it was assumed that the weathered gasoline density is the same as fresh gasoline, approximately 5.7 lbs per gallon.

4.0 CONCLUSIONS

The anomaly probes were installed to evaluate the likelihood of buried tanks in area previously defined as geophysical anomalies. No obstructions were encountered. There is no information to indicate that there are buried tanks in this area. The lack of any obstructions supports the conclusion that there are no buried tanks in the investigated area.

The detected VOCs in the ground water are characteristic gasoline constituents.

Benzene and toluene concentrations are very low, indicating that the gasoline is weathered.

Given the distribution of gasoline constituents in the ground water (Figure 2) from this investigation and previous findings, it appears that the area of the former gasoline UST is the source of the gasoline-related VOCs..

The data from the critical area investigation indicate that ground water flow is more westerly to northwesterly than previously known. Nearby monitoring well MW-1 may be abnormally influencing the flow direction characterization for the Facility.

Past investigations have shown that there are no nearby users of the shallow ground water.

5.0 RECOMMENDATION

Ingersoll-Rand Equipment Sales review of this project's status and technical direction is underway. Once the review has been completed, they will work with their consultant to prepare a letter of recommendations, outlining the proposed course of action.

Ingersoll-Rand, or its consultant, will make this submittal to the County within the near future.

6.0 REFERENCES

California Regional Water Quality Control Board, San Francisco Region, 1999. East Bay Plain Groundwater Basin Beneficial Use Evaluation Report, Alameda and Contra Costa Counties, California, June, 1999, Groundwater Committee

Capsule Environmental Engineering, 1995, Quarterly Ground Water Monitoring Report, October 1995.

San Francisco Bay Region, California Regional Water Quality Control Board, 1990. Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites, San Francisco, California.

US Environmental Protection Agency, Region 9, Preliminary Remediation Goals, dated August 1, 1996. San Francisco, California.

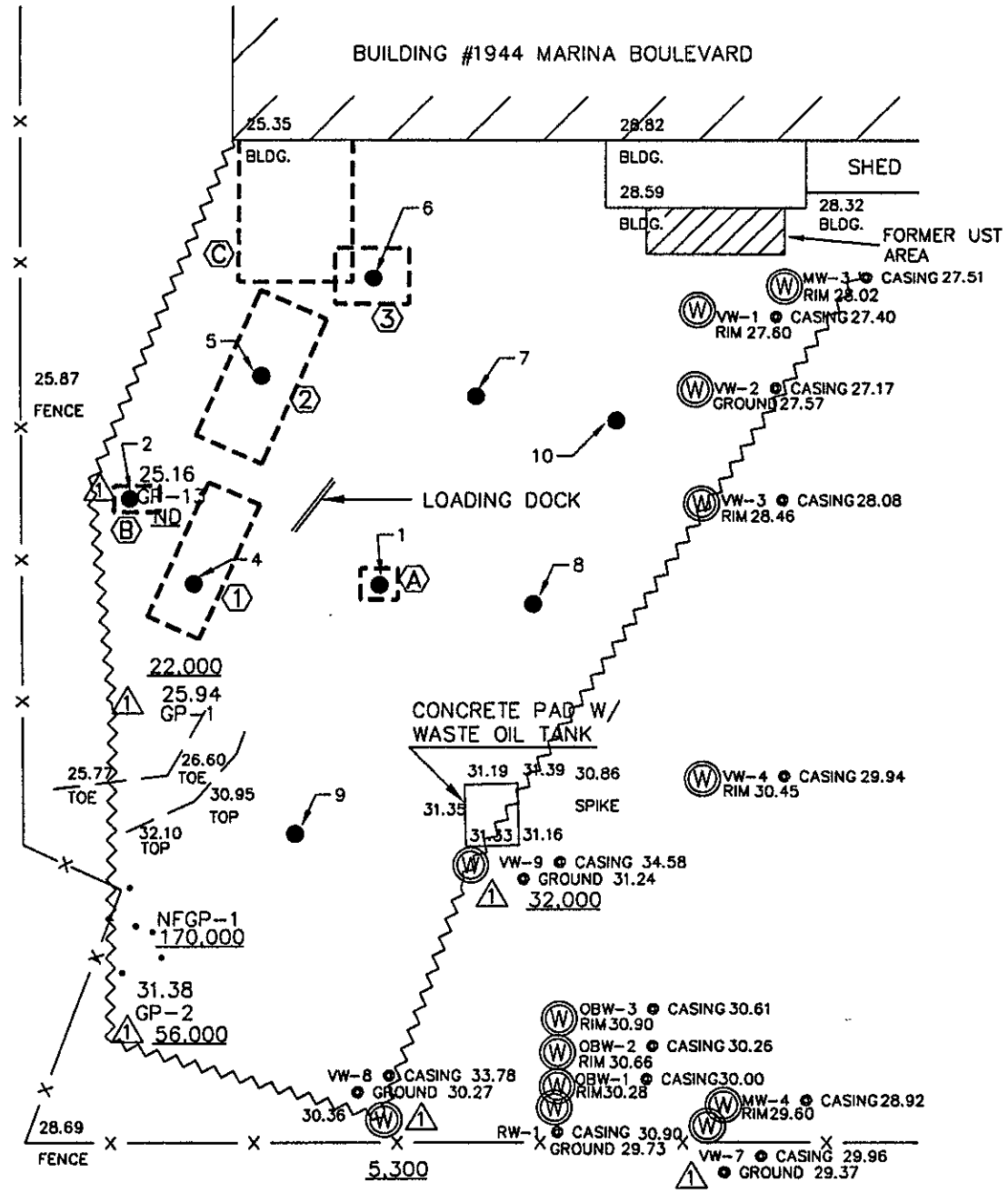
Table 1

Title: Summary of VOCs From 1999 Ground Water Samples
Project: IRES, San Leandro, CA 001-327
Prepared by: John McDermott, Capsule Environmental Engineering
Date prepared: August 13, 1999

Background: This spreadsheet summarizes the detected EPA Method 8260 and 8015M/8020 analyte concentrations for geoprobe holes installed as part of the 1999 critical area investigation.

		Detected Analyte								
Probe Number	**Date**	**benzene** (ug/l)	**ethyl-benzene** (ug/l)	**isopropyl-benzene** (ug/l)	**toluene** (ug/l)	**1,2,4-trimethyl-benzene** (ug/l)	**1,3,5-trimethyl-benzene** (ug/l)	**m,p xylenes** (ug/l)	**o xylene** (ug/l)	**TPH g** (ug/l)
1999 Investigation										
CAGP-1	7/15/99	<100	10,000	1,500	<100	35,000	11,000	24,000	300	270,000
CAGP-7	7/15/99	<1	18	3	2	42	12	20	<1	800
CAGP-8	7/15/99	280	2,500	150	<50	2,700	630	3,000	<50	45,000
CAGP-9	7/15/99	<20	690	150	<20	2,000	530	250	<20	25,000
CAGP-10	7/15/99	<70	2,700	210	250	5,900	1,700	9,300	1,200	110,000
Field blank	7/15/99	<1	<1	<1	<1	<1	<1	<2	<1	ND
Trip blank		<1	<1	<1	<1	<1	<1	<2	<1	ND

ND <50 ug/l



LEGEND:

T.C.	TOP OF CURB
⌐⌐	BUILDING LINE
T/W	TOP OF WALL
B/W	BASE OF WALL
-x-	FENCE LINE
(W)	WELL
E.P.	EDGE OF PAVEMENT
TOP	TOP OF BANK
TOE	TOE OF SLOPE
~~	CRITICAL AREA BOUNDARY
56,000	TPH AS GASOLINE (ug/l.) IN WATER SAMPLE
●	PROBE LOCATION
(A)	GEOPHYSICAL ANOMALY
[- - -]	APPROXIMATE ANOMALY BOUNDARY

GRAPHIC SCALE

20 0 20 40

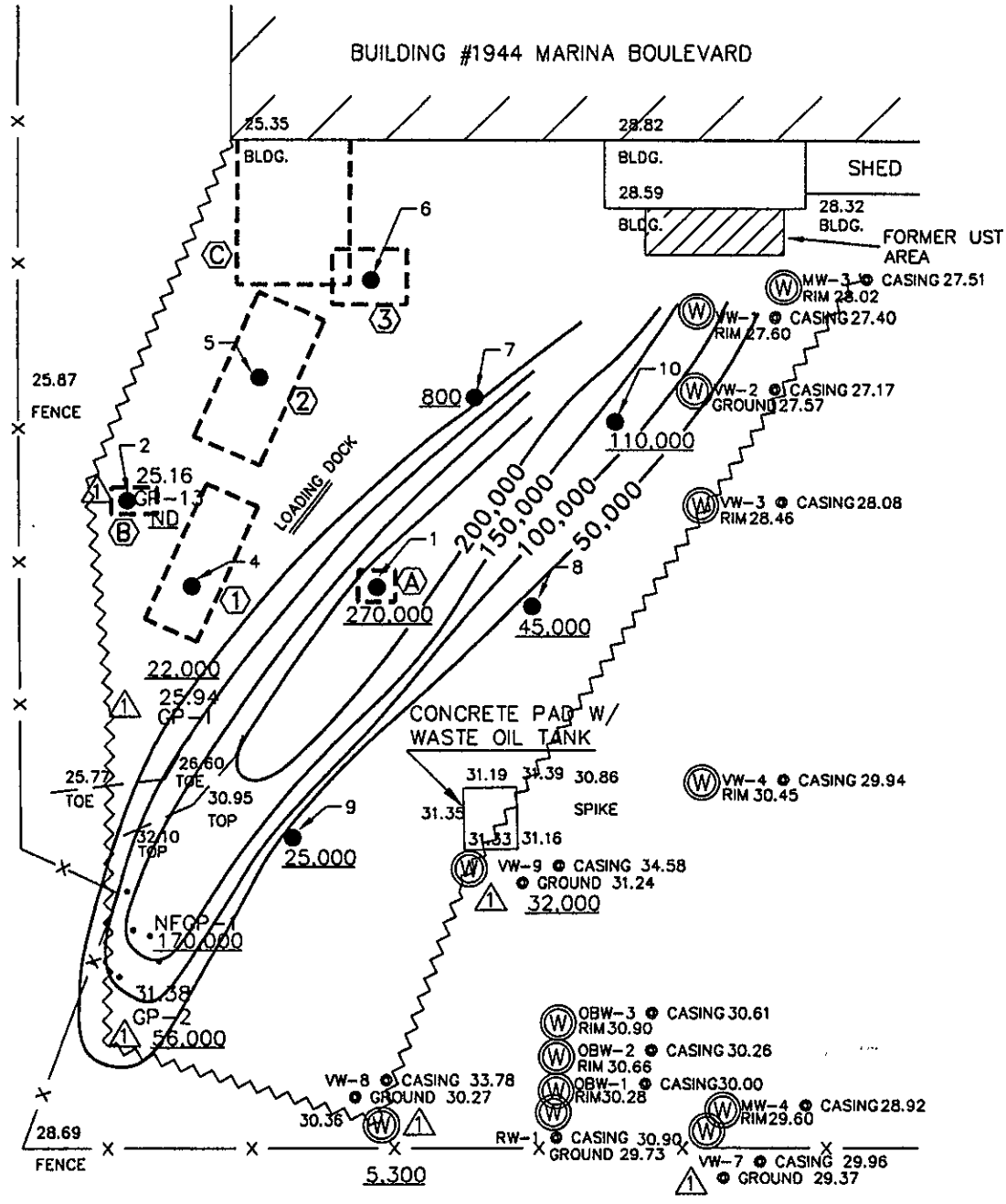
(IN FEET)
1 INCH = 40 FEET

APPROXIMATE NORTH

CAPSULE
ENVIRONMENTAL ENGINEERING, INC.
1970 OAKCREST AVE., SUITE 215
ST. PAUL, MINNESOTA 55113
(612) 636-2644

TITLE: CRITICAL AREA INVESTIGATION REPORT
PROBE LOCATIONS
INGERSOLL-RAND COMPANY
SAN LEANDRO, CALIFORNIA

DRAWN BY:	CHECKED BY:	DATE:	PROJECT NO.:	DRAWING NO.:	FIGURE:
TCD	JJM	9/14/99	001-327	375-01	1



LEGEND:

T.C.	TOP OF CURB
⌐⌐	BUILDING LINE
T/W	TOP OF WALL
B/W	BASE OF WALL
-x-	FENCE LINE
Ⓦ	WELL
E.P.	EDGE OF PAVEMENT
TOP	TOP OF BANK
TOE	TOE OF SLOPE
~~	CRITICAL AREA BOUNDARY
56,000	TPH AS GASOLINE (ugl.) IN WATER SAMPLE
●	PROBE LOCATION
Ⓐ	GEOPHYSICAL ANOMALY
[- - -]	APPROXIMATE ANOMALY BOUNDARY

APPROXIMATE NORTH

GRAPHIC SCALE

20 0 20 40

(IN FEET)
1 INCH = 40 FEET

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ENVIRONMENTAL ENGINEERING, INC.
1970 OAKCREST AVE., SUITE 215
ST. PAUL, MINNESOTA 55113
(612) 636-2644

TITLE: CRITICAL AREA INVESTIGATION REPORT
TPH AS GASOLINE
INGERSOLL-RAND COMPANY
SAN LEANDRO, CALIFORNIA

DRAWN BY:	CHECKED BY:	DATE:	PROJECT NO.:	DRAWING NO.:	FIGURE:
TCD	JJM	9/14/99	001-327	375-02	2

San Francisco Regional Office

1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(925) 426-2600
Fax (925) 426-0106

Clayton
LABORATORY
SERVICES

July 30, 1999

Mr. John McDermott
CAPSULE ENVIRONMENTAL
ENGINEERING, INC.
1970 Oakcrest Avenue
St. Paul, MN 55113

Client Ref.: 001-327
Clayton Project No.: 99070.79/77170.00

Dear Mr. McDermott:

Attached is our analytical laboratory report for the samples received on July 16, 1999. The gasoline results are provided by Chromalab. Also enclosed is a copy of the Chain-of-Custody record acknowledging receipt of these samples.

We appreciate the opportunity to assist you. If you have any questions concerning this report, please contact Client Services at (925) 426-2687.

Sincerely,

Karen Dahl
Client Services Representative
San Francisco Regional Office

KMD/kmd

Attachments

Clayton LABORATORY SERVICES

Analytical Results
for
CAPSULE ENVIRONMENTAL ENGINEERING
Clayton Project No. 77170.00
Client Reference: 001-327

Sample Identification:	CAGP-10	Date Sampled:	07/15/99
Lab Number:	001a/C6463.D	Date Received:	07/17/99
Sample Type:	Water	Date Prepared:	07/21/99
Preparation Method:	--	Date Analyzed:	07/21/99
Analytical Method:	EPA 8260B		
Analyst:	DS		

Analyte	Concentration (a) (µg/L)	LOD (µg/L)
Volatile Compounds		
Acetone	<7,000	7,000
Benzene	<70	70
Bromodichloromethane	<70	70
Bromoform	<70	70
Bromomethane	<70	70
2-Butanone	<3,000	3,000
Carbon disulfide	<3,000	3,000
Carbon tetrachloride	<70	70
Chlorobenzene	<70	70
Chloroethane	<70	70
Chloroform	<70	70
Chloromethane	<70	70
Dibromochloromethane	<70	70
1,2-Dibromoethane	<70	70
Dibromomethane	<70	70
1,2-Dichlorobenzene	<70	70
1,3-Dichlorobenzene	<70	70
1,4-Dichlorobenzene	<70	70
Dichlorodifluoromethane	<70	70
1,1-Dichloroethane	<70	70
1,2-Dichloroethane	<70	70
1,1-Dichloroethene	<70	70
cis-1,2-Dichloroethene	<70	70
trans-1,2-Dichloroethene	<70	70
1,2-Dichloropropane	<70	70
cis-1,3-Dichloropropene	<70	70
trans-1,3-Dichloropropene	<70	70
Ethylbenzene	2,700	70
Freon 113	<70	70
2-Hexanone	<3,000	3,000
Isopropylbenzene	210	70
Methylene chloride	<300	300

Clayton LABORATORY SERVICES

Analytical Results
for
CAPSULE ENVIRONMENTAL ENGINEERING
Clayton Project No. 77170.00
Client Reference: 001-327

Sample Identification:	CAGP-10	Date Sampled:	07/15/99
Lab Number:	001a/C6463.D	Date Received:	07/17/99
Sample Type:	Water	Date Prepared:	07/21/99
Preparation Method:	--	Date Analyzed:	07/21/99
Analytical Method:	EPA 8260B		
Analyst:	DS		

Analyte	Concentration (a) (µg/L)	LOD (µg/L)
Volatile Compounds (continued)		
4-Methyl-2-pentanone	<3,000	3,000
Styrene	<70	70
tert-Butyl methyl ether	<300	300
1,1,2,2-Tetrachloroethane	<70	70
Tetrachloroethene	<70	70
Toluene	250	70
1,1,1-Trichloroethane	<70	70
1,1,2-Trichloroethane	<70	70
Trichloroethene	<70	70
Trichlorofluoromethane	<70	70
1,2,3-Trichloropropane	<70	70
1,2,4-Trimethylbenzene	5,900	70
1,3,5-Trimethylbenzene	1,700	70
Vinyl acetate	<70	70
Vinyl chloride	<70	70
m,p-Xylenes	9,300	100
o-Xylene	1,200	70

(a): Lower LOD'S could not be achieved due to the high concentration of one or more of the target list compounds.

General Notes:

<: Less than the indicated limit of detection (LOD)

--: Information not available or not applicable

Analytical Results
for
CAPSULE ENVIRONMENTAL ENGINEERING
Clayton Project No. 77170.00
Client Reference: 001-327

Clayton LABORATORY SERVICES

Sample Identification:	CAGP-7	Date Sampled:	07/15/99
Lab Number:	002a/C6461.D	Date Received:	07/17/99
Sample Type:	Water	Date Prepared:	07/21/99
Preparation Method:	--	Date Analyzed:	07/21/99
Analytical Method:	EPA 8260B		
Analyst:	DS		

Analyte	Concentration (µg/L)	LOD (µg/L)
Volatile Compounds		
Acetone	<100	100
Benzene	<1	1
Bromodichloromethane	<1	1
Bromoform	<1	1
Bromomethane	<1	1
2-Butanone	<50	50
Carbon disulfide	<50	50
Carbon tetrachloride	<1	1
Chlorobenzene	<1	1
Chloroethane	<1	1
Chloroform	<1	1
Chloromethane	<1	1
Dibromochloromethane	<1	1
1,2-Dibromoethane	<1	1
Dibromomethane	<1	1
1,2-Dichlorobenzene	<1	1
1,3-Dichlorobenzene	<1	1
1,4-Dichlorobenzene	<1	1
Dichlorodifluoromethane	<1	1
1,1-Dichloroethane	<1	1
1,2-Dichloroethane	<1	1
1,1-Dichloroethene	<1	1
cis-1,2-Dichloroethene	<1	1
trans-1,2-Dichloroethene	<1	1
1,2-Dichloropropane	<1	1
cis-1,3-Dichloropropene	<1	1
trans-1,3-Dichloropropene	<1	1
Ethylbenzene	18	1
Freon 113	<1	1
2-Hexanone	<50	50
Isopropylbenzene	3	1
Methylene chloride	<5	5

Clayton LABORATORY SERVICES

Analytical Results
for
CAPSULE ENVIRONMENTAL ENGINEERING
Clayton Project No. 77170.00
Client Reference: 001-327

Sample Identification:	CAGP-7	Date Sampled:	07/15/99
Lab Number:	002a/C6461.D	Date Received:	07/17/99
Sample Type:	Water	Date Prepared:	07/21/99
Preparation Method:	--	Date Analyzed:	07/21/99
Analytical Method:	EPA 8260B		
Analyst:	DS		

Analyte	Concentration (µg/L)	LOD (µg/L)
Volatile Compounds (continued)		
4-Methyl-2-pentanone	<50	50
Styrene	<1	1
tert-Butyl methyl ether	<5	5
1,1,2,2-Tetrachloroethane	<1	1
Tetrachloroethene	<1	1
Toluene	2	1
1,1,1-Trichloroethane	<1	1
1,1,2-Trichloroethane	<1	1
Trichloroethene	<1	1
Trichlorofluoromethane	<1	1
1,2,3-Trichloropropane	<1	1
1,2,4-Trimethylbenzene	42	1
1,3,5-Trimethylbenzene	12	1
Vinyl acetate	<1	1
Vinyl chloride	<1	1
m,p-Xylenes	20	2
o-Xylene	<1	1

General Notes:
<: Less than the indicated limit of detection (LOD)
--: Information not available or not applicable

Analytical Results
for
CAPSULE ENVIRONMENTAL ENGINEERING
Clayton Project No. 77170.00
Client Reference: 001-327

Clayton LABORATORY SERVICES

Sample Identification:	CAGP-1	Date Sampled:	07/15/99
Lab Number:	003a/C6464.D	Date Received:	07/17/99
Sample Type:	Water	Date Prepared:	07/21/99
Preparation Method:	--	Date Analyzed:	07/21/99
Analytical Method:	EPA 8260B		
Analyst:	DS		

Analyte	Concentration (a) (µg/L)	LOD (µg/L)
Volatile Compounds		
Acetone	<10,000	10,000
Benzene	<100	100
Bromodichloromethane	<100	100
Bromoform	<100	100
Bromomethane	<100	100
2-Butanone	<5,000	5,000
Carbon disulfide	<5,000	5,000
Carbon tetrachloride	<100	100
Chlorobenzene	<100	100
Chloroethane	<100	100
Chloroform	200	100
Chloromethane	<100	100
Dibromochloromethane	<100	100
1,2-Dibromoethane	<100	100
Dibromomethane	<100	100
1,2-Dichlorobenzene	<100	100
1,3-Dichlorobenzene	<100	100
1,4-Dichlorobenzene	<100	100
Dichlorodifluoromethane	<100	100
1,1-Dichloroethane	<100	100
1,2-Dichloroethane	<100	100
1,1-Dichloroethene	<100	100
cis-1,2-Dichloroethene	<100	100
trans-1,2-Dichloroethene	<100	100
1,2-Dichloropropane	<100	100
cis-1,3-Dichloropropene	<100	100
trans-1,3-Dichloropropene	<100	100
Ethylbenzene	10,000	100
Freon 113	<100	100
2-Hexanone	<5,000	5,000
Isopropylbenzene	1,500	100
Methylene chloride	<500	500

Analytical Results
for
CAPSULE ENVIRONMENTAL ENGINEERING
Clayton Project No. 77170.00
Client Reference: 001-327

Clayton LABORATORY SERVICES

Sample Identification:	CAGP-1	Date Sampled:	07/15/99
Lab Number:	003a/C6464.D	Date Received:	07/17/99
Sample Type:	Water	Date Prepared:	07/21/99
Preparation Method:	--	Date Analyzed:	07/21/99
Analytical Method:	EPA 8260B		
Analyst:	DS		

Analyte	Concentration (a) (µg/L)	LOD (µg/L)
Volatile Compounds (continued)		
4-Methyl-2-pentanone	<5,000	5,000
Styrene	<100	100
tert-Butyl methyl ether	<500	500
1,1,2,2-Tetrachloroethane	<100	100
Tetrachloroethene	<100	100
Toluene	<100	100
1,1,1-Trichloroethane	<100	100
1,1,2-Trichloroethane	<100	100
Trichloroethene	<100	100
Trichlorofluoromethane	<100	100
1,2,3-Trichloropropane	<100	100
1,2,4-Trimethylbenzene	35,000	100
1,3,5-Trimethylbenzene	11,000	100
Vinyl acetate	<100	100
Vinyl chloride	<100	100
m,p-Xylenes	24,000	200
o-Xylene	300	100

(a): Lower LOD'S could not be achieved due to the high concentration of one or more of the target list compounds.

General Notes:

<: Less than the indicated limit of detection (LOD)

--: Information not available or not applicable

Clayton LABORATORY SERVICES

Analytical Results
for
CAPSULE ENVIRONMENTAL ENGINEERING
Clayton Project No. 77170.00
Client Reference: 001-327

Sample Identification:	CAGP-9	Date Sampled:	07/15/99
Lab Number:	004a/C6467.D	Date Received:	07/17/99
Sample Type:	Water	Date Prepared:	07/21/99
Preparation Method:	--	Date Analyzed:	07/21/99
Analytical Method:	EPA 8260B		
Analyst:	DS		

Analyte	Concentration (a) (µg/L)	LOD (µg/L)
Volatile Compounds		
Acetone	<2,000	2,000
Benzene	<20	20
Bromodichloromethane	<20	20
Bromoform	<20	20
Bromomethane	<20	20
2-Butanone	<1,000	1,000
Carbon disulfide	<1,000	1,000
Carbon tetrachloride	<20	20
Chlorobenzene	<20	20
Chloroethane	<20	20
Chloroform	<20	20
Chloromethane	<20	20
Dibromochloromethane	<20	20
1,2-Dibromoethane	<20	20
Dibromomethane	<20	20
1,2-Dichlorobenzene	<20	20
1,3-Dichlorobenzene	<20	20
1,4-Dichlorobenzene	<20	20
Dichlorodifluoromethane	<20	20
1,1-Dichloroethane	<20	20
1,2-Dichloroethane	<20	20
1,1-Dichloroethene	<20	20
cis-1,2-Dichloroethene	<20	20
trans-1,2-Dichloroethene	<20	20
1,2-Dichloropropane	<20	20
cis-1,3-Dichloropropene	<20	20
trans-1,3-Dichloropropene	<20	20
Ethylbenzene	690	20
Freon 113	<20	20
2-Hexanone	<1,000	1,000
Isopropylbenzene	150	20
Methylene chloride	<100	100

Clayton LABORATORY SERVICES

Analytical Results
for
CAPSULE ENVIRONMENTAL ENGINEERING
Clayton Project No. 77170.00
Client Reference: 001-327

Sample Identification:	CAGP-9	Date Sampled:	07/15/99
Lab Number:	004a/C6467.D	Date Received:	07/17/99
Sample Type:	Water	Date Prepared:	07/21/99
Preparation Method:	--	Date Analyzed:	07/21/99
Analytical Method:	EPA 8260B		
Analyst:	DS		

Analyte	Concentration (a) (µg/L)	LOD (µg/L)
Volatile Compounds (continued)		
4-Methyl-2-pentanone	<1,000	1,000
Styrene	<20	20
tert-Butyl methyl ether	<100	100
1,1,2,2-Tetrachloroethane	<20	20
Tetrachloroethene	<20	20
Toluene	<20	20
1,1,1-Trichloroethane	<20	20
1,1,2-Trichloroethane	<20	20
Trichloroethene	<20	20
Trichlorofluoromethane	<20	20
1,2,3-Trichloropropane	<20	20
1,2,4-Trimethylbenzene	2,000	20
1,3,5-Trimethylbenzene	530	20
Vinyl acetate	<20	20
Vinyl chloride	<20	20
m,p-Xylenes	250	40
o-Xylene	<20	20

(a): Lower LOD'S could not be achieved due to the high concentration of one or more of the target list compounds.

General Notes:

<: Less than the indicated limit of detection (LOD)

--: Information not available or not applicable

Clayton LABORATORY SERVICES

Analytical Results
for
CAPSULE ENVIRONMENTAL ENGINEERING
Clayton Project No. 77170.00
Client Reference: 001-327

Sample Identification:	CAGP-8	Date Sampled:	07/15/99
Lab Number:	005a/C6466.D	Date Received:	07/17/99
Sample Type:	Water	Date Prepared:	07/21/99
Preparation Method:	--	Date Analyzed:	07/21/99
Analytical Method:	EPA 8260B		
Analyst:	DS		

Analyte	Concentration (a) (µg/L)	LOD (µg/L)
Volatile Compounds		
Acetone	<5,000	5,000
Benzene	280	50
Bromodichloromethane	<50	50
Bromoform	<50	50
Bromomethane	<50	50
2-Butanone	<3,000	3,000
Carbon disulfide	<3,000	3,000
Carbon tetrachloride	<50	50
Chlorobenzene	<50	50
Chloroethane	<50	50
Chloroform	<50	50
Chloromethane	<50	50
Dibromochloromethane	<50	50
1,2-Dibromoethane	<50	50
Dibromomethane	<50	50
1,2-Dichlorobenzene	<50	50
1,3-Dichlorobenzene	<50	50
1,4-Dichlorobenzene	<50	50
Dichlorodifluoromethane	<50	50
1,1-Dichloroethane	<50	50
1,2-Dichloroethane	<50	50
1,1-Dichloroethene	<50	50
cis-1,2-Dichloroethene	<50	50
trans-1,2-Dichloroethene	<50	50
1,2-Dichloropropane	<50	50
cis-1,3-Dichloropropene	<50	50
trans-1,3-Dichloropropene	<50	50
Ethylbenzene	2,500	50
Freon 113	<50	50
2-Hexanone	<3,000	3,000
Isopropylbenzene	150	50
Methylene chloride	<300	300

Clayton LABORATORY SERVICES

Analytical Results
for
CAPSULE ENVIRONMENTAL ENGINEERING
Clayton Project No. 77170.00
Client Reference: 001-327

Sample Identification:	CAGP-8	Date Sampled:	07/15/99
Lab Number:	005a/C6466.D	Date Received:	07/17/99
Sample Type:	Water	Date Prepared:	07/21/99
Preparation Method:	--	Date Analyzed:	07/21/99
Analytical Method:	EPA 8260B		
Analyst:	DS		

Analyte	Concentration (a) (µg/L)	LOD (µg/L)
Volatile Compounds (continued)		
4-Methyl-2-pentanone	<3,000	3,000
Styrene	<50	50
tert-Butyl methyl ether	<300	300
1,1,2,2-Tetrachloroethane	<50	50
Tetrachloroethene	<50	50
Toluene	<50	50
1,1,1-Trichloroethane	<50	50
1,1,2-Trichloroethane	<50	50
Trichloroethene	<50	50
Trichlorofluoromethane	<50	50
1,2,3-Trichloropropane	<50	50
1,2,4-Trimethylbenzene	2,700	50
1,3,5-Trimethylbenzene	630	50
Vinyl acetate	<50	50
Vinyl chloride	<50	50
m,p-Xylenes	3,000	100
o-Xylene	<50	50

(a): Lower LOD'S could not be achieved due to the high concentration of one or more of the target list compounds.

General Notes:

<: Less than the indicated limit of detection (LOD)

--: Information not available or not applicable

Clayton LABORATORY SERVICES

Analytical Results
for
CAPSULE ENVIRONMENTAL ENGINEERING
Clayton Project No. 77170.00
Client Reference: 001-327

Sample Identification:	FIELD BLANK	Date Sampled:	07/15/99
Lab Number:	006a/C6459.D	Date Received:	07/17/99
Sample Type:	Water	Date Prepared:	07/21/99
Preparation Method:	--	Date Analyzed:	07/21/99
Analytical Method:	EPA 8260B		
Analyst:	DS		

Analyte	Concentration (µg/L)	LOD (µg/L)
Volatile Compounds		
Acetone	<100	100
Benzene	<1	1
Bromodichloromethane	<1	1
Bromoform	<1	1
Bromomethane	<1	1
2-Butanone	<50	50
Carbon disulfide	<50	50
Carbon tetrachloride	<1	1
Chlorobenzene	<1	1
Chloroethane	<1	1
Chloroform	6	1
Chloromethane	<1	1
Dibromochloromethane	<1	1
1,2-Dibromoethane	<1	1
Dibromomethane	<1	1
1,2-Dichlorobenzene	<1	1
1,3-Dichlorobenzene	<1	1
1,4-Dichlorobenzene	<1	1
Dichlorodifluoromethane	<1	1
1,1-Dichloroethane	<1	1
1,2-Dichloroethane	<1	1
1,1-Dichloroethene	<1	1
cis-1,2-Dichloroethene	<1	1
trans-1,2-Dichloroethene	<1	1
1,2-Dichloropropane	<1	1
cis-1,3-Dichloropropene	<1	1
trans-1,3-Dichloropropene	<1	1
Ethylbenzene	<1	1
Freon 113	<1	1
2-Hexanone	<50	50
Isopropylbenzene	<1	1
Methylene chloride	<5	5

Clayton LABORATORY SERVICES

Analytical Results
for
CAPSULE ENVIRONMENTAL ENGINEERING
Clayton Project No. 77170.00
Client Reference: 001-327

Sample Identification:	FIELD BLANK	Date Sampled:	07/15/99
Lab Number:	006a/C6459.D	Date Received:	07/17/99
Sample Type:	Water	Date Prepared:	07/21/99
Preparation Method:	--	Date Analyzed:	07/21/99
Analytical Method:	EPA 8260B		
Analyst:	DS		

Analyte	Concentration (µg/L)	LOD (µg/L)
Volatile Compounds (continued)		
4-Methyl-2-pentanone	<50	50
Styrene	<1	1
tert-Butyl methyl ether	<5	5
1,1,2,2-Tetrachloroethane	<1	1
Tetrachloroethene	<1	1
Toluene	<1	1
1,1,1-Trichloroethane	<1	1
1,1,2-Trichloroethane	<1	1
Trichloroethene	<1	1
Trichlorofluoromethane	<1	1
1,2,3-Trichloropropane	<1	1
1,2,4-Trimethylbenzene	<1	1
1,3,5-Trimethylbenzene	<1	1
Vinyl acetate	<1	1
Vinyl chloride	<1	1
m,p-Xylenes	<2	2
o-Xylene	<1	1

General Notes:
<: Less than the indicated limit of detection (LOD)
--: Information not available or not applicable

Clayton LABORATORY SERVICES

Analytical Results
for
CAPSULE ENVIRONMENTAL ENGINEERING
Clayton Project No. 77170.00
Client Reference: 001-327

Sample Identification:	TRIP BLANK	Date Sampled:	07/15/99
Lab Number:	007a/C6460.D	Date Received:	07/17/99
Sample Type:	Water	Date Prepared:	07/21/99
Preparation Method:	--	Date Analyzed:	07/21/99
Analytical Method:	EPA 8260B		
Analyst:	DS		

Analyte	Concentration (µg/L)	LOD (µg/L)
Volatile Compounds		
Acetone	<100	100
Benzene	<1	1
Bromodichloromethane	<1	1
Bromoform	<1	1
Bromomethane	<1	1
2-Butanone	<50	50
Carbon disulfide	<50	50
Carbon tetrachlorid	<1	1
Chlorobenzene	<1	1
Chloroethane	<1	1
Chloroform	<1	1
Chloromethane	<1	1
Dibromochloromethane	<1	1
1,2-Dibromoethane	<1	1
Dibromomethane	<1	1
1,2-Dichlorobenzene	<1	1
1,3-Dichlorobenzene	<1	1
1,4-Dichlorobenzene	<1	1
Dichlorodifluoromethane	<1	1
1,1-Dichloroethane	<1	1
1,2-Dichloroethane	<1	1
1,1-Dichloroethene	<1	1
cis-1,2-Dichloroethene	<1	1
trans-1,2-Dichloroethene	<1	1
1,2-Dichloropropane	<1	1
cis-1,3-Dichloropropene	<1	1
trans-1,3-Dichloropropene	<1	1
Ethylbenzene	<1	1
Freon 113	<1	1
2-Hexanone	<50	50
Isopropylbenzene	<1	1
Methylene chloride	<5	5

Clayton LABORATORY SERVICES

Analytical Results
for
CAPSULE ENVIRONMENTAL ENGINEERING
Clayton Project No. 77170.00
Client Reference: 001-327

Sample Identification:	TRIP BLANK	Date Sampled:	07/15/99
Lab Number:	007a/C6460.D	Date Received:	07/17/99
Sample Type:	Water	Date Prepared:	07/21/99
Preparation Method:	--	Date Analyzed:	07/21/99
Analytical Method:	EPA 8260B		
Analyst:	DS		

Analyte	Concentration (µg/L)	LOD (µg/L)
Volatile Compounds (continued)		
4-Methyl-2-pentanone	<50	50
Styrene	<1	1
tert-Butyl methyl ether	<5	5
1,1,2,2-Tetrachloroethane	<1	1
Tetrachloroethene	<1	1
Toluene	<1	1
1,1,1-Trichloroethane	<1	1
1,1,2-Trichloroethane	<1	1
Trichloroethene	<1	1
Trichlorofluoromethane	<1	1
1,2,3-Trichloropropane	<1	1
1,2,4-Trimethylbenzene	<1	1
1,3,5-Trimethylbenzene	<1	1
Vinyl acetate	<1	1
Vinyl chloride	<1	1
m,p-Xylenes	<2	2
o-Xylene	<1	1

General Notes:
<: Less than the indicated limit of detection (LOD)
--: Information not available or not applicable

Clayton LABORATORY SERVICES

Analytical Results
for
CAPSULE ENVIRONMENTAL ENGINEERING
Clayton Project No. 77170.00
Client Reference: 001-327

Sample Identification:	LAB BLANK	Date Sampled:	--
Lab Number:	--/C6452.D	Date Received:	--
Sample Type:	Water	Date Prepared:	07/21/99
Preparation Method:	--	Date Analyzed:	07/21/99
Analytical Method:	EPA 8260B		
Analyst:	DS		

Analyte	Concentration (µg/L)	LOD (µg/L)
Volatile Compounds		
Acetone	<100	100
Benzene	<1	1
Bromodichloromethane	<1	1
Bromoform	<1	1
Bromomethane	<1	1
2-Butanone	<50	50
Carbon disulfide	<50	50
Carbon tetrachloride	<1	1
Chlorobenzene	<1	1
Chloroethane	<1	1
Chloroform	<1	1
Chloromethane	<1	1
Dibromochloromethane	<1	1
1,2-Dibromoethane	<1	1
Dibromomethane	<1	1
1,2-Dichlorobenzene	<1	1
1,3-Dichlorobenzene	<1	1
1,4-Dichlorobenzene	<1	1
Dichlorodifluoromethane	<1	1
1,1-Dichloroethane	<1	1
1,2-Dichloroethane	<1	1
1,1-Dichloroethene	<1	1
cis-1,2-Dichloroethene	<1	1
trans-1,2-Dichloroethene	<1	1
1,2-Dichloropropane	<1	1
cis-1,3-Dichloropropene	<1	1
trans-1,3-Dichloropropene	<1	1
Ethylbenzene	<1	1
Freon 113	<1	1
2-Hexanone	<50	50
Isopropylbenzene	<1	1
Methylene chloride	<5	5

Clayton LABORATORY SERVICES

Analytical Results
for
CAPSULE ENVIRONMENTAL ENGINEERING
Clayton Project No. 77170.00
Client Reference: 001-327

Sample Identification:	LAB BLANK	Date Sampled:	--
Lab Number:	--/C6452.D	Date Received:	--
Sample Type:	Water	Date Prepared:	07/21/99
Preparation Method:	--	Date Analyzed:	07/21/99
Analytical Method:	EPA 8260B		
Analyst:	DS		

Analyte	Concentration (µg/L)	LOD (µg/L)
Volatile Compounds (continued)		
4-Methyl-2-pentanone	<50	50
Styrene	<1	1
tert-Butyl methyl ether	<5	5
1,1,2,2-Tetrachloroethane	<1	1
Tetrachloroethene	<1	1
Toluene	<1	1
1,1,1-Trichloroethane	<1	1
1,1,2-Trichloroethane	<1	1
Trichloroethene	<1	1
Trichlorofluoromethane	<1	1
1,2,3-Trichloropropane	<1	1
1,2,4-Trimethylbenzene	<1	1
1,3,5-Trimethylbenzene	<1	1
Vinyl acetate	<1	1
Vinyl chloride	<1	1
m,p-Xylenes	<2	2
o-Xylene	<1	1

General Notes:
<: Less than the indicated limit of detection (LOD)
--: Information not available or not applicable

Clayton
1252 Quarry Lane
Pleasanton, CA 94566-4756

Attn.: Karen Dahl

Project: 9907079

Attached is our report for your samples received on Friday July 16, 1999.
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after August 15, 1999 unless you have requested otherwise. We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

Sincerely,

Afsaneh Salimpour

Volatile Hydrocarbons by 8015/8020

Clayton

1252 Quarry Lane
Pleasanton, CA 94566-4756

Attn: Karen Dahl

Phone: (925) 426-2600 Fax: (925) 426-0106

Project #:

Project: 9907079

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
CAGP-10	Water	07/15/1999 14:00	1
CAGP-7	Water	07/15/1999 13:45	2
CAGP-1	Water	07/15/1999 12:25	3
CAGP-9	Water	07/15/1999 11:58	4
CAGP-8	Water	07/15/1999 13:00	5
Field blank	Water	07/15/1999 12:40	6
Trip blank	Water	07/15/1999	7

To: **Clayton**

Attn.: Karen Dahl

Test Method: 8020
8015M

Prep Method: 5030

Volatile Hydrocarbons by 8015/8020

Sample ID:	**CAGP-10**	Lab Sample ID:	**1999-07-0252-001**
Project:	9907079	Received:	07/16/1999 15:08
		Extracted:	07/21/1999 20:47
Sampled:	07/15/1999 14:00	QC-Batch:	1999/07/21-01.03
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	110000	10000	ug/L	200.00	07/21/1999 20:47	
Surrogate(s)						
4-Bromofluorobenzene-FID	107.4	50-150	%	.00	07/21/1999 20:47	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-07-0252

To: **Clayton**

Attn.: Karen Dahl

Test Method: 8020
8015M

Prep Method: 5030

Volatile Hydrocarbons by 8015/8020

Sample ID:	**CAGP-7**	Lab Sample ID:	**1999-07-0252-002**
Project:	9907079	Received:	07/16/1999 15:08
		Extracted:	07/20/1999 23:31
Sampled:	07/15/1999 13:45	QC-Batch:	1999/07/20-01.03
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	800	50	ug/L	1.00	07/20/1999 23:31	
Surrogate(s)						
4-Bromofluorobenzene-FID	94.4	50-150	%	.00	07/20/1999 23:31	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-07-0252

To: **Clayton**

Attn.: Karen Dahl

Test Method: 8020
8015M

Prep Method: 5030

Volatile Hydrocarbons by 8015/8020

Sample ID:	**CAGP-1**	Lab Sample ID:	**1999-07-0252-003**
Project:	9907079	Received:	07/16/1999 15:08
		Extracted:	07/20/1999 22:33
Sampled:	07/15/1999 12:25	QC-Batch:	1999/07/20-01.03
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	270000	5000	ug/L	100.00	07/20/1999 22:23	
Surrogate(s)						
4-Bromofluorobenzene-FID	113.8	50-150	%	.00	07/20/1999 22:23	

To: **Clayton**

Attn.: Karen Dahl

Test Method: 8020
8015M

Prep Method: 5030

Volatile Hydrocarbons by 8015/8020

Sample ID:	**CAGP-9**	Lab Sample ID:	**1999-07-0252-004**
Project:	9907079	Received:	07/16/1999 15:08
		Extracted:	07/20/1999 23:59
Sampled:	07/15/1999 11:58	QC-Batch:	1999/07/20-01.03
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	25000	1300	ug/L	25.00	07/20/1999 23:59	
Surrogate(s)						
4-Bromofluorobenzene-FID	103.7	50-150	%	.00	07/20/1999 23:59	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-07-0252

To: **Clayton**

Attn.: Karen Dahl

Test Method: 8020
8015M

Prep Method: 5030

Volatile Hydrocarbons by 8015/8020

Sample ID:	**CAGP-8**	Lab Sample ID:	**1999-07-0252-005**
Project:	9907079	Received:	07/16/1999 15:08
		Extracted:	07/20/1999 23:02
Sampled:	07/15/1999 13:00	QC-Batch:	1999/07/20-01.03
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	45000	5000	ug/L	100.00	07/20/1999 23:02	
Surrogate(s)						
4-Bromofluorobenzene-FID	99.6	50-150	%	.00	07/20/1999 23:02	

To: **Clayton**

Attn.: Karen Dahl

Test Method: 8020
8015M

Prep Method: 5030

Volatile Hydrocarbons by 8015/8020

Sample ID:	**Field blank**	Lab Sample ID:	**1999-07-0252-006**
Project:	9907079	Received:	07/16/1999 15:08
		Extracted:	07/20/1999 21:08
Sampled:	07/15/1999 12:40	QC-Batch:	1999/07/20-01.03
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/20/1999 21:08	
Surrogate(s)						
4-Bromofluorobenzene-FID	102.3	50-150	%	.00	07/20/1999 21:08	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-07-0252

To: **Clayton**

Attn.: Karen Dahl

Test Method: 8020
8015M

Prep Method: 5030

Volatile Hydrocarbons by 8015/8020

Sample ID:	**Trip blank**	Lab Sample ID:	**1999-07-0252-007**
Project:	9907079	Received:	07/16/1999 15:08
		Extracted:	07/20/1999 20:32
Sampled:	07/15/1999	QC-Batch:	1999/07/20-01.01
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	07/20/1999 20:32	
Surrogate(s)						
4-Bromofluorobenzene-FID	82.0	50-150	%	.00	07/20/1999 20:32	

To: **Clayton**

Attn.: Karen Dahl

Test Method: 8020
8015M

Prep Method: 5030

Batch QC Report

Volatile Hydrocarbons by 8015/8020

Method Blank | **Water** | **QC Batch # 1999/07/20-01.03**

MB: 1999/07/20-01.03-001

Date Extracted: 07/20/1999 08:00

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	07/20/1999 08:00	
Surrogate(s)					
4-Bromofluorobenzene-FID	94.0	50-150	%	07/20/1999 08:00	

To: **Clayton**

Attn.: Karen Dahl

Test Method: 8020
8015M

Prep Method: 5030

Batch QC Report

Volatile Hydrocarbons by 8015/8020

Method Blank | **Water** | **QC Batch # 1999/07/20-01.01**

MB: 1999/07/20-01.01-001

Date Extracted: 07/20/1999 08:02

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	07/20/1999 08:02	
Surrogate(s)					
4-Bromofluorobenzene-FID	82.2	50-150	%	07/20/1999 08:02	

To: **Clayton**

Attn.: Karen Dahl

Test Method: 8020
8015M

Prep Method: 5030

Batch QC Report

Volatile Hydrocarbons by 8015/8020

Method Blank **Water** **QC Batch # 1999/07/21-01.03**

MB: 1999/07/21-01.03-001 Date Extracted: 07/21/1999 09:31

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	07/21/1999 09:31	
Surrogate(s)					
4-Bromofluorobenzene-FID	112.6	50-150	%	07/21/1999 09:31	

To: **Clayton**

Attn: Karen Dahl

Test Method: 8015M
8020

Prep Method: 5030

Batch QC Report

Volatile Hydrocarbons by 8015/8020

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 1999/07/20-01.03**

LCS: 1999/07/20-01.03-002 Extracted: 07/20/1999 08:27 Analyzed: 07/20/1999 08:27

LCSD: 1999/07/20-01.03-003 Extracted: 07/20/1999 09:22 Analyzed: 07/20/1999 09:22

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	483	453	500	500	96.6	90.6	6.4	75-125	20		
Surrogate(s)											
4-Bromofluorobenzene-FI	448	519	500	500	89.6	103.8		50-150			

To: **Clayton**

Attn: Karen Dahl

Test Method: 8015M
8020

Prep Method: 5030

Batch QC Report

Volatile Hydrocarbons by 8015/8020

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 1999/07/20-01.01**

LCS: 1999/07/20-01.01-002 Extracted: 07/20/1999 08:29 Analyzed: 07/20/1999 08:29

LCSD: 1999/07/20-01.01-003 Extracted: 07/20/1999 09:23 Analyzed: 07/20/1999 09:23

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	494	513	500	500	98.8	102.6	3.8	75-125	20		
Surrogate(s)											
4-Bromofluorobenzene-FI	461	466	500	500	92.2	93.2		50-150			

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 1999-07-0252

To: **Clayton**

Test Method: 8015M
8020

Attn: Karen Dahl

Prep Method: 5030

Batch QC Report

Volatile Hydrocarbons by 8015/8020

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 1999/07/21-01.03**

LCS: 1999/07/21-01.03-002 Extracted: 07/21/1999 07:07 Analyzed: 07/21/1999 07:07

LCSD: 1999/07/21-01.03-003 Extracted: 07/21/1999 08:01 Analyzed: 07/21/1999 08:01

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	477	495	500	500	95.4	99.0	3.7	75-125	20		
Surrogate(s)											
4-Bromofluorobenzene-FI	522	485	500	500	104 4	97.0		50-150			

Clayton LABORATORY SERVICES

REQUEST FOR LABORATORY ANALYTICAL SERVICES

IMPORTANT
Date Results Requested: Standard
Rush Charges Authorized? ☐ Yes ☐ No
☐ Phone or ☐ Fax Results

Page ____ of ____
For Clayton Use Only
Clayton Lab Project No.
9907079

REPORT RESULTS TO
Name John McDermott | Client Job No. 001-327
Company Capsule Envir. Engr. | Dept.
Mailing Address 1970 Oakcrest Avenue
City, State, Zip St. Paul, MN, 55113
Telephone No. 651.631.2644 | FAX No.

SEND INVOICE TO
Purchase Order No.
Name John McDermott
Company Capsule Envir. Engr. | Dept.
Address 1970 Oakcrest Avenue
City, State, Zip St. Paul MN 55113

Special instructions and/or specific regulatory requirements: (method, limit of detection, etc.)
Include MTBE in report

* Explanation of Preservative

Samples are: (check if applicable)
☐ Drinking Water
☒ Groundwater
☐ Wastewater

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request. Enter a 'P' if Preservative added.*)

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	TIME SAMPLED	MATRIX/ MEDIA	AIR VOLUME (specify units)	Number of Containers	8260 Include MTBE	8015 Tph-g gas	FOR LAB USE ONLY
CAGP-10	7/15	14:00	water			X/P	X/P	
CAGP-7	7/15	13:45	water			X/P	X/P	
CAGP-1	7/15	12:25	water			X/P	X/P	
CAGP-9	7/15	11:55	water			X/P	X/P	
CAGP-8	7/15	13:00	water			X/P	X/P	
Field blank 2vials	7/15	12:40	water			X/P	X/P	
Trip blank 2vial	from	lab.				X/P	X/P	

CHAIN OF CUSTODY
Collected by: John J. McDermott (print) | Collector's Signature:
Relinquished by: | Date/Time
Relinquished by: | Date/Time 7/16/99 1430
Method of Shipment:
Received by: | Date/Time 7/16/99 10:15
Received by: | Date/Time
Received at Lab by: | Date/Time
Authorized by: _____ Date _____
(Client Signature **MUST** Accompany Request)
Sample Condition Upon Receipt: ☐ Acceptable ☐ Other (explain)

Please return completed form and samples to one of the Clayton Group Services, Inc. labs listed below:

Detroit Regional Lab
22345 Roethel Drive
Novi, MI 48375
(800) 806-5887
(248) 344-1770
FAX (248) 344-2655

Atlanta Regional Lab
400 Chastain Center Blvd., N.W., Suite 490
Kennesaw, GA 30144
(800) 252-9919
(770) 499-7500
FAX (770) 423-4990

San Francisco Regional Lab
1252 Quarry Lane
Pleasanton, CA 94566
(800) 294-1755
(925) 426-2657
FAX (925) 426-0106

Seattle Regional Lab
4636 E. Marginal Way S., Suite 215
Seattle, WA 98134
(800) 568-7755
(206) 763-7364
FAX (206) 763-4189

DISTRIBUTION:
White = Clayton Laboratory
Yellow = Clayton Accounting
Pink = Client Copy

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