Quarterly Report
July 1995

Prepared For:

Ingersoll-Rand
Equipment Sales
San Leandro, California

July 26, 1995

QUARTERLY REPORT
JULY 1995

Prepared For:

Ingersoll-Rand Equipment Sales
1944 Marina Boulevard
San Leandro, California 94577

July 26, 1995

Prepared By:

CAPSULE
ENVIRONMENTAL ENGINEERING INC.
1970 Oakcrest Avenue, Suite 215
St. Paul, Minnesota 55113
(612) 636-2644

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1.0 INTRODUCTION

Ingersoll Rand Company (I-R) has contracted with Capsule Environmental Engineering (Capsule) to complete the implementation of the final corrective action design and related underground storage tank response activities for its equipment sales and maintenance facility at 1944 Marina Boulevard in San Leandro, California.

As part of these activities, Capsule prepares quarterly activities reports for the facility. The objectives of these reports are to:

- Provide a summary of corrective action activities, including such work as the quarterly ground water monitoring, being conducted at the facility during the quarter.
- Provide a benchmark of data and interpretation to evaluate the performance of remedial activities.
- Comply with Alameda County and city of San Leandro reporting requirements.

1.1 SITE DESCRIPTION

I-R operates a construction equipment sales and maintenance facility at 1944 Marina Boulevard, San Leandro, Alameda County, California (see Figure 1). The eastern shore of San Francisco Bay is approximately 1.25 miles west of the facility. The local topography around the facility is fairly flat, sloping gently toward the bay. Facility land surface elevations range from 20 to 25 feet above sea level.

The facility is situated in an area of industrial and commercial development. It is bounded on the north by Southern Pacific railroad tracks and on the south by Marina Boulevard. Immediately to the west of the facility is a manufacturer of packaging materials. To the east is a office filing equipment manufacturer. The facility has perimeter fencing.

The property's building has two tenants. The office filing equipment manufacturer occupies the eastern portion of the building. I-R occupies the western portion of the building, which consists of an office and parts distribution area attached to a large bayed service area. To the north and west of the building is an outdoor equipment storage yard. The stored equipment includes both new and used construction machinery. Drilling rigs, compressors, compactors, and other equipment are commonly stored in this area while being readied for sale, repair, rental, and salvage.

1.3 UNDERGROUND STORAGE TANK ACTIVITIES CHRONOLOGY

A detailed underground storage tank chronology is provided in the Quarterly Report April 1995.

Generally, corrective action activities began with the submittal of an Underground Storage Tank Release report to the San Leandro Fire Department in 1989. Site investigation activities since 1989 include monitoring well and boring installation, ground water and soil sampling, and reporting.

In 1992, a soil vapor extraction system was installed and operated for several months. System operation was discontinued when water levels rose and the system collected condensate. It is reported that 800 pounds of product were removed during initial operation.

In late 1994, five additional soil vapor extraction vents were installed. These vents were installed to provide the soil vapor extraction system with flexibility in vacuum configuration over a larger area, including the downgradient property boundary.

Comprehensive ground water sampling of monitoring wells has been performed in November 1989, June and October of 1994 , and January and April 1995. Additionally, a sample was taken from MW-4 in November 1990. The results indicated and confirmed the presence of gasoline-related volatile organic compound (VOCs) and several chlorinated VOCs in low concentrations in site monitoring wells. The April 1995 sampling event and results are discussed in detail in section 2.0 of this report.

2.0 GROUND WATER DATA SUMMARY

The April 1995 ground water sampling event included MW-3, MW-4, and OB-1. The samples were collected and analyzed by Clayton Environmental Consultants. The sample collection procedures are available in their analytical report for the event. The analytical results, the chain of custody, and stabilization tests can be found in Appendix A.

The June and October 1994 and the January 1995 sampling events included upgradient wells, MW-1 and MW-2. During a March 2, 1995, telephone conference with Alameda County Health Care Services, it was agreed that no additional quarterly sampling of MW-1 and MW-2 would be necessary.

2.1 GROUND WATER LEVEL DATA

Depth to water measurements were collected as part of the April 1995 event. The measurements are recorded in the stabilization tests found in Appendix A. A summary of all water level data and measuring point elevations are provided in Table 1.

During the April event water level elevations beneath the facility ranged between 12.1 to 14.1 feet above sea level. Overall, the water level elevation across the facility was down from 0.35 to 0.58 feet from the January 1995 measurements. The January 1995 water table elevations were period of record highs for the project.

During the period of record, the water levels have generally risen 2 to 3 feet, reflecting increasing precipitation from several dry years in the mid to late 1980's to rainfall amounts in the 1990's that are nearer the historic mean. Rainfall at the nearby San Leandro Marina rainfall gage has varied from a low of 10.13 inches in the 1989-1990 water year to a high of 19.33 inches during the 1994-1995 water year. (Alameda County, 1995). January, February, March, and April 1995 rainfall was 9.02, 0.16, 6.75, and 0.98 inches, respectively. The January and March amounts are among the highest monthly amounts recorded for the 25 year period of record for the gage.

The shallow ground water in the area of the facility appears to respond directly to rainfall events.

Water level elevation hydrographs for the four monitoring wells are presented on Figure 2. Water level elevations in individual wells also continue to respond fairly

similarly. This uniform fluctuation results in generally consistent hydraulic gradients and ground water flow direction with time.

The general ground water flow direction remains to the southwest. Ground water contours for the April event are shown in Figure 3. The southwesterly direction is consistent with past findings. The direction is also areally consistent with that reported in the Hydrogeology of Central San Leandro (WCC, 1993).

While the overall flow direction is to the southwest, there is a flexure to the contours. The area of the flexure coincides generally with an area of coarser sand, identified during the 1990 boring program. This feature developed between the October 1994 and January 1995 sampling events. It appears to be the result of the water table rising into this more permeable material.

Because of the interlayered nature of the shallow subsurface, it is likely contours are not as uniform as portrayed. Variations in soil particle size and permeability can cause local variations in flow direction.

2.3 GROUND WATER ANALYTICAL DATA

Aromatic or chlorinated VOCs detected during the April event. MW-3 concentrations were generally higher than previous sampling events. MW-4 concentrations were generally lower or in the same range as previous sampling events. Additional discussion is provided on individual constituents below.

While the water samples were not collected from a public water source, the California maximum contaminant levels (MCLs) are presented for comparison purposes with the detected concentrations.

2.3.1 Chlorinated Organics

The April 1995 event water samples were analyzed using Environmental Protection Agency (EPA) methods 8015/8020 and 8260. No new chlorinated VOC detections have been found in monitoring wells.

2.3.1.1 Trichloroethene (TCE)

Throughout the period of record, MW-1 and MW-2, which are on the upgradient part of the facility, have consistently shown TCE detections ranging from 5 to 29 µg/l.

Department of Toxic Substance Control information indicates that TCE is a widely occurring VOC found in the shallow ground water in the San Leandro area (WCC, 1993). Given this information and the occurrences in upgradient wells, it likely that the TCE-impacted ground water detected in MW-1 and MW-2 is flowing onto the facility from an upgradient source.

By agreement with Alameda County, these wells were not sampled during the April 1995 event.

Analytical results from MW-4 and OB-1 continue to indicate low TCE detections of 14 and 57 microgram/liter (µg/l), respectively. Previous detections in these wells ranged from 14 to 66 µg/l. MW-4 and OB-1 are on the downgradient side of the facility. The TCE detections have at least two possible source areas: 1) the continuation of the TCE-impacted ground water observed in the upgradient wells, MW-1 and MW-2, and 2) a localized, undocumented release on the facility property. While the facility formerly used a TCE parts cleaner, there are no soil sampling observations or analytical results to suggest an undocumented release on the property.

The California MCL for trichloroethene is 0.005 mg/l, or 5 µg/l.

2.3.1.2 1,2-Dichloroethene

Cis-1,2-dichloroethene was detected in OB-1 at 7 µg/l. Previous detections in OB-1 ranged from 6.7 to 9 µg/l. Potential sources of these low concentrations include breakdown products of TCE and as a manufacturing artifact of TCE.

The California MCL for cis-1,2-dichloroethylene is 0.006 mg/l, or 6 µg/l.

Trans-1,2-dichloroethene was detected in MW-4 and OB-1 at 8 and 15 µg/l, respectively. Previous detections in MW-4 and OB-1 ranged from 8 to 15 µg/l. Potential sources of these low concentrations include breakdown products of TCE and as a manufacturing artifact of TCE.

The California MCL for trans-1,2-dichloroethylene is 0.010 mg/l, or 10 µg/l.

2.3.1.3 Chlorobenzene

Chlorobenzene was detected in MW-3 at a concentration of 15 µg/l. Previous detections ranged from 17 to 19 µg/l. Typical uses for the compound include: use as a solvent, for heat transfer, and in the production of pesticides. (Sax and Lewis, 1987).

The California MCL for monochlorobenzene (chlorobenzene) is 0.030 mg/l, or 30 µg/l.

2.3.1.4 Dichlorobenzene Isomers

The three isomers of dichlorobenzene were detected in MW-3 in concentrations ranging from 6 to 43 µg/l. Previous detections ranged from 7 to 64 µg/l. The three isomers, 1,2-dichlorobenzene, 1,3-dichlorobenzene, and 1,4-dichlorobenzene have a wide variety of uses including: solvent, dye manufacturing, insecticides, and industrial odor control. 1,3 and 1,4-dichlorobenzene are generally used in fumigants and insecticides. (Sax and Lewis, 1987).

Only 1,4-dichlorobenzene has a California MCL, which is 0.005 mg/l, or 5 µg/l.

2.3.2 Aromatic Organics

Several gasoline component VOCs continue to be detected in samples from monitoring wells MW-3, MW-4, and OB-1. Each is discussed below.

2.3.2.1 Benzene

During the April event, benzene was detected in MW-3 at 1200 µg/l. Previous benzene concentrations ranged from 9 µg/l in October 1994 to 970 µg/l in January 1995. This two order of magnitude fluctuation may be due to flushing of residual gasoline in unsaturated soils in the area of MW-3, which is near the former gasoline underground storage tank site. Concurrent with the higher benzene, concentrations are higher water level elevations in MW-3. It appears that the higher detected benzene concentrations are the result of additional flushing of residual gasoline in the MW-3 area, which is adjacent to the former underground storage tank area.

Benzene was detected in MW-4 at 500 µg/l. MW-4 concentrations have been fairly steady throughout 1994 and early 1995 ranging from 260 to 470 µg/l. A sample from late 1990 reported 1,500 µg/l.

The California MCL for benzene is 0.001 mg/l, or 1 µg/l.

2.3.2.2 Ethylbenzene

Ethylbenzene is another gasoline constituent detected in MW-3, MW-4, and OB-1. Concentrations ranged from 10 to 720 µg/l. During the April event, the highest concentration was found in MW-3. Historically, MW-3 concentrations ranged from 80 to 170 µg/l.

The MW-4 concentration was 390 µg/l. Previous detections ranged from 230 to 720 µg/l.

The California MCL for ethylbenzene is 0.680 mg/l or 680 µg/l.

2.3.2.3 Toluene

Toluene detections in MW-3 and MW-4 were 1,700 and 11 µg/l, respectively.

Previous detections in MW-3 have ranged from 4 to 410 µg/l. The April concentrations is the highest detected during the period of record. Both the January and April 1995 results coincide with increased benzene and xylene concentrations and support the concept of flushing of residual gasoline in unsaturated soils during this period of high rainfall.

MW-4 toluene concentrations range from 19 to 110 µg/l. The 11 µg/l detected during the April event was an order of magnitude lower than for the January 1995 event.

2.3.2.4 Isomers of Xylene

All three isomers of xylene were detected in MW-3, MW-4, and OB-1 during the April event.

O-xylene was detected at 900 µg/l in MW-3. Previous MW-3 concentrations of o-xylene ranged from 31 to 820 µg/l with the higher value occurring during the January 1995 sampling event. P and m-xylenes were detected at 2,100 µg/l in MW-3.

Previous MW-3 concentrations of p and m-xylenes ranged from 100 to 1,100 µg/l with the higher value also occurring during January 1995. The higher xylene concentrations appear to be the result of soil flushing of residual gasoline in the MW-3 area.

Xylene isomer concentrations were lower in MW-4 than during the January event. O-xylene was detected 60 µg/l. Previous MW-4 concentrations ranged from 50 to 320 µg/l for o-xylene. P and m-xylenes were detected at 430 µg/l. Previous MW-4 concentrations ranged from 270 to 730 µg/l.

The California MCL for xylenes is 1.75 mg/l, or 1,750 µg/l for either a single isomer or the sum of the isomers.

2.3.2.5 Napthalene

This gasoline component has been detected in MW-3, MW-4, and OB-1.

During the April event, napthalene was detected at 150 µg/l in MW-3. Previous MW-3 concentrations ranged from 18 to 100 µg/l. As with the benzene, ethylbenzene, toluene, xylene (BETX) compounds, the increased napthalene concentration appears to be the result of residual gasoline flushing in the MW-3 area.

The MW-4 concentration was 54 µg/l. Previous MW-4 concentrations range from 46 to 120 µg/l.

2.3.2.6 Trimethylbenzene

Both 1,2,4 and 1,3,5 trimethylbenzene occur in MW-3 and MW-4.

1,2,4 trimethylbenzene was detected at 650 µg/l in MW-3 during the April event. Previous MW-3 concentrations range from 120 to 350 µg/l. 1,3,5 trimethylbenzene was detected at 160 µg/l in MW-3. Previous MW-3 concentrations range from 22 to 80 µg/l. As with the BETX compounds, the increased trimethylbenzene concentration appears to be the result of residual gasoline flushing near the MW-3 area.

During the April event 1,2,4 trimethylbenzene was detected at 490 µg/l in MW-4. Previous MW-4 concentrations range 300 to 600 µg/l. 1,3,5 trimethylbenzene was detected at 81 µg/l in MW-4. Previous MW-4 concentrations range from 100 to 120 µg/l.

2.3.2.7 Other Gasoline Components

Throughout the period of record, a number of other gasoline related VOCs have also been detected in MW-3, MW-4, and OB-1. Concentrations of n-butyl benzene, isopropyl benzene (cumene), p-isopropyl-benzene, and n-propyl benzene have been detected during sampling events.

During the April event, these VOCs were detected in concentrations similar to those of previous sampling events. Most concentrations are 100 µg/l or less.

2.3.2.8 Total petroleum hydrocarbons (TPH) as Gasoline

TPH as gasoline was 14,000 µg/l in MW-3. Previous detections ranged from 2,600 to 7,100 µg/l. This increase is consistent with the BETX compound increases previously discussed and appears to represent additional soil flushing of gasoline in the MW-3 area.

TPH concentrations in MW-4 and OB-1 were 6,100 and 2,400 µg/l, respectively.

For the period of record, MW-4 concentrations ranged from 7,600 to 9,700 µg/l. The highest concentration occurred in the January 1995 result. OB-1 concentrations ranged from 1,600 to 3,900 µg/l. The highest concentration occurred in the January 1995 sample.

3.0 CONCLUSIONS

As of April 1995, ground water elevations in facility monitoring wells have declined from the period of record highs that occurred in January 1995.

The prevailing ground water flow direction remains to the southwest.

Gasoline constituent VOCs appear to continue to be flushed from the unsaturated zone into the shallow ground water in the area of MW-3.

The shallow subsurface soils and ground water near the former gasoline underground storage tank are impacted with VOCs. The BETX compounds in the ground water are less than 2 mg/l.

VOCs continue to be detected in the wells near the facility's downgradient boundary. The detected compounds include both gasoline constituents and chlorinated VOCs.

4.0 ACTIVITIES STATUS SUMMARY

The following corrective action activities are planned for the coming months.

During late June and early July, the additional ground water investigation is scheduled to occur. The scope of work for this investigation was submitted to Alameda County on April 25, 1995. It generally involves the installation of hydraulically driven borings to collect water samples. Access arrangements are being made with adjacent property owners as part of the investigation activities.

During early May 1995, soil vapor extraction testing was completed on eight vents. The results have been evaluated and an upgraded soil vapor extraction system is being design. Once design is completed, a contractor will be selected to perform the modifications to the existing system.

Quarterly ground water sampling of wells will continue. Analytical results will be submitted as part of future quarterly reports.

5.0 REFERENCES

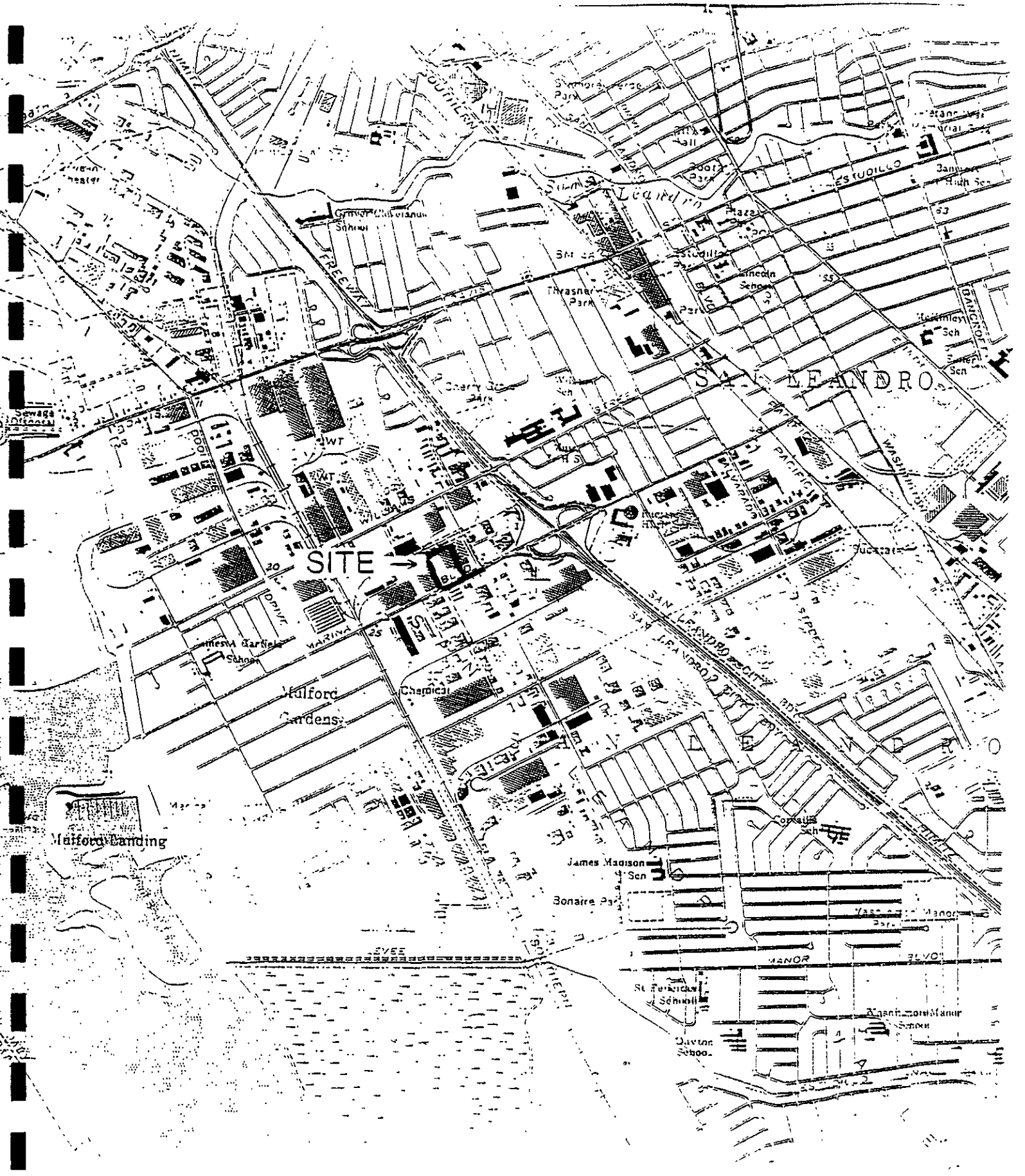
Alameda County, 1995, faxed precipitation data from the Alameda County Flood Control and Water Conservation District, Water Resources Section, Oakland, California.

IT Corporation, 1990, Ingersoll Rand Corporation Data Summary Report, Subject Site: 1944 Marina Boulevard, San Leandro, California, Martinez, California.

IT Environmental Services, 1989, Problem Assessment Report, prepared for: Ingersoll-Rand Incorporated, Martinez, California.

Sax, N.I, and R. J. Lewis, 1987, Hawley's Condensed Chemical Dictionary, Van Nostrand Reinhold, New York.

Woodward-Clyde Consultants, 1993, Hydrogeology of Central San Leandro and Remedial Investigation of Regional Ground water Contamination San Leandro Plume, San Leandro, California, prepared for the California Environmental Protection Agency, Oakland, California.

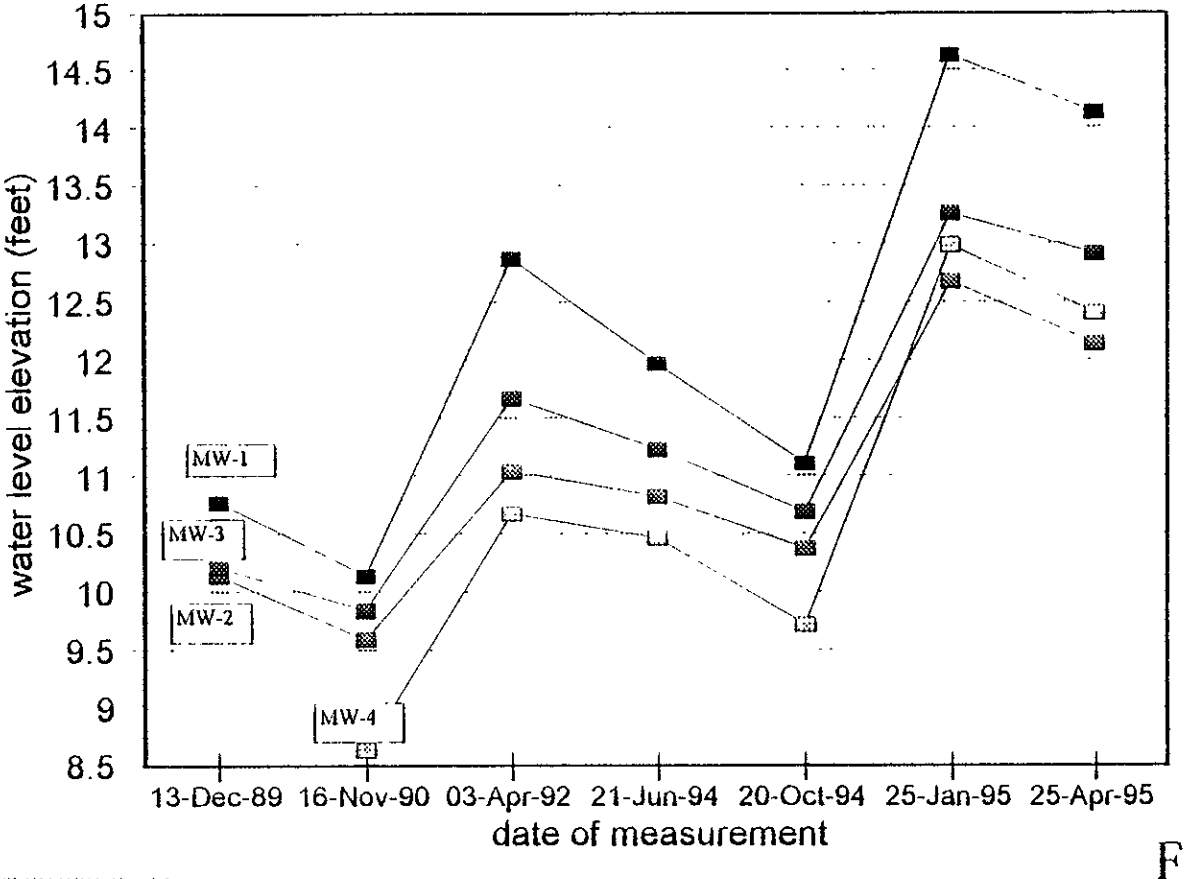


Source: San Leandro, California
7 ½ minute Quadrangle
U.S. Geological Survey
Photo revised 1980

Figure 1 - Site Location Map
San Leandro, California

Water Level Elevations

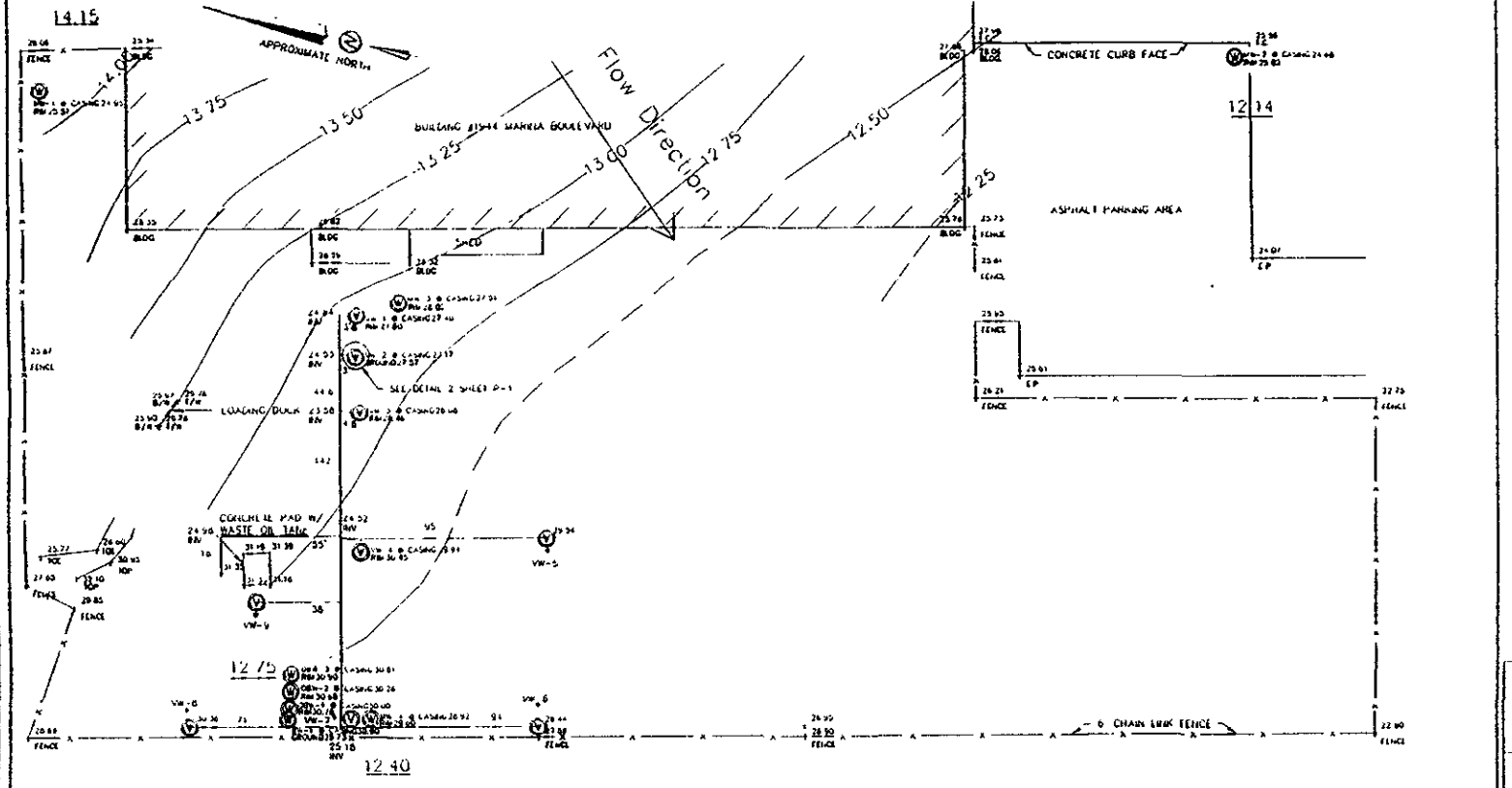
San Leandro, California



File H:\QUATTRO\SLWATLEV WBI.Graph1

Figure 2

FIGURE 3
GROUNDWATER CONTOURS 4/25/95



LEGEND

T/C	TOP OF CURB
- - -	BUILDING LINE
T/W	TOP OF WALL
B/W	BASE OF WALL
- - -	FENCE LINE
	WELL EXISTING
	SOIL VAPOR VENT
E/P	EDGE OF PAVEMENT
TOP	TOP OF BANK
TOE	TOE OF SLOPE

BASIS OF ELEVATIONS: CITY OF SAN LEANDRO BENCHMARK DATUM BEING ON TOP OF CURB AT STORM WATER INLET SOUTHEAST CORNER OF THE INTERSECTION OF MARINA BOULEVARD AND MERCED STREET. ELEVATION = 22.96'

ALL CASING ELEVATIONS WERE TAKEN AT THE SOUTHWEST EDGE OF PVC PIPING

ALL RIM ELEVATIONS WERE TAKEN AT THE SOUTHWEST EDGE OF STEEL RIM UNLESS OTHERWISE NOTED

* DENOTES APPROXIMATE LOCATION OF VW - 5 AND 9

WELL LOCATION SURVEY
INGERSOLL-RAND EQUIPMENT CORPORATION
LOCATED AT 1944 MARINA BOULEVARD
CITY OF SAN LEANDRO COUNTY OF ALAMEDA, CALIFORNIA
JUNE 1994

MORAN ENGINEERING
CIVIL ENGINEERS \ LAND SURVEYORS
465 KENTUCKY AVENUE
BERKELEY CALIFORNIA
94707
(510) 527-1744

CAPSULE
ENVIRONMENTAL ENGINEERING, INC
1670 OAKCREST AVE SUITE 216
ST PAUL, MINNESOTA 55113
(612) 636-8644

TITLE GROUNDWATER CONTOUR
MAP 1/25/95
INGERSOLL-RAND CORPORATION
SAN LEANDRO CALIFORNIA

REVISION	DATE	DESCRIPTION

SCALE	DRAWN BY	CHECKED BY	DATE	PROJECT NO	DRAWING NO	SHEET
NTS	MCC	01/29/95	1203/24	001-142	S-3	2 OF 2

CAPSULE®
ENVIRONMENTAL ENGINEERING, INC

July 26, 1995

Mr. Scott Seery, CHMM
Alameda County Health Care Services Agency
UST Local Oversight Program
80 Swan Way, Room 200
Oakland, California 94621

Dear Mr. Seery:

On behalf of the Ingersoll-Rand Equipment Sales, Capsule Environmental Engineering, Inc., and our project partner, Braun Intertec Corporation, would like to submit the enclosed report, Quarterly Report July 1995. This report is part of Ingersoll-Rand's corrective action activities to address the underground storage tank leak at 1944 Marina Boulevard, San Leandro.

The Quarterly Report July 1995 was prepared to summarize the monitoring and remediation activities for the period from April through June 1995.

If you have any questions, comments or need additional information cited in the report, please contact John McDermott at (800) 328-8246.

Sincerely,

Daniel P. Reinke, P.E.
Principal Engineer
Capsule Environmental Engineering, Inc.

Gerald E. Stuth, P.E.
Senior Project Manager
Braun Intertec Corporation

DPR:mmf
Enclosure
cc/enc: L. Feldman/Regional Water Quality Control Board, Oakland, CA
R. Heindl/Ingersoll-Rand Equipment Sales, Bethlehem, PA
A. Aguirre/Ingersoll-Rand Equipment Sales, San Leandro, CA
M. Bakaldin/San Leandro Fire Department, San Leandro, CA

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Toll Free 1-800-328-8246

TABLE 1
Water Level Summary Table

Project: Ingersoll-Rand Company, San Leandro, CA water level data
Date prepared: April 15, 1995
Latest update: June 13, 1995
Prepared by: JJM

Well	Date of measurement	Measuring point elevation (feet)	Depth to water (feet)	Water level elevation (feet)
MW-1	13-Dec-89	24.78	14.01	10.77
	16-Nov-90	24.97	14.84	10.13
	03-Apr-92	24.97	12.10	12.87
	21-Jun-94	24.95	12.98	11.97
	20-Oct-94	24.95	13.84	11.11
	25-Jan-95	24.95	10.32	14.63
	25-Apr-95	24.95	10.82	14.13
MW-2	13-Dec-89	24.70	14.57	10.13
	16-Nov-90	24.64	15.05	9.59
	03-Apr-92	24.64	13.60	11.04
	21-Jun-94	24.68	13.86	10.82
	20-Oct-94	24.68	14.31	10.37
	25-Jan-95	24.68	12.01	12.67
	25-Apr-95	24.68	12.54	12.14
MW-3	13-Dec-89	27.33	17.13	10.20
	16-Nov-90	27.51	17.67	9.84
	03-Apr-92	27.57	15.90	11.67
	21-Jun-94	27.51	16.28	11.23
	20-Oct-94	27.51	16.82	10.69
	25-Jan-95	27.51	14.25	13.26
	25-Apr-95	27.51	14.60	12.91
MW-4	16-Nov-90	28.92	20.28	8.64
	03-Apr-92	28.92	18.25	10.67
	21-Jun-94	28.92	18.46	10.46
	20-Oct-94	28.92	19.20	9.72
	25-Jan-95	28.92	15.94	12.98
	25-Apr-95	28.92	16.52	12.40
OB-1	21-Jun-94	30.28	19.56	10.72
	20-Oct-94	30.28	20.28	10.00
	25-Jan-95	30.28	16.95	13.33
	25-Apr-95	30.28	17.53	12.75

Notes:

elev.source for December 13, 1989: PAR, 1989

elev. source for Nov. 16, 1990: ELG Surveying letter, 11/21/90

elev. source for April 3, 1992: Report on Further Delineation, June 1992

elev. source for June 21, 1994 and later dates: Moran Engineering map, 6/94

FILE: H:\SLWATLEV.WB1

Table 2: San Leandro Groundwater Analytical Data Summary

Well	Date Collected	Sample collection by	Lab	EPA Method	acetone (ug/l)	benzene (ug/l)	n-butyl-benzene (ug/l)	chloro-benzene (ug/l)	1,2-di-chloro-benzene (ug/l)	1,3-di-chloro-benzene (ug/l)	1,4-di-chloro-benzene (ug/l)	1,1-di-chloro-ethane (ug/l)	1,2-di-chloro-ethane (ug/l)	cis-1,2-dichloro-ethene (ug/l)	trans-1,2-dichloro-ethene (ug/l)	2,2-dichloro-propane (ug/l)	ethyl-benzene (ug/l)	isopropyl-benzene (ug/l)	p-iso-propyl-toluene (ug/l)
MW-1	17-Nov-89	-	PAL	8010/8020		ND											ND		
	21-Jun-94	CEC	ARC	8260		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	21-Jun-94	CEC	ARC	8015															
	21-Jun-94	CEC	CEC	8260	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	21-Jun-94	CEC	CEC	8015															
	20-Oct-94	CEC	CEC	8260	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	20-Oct-94	CEC	CEC	8015/8020		<0.4											<0.3		
	25-Jan-95	CEC	CEC	8260	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	25-Jan-95	CEC	CEC	8015/8020		<0.4											<0.3		
MW-2	17-Nov-89	IT	PAL	8010/8020		ND											ND		
	21-Jun-94	CEC	ARC	8260		<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	21-Jun-94	CEC	ARC	8015															
	21-Jun-94	CEC	CEC	8260	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	21-Jun-94	CEC	CEC	8015															
	20-Oct-94	CEC	CEC	8260	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	20-Oct-94	CEC	CEC	8015/8020		<0.4											<0.3		
	25-Jan-95	CEC	CEC	8260	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	25-Jan-95	CEC	CEC	8015/8020		<0.4											<0.3		
MW-3	17-Nov-89	IT	PAL																
	21-Jun-94	CEC	ARC	8260		27	<1.0	17	42	5.6	13	<1.0	<1.0	>1.0 & <5.0	<1.0	<1.0	120	13	>1.0 & <5.0
	21-Jun-94	CEC	ARC	8015															
	21-Jun-94	CEC	CEC	8260	<20	34	7	19	45	7	14	<5	<5	<5	<5	<5	170	17	<5
	21-Jun-94	CEC	CEC	8015															
	20-Oct-94	CEC	CEC	8260	50	9	13	19	64	9	18	<5	<5	<5	<5	<5	90	20	<5
	20-Oct-94	CEC	CEC	8015/8020		3.9											96		
	25-Jan-95	CEC	CEC	8260	<100	970	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	300	<30	<30
	25-Jan-95	CEC	CEC	8015/8020		950											360		
	26-Apr-95	CEC	CEC	8260	<20	1100	<5	15	43	6	11	<5	<5	<5	<5	<5	840	29	<5
	26-Apr-95	CEC	CEC	8015/8020		1200											720		
MW-4	16-Nov-90	IT	MCL	5030		1500											720		
	21-Jun-94	CEC	ARC	8260		370	19	>1.0 & <5.0	>1.0 & <5.0	<1.0	<1.0	<1.0	11	>1.0 & <5.0	16	>1.0 & <5.0	230	43	>1.0 & <5.0
	21-Jun-94	CEC	ARC	8015															
	21-Jun-94	CEC	CEC	8260	<100	470	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	360	50	<30
	21-Jun-94	CEC	CEC	8015															
	20-Oct-94	CEC	CEC	8260	160	260	17	<5	7	<5	<5	<5	<5	<5	12	<5	240	36	<5
	20-Oct-94	CEC	CEC	8015/8020		360											270		
	25-Jan-95	CEC	CEC	8260	<100	400	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	420	<100	40
	25-Jan-95	CEC	CEC	8015/8020		470											520		
	26-Apr-95	CEC	CEC	8260	<20	470	<5	<5	<5	<5	<5	<5	<5	<5	3	<5	390	51	<5
	26-Apr-95	CEC	CEC	8015/8020		500											250		
OB-1	21-Jun-94	CEC	ARC	8260		33	>1.0 & <5.0	<1.0	>1.0 & <5.0	<1.0	<1.0	>1.0 & <5.0	<1.0	5.7	12	<1.0	10	28	<1.0
	21-Jun-94	CEC	ARC	8015															
	21-Jun-94	CEC	CEC	8260	<20	130	<5	<5	<5	<5	<5	<5	<5	9	14	<5	10	39	<5
	21-Jun-94	CEC	CEC	8015															
	20-Oct-94	CEC	CEC	8260	120	48	<5	<5	<5	<5	<5	<5	<5	9	10	<5	<5	30	<5
	20-Oct-94	CEC	CEC	8015/8020		48											5.2		
	25-Jan-95	CEC	CEC	8260	<20	80	<5	<5	<5	<5	<5	<5	<5	9	10	<5	32	20	<4
	25-Jan-95	CEC	CEC	8015/8020		280											24		
	26-Apr-95	CEC	CEC	8260	<20	190	<5	<5	<5	<5	<5	<5	<5	7	15	<5	10	38	<5
	26-Apr-95	CEC	CEC	8015/8020		200											14		

ARC - Aspen Research Laboratories
CEC - Clayton Environmental Consultants
IT - International Technology Corporation
MCL - Mobile Chem Labs Inc
PAL - Precision Analytical Laboratory Inc

FILE: H:\QUATTRO\SLAN0495.WB1
prepared by JJM 7/95
updated 9/20/95

Table 2 : San Leandro Groundwater Analytical Data Summary

Well	Sample Date Collected	Sample collection by	Lab	EPA Method	naphtha-lene (ug/l)	n-propyl-benzene (ug/l)	sec-butyl-benzene (ug/l)	tetra-chloro-ethene (ug/l)	toluene (ug/l)	1,2,4-trichloro-benzene (ug/l)	trichloro-ethene (ug/l)	1,2,4-trimethyl-benzene (ug/l)	1,3,5-trimethyl-benzene (ug/l)	vinyl chloride (ug/l)	xylenes (ug/l)	o-xylene (ug/l)	p,m-xylenes (ug/l)	TPH gasoline (ug/l)	TPH EPA 8015 gasoline (ug/l)
MW-1	17-Nov-89	IT	PAL	8010/8020					ND		29				ND			ND	
	21-Jun-94	CEC	ARC	8260	<1.0	<1.0	<1.0	>1.0 & <5.0	<1.0	<1.0	18	<1.0	<1.0	<1.0		<1.0	<1.0		<50
	21-Jun-94	CEC	ARC	8015															
	21-Jun-94	CEC	CEC	8260	<5	<5	<5	<5	<5	<5	20	<5	<5	<5		<5	<5		<50
	21-Jun-94	CEC	CEC	8015															
	20-Oct-94	CEC	CEC	8260	<5	<5	<5	<5	<5	<5	11	<5	<5	<5		<5	<5		<50
	20-Oct-94	CEC	CEC	8015/8020					<0.3							<0.4	<0.4		
	25-Jan-95	CEC	CEC	8260	<5	<5	<5	<5	<5	<5	16	<5	<5	<5		<5	<5		<50
	25-Jan-95	CEC	CEC	8015/8020					<0.3							<0.4	<0.4		
MW-2	17-Nov-89	IT	PAL	8010/8020					ND		10				ND			ND	
	21-Jun-94	CEC	ARC	8260	<1.0	<1.0	<1.0	>1.0 & <5.0	<1.0	<1.0	>1.0 & <5.0	<1.0	<1.0	<1.0		<1.0	<1.0		<50
	21-Jun-94	CEC	ARC	8015															
	21-Jun-94	CEC	CEC	8260	<5	<5	<5	<5	<5	<5	5	<5	<5	<5		<5	<5		<50
	21-Jun-94	CEC	CEC	8015															
	20-Oct-94	CEC	CEC	8260	<5	<5	<5	<5	<5	<5	6	<5	<5	<5		<5	<5		<50
	20-Oct-94	CEC	CEC	8015/8020					<0.3							<0.4	<0.4		
	25-Jan-95	CEC	CEC	8260	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	<5		<50
	25-Jan-95	CEC	CEC	8015/8020					<0.3							<0.4	<0.4		
MW-3	17-Nov-89																		
	21-Jun-94	CEC	ARC	8260		18		33	>1.0 & <5.0	<1.0	>1.0 & <5.0	<1.0	<1.0	<1.0	63	<1.0		31	100		2700
	21-Jun-94	CEC	ARC	8015																	
	21-Jun-94	CEC	CEC	8260	<5		43	<5		<5	<5	<5	<5		120	22	<5		40	150		2900
	21-Jun-94	CEC	CEC	8015																	
	20-Oct-94	CEC	CEC	8260		29		43		6	<5	<5	<5	<5	150	46	<5		68	140		2600
	20-Oct-94	CEC	CEC	8015/8020							4.4								69	160		
	25-Jan-95	CEC	CEC	8260		100		<30		<30	<30	410	<30	<30	350	80	<30		820	1000		7100
	25-Jan-95	CEC	CEC	8015/8020								340							760	1100		
	26-Apr-95	CEC	CEC	8260		150		83		5	<5	1600	<5	<5	650	160	<5		900	2100		14000
	26-Apr-95	CEC	CEC	8015/8020								1700							940	1500		
MW-4	16-Nov-90	IT	MCL	5030								2000						27000		32000	
	21-Jun-94	CEC	ARC	8260		46		54	>1.0 & <5.0	<1.0		19	<1.0		15	<1.0		110	>1.0 & <5.0		44	270		8000
	21-Jun-94	CEC	ARC	8015																	
	21-Jun-94	CEC	CEC	8260	<30		60	<30		<30	<30		<30	<30	530	110	<30		50	530		7600
	21-Jun-94	CEC	CEC	8015																	
	20-Oct-94	CEC	CEC	8260		96		78		8	<5	34	<5		27	300	100	<5	110	330		7800
	20-Oct-94	CEC	CEC	8015/8020								33							120	520		
	25-Jan-95	CEC	CEC	8260		120		100	<30		<30	90	<30	<30	600	120	<30		310	550		9700
	25-Jan-95	CEC	CEC	8015/8020								110							320	730		
	26-Apr-95	CEC	CEC	8260		54		61		6	<5	17	<5		14	490	81	<5	60	430		6100
	26-Apr-95	CEC	CEC	8015/8020								11							24	210		
OB-1	21-Jun-94	CEC	ARC	8260	>1.0 & <5.0		5.4	<1.0 & >5.0		<1.0	>1.0 & <5.0		<1.0		31	>1.0 & <5.0	<1.0	<1.0		>1.0 & <5.0	6.6		2800
	21-Jun-94	CEC	ARC	8015																	
	21-Jun-94	CEC	CEC	8260	<5		6	<5		<5	<5		<5		42	<5	<5	<5	<5	7		1600
	21-Jun-94	CEC	CEC	8015																	
	20-Oct-94	CEC	CEC	8260	<5	<5		<5	<5	<5			<5		66	<5	<5	<5	<5	<5		2600
	20-Oct-94	CEC	CEC	8015/8020								3.3							0.9	5		
	25-Jan-95	CEC	CEC	8260	<5		11	<5	<5	<5		39		23	27	<5	<5	<5	2.1	45		3900
	25-Jan-95	CEC	CEC	8015/8020								29							<5	35		
	26-Apr-95	CEC	CEC	8260	<5		8	<5	<5	<5	<5		<5		57	5	<5	<5	<5	9		2400
	26-Apr-95	CEC	CEC	8015/8020								3.4								8.2		

ARC - Aspen Research Laboratories
CEC - Clayton Environmental Consultants
IT - International Technology Corporation
MCL - Mobile Chem Labs Inc
PAL - Precision Analytical Laboratory Inc

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prepared by JJM 7/95
updated 6/20/95

Western Operations

1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(510) 426-2600
Fax (510) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS

May 19, 1995

Mr. Jay S. Mattsfield
CAPSULE ENVIRONMENTAL ENGINEERING, INC.
1970 Oakcrest Avenue, Suite 213
St. Paul, Minnesota 55113-2624

Clayton Project No. 60899.01

Subject: Analytical results of monitoring wells at the Ingersoll-Rand facility in San Leandro, California

Dear Mr. Block:

Clayton Environmental Consultants, Inc. is pleased to present the enclosed analytical results for the groundwater sampling conducted on April 26, 1995 at the Ingersoll-Rand facility located at 1944 Marina Boulevard in San Leandro, California.

Groundwater samples were collected from wells MW-3, MW-4 and OB-1. Prior to sampling the static water depths were measured and 4 to 5 casing volumes of water were purged according to standard Clayton Sampling Protocol. In addition, depth to water measurements were collected from wells MW-1, MW-2, the extraction well, OB-2, OB-3 and VW-1 through VW-4. Two Department of Transportation (DOT) approved 55-gallon drums were left onsite to store the purge water. Upon completion of well sampling a sample from the purge drums was collected to characterize the purge water.

Groundwater samples from monitoring wells MW-3, and MW-4, observation well OB-1, and the purged water DS-3 were analyzed using Environmental Protection Agency (EPA) Methods 8260 for volatile organic compounds (VOCs), EPA Method 8015 modified for gasoline, and EPA 8020 for benzene, toluene, ethylbenzene, and xylenes (BTEX). In addition, the purged water DS-3 was analyzed for reactivity, corrosivity, and ignitability (RCI).

In addition, soil sample CS-2 was collected from the existing stockpile and was analyzed using EPA Method 8260 for volatile organic compounds.

Attachment 1 includes laboratory reports detailing the analyses conducted for water samples collected from monitoring wells MW-3, and MW-4, observation well OB-1, and for the purged water DS-3. Attachment 1 also includes the analyses for the soil sample CS-2. Attachment 2 includes well field sampling forms describing the sampling of the wells and depth to water measurements. The sampling protocols used for sample collection is included in Attachment 3.

If you have any questions regarding the sampling event, please call me at (510) 426-2676 or Richard Silva at (510) 426-2670.

Sincerely,

John F. Vargas, R.G.
Supervisor, Geosciences and Remediation
Western Operations

REGISTERED GEOLOGIST
JOHN F. VARGAS
NO. 5046
STATE OF CALIFORNIA

JFV/rjs
Enclosures

ATTACHMENT 1

ANALYTICAL RESULTS

Western Operations

1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(510) 426-2600
Fax (510) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS

May 11, 1995

Mr. John Vargas
CLAYTON ENVIRONMENTAL CONSULTANTS, INC.
1252 Quarry Lane
Pleasanton, CA 94566

Client Ref.: 60899.01
Clayton Project No.: 95043.48

Dear Mr. Vargas:

Attached is our analytical laboratory report for the samples received on April 26, 1995. Also enclosed is a copy of the Chain-of-Custody record acknowledging receipt of these samples.

Please note that any unused portion of the samples will be discarded after June 10, 1995, unless you have requested otherwise.

We appreciate the opportunity to assist you. If you have any questions concerning this report, please contact Suzanne Haus, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Harriotte A. Hurley, CIH
Director, Laboratory Services
San Francisco Regional Office

HAH/caa

Attachments

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	CS-2	Date Sampled:	04/26/95
Lab Number:	9504348-07A	Date Received:	04/26/95
Sample Matrix/Media:	SOIL	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (mg/kg)	Method Detection Limit (mg/kg)
Volatile Organic Compounds			
Acetone	67-64-1	ND	0.02
Benzene	71-43-2	ND	0.005
Bromobenzene	108-86-1	ND	0.005
Bromochloromethane	74-97-5	ND	0.005
Bromodichloromethane	75-27-4	ND	0.005
Bromoform	75-25-2	ND	0.005
Bromomethane	74-83-9	ND	0.005
2-Butanone	78-93-3	ND	0.02
n-Butylbenzene	104-51-8	ND	0.005
Carbon disulfide	75-15-0	ND	0.02
Carbon tetrachloride	56-23-5	ND	0.005
Chlorobenzene	108-90-7	ND	0.005
Chloroethane	75-00-3	ND	0.005
Chloroform	67-66-3	ND	0.005
Chloromethane	74-87-3	ND	0.005
2-Chlorotoluene	95-49-8	ND	0.005
4-Chlorotoluene	106-43-4	ND	0.005
Dibromochloromethane	124-48-1	ND	0.005
1,2-Dibromo-3-chloropropane	96-12-8	ND	0.02
1,2-Dibromoethane	106-93-4	ND	0.005
Dibromomethane	74-95-3	ND	0.005
1,2-Dichlorobenzene	95-50-1	ND	0.005
1,3-Dichlorobenzene	541-73-1	ND	0.005
1,4-Dichlorobenzene	106-46-7	ND	0.005
Dichlorodifluoromethane	75-71-8	ND	0.005
1,1-Dichloroethane	75-34-3	ND	0.005
1,2-Dichloroethane	107-06-2	ND	0.005
1,1-Dichloroethene	75-35-4	ND	0.005
cis-1,2-Dichloroethene	156-59-2	ND	0.005
trans-1,2-Dichloroethene	156-60-5	ND	0.005

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	CS-2	Date Sampled:	04/26/95
Lab Number:	9504348-07A	Date Received:	04/26/95
Sample Matrix/Media:	SOIL	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (mg/kg)	Method Detection Limit (mg/kg)
Volatile Organic Compounds (Continued)			
1,2-Dichloropropane	78-87-5	ND	0.005
1,3-Dichloropropane	142-28-9	ND	0.005
2,2-Dichloropropane	594-20-7	ND	0.005
1,1-Dichloropropene	563-58-6	ND	0.005
cis-1,3-dichloropropene	10061-01-5	ND	0.005
trans-1,3-dichloropropene	10061-02-6	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Freon 113	76-13-1	ND	0.005
Hexachlorobutadiene	87-68-3	ND	0.005
2-Hexanone	591-78-6	ND	0.02
Isopropylbenzene	98-82-8	ND	0.005
p-Isopropyltoluene	99-87-6	ND	0.005
Methylene chloride	75-09-2	ND	0.005
4-Methyl-2-pentanone	108-10-1	ND	0.02
Naphthalene	91-20-3	0.005	0.005
n-Propylbenzene	103-65-1	ND	0.005
sec-Butylbenzene	135-98-8	ND	0.005
Styrene	100-42-5	ND	0.005
tert-Butylbenzene	98-06-6	ND	0.005
1,1,1,2-Tetrachloroethane	630-20-6	ND	0.005
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.005
Tetrachloroethene	127-18-4	ND	0.005
Toluene	108-88-3	ND	0.005
1,2,3-Trichlorobenzene	87-61-6	ND	0.005
1,2,4-Trichlorobenzene	120-82-1	ND	0.005
1,1,1-Trichloroethane	71-55-6	ND	0.005
1,1,2-Trichloroethane	79-00-5	ND	0.005
Trichloroethene	79-01-6	ND	0.005
Trichlorofluoromethane	75-69-4	ND	0.005
1,2,3-Trichloropropane	96-18-4	ND	0.005

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	CS-2	Date Sampled:	04/26/95
Lab Number:	9504348-07A	Date Received:	04/26/95
Sample Matrix/Media:	SOIL	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (mg/kg)	Method Detection Limit (mg/kg)
Volatile Organic Compounds (Continued)			
1,2,4-Trimethylbenzene	95-63-6	ND	0.005
1,3,5-Trimethylbenzene	108-67-8	ND	0.005
Vinyl acetate	108-05-4	ND	0.02
Vinyl chloride	75-01-4	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		Recovery (%)	QC Limits (%)
4-Bromofluorobenzene	460-00-4	95	74 - 121
Dibromofluoromethane	1868-53-7	94	80 - 120
Toluene-d8	2037-26-5	97	81 - 117

ND: Not detected at or above limit of detection
-: Information not available or not applicable

Results are reported on a wet-weight basis, as received.

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9504348-09A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (mg/kg)	Method Detection Limit (mg/kg)
Volatile Organic Compounds			
Acetone	67-64-1	ND	0.02
Benzene	71-43-2	ND	0.005
Bromobenzene	108-86-1	ND	0.005
Bromochloromethane	74-97-5	ND	0.005
Bromodichloromethane	75-27-4	ND	0.005
Bromoform	75-25-2	ND	0.005
Bromomethane	74-83-9	ND	0.005
2-Butanone	78-93-3	ND	0.02
n-Butylbenzene	104-51-8	ND	0.005
Carbon disulfide	75-15-0	ND	0.02
Carbon tetrachloride	56-23-5	ND	0.005
Chlorobenzene	108-90-7	ND	0.005
Chloroethane	75-00-3	ND	0.005
Chloroform	67-66-3	ND	0.005
Chloromethane	74-87-3	ND	0.005
2-Chlorotoluene	95-49-8	ND	0.005
4-Chlorotoluene	106-43-4	ND	0.005
Dibromochloromethane	124-48-1	ND	0.005
1,2-Dibromo-3-chloropropane	96-12-8	ND	0.02
1,2-Dibromoethane	106-93-4	ND	0.005
Dibromomethane	74-95-3	ND	0.005
1,2-Dichlorobenzene	95-50-1	ND	0.005
1,3-Dichlorobenzene	541-73-1	ND	0.005
1,4-Dichlorobenzene	106-46-7	ND	0.005
Dichlorodifluoromethane	75-71-8	ND	0.005
1,1-Dichloroethane	75-34-3	ND	0.005
1,2-Dichloroethane	107-06-2	ND	0.005
1,1-Dichloroethene	75-35-4	ND	0.005
cis-1,2-Dichloroethene	156-59-2	ND	0.005
trans-1,2-Dichloroethene	156-60-5	ND	0.005

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9504348-09A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (mg/kg)	Method Detection Limit (mg/kg)
Volatile Organic Compounds (Continued)			
1,2-Dichloropropane	78-87-5	ND	0.005
1,3-Dichloropropane	142-28-9	ND	0.005
2,2-Dichloropropane	594-20-7	ND	0.005
1,1-Dichloropropene	563-58-6	ND	0.005
cis-1,3-dichloropropene	10061-01-5	ND	0.005
trans-1,3-dichloropropene	10061-02-6	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Freon 113	76-13-1	ND	0.005
Hexachlorobutadiene	87-68-3	ND	0.005
2-Hexanone	591-78-6	ND	0.02
Isopropylbenzene	98-82-8	ND	0.005
p-Isopropyltoluene	99-87-6	ND	0.005
Methylene chloride	75-09-2	ND	0.005
4-Methyl-2-pentanone	108-10-1	ND	0.02
Naphthalene	91-20-3	ND	0.005
n-Propylbenzene	103-65-1	ND	0.005
sec-Butylbenzene	135-98-8	ND	0.005
Styrene	100-42-5	ND	0.005
tert-Butylbenzene	98-06-6	ND	0.005
1,1,1,2-Tetrachloroethane	630-20-6	ND	0.005
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.005
Tetrachloroethene	127-18-4	ND	0.005
Toluene	108-88-3	ND	0.005
1,2,3-Trichlorobenzene	87-61-6	ND	0.005
1,2,4-Trichlorobenzene	120-82-1	ND	0.005
1,1,1-Trichloroethane	71-55-6	ND	0.005
1,1,2-Trichloroethane	79-00-5	ND	0.005
Trichloroethene	79-01-6	ND	0.005
Trichlorofluoromethane	75-69-4	ND	0.005
1,2,3-Trichloropropane	96-18-4	ND	0.005

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9504348-09A	Date Received:	--
Sample Matrix/Media:	SOIL	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (mg/kg)	Method Detection Limit (mg/kg)
Volatile Organic Compounds (Continued)			
1,2,4-Trimethylbenzene	95-63-6	ND	0.005
1,3,5-Trimethylbenzene	108-67-8	ND	0.005
Vinyl acetate	108-05-4	ND	0.02
Vinyl chloride	75-01-4	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	--	ND	0.005
Surrogates		Recovery (%)	QC Limits (%)
4-Bromofluorobenzene	460-00-4	99	74 - 121
Dibromofluoromethane	1868-53-7	109	80 - 120
Toluene-d8	2037-26-5	100	81 - 117

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	MW-3	Date Sampled:	04/26/95
Lab Number:	9504348-01A	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone	67-64-1	ND	20
Benzene	71-43-2	1100	5
Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	5
2-Butanone	78-93-3	ND	20
n-Butylbenzene	104-51-8	ND	5
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	15	5
Chloroethane	75-00-3	ND	5
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	5
2-Chlorotoluene	95-49-8	ND	5
4-Chlorotoluene	106-43-4	ND	5
Dibromochloromethane	124-48-1	ND	5
1,2-Dibromo-3-chloropropane	96-12-8	ND	5
1,2-Dibromoethane	106-93-4	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	43	5
1,3-Dichlorobenzene	541-73-1	6	5
1,4-Dichlorobenzene	106-46-7	11	5
Dichlorodifluoromethane	75-71-8	ND	5
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
cis-1,2-Dichloroethene	156-59-2	ND	5
trans-1,2-Dichloroethene	156-60-5	ND	5

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	MW-3	Date Sampled:	04/26/95
Lab Number:	9504348-01A	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Continued)			
1,2-Dichloropropane	78-87-5	ND	5
1,3-Dichloropropane	142-28-9	ND	5
2,2-Dichloropropane	594-20-7	ND	5
1,1-Dichloropropene	563-58-6	ND	5
cis-1,3-dichloropropene	10061-01-5	ND	5
trans-1,3-dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	640	5
Freon 113	76-13-1	ND	5
Hexachlorobutadiene	87-68-3	ND	5
2-Hexanone	591-78-6	ND	20
Isopropylbenzene	98-82-8	29	5
p-Isopropyltoluene	99-87-6	ND	5
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	20
Naphthalene	91-20-3	150	5
n-Propylbenzene	103-65-1	83	5
sec-Butylbenzene	135-98-8	5	5
Styrene	100-42-5	ND	5
tert-Butylbenzene	98-06-6	62	5
1,1,1,2-Tetrachloroethane	630-20-6	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	1600	5
1,2,3-Trichlorobenzene	87-61-6	ND	5
1,2,4-Trichlorobenzene	120-82-1	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,2,3-Trichloropropane	96-18-4	ND	5

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	MW-3	Date Sampled:	04/26/95
Lab Number:	9504348-01A	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Continued)			
1,2,4-Trimethylbenzene	95-63-6	650	5
1,3,5-Trimethylbenzene	108-67-8	160	5
Vinyl acetate	108-05-4	ND	10
Vinyl chloride	75-01-4	ND	5
o-Xylene	95-47-6	900	5
p,m-Xylenes	--	2100	5
Surrogates		Recovery (%)	QC Limits (%)
4-Bromofluorobenzene	460-00-4	102	74 - 121
Dibromofluoromethane	1868-53-7	95	80 - 120
Toluene-d8	2037-26-5	100	81 - 117

ND: Not detected at or above limit of detection
-: Information not available or not applicable

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	MW-4	Date Sampled:	04/26/95
Lab Number:	9504348-02A	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone	67-64-1	ND	20
Benzene	71-43-2	470	5
Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	5
2-Butanone	78-93-3	ND	20
n-Butylbenzene	104-51-8	ND	5
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	5
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	5
2-Chlorotoluene	95-49-8	ND	5
4-Chlorotoluene	106-43-4	ND	5
Dibromochloromethane	124-48-1	ND	5
1,2-Dibromo-3-chloropropane	96-12-8	ND	5
1,2-Dibromoethane	106-93-4	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	5
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
cis-1,2-Dichloroethene	156-59-2	ND	5
trans-1,2-Dichloroethene	156-60-5	8	5

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	MW-4	Date Sampled:	04/26/95
Lab Number:	9504348-02A	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Continued)			
1,2-Dichloropropane	78-87-5	ND	5
1,3-Dichloropropane	142-28-9	ND	5
2,2-Dichloropropane	594-20-7	ND	5
1,1-Dichloropropene	563-58-6	ND	5
cis-1,3-dichloropropene	10061-01-5	ND	5
trans-1,3-dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	390	5
Freon 113	76-13-1	ND	5
Hexachlorobutadiene	87-68-3	ND	5
2-Hexanone	591-78-6	ND	20
Isopropylbenzene	98-82-8	51	5
p-Isopropyltoluene	99-87-6	ND	5
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	20
Naphthalene	91-20-3	54	5
n-Propylbenzene	103-65-1	61	5
sec-Butylbenzene	135-98-8	6	5
Styrene	100-42-5	ND	5
tert-Butylbenzene	98-06-6	ND	5
1,1,1,2-Tetrachloroethane	630-20-6	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	17	5
1,2,3-Trichlorobenzene	87-61-6	ND	5
1,2,4-Trichlorobenzene	120-82-1	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	14	5
Trichlorofluoromethane	75-69-4	ND	5
1,2,3-Trichloropropane	96-18-4	ND	5

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	MW-4	Date Sampled:	04/26/95
Lab Number:	9504348-02A	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Continued)			
1,2,4-Trimethylbenzene	95-63-6	490	5
1,3,5-Trimethylbenzene	108-67-8	81	5
Vinyl acetate	108-05-4	ND	10
Vinyl chloride	75-01-4	ND	5
o-Xylene	95-47-6	60	5
p,m-Xylenes	--	430	5
Surrogates		Recovery (%)	QC Limits (%)
4-Bromofluorobenzene	460-00-4	104	74 - 121
Dibromofluoromethane	1868-53-7	94	80 - 120
Toluene-d8	2037-26-5	97	81 - 117

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	OB-1	Date Sampled:	04/26/95
Lab Number:	9504348-03A	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone	67-64-1	ND	20
Benzene	71-43-2	190	5
Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	5
2-Butanone	78-93-3	ND	20
n-Butylbenzene	104-51-8	ND	5
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	5
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	5
2-Chlorotoluene	95-49-8	ND	5
4-Chlorotoluene	106-43-4	ND	5
Dibromochloromethane	124-48-1	ND	5
1,2-Dibromo-3-chloropropane	96-12-8	ND	5
1,2-Dibromoethane	106-93-4	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	5
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
cis-1,2-Dichloroethene	156-59-2	7	5
trans-1,2-Dichloroethene	156-60-5	15	5

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	OB-1	Date Sampled:	04/26/95
Lab Number:	9504348-03A	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Continued)			
1,2-Dichloropropane	78-87-5	ND	5
1,3-Dichloropropane	142-28-9	ND	5
2,2-Dichloropropane	594-20-7	ND	5
1,1-Dichloropropene	563-58-6	ND	5
cis-1,3-dichloropropene	10061-01-5	ND	5
trans-1,3-dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	10	5
Freon 113	76-13-1	ND	5
Hexachlorobutadiene	87-68-3	ND	5
2-Hexanone	591-78-6	ND	20
Isopropylbenzene	98-82-8	38	5
p-Isopropyltoluene	99-87-6	ND	5
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	20
Naphthalene	91-20-3	ND	5
n-Propylbenzene	103-65-1	8	5
sec-Butylbenzene	135-98-8	ND	5
Styrene	100-42-5	ND	5
tert-Butylbenzene	98-06-6	ND	5
1,1,1,2-Tetrachloroethane	630-20-6	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	ND	5
1,2,3-Trichlorobenzene	87-61-6	ND	5
1,2,4-Trichlorobenzene	120-82-1	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	57	5
Trichlorofluoromethane	75-69-4	ND	5
1,2,3-Trichloropropane	96-18-4	ND	5

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	OB-1	Date Sampled:	04/26/95
Lab Number:	9504348-03A	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Continued)			
1,2,4-Trimethylbenzene	95-63-6	5	5
1,3,5-Trimethylbenzene	108-67-8	ND	5
Vinyl acetate	108-05-4	ND	10
Vinyl chloride	75-01-4	ND	5
o-Xylene	95-47-6	ND	5
p,m-Xylenes	--	8	5
Surrogates		Recovery (%)	QC Limits (%)
4-Bromofluorobenzene	460-00-4	98	74 - 121
Dibromofluoromethane	1868-53-7	91	80 - 120
Toluene-d8	2037-26-5	100	81 - 117

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	DS-3	Date Sampled:	04/26/95
Lab Number:	9504348-04A	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone	67-64-1	ND	20
Benzene	71-43-2	200	5
Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	5
2-Butanone	78-93-3	ND	20
n-Butylbenzene	104-51-8	ND	5
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	5
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	5
2-Chlorotoluene	95-49-8	ND	5
4-Chlorotoluene	106-43-4	ND	5
Dibromochloromethane	124-48-1	ND	5
1,2-Dibromo-3-chloropropane	96-12-8	ND	5
1,2-Dibromoethane	106-93-4	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	12	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	5
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
cis-1,2-Dichloroethene	156-59-2	ND	5
trans-1,2-Dichloroethene	156-60-5	5	5

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	DS-3	Date Sampled:	04/26/95
Lab Number:	9504348-04A	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Continued)			
1,2-Dichloropropane	78-87-5	ND	5
1,3-Dichloropropane	142-28-9	ND	5
2,2-Dichloropropane	594-20-7	ND	5
1,1-Dichloropropene	563-58-6	ND	5
cis-1,3-dichloropropene	10061-01-5	ND	5
trans-1,3-dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	130	5
Freon 113	76-13-1	ND	5
Hexachlorobutadiene	87-68-3	ND	5
2-Hexanone	591-78-6	ND	20
Isopropylbenzene	98-82-8	18	5
p-Isopropyltoluene	99-87-6	ND	5
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	20
Naphthalene	91-20-3	25	5
n-Propylbenzene	103-65-1	21	5
sec-Butylbenzene	135-98-8	ND	5
Styrene	100-42-5	ND	5
tert-Butylbenzene	98-06-6	ND	5
1,1,1,2-Tetrachloroethane	630-20-6	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	45	5
1,2,3-Trichlorobenzene	87-61-6	ND	5
1,2,4-Trichlorobenzene	120-82-1	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	10	5
Trichlorofluoromethane	75-69-4	ND	5
1,2,3-Trichloropropane	96-18-4	ND	5

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	DS-3	Date Sampled:	04/26/95
Lab Number:	9504348-04A	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Continued)			
1,2,4-Trimethylbenzene	95-63-6	140	5
1,3,5-Trimethylbenzene	108-67-8	21	5
Vinyl acetate	108-05-4	ND	10
Vinyl chloride	75-01-4	ND	5
o-Xylene	95-47-6	42	5
p,m-Xylenes	--	160	5
Surrogates		Recovery (%)	QC Limits (%)
4-Bromofluorobenzene	460-00-4	92	74 - 121
Dibromofluoromethane	1868-53-7	97	80 - 120
Toluene-d8	2037-26-5	103	81 - 117

ND: Not detected at or above limit of detection
-: Information not available or not applicable

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	FIELD BLANK #0032995	Date Sampled:	04/26/95
Lab Number:	9504348-05A	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone	67-64-1	ND	20
Benzene	71-43-2	ND	5
Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	5
2-Butanone	78-93-3	ND	20
n-Butylbenzene	104-51-8	ND	5
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	5
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	5
2-Chlorotoluene	95-49-8	ND	5
4-Chlorotoluene	106-43-4	ND	5
Dibromochloromethane	124-48-1	ND	5
1,2-Dibromo-3-chloropropane	96-12-8	ND	5
1,2-Dibromoethane	106-93-4	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	5
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
cis-1,2-Dichloroethene	156-59-2	ND	5
trans-1,2-Dichloroethene	156-60-5	ND	5

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	FIELD BLANK #0032995	Date Sampled:	04/26/95
Lab Number:	9504348-05A	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Continued)			
1,2-Dichloropropane	78-87-5	ND	5
1,3-Dichloropropane	142-28-9	ND	5
2,2-Dichloropropane	594-20-7	ND	5
1,1-Dichloropropene	563-58-6	ND	5
cis-1,3-dichloropropene	10061-01-5	ND	5
trans-1,3-dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
Freon 113	76-13-1	ND	5
Hexachlorobutadiene	87-68-3	ND	5
2-Hexanone	591-78-6	ND	20
Isopropylbenzene	98-82-8	ND	5
p-Isopropyltoluene	99-87-6	ND	5
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	20
Naphthalene	91-20-3	ND	5
n-Propylbenzene	103-65-1	ND	5
sec-Butylbenzene	135-98-8	ND	5
Styrene	100-42-5	ND	5
tert-Butylbenzene	98-06-6	ND	5
1,1,1,2-Tetrachloroethane	630-20-6	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	ND	5
1,2,3-Trichlorobenzene	87-61-6	ND	5
1,2,4-Trichlorobenzene	120-82-1	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,2,3-Trichloropropane	96-18-4	ND	5

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	FIELD BLANK #0032995	Date Sampled:	04/26/95
Lab Number:	9504348-05A	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Continued)			
1,2,4-Trimethylbenzene	95-63-6	ND	5
1,3,5-Trimethylbenzene	108-67-8	ND	5
Vinyl acetate	108-05-4	ND	10
Vinyl chloride	75-01-4	ND	5
o-Xylene	95-47-6	ND	5
p,m-Xylenes	--	ND	5
Surrogates		Recovery (%)	QC Limits (%)
4-Bromofluorobenzene	460-00-4	100	74 - 121
Dibromofluoromethane	1868-53-7	101	80 - 120
Toluene-d8	2037-26-5	100	81 - 117

ND: Not detected at or above limit of detection
-: Information not available or not applicable

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	TRIP BLANK #0032995	Date Sampled:	04/26/95
Lab Number:	9504348-06C	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone	67-64-1	ND	20
Benzene	71-43-2	ND	5
Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	5
2-Butanone	78-93-3	ND	20
n-Butylbenzene	104-51-8	ND	5
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	5
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	5
2-Chlorotoluene	95-49-8	ND	5
4-Chlorotoluene	106-43-4	ND	5
Dibromochloromethane	124-48-1	ND	5
1,2-Dibromo-3-chloropropane	96-12-8	ND	5
1,2-Dibromoethane	106-93-4	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	5
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
cis-1,2-Dichloroethene	156-59-2	ND	5
trans-1,2-Dichloroethene	156-60-5	ND	5

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	TRIP BLANK #0032995	Date Sampled:	04/26/95
Lab Number:	9504348-06C	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Continued)			
1,2-Dichloropropane	78-87-5	ND	5
1,3-Dichloropropane	142-28-9	ND	5
2,2-Dichloropropane	594-20-7	ND	5
1,1-Dichloropropene	563-58-6	ND	5
cis-1,3-dichloropropene	10061-01-5	ND	5
trans-1,3-dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
Freon 113	76-13-1	ND	5
Hexachlorobutadiene	87-68-3	ND	5
2-Hexanone	591-78-6	ND	20
Isopropylbenzene	98-82-8	ND	5
p-Isopropyltoluene	99-87-6	ND	5
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	20
Naphthalene	91-20-3	ND	5
n-Propylbenzene	103-65-1	ND	5
sec-Butylbenzene	135-98-8	ND	5
Styrene	100-42-5	ND	5
tert-Butylbenzene	98-06-6	ND	5
1,1,1,2-Tetrachloroethane	630-20-6	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	ND	5
1,2,3-Trichlorobenzene	87-61-6	ND	5
1,2,4-Trichlorobenzene	120-82-1	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,2,3-Trichloropropane	96-18-4	ND	5

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	TRIP BLANK #0032995	Date Sampled:	04/26/95
Lab Number:	9504348-06C	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Continued)			
1,2,4-Trimethylbenzene	95-63-6	ND	5
1,3,5-Trimethylbenzene	108-67-8	ND	5
Vinyl acetate	108-05-4	ND	10
Vinyl chloride	75-01-4	ND	5
o-Xylene	95-47-6	ND	5
p,m-Xylenes	--	ND	5
Surrogates		**Recovery (%)**	**QC Limits (%)**
4-Bromofluorobenzene	460-00-4	93	74 - 121
Dibromofluoromethane	1868-53-7	97	80 - 120
Toluene-d8	2037-26-5	97	81 - 117

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9504348-08A	Date Received:	--
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone	67-64-1	ND	20
Benzene	71-43-2	ND	5
Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	5
2-Butanone	78-93-3	ND	20
n-Butylbenzene	104-51-8	ND	5
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	5
Chloroform	67-66-3	ND	5
Chloromethane	74-87-3	ND	5
2-Chlorotoluene	95-49-8	ND	5
4-Chlorotoluene	106-43-4	ND	5
Dibromochloromethane	124-48-1	ND	5
1,2-Dibromo-3-chloropropane	96-12-8	ND	5
1,2-Dibromoethane	106-93-4	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	5
1,1-Dichloroethane	75-34-3	ND	5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	5
cis-1,2-Dichloroethene	156-59-2	ND	5
trans-1,2-Dichloroethene	156-60-5	ND	5

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9504348-08A	Date Received:	--
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Continued)			
1,2-Dichloropropane	78-87-5	ND	5
1,3-Dichloropropane	142-28-9	ND	5
2,2-Dichloropropane	594-20-7	ND	5
1,1-Dichloropropene	563-58-6	ND	5
cis-1,3-dichloropropene	10061-01-5	ND	5
trans-1,3-dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
Freon 113	76-13-1	ND	5
Hexachlorobutadiene	87-68-3	ND	5
2-Hexanone	591-78-6	ND	20
Isopropylbenzene	98-82-8	ND	5
p-Isopropyltoluene	99-87-6	ND	5
Methylene chloride	75-09-2	ND	5
4-Methyl-2-pentanone	108-10-1	ND	20
Naphthalene	91-20-3	ND	5
n-Propylbenzene	103-65-1	ND	5
sec-Butylbenzene	135-98-8	ND	5
Styrene	100-42-5	ND	5
tert-Butylbenzene	98-06-6	ND	5
1,1,1,2-Tetrachloroethane	630-20-6	ND	5
1,1,2,2-Tetrachloroethane	79-34-5	ND	5
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	ND	5
1,2,3-Trichlorobenzene	87-61-6	ND	5
1,2,4-Trichlorobenzene	120-82-1	ND	5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	75-69-4	ND	5
1,2,3-Trichloropropane	96-18-4	ND	5

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9504348-08A	Date Received:	--
Sample Matrix/Media:	WATER	Date Prepared:	05/04/95
Preparation Method:	EPA 5030	Date Analyzed:	05/04/95
Method Reference:	EPA 8260	Analyst:	JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Continued)			
1,2,4-Trimethylbenzene	95-63-6	ND	5
1,3,5-Trimethylbenzene	108-67-8	ND	5
Vinyl acetate	108-05-4	ND	10
Vinyl chloride	75-01-4	ND	5
o-Xylene	95-47-6	ND	5
p,m-Xylenes	--	ND	5
Surrogates		Recovery (%)	QC Limits (%)
4-Bromofluorobenzene	460-00-4	99	74 - 121
Dibromofluoromethane	1868-53-7	109	80 - 120
Toluene-d8	2037-26-5	100	81 - 117

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	MW-3	Date Sampled:	04/26/95
Lab Number:	9504348-01C	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/08/95
Preparation Method:	EPA 5030	Date Analyzed:	05/08/95
Method Reference:	EPA 8015/8020	Analyst:	WAS

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	1200	0.4
Ethylbenzene	100-41-4	720	0.3
Toluene	108-88-3	1700	0.3
o-Xylene	95-47-6	940	0.4
p,m-Xylenes	--	1500	0.4
Gasoline	--	14000	50
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	125	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	MW-4	Date Sampled:	04/26/95
Lab Number:	9504348-02C	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/08/95
Preparation Method:	EPA 5030	Date Analyzed:	05/08/95
Method Reference:	EPA 8015/8020	Analyst:	WAS

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	500	0.4
Ethylbenzene	100-41-4	250	0.3
Toluene	108-88-3	11	0.3
o-Xylene	95-47-6	24	0.4
p,m-Xylenes	--	210	0.4
Gasoline	--	6100	50
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	112	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	OB-1	Date Sampled:	04/26/95
Lab Number:	9504348-03C	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/08/95
Preparation Method:	EPA 5030	Date Analyzed:	05/08/95
Method Reference:	EPA 8015/8020	Analyst:	WAS

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	200	0.4
Ethylbenzene	100-41-4	7.4	0.3
Toluene	108-88-3	3.4	0.3
o-Xylene	95-47-6	2.0	0.4
p,m-Xylenes	--	6.2	0.4
Gasoline	--	2400	50
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	130	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	DS-3	Date Sampled:	04/26/95
Lab Number:	9504348-04C	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/08/95
Preparation Method:	EPA 5030	Date Analyzed:	05/08/95
Method Reference:	EPA 8015/8020	Analyst:	WAS

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	200	0.4
Ethylbenzene	100-41-4	140	0.3
Toluene	108-88-3	48	0.3
o-Xylene	95-47-6	47	0.4
p,m-Xylenes	--	170	0.4
Gasoline	--	2900	50
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	124	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	FIELD BLANK #0032995	Date Sampled:	04/26/95
Lab Number:	9504348-05C	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/08/95
Preparation Method:	EPA 5030	Date Analyzed:	05/08/95
Method Reference:	EPA 8015/8020	Analyst:	WAS

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
TEX/Gasoline			
Benzene	71-43-2	0.4	0.4
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	1.4	0.3
o-Xylene	95-47-6	ND	0.4
p,m-Xylenes	--	0.4	0.4
Gasoline	--	ND	50
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	115	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	TRIP BLANK #0032995	Date Sampled:	04/26/95
Lab Number:	9504348-06A	Date Received:	04/26/95
Sample Matrix/Media:	WATER	Date Prepared:	05/08/95
Preparation Method:	EPA 5030	Date Analyzed:	05/08/95
Method Reference:	EPA 8015/8020	Analyst:	WAS

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
TEX/Gasoline			
Benzene	71-43-2	ND	0.4
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	ND	0.3
o-Xylene	95-47-6	ND	0.4
p,m-Xylenes	--	ND	0.4
Gasoline	--	ND	50
Surrogates		**Recovery (%)**	**QC Limits (%)**
a,a,a-Trifluorotoluene	98-08-8	115	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9504348-08A	Date Received:	--
Sample Matrix/Media:	WATER	Date Prepared:	05/08/95
Preparation Method:	EPA 5030	Date Analyzed:	05/08/95
Method Reference:	EPA 8015/8020	Analyst:	WAS

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
BTEX/Gasoline			
Benzene	71-43-2	ND	0.4
Ethylbenzene	100-41-4	ND	0.3
Toluene	108-88-3	ND	0.3
o-Xylene	95-47-6	ND	0.4
p,m-Xylenes	--	ND	0.4
Gasoline	--	ND	50
Surrogates		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	100	50 - 150

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification: See Below
Lab Number: 9504348
Sample Matrix/Media: WATER
Method Reference: EPA 1010

Date Received: 04/26/95
Date Analyzed: 05/04/95

Lab Number	Sample Identification	Date Sampled	Flash Point (Degrees F)	Method Detection Limit (Degrees F)
04	DS-3	04/26/95	>200	--

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification: See Below
Lab Number: 9504348
Sample Matrix/Media: WATER
Method Reference: EPA 335.2

Date Received: 04/26/95
Date Analyzed: 04/28/95

Lab Number	Sample Identification	Date Sampled	Reactive Cyanide (mg/L)	Method Detection Limit (mg/L)
-04	DS-3	04/26/95	<0.1	0.1
-08	METHOD BLANK	--	<0.1	0.1

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification: See Below
Lab Number: 9504348
Sample Matrix/Media: WATER
Method Reference: SW 7.3.4.2

Date Received: 04/26/95
Date Analyzed: 05/04/95

Lab Number	Sample Identification	Date Sampled	Reactive Sulfide (mg/L)	Method Detection Limit (mg/L)
-04	DS-3	04/26/95	<10	10
-08	METHOD BLANK	--	<10	10

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Analytical Results
for
Clayton Environmental Consultants, Inc.
Client Reference: 60899.01
Clayton Project No. 95043.48

Sample Identification: See Below
Lab Number: 9504348
Sample Matrix/Media: WATER
Method Reference: EPA 150.1

Date Received: 04/26/95
Date Analyzed: 04/27/95

Lab Number	Sample Identification	Date Sampled	pH (S.U.)	Method Detection Limit (S.U.)
04	DS-3	04/26/95	7.1	--

ND: Not detected at or above limit of detection
--: Information not available or not applicable

Clayton ENVIRONMENTAL CONSULTANTS

REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Clayton Use Only	Page 1 of 2
Project No.	
Batch No.	9504248
Ind. Code	W.P.
Date Logged In 4/27/95	By SRB

REPORT RESULTS TO

Name: JOHN VARGAS | Title:
Company: CLAYTON | Dept.:
Mailing Address:
City, State, Zip:
Telephone No: | Telefax No.:

SEND INVOICE TO

Purchase Order No.: | Client Job No.: 60899.01
Name:
Company: INGERSOLL RAND | Dept:
Address:
City, State, Zip:

Date Results Req.: STANDARD TAT | Rush Charges Authorized? ☐ Yes ☐ No | Phone / Fax Results ☐ ☐

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative: P = HCL

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	MATRIX/ MEDIA	AIR VOLUME (specify units)	Number of Containers	ANALYSIS REQUESTED: EPA 8260	GAS/BTEX	RCI	FOR LAB USE ONLY
MW-3	4-26-95	H_2O	40 mls	2	XP			01 A, B
MW-3			40 mls	2		XP		C, D
MW-4			40 mls	2	XP			02 A, B
MW-4			40 mls	2		XP		C, D
OB-1			40 mls	2	XP			03 A, B
OB-1			40 mls	2		XP		C, D
DS-3			40 mls	2	XP			04 A, B
DS-3			40 mls	2		XP		C, D
DS-3	↓	↓	500 mls plastic	1			X	E

CHAIN OF CUSTODY

Collected by: RICHARD SILVA (print) | Collector's Signature: Richard Silva
Relinquished by: Richard Silva | Date/Time 4-26-95/6:10 pm | Received by: | Date/Time
Relinquished by: | Date/Time | Received at Lab by: Carol Hammerberg | Date/Time 4/26/95 6:10
Method of Shipment: | Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

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

22345 Roethel Drive, Novi, MI 48375, (810) 344-1770
Raritan Center, 160 Fieldcrest Ave, Edison, NJ 08837, (908) 225-6040
400 Chastain Center Blvd., N.W., Suite 490, Kennesaw, GA 30144, (404) 499-7500
1252 Quarry Lane, Pleasanton, CA 94566, (510) 426-2657

2/92

DISTRIBUTION:
WHITE - Cle
YELLOW - C ing
PINK - ains

Clayton ENVIRONMENTAL CONSULTANTS

REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Clayton Use Only	Page 2 of 2
Project No.	
Batch No.	9504348
Ind. Code	W.P.
Date Logged In 4/27/95	By SB

REPORT RESULTS TO

Name: JOHN VARGAS | Title:
Company: CLAYTON | Dept.:
Mailing Address:
City, State, Zip:
Telephone No.: | Telefax No.:

SEND INVOICE TO

Name:
Company: INGERSOLL RAND | Dept:
Address:
City, State, Zip:

Purchase Order No.: | Client Job No.: 60899.01

Date Results Req: STANDARD TAT | Rush Charges Authorized? ☐ Yes ☐ No | Phone / Fax Results ☐ ☐

Special Instructions: (method, limit of detection, etc.)

* Explanation of Preservative: P = HCl

Samples are: (check if applicable)
☐ Drinking Water
☐ Collected in the State of New York

CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	MATRIX/ MEDIA	AIR VOLUME (specify units)	Number of Containers	ANALYSIS REQUESTED (Enter an 'X' in the box below to indicate request; Enter a 'P' if Preservative added. *) EPA 8260	GAS/BTEX	FOR LAB USE ONLY
FIELD BLANKS #0032995	4-26-95	H2O	40 mls	4	XP	XP	05 A-D
TRIP BLANKS #0032995	4-26-95	H2O	40 mls	4	XP	XP	06 A-D
CS-2	4-26-95	Solid	2"x6" BRASS	1	X		07 A

CHAIN OF CUSTODY

Collected by: RICHARD SILVA (print) | Collector's Signature: Richard Silva
Relinquished by: Richard Silva | Date/Time 4-26-95/6:10pm | Received by: | Date/Time
Relinquished by: | Date/Time | Received at Lab by: Carol Hammerberg | Date/Time 4/26/95 6:10
Method of Shipment:

Sample Condition Upon Receipt: ☒ Acceptable ☐ Other (explain)
P SUM ADDED — TO COC. 4/27/95 7:05 M

Authorized by: _____ Date _____
(Client Signature Must Accompany Request)

ALS ANALYZE FIELD BLANKS FOR GAS/BTEX
MS ANALYZE TRIP BLANKS FOR EPA 8260 } P.M.

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

22345 Roethel Drive Novi, MI 48375 (810) 344-1770	Raritan Center 160 Fieldcrest Ave. Edison, NJ 08837 (908) 225-6040	400 Chastain Center Blvd., N.W. Suite 490 Kennesaw, GA 30144 (404) 499-7500	1252 Quarry Lane Pleasanton, CA 94566 (510) 426-2657

2/92

DISTRIBUTION.
WHITE - Clayton Laboratory
YELLOW - Clayton Accounting
PINK - Client Retains

Clayton
ENVIRONMENTAL
CONSULTANTS

Quality Assurance Results Summary

Matrix Spike/Matrix Spike Duplicate Results

for

Clayton Project No. 95043.48

Quality Assurance Results Summary
for
Clayton Project No. 95045.48

Clayton Lab Number:	9504348-04E	Analytical Method:	EPA7_3_4_2
Ext./Prep. Method:	EPA7.3.4.2	Instrument ID:	00008
Date:	05/03/95	Date:	05/04/95
Analyst:	HYW	Time:	13:00
Std. Source:	HALL 6881	Analyst:	HYW
Sample Matrix/Media:	WATER	Units:	mg/L

Analyte	Sample Result	Spike Level	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
REACTIVE SULFIDE	ND	54.4	52.8	97	49.6	91	94	65	120	6.3	20

LCS = Laboratory Control Sample
ND = Not detected at or above limit of detection
LCL = Lower Control Limit
UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

Quality Assurance Results Summary
for
Clayton Project No. 95043.48

Clayton Lab Number:	9504345-04A	Analytical Method:	EPA8260
Ext./Prep. Method:	EPA5030	Instrument ID:	02831
Date:	05/04/95	Date:	05/04/95
Analyst:	JP	Time:	15:47
Std. Source:	M950206-02W	Analyst:	JP
Sample Matrix/Media:	WATER	Units:	UG/L

Analyte	Sample Result	Spike Level	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
1,1-DICHLOROETHENE	ND	50.0	42.3	85	37.5	75	80	80	120	12	20
BENZENE	ND	50.0	50.6	101	50.3	101	101	80	120	0.6	20
CHLOROBENZENE	ND	50.0	51.6	103	49.4	99	101	80	120	4.4	20
TOLUENE	ND	50.0	52.5	105	50.6	101	103	80	120	3.7	20
TRICHLOROETHENE	10.5	50.0	52.4	84	50.0	79	81	80	120	4.7	20

LCS = Laboratory Control Sample
ND = Not detected at or above limit of detection
LCL = Lower Control Limit
UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

Quality Assurance Results Summary
for
Clayton Project No. 95043.48

Clayton Lab Number:	9504388-01A	Analytical Method:	EPA8260
Ext./Prep. Method:	EPA5030	Instrument ID:	02831
Date:	05/04/95	Date:	05/04/95
Analyst:	JP	Time:	17:20
Std. Source:	M950206-02W	Analyst:	JP
Sample Matrix/Media:	SOIL	Units:	MG/KG

Analyte	Sample Result	Spike Level	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
(A) 1,1-DICHLOROETHENE	ND	0.0500	0.0290	58	0.0320	64	61	59	172	9.8	22
(C) BENZENE	ND	0.0500	0.0440	88	0.0450	90	89	66	142	2.2	21
(D) TRICHLOROETHENE	ND	0.0500	0.0610	122	0.0600	120	121	62	137	1.7	24
(E) TOLUENE	ND	0.0500	0.0500	100	0.0490	98	99	59	139	2.0	21
(G) CHLOROBENZENE	ND	0.0500	0.0470	94	0.0490	98	96	60	133	4.2	21

LCS = Laboratory Control Sample
ND = Not detected at or above limit of detection
LCL = Lower Control Limit
UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

Quality Assurance Results Summary
for
Clayton Project No. 95043.48

Clayton Lab Number:	9504348-06C	Analytical Method:	EPA8015_8020
Ext./Prep. Method:	EPA 5030	Instrument ID:	05587
Date:	05/08/95	Date:	05/08/95
Analyst:	WAS	Time:	11:31
Std. Source:	V950301-02W	Analyst:	WAS
Sample Matrix/Media:	WATER	Units:	UG/L

Analyte		Sample Result	Spike Level	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
BENZENE	(PID)	ND	10.3	10.5	100	10.7	104	102	81	118	3.8	20
ETHYLBENZENE	(PID)	ND	8.03	7.99	100	8.18	102	101	81	114	2.4	20
GASOLINE	(FID)	ND	500	507	101	504	101	101	80	150	0.6	25
TOLUENE	(PID)	ND	42.9	42.7	100	43.5	101	100	84	118	1.9	20
TOTAL XYLENE	(PID)	ND	47.8	47.3	99	48.2	101	100	85	115	1.9	20

LCS = Laboratory Control Sample
ND = Not detected at or above limit of detection
LCL = Lower Control Limit
UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

Quality Assurance Results Summary
for
Clayton Project No. 95043.48

Clayton Lab Number: 9504357-02A
Ext./Prep. Method: EPA 5030
Date: 05/09/95
Analyst: WAS
Std. Source: V950301-02W
Sample Matrix/Media: WATER

Analytical Method: EPA8015_8020
Instrument ID: 05587
Date: 05/09/95
Time: 01:29
Analyst: WAS
Units: UG/L

Analyte		Sample Result	Spike Level	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
BENZENE	(PID)	ND	9.98	9.63	96	11.4	114	105	81	118	17	20
ETHYLBENZENE	(PID)	ND	7.76	7.71	99	8.93	115	107	81	114	15	20
GASOLINE	(FID)	ND	500	501	100	530	106	103	80	150	5.6	25
TOLUENE	(PID)	ND	41.4	41.9	101	43.6	105	103	84	118	4.0	20
TOTAL XYLENE	(PID)	ND	45.8	45.1	98	51.9	113	106	85	115	14	20

LCS = Laboratory Control Sample
ND = Not detected at or above limit of detection
LCL = Lower Control Limit
UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

Quality Assurance Results Summary
for
Clayton Project No. 95043.48

Clayton Lab Number: 95043/9-01E
Ext./Prep. Method: EPA 5030
Date: 05/09/95
Analyst: WAS
Std. Source: V950301-02W
Sample Matrix/Media: WATER

Analytical Method: EPA8015_8020
Instrument ID: 05587
Date: 05/10/95
Time: 00:59
Analyst: WAS
Units: UG/L

Analyte		Sample Result	Spike Level	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
BENZENE	(PID)	ND	8.99	10.1	112	9.70	108	110	81	118	3.7	20
ETHYLBENZENE	(PID)	ND	7.25	7.91	109	7.64	105	107	81	114	3.5	20
GASOLINE	(FID)	ND	500	523	105	512	102	104	80	150	2.1	25
TOLUENE	(PID)	ND	37.7	40.2	107	39.5	105	106	84	118	1.8	20
TOTAL XYLENE	(PID)	ND	42.8	45.4	106	44.2	103	105	85	115	2.7	20

LCS = Laboratory Control Sample
ND = Not detected at or above limit of detection
LCL = Lower Control Limit
UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

Quality Assurance Results Summary
for
Clayton Project No. 95043.48

Clayton Lab Number: 9504303-06A
Ext./Prep. Method: EPA335.2
Date: 04/28/95
Analyst: HYW
Std. Source: MALL 6881
Sample Matrix/Media: WATER

Analytical Method: EPA335.2
Instrument ID: 0748?
Date: 04/28/95
Time: 16:00
Analyst: HYW
Units: mg/L

Analyte	Sample Result	Spike Level	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
CYANIDE	ND	0.400	0.381	95	0.386	96	96	70	119	1.2	20

LCS = Laboratory Control Sample
ND = Not detected at or above limit of detection
LCL = Lower Control Limit
UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

ATTACHMENT 2

FIELD SAMPLING SURVEY FORMS

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

WATER SAMPLING FIELD SURVEY FORM

Job # 6099.01 Site: INGERSOLL-RAND Date: APRIL 25, 1995

Well # MW-1 Sampling Team: R. SILVA

Sampling Method: _____

Field Conditions: _____

Describe Equipment D-Con Before Sampling This Well: _____

Total Depth of Well: _____ feet Time: 1457 Depth to Water Before Pumping: 10.82 feet

Volume Height of Water Column:		Diameter 2-inch	Diameter 4-inch	Volume		Purge Factor		To Purge
_____	feet *	.16	.65	= _____	gal *	_____	=	_____

Depth Purging From: _____ feet Time Surging Begins: _____

Notes on Initial Discharge: _____

Time	Volume Purged	pH	Conductivity	T	Notes

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

WATER SAMPLING FIELD SURVEY FORM

Job # 60899.01 Site: INGERSOLL-RAND Date: APRIL 26, 1995

Well # MW-2 Sampling Team: R. SILVA

Sampling Method: _____

Field Conditions: _____

Describe Equipment D-Con Before Sampling This Well: _____

Total Depth of Well: _____ feet Time: 1509 Depth to Water Before Pumping: 12.54 feet

Volume Height of Water Column:		Diameter 2-inch	Diameter 4-inch		Purge Factor		To Purge
_____	feet *	.16	.65	= _____ gal *	_____	=	_____

Depth Purging From: _____ feet Time Surging Begins: _____

Notes on Initial Discharge: _____

Time	Volume Purged	pH	Conductivity	T	Notes

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

WATER SAMPLING FIELD SURVEY FORM

Job # 60599.01 Site: INGERSOLL-RAND Date: APRIL 26, 1995

Well # MW-3 Sampling Team: RICHARD SILVA

Sampling Method: DISPOSABLE BAILER

Field Conditions: PARTLY CLOUDY, COOL, WINDY

Describe Equipment D-Con Before Sampling This Well: SUBMERSIBLE PUMP WAS WASHED WITH DETERGENT THEN TRIPLE RINSED

Total Depth of Well: 20.20 feet Time: 1252 Depth to Water Before Pumping: 14.60 feet

Volume Height of Water Column:		Diameter 2-inch	Diameter 4-inch	Volume		Purge Factor		To Purge
5.60	feet *	.16	(65)	= 3.64	gal *	4	=	14.56

Depth Purging From: 20 feet Time Surging Begins: 1258

Notes on Initial Discharge: CLEAR, ODOR

Time	Volume Purged	pH	Conductivity	T	Notes
1300	3-GAL	5.7	822	18.7	CLEAR, ODOR
1302	6-GAL	5.7	822	18.6	CLEAR, ODOR
1304	9-GAL	5.7	830	18.7	CLEAR, ODOR
1306	12-GAL	5.8	830	18.8	CLEAR, ODOR
1308	15-GAL	5.8	834	18.8	CLEAR, ODOR PURGED DRY

EWATER.TBL (11/21/88)

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

WATER SAMPLING FIELD SURVEY FORM

Job # 60F99.01 Site: INGERSOLL-RAND Date: APRIL 26, 1995

Well # MW-4 Sampling Team: RICHARD SILVA

Sampling Method: DISPOSABLE BAILER

Field Conditions: CLEAR SKIES, COOL, WINDY

Describe Equipment D-Con Before Sampling This Well: SUBMERSIBLE PUMP WAS WASHED WITH DETERGENT THEN TRIPLE RINSED

Total Depth of Well: 27.83 feet Time: 1045 Depth to Water Before Pumping: 16.52 feet

Volume Height of Water Column:		Diameter 2-inch	Diameter 4-inch	Volume	Purge Factor	To Purge
11.31	feet *	.16	(.65) =	7.35 gal *	4	= 29.40

Depth Purging From: 27 feet Time Surging Begins: 1055

Notes on Initial Discharge: GRAYISH, SILTY, NO ODOR

Time	Volume Purged	pH	Conductivity	T	Notes
1058	10-GAL	5.5	944	18.5	CLEAR, ODOR
1100	15-GAL	5.8	991	18.6	CLEAR, ODOR
1102	20-GAL	5.7	1059	18.7	CLEAR, ODOR
1104	25-GAL	5.7	1072	18.7	CLEAR, ODOR
1106	30-GAL	5.8	1081	18.8	CLEAR, ODOR

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

WATER SAMPLING FIELD SURVEY FORM

Job # 6089.01 Site: INGERSOLL-RAND Date: APRIL 25, 1990
6" EXTRACTION
Well # WELL Sampling Team: R. SILVA

Sampling Method: _____

Field Conditions: _____

Describe Equipment D-Con Before Sampling This Well: _____

Total Depth of Well: _____ feet Time: 1450 Depth to Water Before Pumping: 18.39 feet

Volume Height of Water Column:		Diameter 2-inch	Diameter 4-inch	Volume		Purge Factor		To Purge
_____	feet *	.16	.65	= _____	gal *	_____	=	_____

Depth Purging From: _____ feet Time Surging Begins: _____

Notes on Initial Discharge: _____

Time	Volume Purged	pH	Conductivity	T	Notes

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

WATER SAMPLING FIELD SURVEY FORM

Job # 60899.01 Site: INGERSOLL-RAND Date: APRIL 26, 1995

Well # OB-1 Sampling Team: RICHARD SILVA

Sampling Method: DISPOSABLE BAILER

Field Conditions: PARTLY CLOUDY, COOL, WINDY

Describe Equipment D-Con Before Sampling This Well: SUBMERSIBLE PUMP WAS WASHED WITH DETERGENT THEN TRIPLE RINSED

Total Depth of Well: 49.64 feet Time: 1150 Depth to Water Before Pumping: 17.53 feet

Volume Height of Water Column:		Diameter 2-inch	Diameter 4-inch		Purge Factor	To Purge
32.11 feet	*	(.16)	.65	= 5.14 gal	* 4	= 20.56

Depth Purging From: 49 feet Time Surging Begins: 1158

Notes on Initial Discharge: CLEAR, ODOR

Time	Volume Purged	pH	Conductivity	T	Notes
1200	5-GAL	5.7	1172	18.9	CLEAR, ODOR
1202	10-GAL	5.8	1218	19.0	CLEAR, ODOR
1204	15-GAL	5.9	1258	19.0	CLEAR, ODOR
1206	20-GAL	5.8	1264	19.0	CLEAR, ODOR

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

WATER SAMPLING FIELD SURVEY FORM

Job # 6CE95.01 Site: INGERSOLL-RAND Date: APRIL 25, 1995

Well # OB-2 Sampling Team: R. SILVA

Sampling Method: _____

Field Conditions: _____

Describe Equipment D-Con Before Sampling This Well: _____

Total Depth of Well: _____ feet Time: 1239 Depth to Water Before Pumping: 17.78 feet

Volume Height of Water Column:		Diameter 2-inch	Diameter 4-inch	Volume		Purge Factor		To Purge
_____	feet *	.16	.65	= _____	gal *	_____	=	_____

Depth Purging From: _____ feet Time Surging Begins: _____

Notes on Initial Discharge: _____

Time	Volume Purged	pH	Conductivity	T	Notes

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

WATER SAMPLING FIELD SURVEY FORM

Job # 60899.01 Site: INGERSOLL-RAND Date: APRIL 25, 1995

Well # CB-3 Sampling Team: R. SILVA

Sampling Method: _____

Field Conditions: _____

Describe Equipment D-Con Before Sampling This Well: _____

Total Depth of Well: _____ feet Time: 1240 Depth to Water Before Pumping: 18.10 feet

Volume Height of Water Column:		Diameter 2-inch	Diameter 4-inch	Volume		Purge Factor		To Purge
_____	feet *	.16	.65	= _____ gal	*	_____	=	_____

Depth Purging From: _____ feet Time Surging Begins: _____

Notes on Initial Discharge: _____

Time	Volume Purged	pH	Conductivity	T	Notes

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

WATER SAMPLING FIELD SURVEY FORM

Job # 6089.01 Site: INGERSOLL-RAND Date: APRIL 25, 1995

Well # VW-1 Sampling Team: R. SILVA

Sampling Method: _____

Field Conditions: _____

Describe Equipment D-Con Before Sampling This Well: _____

Total Depth of Well: _____ feet Time: 1407 Depth to Water Before Pumping: 14.48 feet

Volume Height of Water Column:		Diameter 2-inch	Diameter 4-inch	Volume		Purge Factor		To Purge
_____	feet *	.16	.65	= _____	gal *	_____	=	_____

Depth Purging From: _____ feet Time Surging Begins: _____

Notes on Initial Discharge: _____

Time	Volume Purged	pH	Conductivity	T	Notes

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

WATER SAMPLING FIELD SURVEY FORM

Job # 6089.01 Site: INGERSOLL-RAND Date: APRIL 25, 1995

Well # VW-2 Sampling Team: R. SILVA

Sampling Method: _____

Field Conditions: _____

Describe Equipment D-Con Before Sampling This Well: _____

Total Depth of Well: _____ feet Time: 1430 Depth to Water Before Pumping: 14.24 feet

Volume Height of Water Column:		Diameter 2-inch	Diameter 4-inch	Volume		Purge Factor		To Purge
_____	feet *	.16	.65	= _____	gal *	_____	=	_____

Depth Purging From: _____ feet Time Surging Begins: _____

Notes on Initial Discharge: _____

Time	Volume Purged	pH	Conductivity	T	Notes

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

WATER SAMPLING FIELD SURVEY FORM

Job # 60899.01 Site: INGERSOLL-RAND Date: APRIL 25, 1995

Well # VW-3 Sampling Team: R. SILVA

Sampling Method: _____

Field Conditions: _____

Describe Equipment D-Con Before Sampling This Well: _____

Total Depth of Well: _____ feet Time: 1440 Depth to Water Before Pumping: 15.24 feet

Volume Height of Water Column:		Diameter 2-inch	Diameter 4-inch	Volume		Purge Factor		To Purge
_____	feet *	.16	.65	= _____	gal *	_____	=	_____

Depth Purging From: _____ feet Time Surging Begins: _____

Notes on Initial Discharge: _____

Time	Volume Purged	pH	Conductivity	T	Notes

CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

WATER SAMPLING FIELD SURVEY FORM

Job # 60859.01 Site: R-SILVA Date: APRIL 25, 1995

Well # VW-4 Sampling Team: R. SILVA

Sampling Method: _____

Field Conditions: _____

Describe Equipment D-Con Before Sampling This Well: _____

Total Depth of Well: _____ feet Time: 1420 Depth to Water Before Pumping: 17.37 feet

Volume Height of Water Column:		Diameter 2-inch	Diameter 4-inch	Volume		Purge Factor		To Purge
_____	feet *	.16	.65	= _____ gal	*	_____	=	_____

Depth Purging From: _____ feet Time Surging Begins: _____

Notes on Initial Discharge: _____

Time	Volume Purged	pH	Conductivity	T	Notes

ATTACHMENT 3

DRILLING, WELL CONSTRUCTION, AND SAMPLING PROTOCOLS FOR BOREHOLE/MONITORING WELL INSTALLATION

DRILLING, WELL CONSTRUCTION, AND SAMPLING PROTOCOLS FOR BOREHOLE/MONITORING WELL INSTALLATION

BOREHOLE INSTALLATION

Clayton Environmental Consultants, Inc. acquires the proper governmental agency permits to bore, drill, or destroy all proposed boreholes and monitoring wells that intersect with groundwater aquifers and writes a health and safety plan.

Clayton subcontracts only with drillers who possess a current C-57 water well contractor's license issued by the State of California and whose personnel have attended the OSHA 40-hour Hazardous Materials Safety Training. Prior to starting work, a "tailgate" safety meeting including discussion of the safety hazards and precautions relevant to the particular job will be held with all personnel working on the job. Well drillers are identified on permit applications.

Borings are drilled dry by hollow- or solid-stem, continuous flight augers. Augers, drill rods, and other working components of the drilling rig are steam-cleaned before arriving onsite to prevent the introduction of contaminants. These components are also steam-cleaned between borings away from boring locations. Cleaned augers, rods, and other components are stored, and/or covered when not in use.

Our bore logs include a detailed description of subsurface stratigraphy. Clayton examines the soil brought to the surface by drilling operations, and samples undisturbed soil every 5 feet or as otherwise specified. Soil cuttings are screened for hydrocarbon contamination using a photoionization detector. Boring logs are filled out in the field by a professional geologist, civil engineer, engineering geologist who is registered by the State of California, or a technician who is trained and working under the supervision of one of the previously mentioned persons, using the Unified Soil Classification System.

SOIL SAMPLING

Soil samples are taken every 5 feet, at areas of obvious contamination, or as otherwise specified, with a California modified split-spoon sampler that is lined with three six-inch brass tubes. The sampler and rod are inserted into the borehole to the current depth and a hammer of known weight and height above the sampler are allowed to free-fall onto the rod, advancing the assembly 18 inches into undisturbed soil. Clayton uses the number of blows necessary to drive the sampler into the ground to help evaluate the consistency of materials encountered. The sampler is then pulled from the borehole and disassembled, and the three brass tubes are separated for inspection and labeling.

Clayton uses new brass liners or liners cleaned with a trisodium phosphate (TSP) solution, double rinsed with clean tap water, and air dried prior to each sampling. The sampler is also cleaned with TSP and rinsed with tap water between sampling events.

Soil samples selected for laboratory analysis are left in the brass liners, sealed with aluminum foil and plastic caps, taped for air tightness, labeled, and immediately placed into a pre-cooled ice

chest chilled to less than 4°C. Labels contain the following information: site name, date and time sampled, borehole number and depth, and the sampler's initials. The samples are transported under chain-of-custody to a state-certified laboratory. The laboratory analyzes soil samples within the prescribed holding time, storing them at temperatures below 4°C at all times.

Pending results of laboratory analysis, excess drilling and sampling cuttings are placed into Department of Transportation (DOT)-approved drums, labeled with the name of the site, address, and well number, and left at the site. Uncontaminated soil may be disposed of by the client. Soil found to contain levels of contaminants above local or state action levels will require that the client dispose of it in accordance with hazardous waste regulations. At the client's request, we will assist with the disposal of contaminated soil.

WELL CONSTRUCTION

Boreholes are converted to monitoring wells by placing 2-inch or 4-inch diameter well casing with flush-threaded joints and slotted screen into the borehole. Construction materials include polyvinyl chloride (PVC), stainless steel, or low carbon steel. The most suitable material for a particular installation will depend on the parameters to be monitored. All screens and casings used are in a contaminant-free condition when placed in the ground. No thread lubrication is used, other than teflon tape, for connecting the casing segments.

Wells extend at least 10 feet into the upper saturated zone, but do not extend through any clay layers greater than 5 feet that are below the shallow water table. The standard practice for wells installed at hydrocarbon contamination sites is to construct a well with a 20-foot long perforated interval extending 15 feet below and 5 feet above the water table in an unconfined aquifer. The top of the well is solid casing. The annular space of the borehole is backfilled with washed, kiln-dried sand to a point at least 1 foot above the slotted screen. A seal above the filter pack is formed by placing a 1- to 2-foot layer of bentonite pellets on top of the sand. The bentonite pellets are moistened by pouring clean tap water down the hole so that they can expand and seal the annulus. A neat cement grout is placed above the bentonite seal and brought to the ground surface.

Well casings are protected from surface contamination, accidental damage, and unauthorized entry or tampering with water-tight locking caps on the well casings. The caps are usually surrounded by a concrete vault. Wells are clearly identified with a metal tag or other device where the following information is recorded: well number, depth to water, depth of well, casing data including location of screened interval.

WELL DEVELOPMENT

The well seal in newly developed wells must set up for 48 to 72 hours prior to development. Since development of the well can volatilize contaminants present, the well must also settle for at least 48 to 72 hours between development and the first purging/sampling incident.

All monitoring wells are initially developed to clean the well and stabilize sand, gravel, and disturbed aquifer materials around the screened internal perforations. Wells are developed by pumping (or bailing) and surging until water turbidity and specific conductance stabilize. In some cases, where wells are installed in low permeability formations and the wells purge dry, the well

is allowed to recover and is purged dry three times. Clean tap water is introduced into the well if it does not recover rapidly enough.

Pending results by laboratory analysis, purge water from well development and sampling is placed into DOT-approved drums, labeled with the name of the site, address, well number, and left at the site. Uncontaminated water may be disposed of by the client. Water found to contain levels of contaminants above local or state action levels requires that the client dispose of it in accordance with hazardous waste requirements. At the client's request, we can assist with the disposal of contaminated purge water.

GROUNDWATER SAMPLING

To collect a representative sample of the groundwater, stagnant water within the well casing and filter material must be purged and fresh aquifer water allowed to replace it. The water is purged from the well by pumping or bailing at least three well volumes. Well volumes are calculated by measuring depth to groundwater to the nearest 0.01 foot upon arrival at the well before any purging has begun. Groundwater samples are collected only after purging has been of sufficient duration for pH, temperature, and electrical conductivity to stabilize. When purging low-yield wells, the wells are purged to dryness. When the well recovers to 80% of the depth measured upon arrival, samples are collected.

Field sampling logs maintained for each well include:

- Monitoring well identification
- Static water level, before and after pumping
- Well depth
- Condition of water prior to purging (e.g., amount of free product)
- Purge rate and volume
- pH, temperature, and conductivity during purging
- Time purged
- Time of sample collection
- Sampling method
- Name of sampler
- Climatic conditions

Water samples are collected using clean teflon bailers. All equipment that contacts samples is thoroughly cleaned before arrival at the site and between sampling events.

Water is collected in clean laboratory-supplied containers, labeled, placed immediately into an ice chest pre-cooled to 4°C, and transported to Clayton's laboratory for analysis. One trip blank will be furnished in accordance with our quality assurance/quality control (QA/QC) program.

All samples are collected in such a manner so as to minimize the volatilization of a sample due to agitation and/or transfer from bailer to sample container. Samples are collected so that contaminants most sensitive to volatilization are sampled first.

Preservatives are not added to any sample, unless instructed. If requested, they are supplied by Clayton's laboratory.

All sample containers are labeled in the field. Labels contain the following information: project name, sample identification number, project number, date and time of collection, and sampler's initials.

Under no circumstances are sealed sample containers opened by anyone other than the laboratory personnel who perform the requested analyses. If it is necessary for samples or sample chests to leave the immediate control of the sampler prior to delivery to the laboratory, for example during shipment by an overnight shipper, a custody seal is placed on each sample container and/or sample chest to ensure that the samples have not been tampered with during transportation. The custody seal is signed by the sampler, and the date and time that the seal was placed is recorded. The elapsed time between sample collection and delivery to the laboratory never exceeds 48 hours. Water samples are not held for more than 14 days prior to analysis and are kept at 4°C at all times.

To document and trace samples from time of collection, a signed chain-of-custody record is filled out by the sampler and accompanies the samples through the laboratory analyses. The completed chain-of-custody is included with the analytical report from the laboratory.

REFERENCES

Groundwater Monitoring Guidelines, Revised February 1990. Alameda County District Groundwater Protection Program.

Leaking Underground Fuel Tank (LUFT) Field Manual: Guidelines for Site Assessment, Cleanup, and Underground Tank Closure, May 1988. State of California LUFT Task Force.

Regional Board Staff Recommendations for Initial Evaluation and Investigation of Underground Tanks, Revised November 1989. North Coast, San Francisco Bay, and Central Valley regions of the California State Water Quality Control Board.

Standards for the Construction and Destruction of Wells and Other Deep Excavations in Santa Clara County, Revised June 1989. Santa Clara Valley Water District.