

# Quarterly Report April 1995

Prepared For:

Ingersoll-Rand Equipment Sales San Leandro, California

June 12, 1995

## **R** INGERSOLL-RAND

## QUARTERLY REPORT APRIL 1995

## Prepared For:

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

June 12, 1995

Prepared By:



## TABLE OF CONTENTS

1.0	INTROD	UCTION					
	1.1	SITE DESCRIPTION				 	1
	1.2	SITE HISTORY				 	2
	1.3	UNDERGROUND STORAGE TANK (UST) ACTIVITIES					
		CHRONOLOGY				 	2
	1.4	REGULATORY OVERVIEW				 	4
2.0		WATER SUMMARY	•	• •		 	5
	2.1	REGIONAL HYDROGEOLOGIC SETTING					
	2.2	FACILITY HYDROGEOLOGIC SETTING					
	2.3	GROUND WATER DATA SUMMARY					
		2.3.1 Sampling Event Chronology					
		2.3.2 Ground Water Level Data					
	2.4	GROUND WATER ANALYTICAL DATA				 	
		2.4.1 Chlorinated Organics				 	8
		2.4.1.1 Trichloroethene					
		2.4.1.2 1,2-Dichloroethene				 	9
		2.4.1.3 Chlorobenzene				 	9
		2.4.1.4 Dichlorobenzene Isomers					
	2.5	AROMATIC ORGANICS				 	10
		2.5.1 Benzene					
		2.5.2 Ethylbenzene					
		2.5.3 Toluene					
		2.5.4 Isomers of Xylene					
		2.5.5 Napthalene					
		2.5.6 Trimethylbenzene					
		2.5.7 Other Gasoline Components					
		2.3.7 Outer Guserme Components	•	• • •	•	 • •	12
3.0	CONCL	SIONS	•			 	13
4.0	ACTIVI	IES STATUS SUMMARY				 	14
5.0	DEEED	NCES					1.5

#### TABLE OF CONTENTS

#### **FIGURES**

- Figure 1 Site Location Map
- Figure 2 Site Map
- Figure 3 Water Level Elevations
- Figure 4 Ground Water Contours, June 21, 1994
- Figure 5 Ground Water Contours, October 20, 1994
- Figure 6 Ground Water Contours, January 25, 1995

#### **TABLES**

- Table 1 Water Level Summary
- Table 2 Ground Water Analytical Data Summary, Page 1 of 2 Ground Water Analytical Date Summary, Page 2 of 2
- Table 3 List of EPA Method 8260 Compounds
- Table 4 List of EPA Method 8020 Compounds

#### **APPENDICES**

- APPENDIX A June 1994 Analytical Results
- APPENDIX B October 1994 Analytical Results
- APPENDIX C January 1995 Analytical Results

## **LIST OF ACRONYMS**

BETX benzene, ethylbenzene, toluene, xylene
Capsule Capsule Environmental Engineering, Inc.
Clayton
DCE dichloroethylene
DTSC Department of Toxic Substance Control
EPA United States Environmental Protection Agency
gpm gallons per minute
IRES Ingersoll-Rand Equipment Sales
IT IT Corporation
LUFT Leaking Underground Fuel Tank
MCLs maximum contaminant levels
mg/kg milligram/kilogram
mg/l milligrams/liter
PAR Problem Assessment Report
scfm standard cubic feet per minute
SVE soil vapor extraction
TPH total petroleum hydrocarbon
TPH-g total petroleum hydrocarbon as gasoline
TCE trichloroethene
$\mu$ g/l micrograms/liter
UST underground storage tank
USTs underground storage tanks
VOC volatile organic compound
VOCs volatile organic compounds
WCC

#### 1.0 INTRODUCTION

Ingersoll-Rand Equipment Sales (IRES) has contracted with Capsule Environmental Engineering, Inc. (Capsule) to complete the implementation of the final corrective action design and related activities for its equipment sales and maintenance facility at 1944 Marina Boulevard in San Leandro, California.

As part of these activities, Capsule will be preparing and submitting quarterly activities reports for the facility. These reports are prepared to:

- Provide a summary of remedial activities, including such work as 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

This report is the initial presentation of data after a period of intermittent project activity. As such, it will be more extensive than future quarterly reports in providing project background and current status.

#### 1.1 SITE DESCRIPTION

IRES 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 an office filing equipment manufacturer.

The property's building has two tenants. The office filing equipment manufacturer occupies the eastern portion of the building. IRES occupies the western portion of the building that 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 storage yard has perimeter fencing. 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.

### 1.2 SITE HISTORY

The facility building was constructed in 1955. IRES began leasing the building and adjoining yard area in 1974. There is no information on tenants prior to 1974. Land use prior to 1955 has not been determined.

#### 1.3 UNDERGROUND STORAGE TANK (UST) ACTIVITIES CHRONOLOGY

In 1955 (or 1969), two USTs were installed; a 5,000 gallon unleaded gasoline tank, and a 10,000 gallon diesel tank. In 1987 (or 1969), a 500 gallon used oil tank was installed. All tanks passed biennial tank testing in 1987; however, in 1989 the unleaded gasoline tank was found to be leaking. All of the tanks were subsequently removed in October 1989. Tanks were replaced with two above ground tanks; a 500 gallon waste oil tank and a 1,000 gallon diesel tank.

Soil samples collected from the overburden removed from all three tanks contained detectable levels of hydrocarbons. No petroleum hydrocarbons were detected in soil samples collected from beneath the waste oil and diesel tanks. Total petroleum hydrocarbon as gasoline (TPH-g) levels of 7,770 and 3,200 milligram/kilogram (mg/kg) were found in samples obtained from beneath the gasoline tank.

In May 1989, an Unauthorized Underground Storage Tank Release Report was submitted to the San Leandro Fire Department. Site investigation activities commenced in 1989 under the direction of IT Corporation (IT).

In November 1989, three ground water monitoring wells, MW-1, MW-2, and MW-3 were installed on the site. Additionally, seven soil borings were installed in the immediate vicinity of the previously removed gasoline UST. The analytical results found hydrocarbons in an area of approximately 80-feet radius centered around the location of the former gasoline UST. Approximately 3 millimeters of floating product was found during the installation of monitoring well MW-3. Free product has not been seen at the site since this 1989 occurrence.

On December 20, 1989, a Problem Assessment Report (PAR) was submitted to Alameda County and the Regional Water Quality Board (ITES, 1989). The PAR summarized the tank removal, monitoring well installation, and boring findings. The PAR also proposed recovery wells to remove free product, followed by carbon filtration of ground water with effluent pumped to the sanitary sewer to remove dissolved product. Soil venting with carbon filtration of effluent air was recommended to remove product from the soil above the water table. This proposal was accepted by the Alameda County Department of Environmental Health on June 4, 1990.

During October 1990, 12 additional soil borings were installed. Four of the borings were completed as soil vapor extraction (SVE) wells. A fourth ground water monitoring well, MW-4, was installed near the west boundary of the property, approximately 200 feet west of the former UST to evaluate ground water conditions hydraulically downgradient from the UST. The analytical results from soil borings and monitoring well detected gasoline constituents in both soils around the former gasoline UST and in the ground water.

Aquifer and SVE tests were also conducted during the October 1990 fieldwork. The investigators reported a drought period for the area and indicated that low well yields in wells MW-3 and MW-4 may have been due, in part, to the low rainfall period. A SVE test indicated a radius of influence of over 100 feet. The work efforts were summarized in a Data Summary Report (IT, 1990).

In 1992, IT installed a SVE system using one well with a 100 standard cubic feet per minute (scfm) design flow rate to remove hydrocarbons from the unsaturated soils. An air permit was obtained for the system and removed vapors were treated through a two stage carbon bed system. System operation was discontinued after several months when water levels rose and the system collected condensate. IT reported that 800 pounds of product were removed during the initial operation although there is no supporting information for this claim.

In April 1992, eight cone penetrometer tests were performed and temporary wells were installed in the test holes. Four of these wells were installed off site, on the Page Packaging site to the west of IRES. Soil vapor samples and ground water samples were collected from several of the wells. These samples indicated downgradient off-site total petroleum hydrocarbon (TPH) levels of 680 to 53,000 micrograms/liter ( $\mu$ g/l) as compared to levels of 2,600  $\mu$ g/l in MW-3 near the former gasoline UST.

In September 1992, an 8-inch diameter ground water extraction well, RW-1, was installed in the low permeability saturated sediments near the western property border. Three observation wells, OB-1, OB-2, and OB-3 were also installed. The pump test indicated that the well yield was limited but could be increased through the use of vacuum to approximately 1 gallon per minute (gpm).

In November 1994, five additional SVE vents were installed. These vents were installed to provide the SVE 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, 1995. Additionally, a sample was taken from MW-4 in November 1990. The results indicated and confirmed the presence of gasoline-related volatile organic compounds (VOCs) and several chlorinated VOCs in low concentrations in site monitoring wells. These sampling events and results are discussed in detail in Section 2.3 of this report.

#### 1.4 <u>REGULATORY OVERVIEW</u>

The Alameda County Health Care Service Agency, Hazardous Waste Program, is the primary regulatory, or local implementing, agency, responsible for regulatory oversite of the project. The city of San Leandro Fire Department and the Regional Water Quality Board are also an interested regulatory agencies to the project activities.

The remedial work is generally conducted under the Article 11, Corrective Action Requirements, of the California Code of Regulations, Title 23, Division 3, Chapter 16, Underground Storage Tank Regulations. Guidance documents are provided through the State of California's Leaking Underground Fuel Tank (LUFT) manual (1989) and the Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation (1990). Corrective action work also must comply with the Bay Area Air Board, California Environmental Protection Agency, and Zone 7 Water Management Agency requirements.

#### 2.0 GROUND WATER SUMMARY

The facility's hydrogeologic setting and analytical data collected during the project are discussed in the following sections.

### 2.1 REGIONAL HYDROGEOLOGIC SETTING

The facility lies within the East Bay Plain. Young, unconsolidated sediments of Pleistocene and Holocene age, make up the soil materials of the plain. These sediments are up to 1,000 feet thick and rest on Jurassic-aged bedrock. The regional geology is dominated by northwest trending faults of the San Andreas fault system.

The shallow, unconsolidated sediments are comprised of bedded clays, silts, and sands. These sediments have eroded from the hills to the east of the plain and deposited in alluvial cones, similar to deltas. These cones coalesce to form the gently sloping East Bay Plain.

The shallow hydrogeologic setting has also been influenced by the rise and fall of sea level over recent geologic time.

Several investigators have described the near surface hydrogeology of the San Leandro area. Hickenbottom and Muir (1988) describe the near surface deposits as relatively thin deposits of silt and clay, fine sand and silt, and occasional thin beds of coarse sand.

Beneath these younger alluvial deposits is older alluvium comprised of fine to medium grained sands with lenses of silt and clay, and layers of unconsolidated and consolidated clay, silt and sand. In some areas, a unit identified as the bay mud comprised of plastic clay and silt separate the younger and older alluvium.

The more recent Department of Toxic Substance Control (DTSC) investigation, conducted by Woodward-Clyde Corporation (WCC, 1993), of the central San Leandro hydrogeology provides considerable information and discussion on the nature of shallow geologic setting. The existing topography and the collected data suggested to the WCC investigators that very shallow, laterally discontinuous subsurface channels may exist across the San Leandro area. These channels of more permeable sediments may provide preferential pathways for shallow ground water movement. The same report also concludes that an aquitard exists at a depth of 50 to 150 feet below mean sea level.

Recharge to the shallow alluvium occurs primarily from the infiltration of precipitation. Stream flow losses may also contribute to the shallow recharge. Recharge to deeper geologic units appears to occur at higher elevations where these units are nearer the surface. Infiltration from overlying shallower units to lower units appears to be a secondary, minor recharge pathway because of the presence of clay units.

The mean annual precipitation for the San Leandro ranges between 18 and 26 inches with the eastern upland areas recording the greater amounts. Hickenbottom and Muir (1988) report 22 to 24 inches per year for the project area.

#### 2.2 FACILITY HYDROGEOLOGIC SETTING

During the remedial activities the facility's shallow subsurface has been investigated to a depth of 50 feet using both auger borings and cone penetrometer testing. The investigation work was conducted both on and off site.

The facility's shallow hydrogeologic setting is similar to that described for the San Leandro area. Subsurface geologic features are the result of the deposition of sediments in layers. The sediments are composed of silts, clays, and sands. The silts and clays are found in the upper 10 to 15 feet. A sand layer and gravel layer varying in thickness from 3 to 10 feet is found beneath the silt and clay layer. A dense, plastic clay, containing varying amounts of silt and sand, represents the deepest sediments evaluated.

The water table is approximately 15 feet below the land surface. Significant water table fluctuations have occurred during the period of record. These fluctuations and the hydraulic gradient are discussed in Section 2.3.2.

A hydraulic conductivity of approximately 7 ft²/day was determined for MW-4 by pump testing. (IT, 1990). This value is within the literature range for a silty sand. (United States Environmental Protection Agency [EPA], 1987).

#### 2.3 GROUND WATER DATA SUMMARY

Over the period of investigation and remediation, there have been a number of monitoring well sampling events. Figure 2 shows the locations of the monitoring wells. The events have been for the collection and analysis of VOCs. Table 1 and Figure 3 summarize the water level elevations for the well measurement and sampling events. Table 2 summarizes the information on the ground water sampling events and all detected VOCs found in ground water during the project period of record.

#### 2.3.1 Sampling Event Chronology

A November 17, 1989, ground water sampling event, performed by IT Corporation, of monitoring wells MW-1, MW-2, and MW-3 is documented in the PAR. Stabilization tests were performed and samples were submitted with chain of custody forms.

A second IT Corporation ground water sampling event was conducted on November 17, 1990. MW-4 was sampled during this event. A stabilization test was performed and the sample was submitted with a chain of custody form. EPA Method 5030 and TPH LUFT with EPA Method 602 were used to perform the analysis. Other sampling may have been conducted but results were not found in the review of the project files.

Periodic sampling was initiated in June 1994. MW-1, MW-2, MW-3, MW-4, and OB-1 were put on a quarterly sampling schedule in order to provide additional information on the nature and extent of the VOC detections from the earlier sampling.

Capsule selected Clayton Environmental Consultants (Clayton) to perform the ground water sampling and analyses. Clayton performed the stabilization tests and completed the chain of custody forms for the June 1994 sampling event. For quality control comparison purposes during this initial sampling event, the samples were split and analyzed by two laboratories, Clayton and Aspen Research Laboratory. The methods used by both laboratories were EPA Methods 8260 and 8015/8020. For documentation purposes, the list of EPA Method 8260 and 8020 compounds is presented in Tables 3 and 4, respectively.

As shown in Table 2, the Clayton and Aspen results are comparable in terms of both the VOCs detected and the amount detected. The analytical results, stabilization tests, and chain of custody for the June event are found in Appendix A.

The October 1994 sampling event was performed by Clayton. In the initial sample results, the laboratory reported that acetone was detected in the ground water samples. The laboratory later stated in followup correspondence that the reported acetone was a laboratory error. The analytical results, the stabilization tests and the chain of custody, and associated followup correspondence for the October sampling can be found in Appendix B.

The January 1995 sampling event was performed by Clayton. The analytical results, the stabilization tests, and the chain of custody for the January 1995 sampling can be found in Appendix C.

#### 2.3.2 Ground Water Level Data

Depth to water measurements have been taken at various times during site activities. Measuring point elevations have been recorded on at least three occasions. The measuring point elevation and water level data are provided in Table 1 and shown in Figure 3.

Water level elevations beneath the facility range between 12.5 to 14.5 feet above sea level. During the period of the project, water levels have generally risen 2 to 3 feet, reflecting increasing precipitation from several dry years in the mid to late 1980s to rainfall amounts in the 1990s 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).

Water level elevation hydrographs for the four monitoring wells are presented on Figure 3. Over the measurement period, the wells have responded relatively uniformly to fluctuating water levels. This supports the conclusion of a fairly uniform hydraulic gradients and ground water flow direction.

Figures 4, 5, and 6 present the water table elevation contour maps based on water level data collected during the June and October 1994 and January 1995 sampling events.

The June and October contours indicate a generally similar character with flow direction to the southwest. This direction is consistent with earlier findings (IT, 1990) of flow direction. The direction is also areally consistent with the <u>Hydrogeology of Central San Leandro</u> (WCC, 1993) findings.

Figure 6 presents the water table elevation contours for the January 1995 event. While the overall flow direction is to the southwest, there is a pronounced flexure to the contours. The area of the flexure coincides generally with an area of coarser sand identified during the 1990 boring program. As the water table rose into this more permeable material over the period from October 1994 to January 1995, it is likely that the contour flexure developed in response to the these conditions.

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.

#### 2.4 GROUND WATER ANALYTICAL DATA

Analytical results are discussed for the aromatic and chlorinated VOCs detected during the project period of record. While the water samples were not collected from a public water source, the California maximum contaminant levels (MCLs) are presented and discussed for comparison purposes with the detected amounts.

#### 2.4.1 Chlorinated Organics

Chlorinated volatile organic compound (VOC) detections have been found in monitoring wells. Each detected compound is discussed below.

#### 2.4.1.1 Trichloroethene (TCE)

MW-1 and MW-2, which are on the upgradient part of the facility, have consistently shown TCE detections ranging from 5 to 29  $\mu$ g/l.

DTSC 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.

1994 and 1995 sampling of MW-4 and OB-1 have indicated TCE detections ranging from 15 to 66  $\mu$ g/l. These wells are on the downgradient side of the facility. The TCE detections suggest 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.
- 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 maximum contaminant level (MCL) for TCE is 0.005 milligrams/liter (mg/l), or 5  $\mu$ g/l.

#### 2.4.1.2 1,2-Dichloroethene (also known as dichloroethylene)

Cis- and trans-1,2-dichloroethene, ranging from 6 to 14  $\mu$ g/l, have been detected in MW-4 and OB-1. 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  $\mu$ g/l. The California MCL for trans-1,2-dichloroethylene is 0.010 mg/l, or 10  $\mu$ g/l.

#### 2.4.1.3 Chlorobenzene

Chlorobenzene concentrations, ranging from 17 to 19  $\mu$ g/l, have been detected in MW-3 during the June and October 1994 sampling events. Typical uses for the compound are solvent, heat transfer, and in the production of pesticides. (Sax and Lewis, 1987).

The California MCL for monochlorobenzene (chlorobenzene) is 0.070 mg/l, or 70  $\mu$ g/l.

#### 2.4.1.4 Dichlorobenzene Isomers

Three isomers of dichlorobenzene have been detected in MW-3 in concentrations ranging from 7 to 64  $\mu$ g/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).

The California MCL for 1,2-dichlorobenzene is 0.6 mg/l, or 600  $\mu$ g/l.

The California MCL for 1,4-dichlorobenzene is 0.005 mg/l, or 5  $\mu$ g/l.

#### 2.5 AROMATIC ORGANICS

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

#### 2.5.1 Benzene

MW-3 benzene concentrations have varied from 9  $\mu$ g/l in October 1994 to 970 mg/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 UST site. Concurrent with the higher benzene concentration is a water level elevation in MW-3 at a record high.

Benzene concentrations in MW-4 have been fairly steady throughout 1994 and early 1995 ranging from 260 to 470  $\mu$ g/1. A sample from late 1990 reported 1,500  $\mu$ g/1.

The California MCL for benzene is 0.001 mg/l, or 1  $\mu$ g/l.

#### 2.5.2 Ethylbenzene

This is another gasoline constituent detected in MW-3, MW-4, and OB-1. The highest concentrations are found in MW-4 with a range of 230 to 720  $\mu$ g/l. Concentration ranges from MW-3 are 80 to 120  $\mu$ g/l. The concentration difference may reflect a difference in the subsurface mobility of benzene and ethylbenzene.

The California MCL for ethylbenzene is 0.7 mg/l, or 700  $\mu$ g/l.

#### 2.5.3 Toluene

Toluene concentrations in MW-3 range from 4 to 410  $\mu$ g/l. The higher concentrations are from the January 1995 sampling event. They coincide with increased benzene and xylene concentrations and support the concept of flushing of residual gasoline in unsaturated soils.

MW-4 toluene concentrations range from 19 to 110 µg/l for 1994 and 1995 sampling.

The California MCL for toluene is 0.15 mg/l or 150  $\mu$ g/l.

#### 2.5.4 Isomers of Xylene

MW-3 concentrations of o-xylene ranged from 31 to 820  $\mu$ g/l with the higher values occurring during the January 1995 sampling event. Concentrations of p,m xylenes ranged from 100 to 1,100  $\mu$ g/l with the highest values also occurring during January 1995. The higher benzene, toluene and xylene concentrations appear to be the result of soil flushing of residual gasoline near the MW-3 area.

Xylene isomers also occur in downgradient well MW-4 and OB-1. MW-4 concentrations ranged from 50 to 320  $\mu$ g/l for o-xylene and 270 to 730  $\mu$ g/l for p,m xylenes.

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

#### 2.5.5 Napthalene

This gasoline component has been detected in MW-3, MW-4 and OB-1. The MW-3 concentrations ranged from 18 to 100  $\mu$ g/l and show a trend similar to the benzene, ethylbenzene, toluene, xylene (BETX) compounds with the highest value in the January 1995 sample.

There is no California MCL for napthalene.

### 2.5.6 <u>Trimethylbenzene</u>

Both 1,2,4 and 1,3,5 trimethylbenzene occur in MW-3 and MW-4. Total concentrations range from 63 to 720  $\mu$ g/l. Generally, the higher concentrations are seen in MW-4. Concentrations of individual compounds have been fairly consistent throughout the sampling period.

There is no California MCL for trimethylbenzene.

## 2.5.7 Other Gasoline Components

A number of other gasoline related VOCs have also been detected in MW-3, MW-4, and OB-1. Concentrations of n-butylbenzene, isopropylbenzene (cumene), p-isopropylbenzene, and n-propylbenzene have been consistently detected during each sampling event. Most of the concentrations are  $100~\mu g/1$  or less.

There are no California MCLs for these constituents.

#### 3.0 <u>CONCLUSIONS</u>

As of January 1995, ground water elevations in facility monitoring wells are at a period of record highs.

The prevailing ground water flow direction is to the southwest.

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

BETX compounds in MW-3 generally showed marked increases in concentrations during the January 1995 sampling event. The increases coincide with high ground water elevations and are likely the result of the dissolution of residual gasoline in the MW-3 area.

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

VOCs continue to be detected in the wells near the facility's downgradient boundary. The detected compounds include both gasoline constituents and chlorinated VOCs. The gasoline compounds concentrations are similar to those found upgradient. Although TCE concentrations are similar to slightly higher than those found in the upgradient wells, dichloroethylene (DCE), chlorobenzene, and dichlorobenzene have also been detected in MW-3 in low concentrations.

TCE has been detected in monitoring wells that are consistently upgradient. TCE has been identified by the DTSC as widespread in the shallow subsurface in the San Leandro area.

## 4.0 ACTIVITIES STATUS SUMMARY

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

In early May 1995, the existing SVE vents were tested and evaluated. The evaluation is being used as the design basis for upgrading the SVE system. Once design is completed, a contractor will be selected to perform the modifications to the system.

Additional investigation planning is currently underway. A scope of work has been submitted to Alameda County. The scope outlines the tasks necessary to complete the horizontal and vertical delineation of the hydrocarbon plume. Access agreements are being obtained with neighboring facilities.

Quarterly ground water sampling of selected 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
- Environmental Protection Agency, 1987, Handbook Ground Water, EPA/625/6-87/016, U.S. Environmental Protection Agency, Washington.
- Hickenbottom, K. and K. Muir, 1988, Geohydrology and Ground water-Quality Overview, East Bay Plain Area, Alameda County, California, 205 (j) Report, Alameda County Flood Control and Water Conservation District, 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.

Figure 1 - Site Location Map

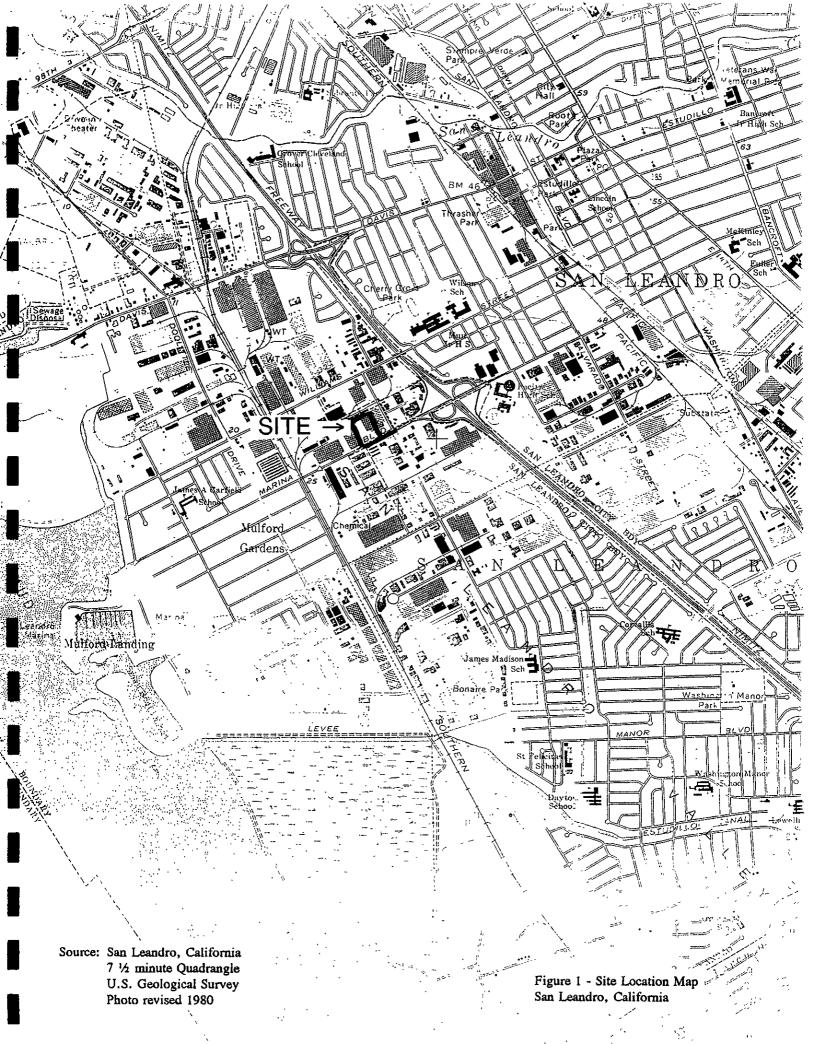


Figure 2 - Site Map

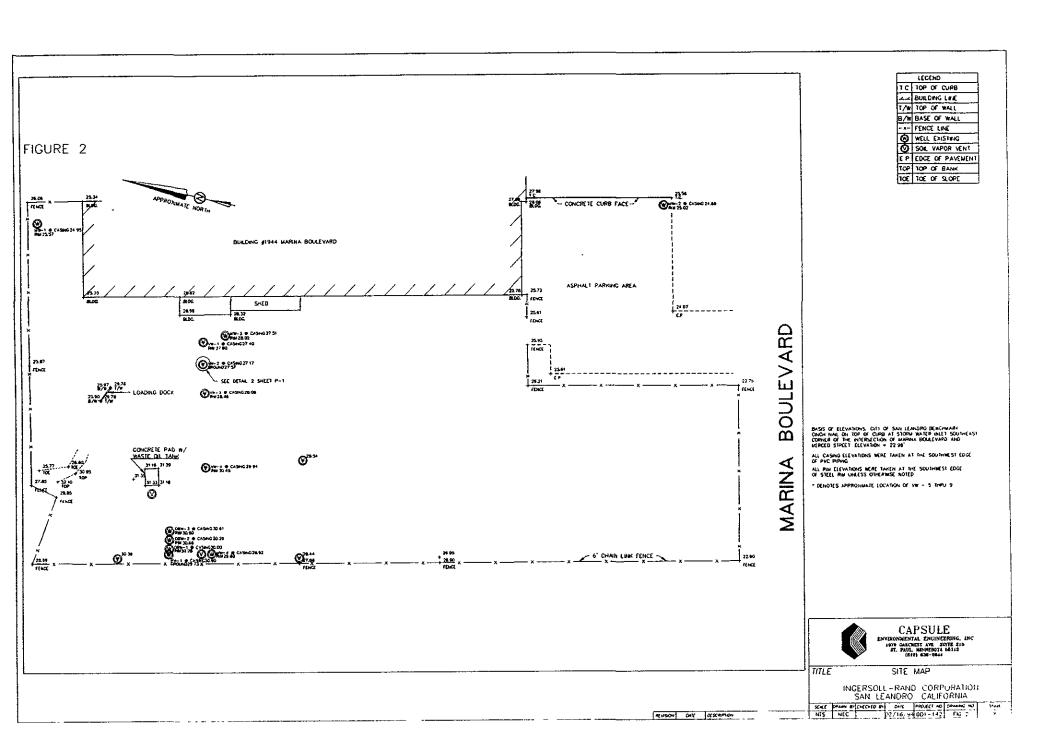


Figure 3 - Water Level Elevations

## **Water Level Elevations**

San Leandro, California

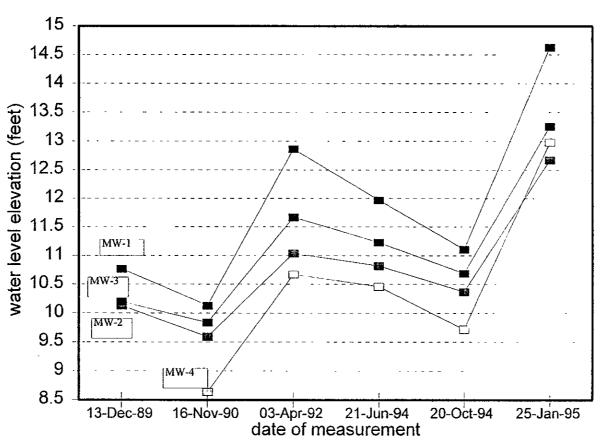


Figure 3

Figure 4 - Ground Water Contours, June 21, 1994

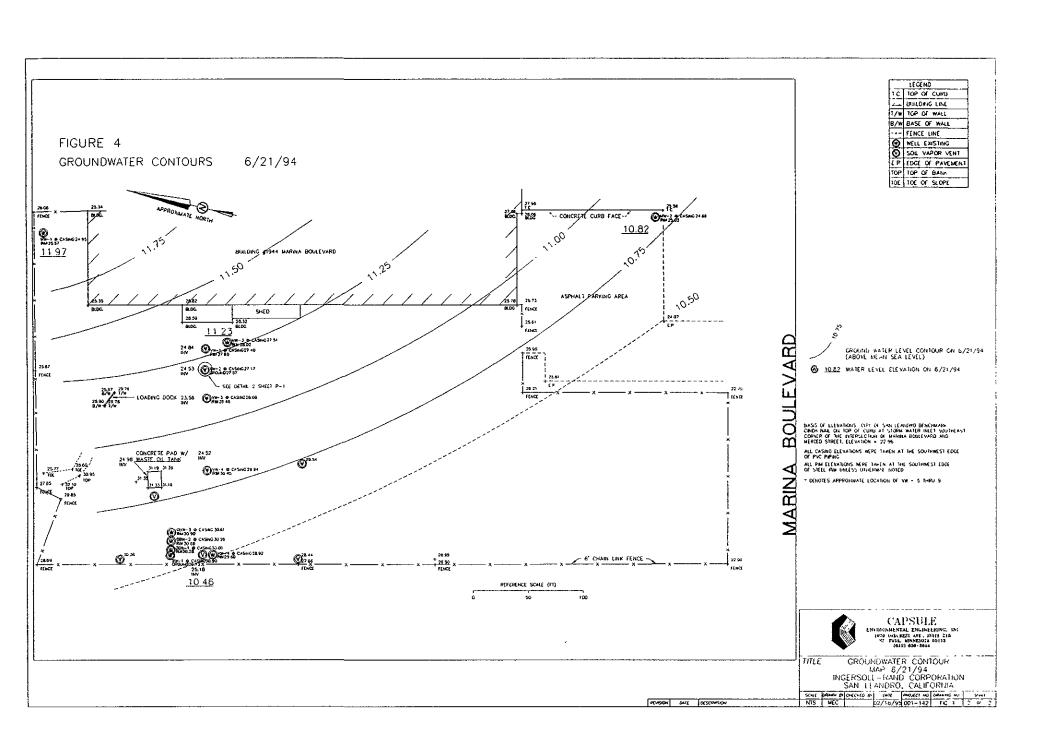


Figure 5 - Ground Water Contours, October 20, 1994

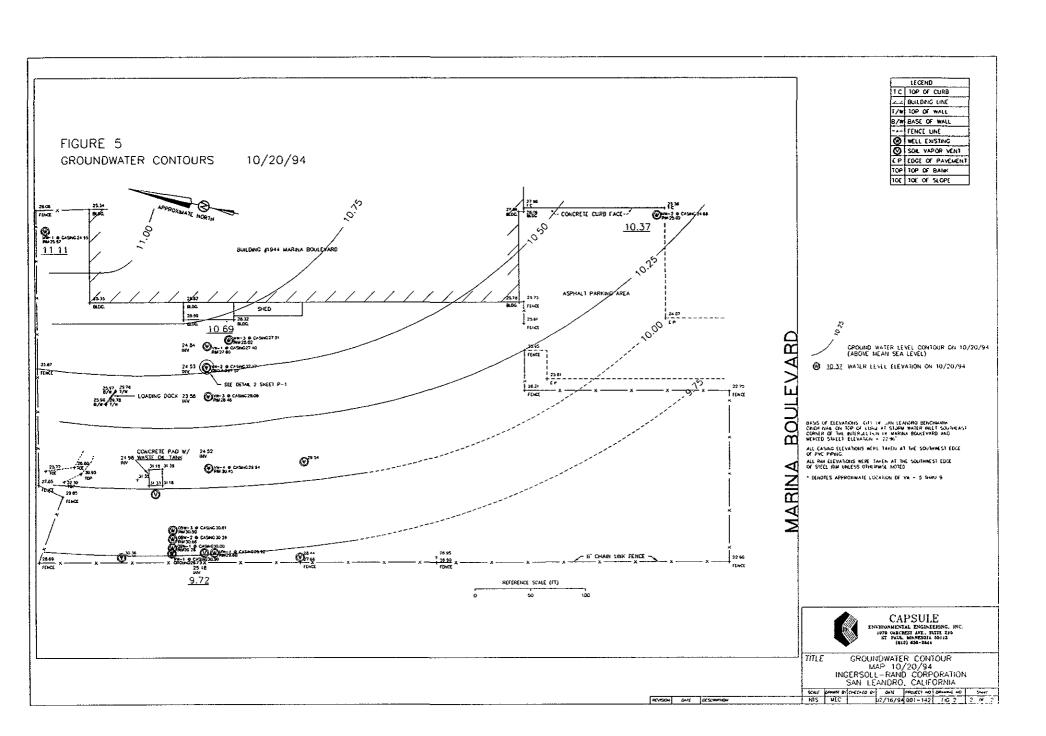
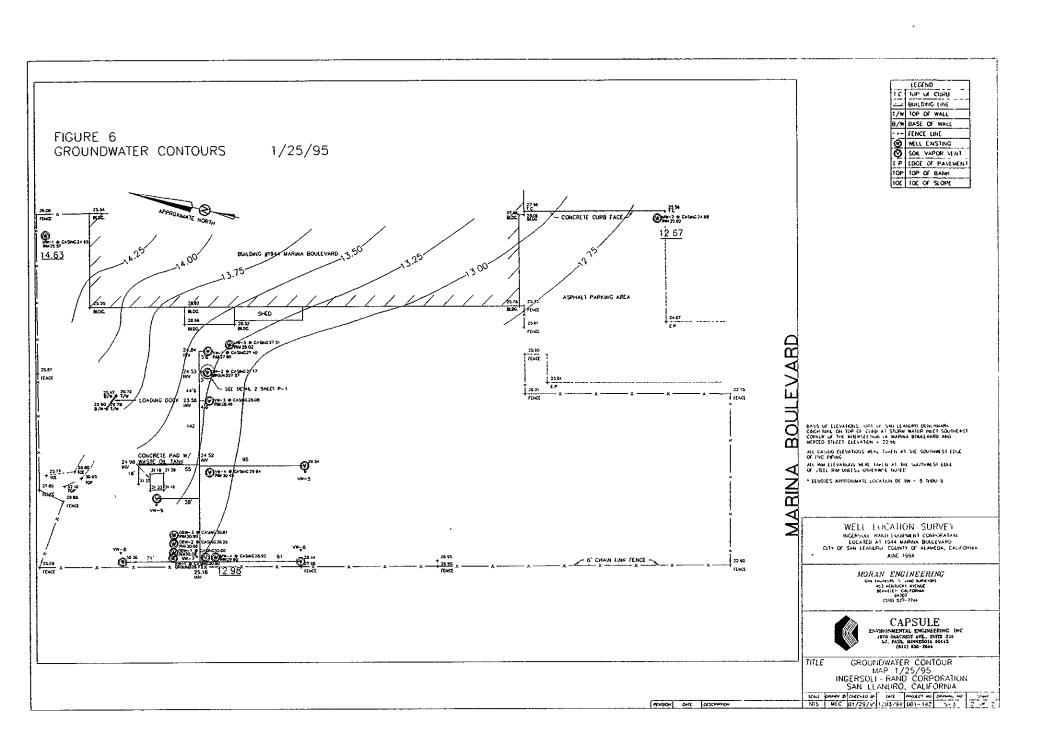


Figure 6 - Ground Water Contours, January 25, 1995



## Table 1 - Water Level Summary

# TABLE 1 Water Level Summary Table

Project: Ingersoll-Rand Company, San Leandro, CA water level data

Date prepared: April 15, 1995

Prepared by: JJM

Well	Date of measurement	Measuring point elevation (feet)	Depth to water (feet)	Water level elevation (feet)
MVV-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
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
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
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
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

#### 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 Oct. 20, 1994: Moran Engineering map, 6/94

Table 2 - Ground Water Analytical Data Summary, Page 1 of 2

Ground Water Analytical Date Summary, Page 2 of 2

Table 2: San Leandro Groundwater Analytical Data Summary

								<del></del>				· · · · · · · · · · · · · · · · · · ·		1		1			
	<del>                                     </del>								1,2-di-	1,3-d1-	1,4-di-	1,1-dı-	1,2-di-	cis-1,2-	trans-1.2-	2.2-		<del></del>	2-150-
	1			1			a bund	chlora-	chloro-	chioro-	chloro-	chloro-	cnloro-	dichioro-	dichloro-	dichloro-	ethyl-	isopropyl-	propyl-
		Sample		;		5	n-butyl-		benzene	penzene	benzene	ethane	ethane	ethene	etnene	propane	benzene	benzene	toluene
		collection		EPA :	acetone	benzene	benzene	benzene			(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(1450)	(ug/l)	(ug/l)	(ug/l)
Weil	Coilected	, by	Lab	Method	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(091)	(091)	109///	(ug/i)	100117	39.7	(49.1)	(0901)	
											·	<del></del>		<del></del>		<u> </u>	ND i		
MW-	1 :7-Nov-891			8010/80201		ND							71.0			<13	<10	<10 !	<10
	21-Jun-94		ARC	3260		<10	<10	<10	<10	<1.0	<10	<10	<10	<10	<10	<u> </u>			
	21-Jun-94	CEC	ARC	80151							<u> </u>				46	<5	<5	<5	<5
	21-Jun-94	CEC	CEC	32601		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<u> </u>			
i	21-Jun-94	CEC	CEC	30151								<u></u>		<del> </del>				ا - ا	
	20-Oct-94	CEC :	CEC	3260	<20	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	20-Oct-94	CEC	CEC	8015/8020		<0.4		<u> </u>						<del></del>	<u>-</u>		<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			8015/80201		<0.4									<del></del> -		<0.3		
							1												
	+																		
MW-2	17-Nov-89	ΙT	PAL	8010/8020		ND	<u> </u>										NO		
2	21-Jun-94		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		ARC	8015			i	1		1									
	21-Jun-94		CEC	8260		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
			CEC	8015				1		<del>                                     </del>									
<del></del>	21-Jun-94		CEC	8260		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	20-Oct-94			8015/8020		<0.4								1			<0.3		
	20-Oct-94					<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
	25-Jan-95		CEC	8260		<0.4		1		<del></del>	-			<del>                                     </del>			<0.3	······································	
	25-Jan-95	CEC	CEC	8015/8020	<u> </u>	- CU.4	<del> </del>	<del> </del>			<u> </u>	<del></del>		+					
			<u> </u>		<u> </u>		ļ				<del></del>	<del></del>	<del> </del>	<del>   </del>					
				<u> </u>				ļ <u>.                                    </u>				-		<del></del>					
MW-3	17-Nov-89		PAL				ļ	1-	40	6.6	12	Z1 0	<1.0	>1 0 & <5.0	<1.0	<1.0	120	13	>1.0 & <5.0
	21-Jun-94		ARC -	8260		27	<1.0	17	42	6.6	13	<1.0	V1.0	210 & 03.01	71.0		120	, , ,	12 1.0 0 40.0
	21-Jun-94	CEC	ARC	8015		<u> </u>		ļ		<del> </del>					<5	<5	170	17	<5
	21-Jun-94	CEC	CEC	8260	1 <20	34	1 7	19	45	7	14	<5	<5	<5	- 53	<u> </u>	:70	1.	3
	21-Jun-94	CEC	ÇEC	3015			t										20	20	- ce
	20-Oct-94	CEC	CEC	8260	50		1	19	64	. 9	18	<5	<5	<5	<5	<5	90		<5_
	20-Oct-94	CEC	CEC	8015/8020	1	8.9					<u> </u>						96		
	25-Jan-95	CEC	CEC	8260	<100	970	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	80		<30
	25-Jan-95	<del></del>	CEC	8015/8020		950											86		
<b> </b>																			
<del></del>	<del></del>				<del> </del> -									<u> </u>					
MW-4	16-Nov-90	IT.	MCL -	5030		1500		1						1	<u> </u>	_	720		<u> </u>
	21-Jun-94		ARC -	8260		370	19	>1.0 & <5.0	>1.0 & <5.0	<1.0	<1.0	<1.0	11	1 >1.0 & <5.0	16	>1.0 & <5.0	230	43	>1.0 & <5.0
<del></del>	21-Jun-94		ARC	8015			1			1									
	21-Jun-94		CEC -	3260	<u> </u>	470	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	360	50	<30
	0.0	<del></del>	CEC -				1	1		1									
	21-Jun-94 20-Oct-94		CEC	8260		260	17	<5	<del> </del>	<5	<5	<5	<5	<5	12	<5	240	66	<5
				8015/8020		360		+	<del>                                     </del>	† <del></del>							270		
	20-Oct-94					400		<30	<30	<30	<30	<30	<30	<30	<30	<30	420		40
	25-Jan-95		CEC			470		<del>  ~~</del>		<del>                                     </del>	1			1			520		
	25-Jan-95	CEC	الكال ا	8015/8020	<del>' </del>	+10	<del>' </del>	+		<del> </del>	<del> </del>			1	<u> </u>				1
		ļ	-		<del> </del>		<del> </del>	+		+		<del> </del>		+		<del> </del>			
		1		ļ <u></u>		<del> </del>	1-100 -00	<del>                                     </del>	>1.0 & < 5.0	<1.0	<1.0	>1.0 & <5.0	<1.0	6.7	12	<1.0	10	28	<1.0
OB-1	21-Jun-94		ARC	8260		83	>1.0 & <5.0	<1.0	-1.0 & < 3.0	~1.0	71.0	- 1.0 0	-1.0	+	<del>'</del>	1.5	.0		<del>                                     </del>
	21-Jun-94		ARC-	8015		ļ		<u> </u>	<del> </del>	4			<5	9	14	<5	10	39	<5
	21-Jun-94		CEC	8260		130	<5	<5	<5	<5	<5	<5		<del></del>	14		1	33	<del>-~~</del>
	21-Jun-94		CEC	8015				<u> </u>	<u> </u>	<del></del>	1	<u> </u>		4	10	<\$	<5	30	<5
	20-Oct-94		CEC	3250				<5	<5	<5	<5	<5	<5	91		3			, , , ,
	20-Oct-94		JEC	8015/8020		48		<u> </u>		<del></del>				<del></del>		75	5 2		14
	25-Jan-95		SEC	3250	) <20	.80	)i ~5	<5	<5	<5	<5	<5	<5	3	10	<5	32		1 44
ĺ.	_Urualirsu	, , , , ,		8015/8020		280			<del></del>						•		24	1	

ARC - Aspen Research Laboratories SEC - Clayton Environmental Consultants T - International Technology Corporation

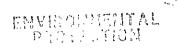
MCL - Mobile Chemicabs Inc. PAL - Precision Analytical Laboratory, Inc.

Table 2: San Leandro Groundwater Analytical Data Summary

<del></del>			· · · · · · · · · · · · · · · · · · ·	,	1				· · · · · · · · · · · · · · · · · · ·	<del> </del>		1	ļ	l		. 1			1
	<del></del>	<del></del>	,		· · · · · · · · · · · · · · · · · · ·		sec-	tetra-		1.2.4-	i .	1 2,4-	1,3.5-						TPH
		Sample		1	naphtha-	n-propyl-	outyl-	chloro-		trichloro-	tricaloro-	trimethyl-	tnmethyl-	vinyl			o,m	TPH	EPA 8015
	Date	collection !		- EPA	ene	benzene	benzene	ethene	toluene	benzene	ethene	penzene	benzene	chlonde	xylenes	o-xylene	xylenes	gasoline	gasoline
Weil	Collected	Эу	Lab	Method	(ug/l)	(lıgıl)	rug/l)	(ug/l) i	(ug/i)	(ug/l)	(ug/l)	rug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	/ug/i)	(ug/l)	(ug/t)
				1		i		j ,				! 	1	<u> </u>		1			1
MW-:	: 17-Nov-89		ÞΑL	3010/802	1			1	ND		. 29				ND			ND	<u> </u>
	21-Jun-94	CEC	ARC	3250	<10	<10	<10	>1 0 & <5.0	<1.0	<1.0	1.8	<1.0	<10	<10		<10	<1.3	· · · · · · · · · · · · · · · · · · ·	
	21-Jun-94		ARC	3015								<u> </u>	<u> </u>		<u></u>	1			<50
	i 21-Jun-94		CEC	3260	<5 i	<5	<5	<5	<5	<5	20	1 <5	<5	<5		<5	<5		
	: 21-Jun-94		CEC	3015				1			<u>í</u>			<u> </u>					<50
	20-Oct-94	CEC	CEC	3260	<5	<5	<5	<5	<5	<5	11	<5	<5	<5		< 5	<5		
	20-Oct-94	CEC	CEC	.8015/802					<0.3	<u> </u>	1			<u> </u>		<0.4	<0.4		<50
	25-Jan-95		CEC	3260	<5	<5	<5	<5	<5	<5	16	<5	<5	<5		<5_	<5		
	25-Jan-95	CEC	CEC	8015/802					<0.3							<0.4	<0.4		<50
											j								
<del></del>	1			i						<u> </u>	<u> </u>								
MW-2	17-Nov-89	1T	PAL	8010/802					ND		10	1		<u> </u>	ND		<u> </u>	ND	<del> </del>
	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	<10		
	21-Jun-94		ARC	8015															<50
	21-Jun-94	CEC	CEC	8260	<5	<5	<5	<5	<5	<5	5	<5	<5	<5		<5	<5		
<del></del>	21-Jun-94		CEC	8015			<u> </u>									-		<u></u>	<50
	20-Oct-94	CEC	CEC	8260	<5	<5	<5	<5	<5	<5	6	<5	<5	<5		<5	<5		<u> </u>
	20-Oct-94		CEC	8015/802					<0.3							<0.4	<0.4		<50
	25-Jan-95		CEC	8260	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5		<5	<5		
	25-Jan-95	<del></del>		8015/802					<0.3							<0.4	<0.4	<u> </u>	<50
																	1		
																-		ļ	
MW-3	17-Nov-89			1															
	21-Jun-94	CEC	ARC	3260	18	33	>1.0 & <5.0	<10	>1.0 & <5.0	<1.0	<10	<1.0	63	<1.0		31	100	<u> </u>	
	21-Jun-94	<del></del>	ARC	3015															2700
	21-Jun-94		CEC	8260		43	<5	<5	<5	<5	<5	120	22	<5		40	150		
	21-Jun-94	<del></del>	CEC	8015		ĺ													2900
	20-Oct-94		CEC	3260		43	6	<5	<5	<5	<5	150	46	<5		68	140		
	20-Oct-94			8015/802					4.4					1		69	160		2600
	25-Jan-95		CEC	8260	100	<30	<30	<30	410	<30	<30	350	80	<30		820			
	25-Jan-95	I		8015/802					340							760	1100		7100
<del></del>	25-0011-50	1 020		100.101002		<del> </del>	<del> </del>		<u> </u>							-			
	<del></del>	<del> </del>		<del> </del>					<del> </del>										
MW-4	16-Nov-90	17	MCL	5030				1	2000	)					27000			32000	)[]
10100-1	21-Jun-94	<del></del>	ARC-	8260		54	>1.0 & <5.0	<1.0	19	<1.0	15	<1.0	110	>1.0 & <5.0		- 44	270		T
	21-Jun-94		ARC-	8015		-				1						,			8000
	21-Jun-94		CEC	8260		60	<30	<30	<30	<30	<30	530	110	<30		50	530		1
	24 1 24	- 252	CEC	8015		<u> </u>										1			7600
	21-Jun-94 20-Oct-94		CEC	8260		78	1 8	<5	34	<5	27	300	100	<5		110	330		1
	20-Oct-94			8015/802					33		<u> </u>	1	<del>                                     </del>			120	520		7800
-	25-Jan-95		CEC-			100	<30	<30	90		<30	600	120	<30	1	310			T
<del></del>	25-Jan-95			8015/802		100	-00		110					<del></del>		- 320	730		9700
<del></del>	<u> </u>	CEC	020	0013/802		1		<del>                                     </del>		<del></del>	<del></del>		· · · · · · · · · · · · · · · · · · ·				<del> </del>		1
	<del></del>			<del>                                     </del>	<del>                                     </del>	<del> </del>	<del>                                     </del>	<del> </del>	-	1			<del> </del>	1					
08.1	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	>1.0 & <5.0	6.6	1	1
OB-1	21-Jun-94 21-Jun-94		ARC	3015		3.7	-1.5 0 - 5.0	1.3	1.5 3.3.5	·	1	1		1					2800
<u> </u>	- 2		CEC	8260		1 8	<5	<5	<del>                                     </del>	<5	42	<5	<5	<5	<u> </u>	<5	7	1	1
ļ	21-Jun-94			8015				1 2	-5	+	<del> </del>	<del></del>		1		<del> </del>	1	1	1600
<u> </u>	21-Jun-94		CEC	•		<5	<5	<5	<5	<5	56	<5	<5	+ <5		<5	<5	i	1
ļ	20-Oct-94		050	3260	<u> </u>				3 (		30			• • • • • • • • • • • • • • • • • • • •	•	<u> </u>			2600
	20-Oct-94		0E0				<5		39		31 27	<5	<5	<5		21			
	25-Jan-95	DEC	QEC.	3260			<del> </del>	~~	29					·		•5			2900
1		i SEC	CEC	8015/802					43	7	<del></del>							<del>*</del>	

ARC - Aspen Research Laboratories CEC - Clayton Environmental Consultants T - International Technology Corporation MCL - Mobile Chemicabs and PAL - Precision Analytical Laboratory and





95 JUN 19 AH 10: 22

June 12, 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 April 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.

As we agreed in our March 14, 1995, meeting with you, this initial report provides a summary and a copy of all analytical data for the July and October 1994 and January 1995 quarterly sampling events. Future reports will provide information on both monitoring and remediation activities for the quarter.

If you have any questions, comments or need additional information cited in the report, please contact either John McDermott or Dan Reinke 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

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

## Table 3 - List of EPA Method 8260 Compounds

Rev 0 061295

#### · Table 3

#### List of EPA Method 8260 Compounds

acetone 1,1-dichloropropene

benzene cis-1-3-dichloropropene

bromobenzene trans-1-3-dichloropropene

bromochlorobenzene ethylbenzene

bromodichloromethane freon 113

bromoform hexachlorobutadiene

bromomethane 2-hexanone

2-butanone isopropylbenzene

n-butylbenzene p-isopropyltoluene

carbon disulfide methylene chloride

carbon tetrachloride 4-methyl-2-pentanone

chlorobenzene naphthalene

chloroethane n-propylbenzene

chloroform sec-butylbenzene

chloromethane styrene

2-chlorotoluene tert-butylbenzene

4-chlorotoulene 1,1,1,2-tetrachloroethane

dibromochloromethane 1,1,2,2-tetrachloroethane

1,2-dibromo-3-chloropropane tetrachloroethene

1,2 dibromoethane toluene

dibromomethane 1,2,3-trichlorobenzene

1,2-dichlorobenzene 1,2,4-trichlorobenzene

1,3-dichlorobenzene 1,1,1-trichloroethane

1,4-dichlorobenzene 1,1,2-trichloroethane

dichlorodifluoromethane trichloroethene

1,1-dichloroethane trichlorofluoromethane

1,2-dichloroethane 1,2,3-trichloropropane

1,1-dichloroethene 1,2,4-trimethylbenzene

cis-1,2-dichloroethene 1,3,5-trimethylbenzene

trans-1,2-dichloroethene vinyl acetate

1,2-dichloropropane vinyl chloride

1,3-dichloropropane o-xylene

2,2-dichloropropene p,m xylenes

File: H:\QUATTRO\LIST8260.WB1

Date: April 25, 1995

Table 4 - List of EPA Method 8020 Compounds

Rev 0 061295

Table 4 List of EPA Method 8015/8020 Compounds

o-xylenes benzene

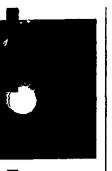
p,m-xylenes ethylbenzene

gasoline toluene

File: H:\QUATTRO\LIST8020.WB1 Date: April 25, 1995

## APPENDIX A - June 1994 Analytical Results

Rev 0 061295





Received

JUL () 7 1994

CAPSULE

July 5, 1994

ID#: SERVICE.

BG, CF, CO, MT, PL

CORRESPONDENCE:

Mr. Bill Block

Tel: 612 / 631-9234

436 West County Rd. D. St. Paul, MN 55112-3522

Capsule Environmental Engineering, Inc. 1970 Oakcrest Avenue, Suite 23.5 st. Paul, MN 55113

Fax: 612/631-9270

Reference: ARC Project #: 13356

Capsule Project Title: Clayton Environmental

Sampling Date: June 21, 1994

Sample Receipt Date: June 22, 1994

Dear Mr. Block:

We have completed the requested analysis on the above referenced project. Enclosed you will find a summary of the results obtained.

The analysis for the following parameters was performed according to Test Methods for the Evaluation of Solid Wastes, SW-846, 3rd Edition:

Parameter

Test Method

Volatiles TPH as Gas EPA Method 8260 modified EPA Method 8015 modified

Aspen Research received two 40 ml vials for analysis. In the future, Aspen would like to receive at least three 40 ml vials for EPA 8260 and three 40 ml vials for TPH as Gas analysis. In order for Aspen to follow its quality control plan, we need to be provided with sufficient sample to test for matrix spike and matrix spike duplicates.

Thank you for using Aspen Research Corporation. As always, if you have questions, comments, or if we can be of further assistance, please do not hesitate to call.

Regards,

ASPEN RESEARCH CORPORATION

Yerry D. Olson Jerry D. Olson

Analysis for Volatile Organic Compounds by Modified Method 8260, SU-846 Third Edition

Capsule Environmental Engineering, Project IO: Clayton Environmental, PMN 56418.00 Sampling Date: June 21, 1994

Aspen Research Corporation Project IO: 13356

Sample ID: ARC ID:		Meth 81. 00000	HU-1 52340	MJ-2 52342	MU-3 52344	MU-4 52346	08-1 52348
Analyte	ug/L	ug/L	ug/L	ug/L	ug/L	ug/Ĺ	ug/L
***************************************		un	HO	 HO	HO	HS	HØ
Dichlorodifluoromethane	S.0	HO		HO	KO	KO	HO
Chloromethane	5.0	HO	KO	HO	KO	BEQL	HD
Vinyl chloride	5.0	NO NO	KO Ko	HO HO	NO NO	KO KO	HO
Brononethane	5.0	KO.		HO.	HB	HO HO	HO
Chloroethane	5.0	KO	KO	HO HO	HO HO	ЖO	HB
Trichlorofluoromethane	5.0	HO.	HO HO		HO	NO NO	NO NO
1,1-Dichloroethene	5.0	KO	HO	HO			HD
Methylene chloride	5.0	HO	Ю	К0	KO	80 16	12
trans-1,2-Dichioroethene	5.0	HO	HO	H0	NO NO	16	
1,1-Bichlorgethane	5.0	HO	HO	HO	NO US	HO HO	8EGL
2,2-Dichloropropane	5.0	KO	HO	H9	NO	BEQL.	HO
cis-1,2-Dichloroethene	5.0	HO	NO	HO	BEOL	BEQL	6.7
Chloroforn	5.0	HO	YO	HO	HD	K8	HB
Bronochloronethane	5.0	HO	HO	HO	HO	KO	HO
1,1,1-Trichloroethane	5.0	HO	HB	KD	HO	HB	80
i,1-Bichloropropene	5.0	HO	HO	HO	HO	HO	NO
Carbon tetrachloride	5.0	KO .	HO	KO	HO	HD	HO
1,2-Dichloroethane	5.0	HO	HB	HB	KD	11	HO
<b>Benzene</b>	5.0	HO	HD	80	27	370 *	83
Trichloroethene	5.0	HO	18	BEQL	HO	15	31
1,2-Dichloropropane	5.0	HO	HO	HO	HO	HO	HO
Bronodichloronethane	5.0	HO	HD	HO	HO	HD	KO
Dibronomethane	9.8	HO	HO	HD	MO	NO	HO ·
cis-1,3-Dichloropropene	5.0	HB	HØ	KO	HO	HO	HO
Toluene	5.0	HO	HO:	KO	BEQL	19	8EQL
trans-1,3-Dichloropropene	5.0	HO	HO	H8	HØ	KØ	HO
1,1,2-Trichloroethane	5.0	HO	HO	HD	HO	XO	H0
1,3-Dichloropropane	5.0	HO	HO	HD	KD	HO	HO
Tetrachiorgethene	5.0	80	BEQL.	BEQL	HØ	HO	HO
Chlorodibronomethane	5.0	HD OH	KO	HO	HD	HO	HO
1,2-Dibronoethane	5.0	HO	HO	КО	HD	HO	KO
Chlorobenzene	5.0	ND .	HD	HD	17	BEQL	HD
1.1.1.2-Tetrachloroethane	5.0	HO	HO:	Hű	HO	HO	HO
Ethylbenzene	5.0	HO	КО	HO	120 *	230 *	10
n,p-Kylene	5.0	HO	110	HO	100 *	270 *	6.6
o-Xylene	5.0	HO	Ю	HO	31	44	8EQL
Styrene	5.0	HO	ко	HD	HO	HD	HO
Bronoforn	5.0	HO	HO	Ю	HO	HD	HO
Isopropylbenzene	5.0	HO	HO	HD	13	43	28
1,1,2,2-Tetrachloroethane	5.0	HO	HO	HO	NO	НО	HO
1,2,3-frichloropropane	5.0	HO	HG	HD	HØ	MO	HO
n-Propylbenzene	5.0	80	HO	HO	33	54	5.4
Branobenzene	5.0	HB	HD	HO	HB	HO	NO
1.3.5-Tranethylbenzene	5.0	XO.	KO	 OK	63	110 ×	HØ
· ·	5.0	HO	NO NO	HO	KD	XO	KO
Z-Chlorotoluene		HO.	KØ	HO OH	HO	KO	HO
1-Chlorotoluene	5.0	ΠÜ	ពម	กบ	III	1 HD	HU

Capsule Environmental Engineering, Project IO: Clayton Environmental, PM# 56418.00 Sampling Date: June 21, 1994

Aspen Research Corporation Project IO: 13356

Sample IO: ARC IO:	EQL Nater	Meth 91. 00000	MJ-1 52340	MJ-2 52342	101-3 52344	181-4 52346	08-1 52348
Analyte	ug/L	ug/L	ug/L 	ug/L	ug/L	ug/l.	ug/L
tert-Butylbenzene	5.0	HO	HO	HO	HD	MD	HO
1,2,4-Irinethylbenzene	5.0	HO	HO	HO	78	210 *	8EQL
sec-Butylbenzene	5.0	HO	HO	HO	BEQL	BEQL	BEQL,
f-Isopropyltoluene	5.0	HO	HD	HO	BEQL	BEQL	HO
1,3-Dichlorabenzene	5.0	HO	HO	HD	6.6	HO	HO
i, 1-Gichlorobenzene	5.0	HO	HO	HO	13	KO	HD
n-Butylbenzene	5.0	HO	HO	HO	NO	19	8EQL
1,2-Bichlorobenzene	5.0	HO	HO	HO	42	9 <b>2</b> 01	8EQL
1,2-Dibrono-3-chloropropane	5.0	HO	<del>11</del> 0	HO	HO	HO	HO
1,2,4-Trichlorobenzene	5.0	HO	HO	HØ	KO	KO	HO
texachlorobutadiene	5.0	HO	HO	HO	HO	HO	HO
faohthalene	5.0	HO	HD	HD	18	46	<b>BEQL</b>
1,2,3-Trichlorobenzene	5.0	но	HO	HO	KO	H8	HO
file Manar:		) <del>9</del> 0177	>86172	>80173	>80174	) <del>8</del> 0175	>80176
Analysis Oate:		940629	940629	940629	940629	940629	940629
v ·				10	4	а	

Key:

Estimated Quantitation Limit. EQL:

Analyst: Thilly l. Faworn Bate: 6-30-94

Jerry D. Olar 7-5-94

Not Detected at a concentration greater than 20% of the stated EQL. BEQL: Detected at a concentration less than the EQL but greater than NO.

<sup>\*</sup> Walues exceed linear range. Dilutions of samples not possible because only one vial provided for assay.

# Clayton PN# 13356 ENVIRONMENTAL CONSULTANTS

#### REQUEST FOR LABORATORY **ANALYTICAL SERVICES**

For Clayton Use Only	Page of	
Project No.		
Batch No.		
Ind. Code	W.P.	
Date Logged In	Ву	
	M. ==-2 /	

							_			Dat	e Logg	led lu			By	<u> </u>	
O Name	MR. JERRY OLSON I	itle			Purch	ase Or	der No	. 4-	796	9		Clier	ıt Job I	No. 🗲	16418	8.00	
City, S Compa City, S	ANY ASPEN RESEARCH C	ORP. D	ept.				ne 🤇	TOH	Y Y	424							
Hailing	Address 436 WEST COUNT	Y ROAD	)		SEND INVOICE	Con					ENV	IRO	YMI	ENT	AL	Dept.	EMS
E City. S	late, Zip ST. PAUL, MINNE	SOTA 5	5/12-	- 3522	⊌ક્	Address P.O. Box 9019											
	one No(612)631-9234 Telefax		· · · · · · · · · · · · · · · · · · ·			City	. State	, Zip	PLE						456	<u>مي.</u>	
HOPMAL	s Req.: Rush Charges Authorized? Phon  TAT □ Yes ☑ No □	e/Fax Hesults	1 - 2	s are: f applicable)	ers	(Enter	an 'X'			AN low to	ALYSI indica	S HEC te requ	Jest; E	ED nter a	P' if P	reservati	ve added.
	uctions: (method, limit of detection, etc.)		( ·	• •	tain			1030	7	_						//	
REF: MR. EVERETT MILTON																	
• Explanation	n of Preservative: $P = Hcl$		State	of New York	jo jo		$\sqrt{g}$	1/2	У,	/ ,	Ι,	Ζ,	/,	Ι,	/,	/	
С	CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	MATRIX/ MEDIA	AIR VOLUME (specify units)	. ~	/4	1/2	Ž		$\angle$	$\angle$	$\angle$	$\angle$	$\angle$			FOR LAB ISE ONLY
	MW-1	6-21-94	120	40 mls	2	XP	Xe					ļ					
	MW-2		1		2	Xe	Xr					<b> </b>					
	MW-3				2	XP	Xe				<u></u>	<u> </u>					
	nw-4				2	Xe	XP								<u> </u>	<u> </u>	
	08-1	业	上	上上	2	Xe	Xe								ļ		
				<u> </u>	<u> </u>								<u> </u>		<u> </u>	<u> </u>	
					<u> </u>		<u> </u>						ļ		ـــــــ		
				<u> </u>		ļ	<u> </u>				<u> </u>		<u> </u>	ļ	—	ļ	<u> </u>
			<u> </u>	ļ	<u> </u>	ļ	<u> </u>			<b> </b>		ļ	<u> </u>	<u> </u>	ऻ		
						<u> </u>	<u> </u>					ا	<u></u>	<u> </u>	<u> </u>	<u> </u>	
	Collected by: RICHARD SI	LVA		(print)	Coll	ector's	Signat	ure: 7	Rec	ha	uf	1	M	-A			
CHAIN OF	Relinquished by: Richard Si	ha	Date/Time	4/0820	T	eived b					,				Date/		
CUSTODY	Relinquished by:		Date/Time	<sub>9</sub> 7	Rec	eived a	t Lab b	y:68	ek B	rau	020	hu	was	<b>.</b>	Date/	1/223/G	49:00
	Method of Shipment: UPS-RE	<b>D</b>				ple Co	ndition	Upon	Receip	t:	□ Ac	cepta	ble C	)	☐ Otl	her (expl	lain)
Authorized	Authorized by: Date				४%												
	(Client Signature Must Accompany	Request)			<u> </u>												
Please retui	rn completed form and samples to one of	he Clayton Env	ironmentai	Consultants, In	c. labs	listed	below:							DICTE	NOLITIZ	OM.	

22345 Roethel Drive Novi, MI 48375

(313) 344-1771

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) 425 2657

DISTRIBUTION:

 Clayton Laboratory WHITE YELLOW - Clayton Accounting PINK nt Retains

#### Analysis of TPH as Gasoline By Modified EPA Method 8015

Client Project ID: PN# 56418.00

ARC Project ID: 13356 Date sampled: Date analyzed:

6/21/94 6/29/94

Sample ID:	ARC#	TPH (reg/L)	File Spec. f0000-	PQL (mg/L)
Laboratory Blank		BPQL	26.29	0.05
NN-1	52339	BPQL	26.31	0.05
M7-2	52341	BPQL	26.30	0.05
XW-3	52343	2.7	26.33	0.5*
<b>M</b> F-4	52345	8.0	26.34	0.5*
OB-1	52347	2.8	26.32	0.05

Spike recovery 106% Spike dup recovery 110%

PQL = Practical Quantitation Limit

BPQL = Not detected at a level above the practical quantitation limit

\* These samples were diluted 1:10 and the PQL was raised accordingly.

Jerys. Olm

Reviewed by

1252 Quarry Lane P.O. 80x 9019 Pleasanton, CA 94566 (510) 426-2600 Fax (510) 426-0106



July 11, 1994

Mr. Everett Milton CAPSULE ENVIRONMENTAL ENGINEERING, INC. 1970 Oakcrest Avenue, Suite 213 St. Paul, Minnesota 55113-2624

Clayton Project No. 56418.00

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

Dear Mr. Milton:

Clayton Environmental Consultants, Inc. is pleased to present the enclosed analytical results for the groundwater sampling conducted on June 21, 1994 at the Ingersoll-Rand facility located at 1944 Marina Boulevard in San Leandro, California. The attached laboratory reports detail the analyses conducted for water samples collected from monitoring wells MW-1, MW-2, MW-3, and MW-4, and for observation well OB-1. Well field sampling forms describing the sampling of the wells are also enclosed.

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, Geos¢iences and Remediation

Western Operations

JFV/rjs Enclosures FILE! SAN (GANAGO (100061) RÉMEMBARAN REGULATIONNY GUN HONTARINE 1252 Quarry Lane P.O. Box 9019 Pleasanton, CA 94566 (510) 426-2600 Fax (510) 426-0106



July 6, 1994

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

> Client Ref.: 56418.00 Clayton Project No.: 94062.88

Dear Mr. Vargas:

Attached is our analytical laboratory report for the samples received on June 22, 1994. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of after August 5, 1994, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Suzanne Silvera, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Harriotte A. Hurley, CIH

Director, Laboratory Services

Western Operations

HAH/kli

Attachments

Page 2 of 26

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00

Clayton Project No. 94062.88

Sample Identification: MW-1

trans-1,2-Dichloroethene

Lab Number:

9406288-01A

Sample Matrix/Media: Preparation Method:

WATER

EPA 5030 EPA 8260

Method Reference:

Date Sampled:

Date Received: 06/22/94 Date Prepared: 06/30/94 Date Analyzed:

Analyst:

06/30/94

JP

06/21/94

5

Method Reference: EP.	A 0200	Allarysc.	ųr
Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compound	s		
Acetone	67-64-1	ND	20
Benzene	71-43-2	ND	5
Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5	ND	5

Acetone	67-64-1	ND	20
-Benzene	71-43-2	ND	5 5 5 5 5 5 5
Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5	ND	5
<ul> <li>Bromodichloromethane</li> </ul>	75-27-4	ND	5
Bromoform	75-25-2	ND	5
<pre>Bromomethane</pre>	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
	96-12-8	ND	5
1,2-Dibromo-3-chloropropane 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	ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ ភ
cis-1,2-Dichloroethene	156-59-2	ND	5
			-

156-60-5

ND

Page 3 of 26

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00

Clayton Project No. 94062.88

Sample Identification: MW-1

Lab Number:

9406288-01A

ample Matrix/Media: WATER

EPA 5030

Preparation Method: Method Reference:

EPA 8260

Date Sampled: Date Received:

06/21/94 06/22/94

Date Prepared: Date Analyzed:

06/30/94 06/30/94

Analyst:

JP

			Method
_			Detection
•		Concentration	Limit
malyte	CAS #	(ug/L)	(ug/L)

nalyte	CAS #	(ug/L)	(ug/L)
Volatile Organic Compounds (Cons	tinued)		
1,2-Dichloropropane	78-87-5	ND	5
1,3-Dichloropropane	142-28-9	ND	ភ ភ ភ ភ ភ ភ ភ ភ ភ
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	
2-Hexanone	591-78-6	ND	. 20
Isopropylbenzene	98-82-8	ND	5 5 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	5555555555555555
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	20 ~	5
Trichlorofluoromethane	75-69-4	ND	. 5
1,2,3-Trichloropropane	96-18-4	ND	5

Page 4 of 26

#### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00

Clayton Project No. 94062.88

Sample Identification: MW-1

Lab Number:

ample Matrix/Media:

Preparation Method:

WATER

Method Reference:

9406288-01A

EPA 5030

**EPA 8260** 

06/21/94 Date Sampled:

Date Received: 06/22/94 Date Prepared: 06/30/94 Date Analyzed: 06/30/94

JP Analyst:

Method

analyte	CAS #	(ug/L)	(ug/L)
•		Concentration	Detection Limit

#### 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	<del></del>	ND	5

Surrogates		Recovery (名)	OC Limits (%)
4-Bromofluorobenzene	460-00-4	114	74 - 121
Dibromofluoromethane	1868-53-7	97	80 - 120
Toluene-d8	2037-26-5	99	81 - 117

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

Page 5 of 26

#### Analytical Results

#### for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 94062.88

Sample Identification: MW-2

Date Sampled:

06/21/94

Lab Number: ample Matrix/Media: 9406288-02A WATER

Date Received: 06/22/94 Date Prepared: 06/30/94

Preparation Method:

EPA 5030

Date Analyzed:

07/01/94

Method Reference:

EPA 8260

Analyst:

JP

			Method Detection
_		Concentration	Limit
analyte	CAS #	(ug/L)	(ug/L)

analyte	CAS #	(nd/r)	(ug/L)
Volatile Organic Compounds		1900 1 - 1900 - 1900 - 1900 1 - 1900 1 - 1900 1 - 1900 1 - 1900 1 - 1900 1 - 1900 1 - 1900 1 - 1900 1 - 1900 1	
Acetone	67-64-1	ND	20
■ Benzene	71-43-2	· ND	
Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5	ND	5 5 5 5 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 <b>-</b> 23-5	ND	5
Chlorobenzene	108-90-7	ND	5
Chloroethane	75-00-3	ND	5 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 5 5 5 5 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
<pre>1,2-Dichlorobenzene</pre>	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	5
1,4-Dichlorobenzene	106-46-7	ND	5 5
Dichlorodifluoromethane	75-71-8	ND	5
1,1-Dichloroethane	75-34-3	ND	5 5 5 5 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

Page 6 of 26

#### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00

Clayton Project No. 94062.88

Sample Identification: MW-2

9406288-02A

sample Matrix/Media: Preparation Method:

WATER EPA 5030

Method Reference:

Lab Number:

EPA 8260

Date Sampled: Date Received: 06/21/94 06/22/94

Date Prepared:

06/30/94

Date Analyzed:

Analyst:

07/01/94

JP

			Method
			Detection
•		Concentration	Limit
Analyte	CAS #	(ug/L)	(ug/L)

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

Page 7 of 26

#### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00

Clayton Project No. 94062.88

Sample Identification: MW-2

Lab Number:

9406288-02A

ample Matrix/Media: Preparation Method:

WATER EPA 5030

Method Reference:

EPA 8260

Date Sampled:

06/21/94 Date Received: 06/22/94 Date Prepared: 06/30/94

Date Analyzed: Analyst:

07/01/94

JP

				Method Detection
malyte	CAS	#	Concentration (ug/L)	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 (%)	OC Limits (%)
4-Bromofluorobenzene	460-00-4	115	74 - 121
Dibromofluoromethane	1868-53-7	94	80 - 120
Toluene-d8	2037-26-5	101	81 - 117

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

Page 8 of 26

#### Analytical Results

#### for

Clayton Environmental Consultants, Inc.
Client Reference: 56418.00
Clayton Project No. 94062.88

Sample Identification: MW-3 Date Sampled: 06/21/94 Date Received: Lab Number: 9406288-03A 06/22/94 ample Matrix/Media: WATER Date Prepared: 06/30/94 EPA 5030 Date Analyzed: reparation Method: 07/01/94 Analyst: EPA 8260 JP Method Reference:

analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone	67-64-1	ND	20
■ Benzene	71-43-2	34 ∵	5
Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5	ND	5
Bromodichloromethane	75-27-4	ND	5 5 5 5 5 5
Bromoform	75-25-2	NĎ	5
Bromomethane	74-83-9	ND	
2-Butanone	78-93-3	ND _	20
n-Butylbenzene	104-51-8	7~	5
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23-5	ND	5
■ Chlorobenzene	108-90-7	19*	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	45.	5
1,3-Dichlorobenzene	541-73-1	7	5
1,4-Dichlorobenzene	106-46-7	<b>14</b> 2	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	ភភភភភភភភភភភភភភភភភភភភភភភភភភភភភភភភភភភភភភ
cis-1,2-Dichloroethene	156-59-2	· ND	
trans-1,2-Dichloroethene	156-60-5	ND	5

Page 9 of 26

06/21/94

5

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 94062.88

Sample Identification: MW-3

1,2,3-Trichloropropane

Lab Number: ample Matrix/Media: WATER Treparation Method: EPA 5030
EPA 8260

9406288-03A

Method Reference:

EPA 8260

Date Sampled: Date Received:

06/22/94 Date Prepared: 06/30/94 Date Analyzed: 07/01/94

Analyst:

JP

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
olatile Organic Compounds (Con	tinued)		
1,2-Dichloropropane	78-87-5	ND	5
	142-28-9	ND	5 5 5 5 5 5 5 5
1,3-Dichloropropane 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	170 5	5
Freon 113	76-13-1	ND	5
Hexachlorobutadiene 2-Hexanone	87-68-3	ND	<del>-</del>
2-Hexanone	591-78-6	ND /	20
Isopropylbenzene	98-82-8	17~	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	$43^{b}$	5
sec-Butylbenzene	135-98-8	ND	5
Styrene	100-42-5	ND	5
tert-Butylbenzene	98-06-6	ND	5
tert-Butylbenzene 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
Tetrachioroethene 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
	00.00		_

96-18-4

ND

Page 10 of 26

# Analytical Results

for

Clayton Environmental Consultants, Inc.
Client Reference: 56418.00
Clayton Project No. 94062.88

Sample Identification: Lab Number: Lample Matrix/Media: Preparation Method: Method Reference:	MW-3 9406288-03A WATER EPA 5030 EPA 8260		Date Sampled: Date Received: Date Prepared: Date Analyzed: Analyst:	
analyte		CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compo	ne	95-63-6	120 -	5
1,3,5-Trimethylbenze Vinyl acetate Vinyl chloride	ne	108-67-8 108-05-4 75-01-4	22 ND ND	5 10 5

urrogates		Recovery (%)	OC Limits (%)
4-Bromofluorobenzene	460-00-4	106	74 - 121
Dibromofluoromethane	1868-53-7	92	80 - 120
Toluene-d8	2037-26-5	101	81 - 117

95-47-6

40

150

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

o-Xylene

p.m-Xylenes

Page 11 of 26

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 94062.88

sample Identification: MW-4 Date Sampled: 06/21/94 Date Received: 9406288-04A 06/22/94 Lab Number: Date Prepared: ample Matrix/Media: WATER 06/30/94 Preparation Method: EPA 5030 Date Analyzed: 07/01/94 Method Reference: EPA 8260 Analyst: JP

analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone	67-64-1	ND	100
Benzene	71-43-2	470 ,	30
··Bromobenzene	108-86-1	ND	30
■: Bromochloromethane	74-97-5	ND	30
: Bromodichloromethane	75-27-4	ND	30
Bromoform	75-25-2	ND	30
Bromomethane	74-83-9	ND	30
2-Butanone	78-93-3	ND	100
n-Butylbenzene	104-51-8	ND	30
Carbon disulfide	75-15-0	ND	30
Carbon tetrachloride	56-23-5	ND	30
Chlorobenzene	108-90-7	ND	30
Chloroethane	75-00-3	ND	30
Chloroform	67-66-3	ND	30
_ Chloromethane	74-87-3	ND	30
2-Chlorotoluene	95-49-8	ND	30
4-Chlorotoluene	106-43-4	ND	30
Dibromochloromethane	124-48-1	ND	30
■ 1,2-Dibromo-3-chloropropane	96-12-8	ND	30
1,2-Dibromoethane	106-93-4	ИD	30
Dibromomethane	74-95-3	ND	30
_ 1,2-Dichlorobenzene	95-50-1	ND	30
1,3-Dichlorobenzene	541-73-1	ND	30
■ 1,4-Dichlorobenzene	106-46-7	ND	30
Dichlorodifluoromethane .	75-71-8	ND	30
1,1-Dichloroethane	75-34-3	ND	30
1,2-Dichloroethane	107-06-2	ND	30
1,1-Dichloroethene	75-35-4	ND	30
cis-1,2-Dichloroethene	156-59-2	ND	30
trans-1,2-Dichloroethene	156-60-5	ND	30

Date Sampled: 06/21/94

Date Received: 06/22/94

Page 12 of 26

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 94062.88

Sample Identification: MW-4

Lab Number:

9406288-04A

Sample Matrix/Media: Preparation Method: Method Reference:	WATER EPA 5030 EPA 8260		Date Prepared: Date Analyzed: Analyst:	06/30/94 07/01/94 JP
Analyte		CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compo	ounds (Continu	ed)		
1,2-Dichloropropane		78-87-5	ND	30
■ 1,3-Dichloropropane		142-28-9	ND	30
2,2-Dichloropropane		594-20-7	ND	30
1,1-Dichloropropene		563-58-6	ND	30
_ cis-1,3-dichloroprop	ene	10061-01-5	ND	30
trans-1,3-dichloropr	copene	10061-02-6	ND	30
Ethylbenzene		100-41-4	360 √	30
Freon 113		76-13-1	ND	30
Hexachlorobutadiene		87-68-3	ND	30
2-Hexanone		591-78-6	ND	100
<pre>Isopropylbenzene</pre>		98-82-8	50レ	30
<pre>p-Isopropyltoluene</pre>		99-87-6	ND	30
Methylene chloride		75-09-2	ND	30
4-Methyl-2-pentanone	<b>:</b>	108-10-1	ND	100
Naphthalene		91-20-3	ND	30
n-Propylbenzene		103-65-1	60 -	30
sec-Butylbenzene		135-98-8	ND	30
Styrene		100-42-5	ND	30
tert-Butylbenzene		98-06-6	ND	30
1,1,1,2-Tetrachloroe	ethane	630-20-6	ND	30
1,1,2,2-Tetrachloroe	thane	79-34-5	ND	30
Tetrachloroethene		127-18-4	ND	30
Toluene		108-88-3	ND	30
1,2,3-Trichlorobenze	ene	87-61-6	ND	30
1,2,4-Trichlorobenze		120-82-1	ND	30
1,1,1-Trichloroethan		71-55-6	ND	30
1,1,2-Trichloroethan		79-00-5	ND	30
Trichloroethene		79-01-6	ND	30
■ Trichlorofluorometha	ne	75-69-4	ND	30
1,2,3-Trichloropropa		96-18-4	ND	30

Page 13 of 26

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00

Clayton Project No. 94062.88

Sample Identification: MW-4

Date Sampled: 06/21/94

Lab Number: Sample Matrix/Media:

9406288-04A WATER

Date Received: 06/22/94 Date Prepared: 06/30/94

reparation Method:

**EPA 5030** 

Date Analyzed: 07/01/94

Method Reference:

EPA 8260

Analyst:

JP

					Method
-				Concentration	Detection Limit
Analyte	1	CAS	#	(ug/L)	(ug/L)

#### 

1,2,4-Trimethylbenzene	95-63-6	530 <sup>©</sup>	30
1,3,5-Trimethylbenzene	108-67-8	110	30
Vinyl acetate	108-05-4	ND	50
Vinyl chloride	75-01-4	ND	30
o-Xylene	95-47-6	50 🗸	30
p,m-Xylenes		530	30

868-53-7 96	74 - 121 80 - 120 81 - 117
•	

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

Detection limits increased due to dilution necessary for quantitation.

Page 14 of 26

#### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00

Clayton Project No. 94062.88

Sample Identification: OB-1

Lab Number: WATER

9406288-05A

ample Matrix/Media: reparation Method: Method Reference:

EPA 5030

EPA 8260

Date Sampled:

06/21/94 Date Received: 06/22/94 Date Prepared: 06/30/94 Date Analyzed: 07/01/94

Analyst:

JP

Acetone	nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Benzene         71-43-2         130 °         5           Bromochenzene         108-86-1         ND         5           Bromodloromethane         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           Chlorobenzene         75-00-3         ND         5           Chlorothane         74-87-3         ND         5           Chlorothane         74-87-3         ND         5           2-Chlorotoluene         95-49-8         ND         5           2-Chlorotoluene         106-43-4         ND         5           Dibromochloromethane         124-48-1         ND         5           1,2-Dibromo-3-chloroperopane         106-93-4	olatile Organic Compounds			
Bromobenzene   108-86-1   ND   5	Acetone	67-64-1	ND	20
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           Chlorobenzene         108-90-7         ND         5           Chlorothane         75-00-3         ND         5           Chlorothane         74-87-3         ND         5           Chlorotoluene         95-49-8         ND         5           Chlorotoluene         95-49-8         ND         5           2-Chlorotoluene         106-43-4         ND         5           1,2-Dibromo-3-chloropropane         124-48-1         ND         5           1,2-Dibromoethane         106-43-4         ND         5           1,2-Dichlorobenzene         55-50-1 <td>Benzene</td> <td>71-43-2</td> <td>1.30 4</td> <td>5</td>	Benzene	71-43-2	1.30 4	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           Chlorotoluene         95-49-8         ND         5           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         74-95-3         ND         5           1,3-Dichlorobenzene         95-50-1         ND         5           1,4-Dichloroethane         75-34	Bromobenzene	108-86-1	ND	
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           Chlorobenzene         75-00-3         ND         5           Chlorothane         75-00-3         ND         5           Chlorothane         74-87-3         ND         5           Chlorothane         95-49-8         ND         5           2-Chlorotoluene         95-49-8         ND         5           4-Chlorotoluene         106-43-4         ND         5           1,2-Dibromo-3-chloropropane         106-43-4         ND         5           1,2-Dibromoethane         106-93-4         ND         5           1,2-Dibromoethane         106-93-4         ND         5           1,3-Dichlorobenzene         95-50-1         ND         5           1,4-Dichlorobenzene         106-46-7 <td>Bromochloromethane</td> <td>74-97-5</td> <td>ND</td> <td>5</td>	Bromochloromethane	74-97-5	ND	5
Bromomethane	Bromodichloromethane	75-27-4	ND	5
2-Butanone 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 Chlorotoluene 95-49-8 ND 5 4-Chlorotoluene 106-43-4 ND Dibromochloromethane 124-48-1 ND 5 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane 106-93-4 ND 5 1,2-Dichlorobenzene 106-93-4 ND 5 1,2-Dichlorobenzene 106-46-7 ND 5 1,3-Dichlorobenzene 106-46-7 ND 5 1,1-Dichloroethane 175-34-3 ND 5 1,2-Dichloroethane 175-34-3 ND 5 1,2-Dichloroethane 175-35-4 ND 5 1,1-Dichloroethane 107-06-2 ND 5	Bromoform	75-25-2	ND	5
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         1,2-Dichlorobenzene       95-50-1       ND       5         1,3-Dichlorobenzene       95-50-1       ND       5         1,4-Dichlorobenzene       106-46-7       ND       5         1,1-Dichloroethane       75-34-3       ND       5         1,1-Dichloroethane       107-06-2       ND       5         1,1-Dichloroethane       75-35-4       ND       5	Bromomethane	74-83-9	ND	
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         Chlorotoluene       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         1,2-Dibromoethane       95-50-1       ND       5         1,3-Dichlorobenzene       95-50-1       ND       5         1,4-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         1,1-Dichloroethane       75-35-4       ND       5	2-Butanone	78-93-3	ND	20
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         1.2-Dichloromethane       74-95-3       ND       5         1.3-Dichlorobenzene       95-50-1       ND       5         1.3-Dichlorobenzene       541-73-1       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	n-Butylbenzene	104-51-8	ND	
Chlorobenzene	Carbon disulfide	75-15-0	ND	
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-Dichloroethane 107-06-2 ND 5 1,1-Dichloroethane 107-06-2 ND 5 1,1-Dichloroethane 75-35-4 ND 5	Carbon tetrachloride	56-23-5	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         1,2-Dichloroethane       75-34-3       ND       5         1,2-Dichloroethane       107-06-2       ND       5         1,1-Dichloroethene       75-35-4       ND       5	Chlorobenzene	108-90-7		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       107-06-2       ND       5         1,1-Dichloroethene       75-35-4       ND       5	Chloroethane	75-00-3	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       107-06-2       ND       5         1,1-Dichloroethane       107-06-2       ND       5         1,1-Dichloroethane       75-35-4       ND       5	Chloroform	67-66-3	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	_ Chloromethane	74-87-3	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	2-Chlorotoluene	95-49-8	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	4-Chlorotoluene	106-43-4	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	Dibromochloromethane	124-48-1	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-Dichloroethane       75-35-4       ND       5	1,2-Dibromo-3-chloropropane	96-12-8	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	1,2-Dibromoethane	106-93-4	ND	
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	Dibromomethane	74-95-3	ND	
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	■ 1,2-Dichlorobenzene	95-50-1	ND	
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	1,3-Dichlorobenzene	541-73-1	ND	
1,1-Dichloroethane       75-34-3       ND       5         1,2-Dichloroethane       107-06-2       ND       5         1,1-Dichloroethene       .75-35-4       ND       5	1,4-Dichlorobenzene	106-46-7	ND	
1,2-Dichloroethane 107-06-2 ND 5 1,1-Dichloroethene .75-35-4 ND 5	_ Dichlorodifluoromethane	75-71-8	ND	5
1,2-Dichloroethane 107-06-2 ND 5 1,1-Dichloroethene .75-35-4 ND 5	1,1-Dichloroethane	75-34-3	ND	5
1,1-Dichloroethene .75-35-4 ND, 5		107-06-2	ND	5
	•	75-35-4	ND ,	5
■ cis-1,2-Dichloroethene 156-59-2 9 5	cis-1,2-Dichloroethene	156-59-2	9 '-	5 .
trans-1,2-Dichloroethene 156-60-5 14 5			,	

Page 15 of 26

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 94062.88

Sample Identification: OB-1 Date Sampled: 06/21/94 9406288-05A Date Received: Lab Number: 06/22/94 Sample Matrix/Media: Date Prepared: WATER 06/30/94 Preparation Method: EPA 5030 Date Analyzed: 07/01/94

Method Reference: EPA 8260 Analyst: JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Cont	tinued)		
1,2-Dichloropropane	78-87-5	ND	5
1,2 Dichloropropane	142-28-9	ND	5 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 5 5 5 5 5 5
trans-1,3-dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	10 V	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	39	· 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	6	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	<b>5</b> 5 5 5 5 5
Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	ND	5
<pre>1,2,3-Trichlorobenzene</pre>	87-61-6	ND	5
1,2,4-Trichlorobenzene	120-82-1	ND	5 5
1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	42	5
Trichlorofluoromethane	75-69-4	ND	5
1,2,3-Trichloropropane	96 <b>-</b> 18-4	ND	5

Page 16 of 26

#### Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 56418.00 Clayton Project No. 94062.88

sample Identification: OB-1 Date Sampled: 06/21/94 Lab Number: Date Received: 9406288-05A 06/22/94 ample Matrix/Media: WATER Date Prepared: 06/30/94 reparation Method: EPA 5030 Date Analyzed: 07/01/94 Method Reference: EPA 8260 Analyst: JP

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Con	rinuad)		
Volatile Organic Compounds (Con	<u>cinded)</u>		
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		<b>7</b> ,	5
Surrogates		Recovery (%)	OC Limits (%)
4-Bromofluorobenzene	460-00-4	113	74 - 121
Dibromofluoromethane	1868-53-7	90	80 - 120
Toluene-d8	2037-26-5	98	81 - 117

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

Page 17 of 26

#### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00

Clayton Project No. 94062.88

Sample Identification: TRIP BLANK #0052094 Lab Number:

Date Sampled: 06/21/94

Sample Matrix/Media:

9406288-06A WATER

Date Received: 06/22/94 Date Prepared: 06/30/94

Preparation Method:

EPA 5030

Date Analyzed: 07/01/94

Method Reference:

**EPA 8260** 

Analyst: JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone .Benzene	67-64-1 71-43-2	ND ND	20 5
···Bromobenzene	108-86-1	ND	5 5 5 5 5 5
Bromochloromethane	74-97-5	ND	5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	
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 ND	5
Chloroform Chloromethane	67-66-3 74-87-3	ND	5
2-Chlorotoluene	95-49-8	ND	) =
4-Chlorotoluene	106-43-4	ND	J
Dibromochloromethane	124-48-1	ND	ນ ຮ
1,2-Dibromo-3-chloropropane	96-12-8	ND	ر بر
1,2-Dibromoethane	106-93-4	ND	÷
Dibromomethane	74-95-3	ND	٠ ج
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	Š
trans-1,2-Dichloroethene	156-60-5	ND	<b>ទី ២ ១ ១ ១ ១ ១ ១ ១ ១ ១ ១ ១ ១ ១ ១ ១ ១</b> ១

Page 18 of 26

#### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00

Clayton Project No. 94062.88

sample Identification: TRIP BLANK #0052094 Lab Number:

9406288-06A

Date Sampled: 06/21/94 Date Received:

Sample Matrix/Media:

WATER

06/22/94 Date Prepared: 06/30/94

Preparation Method:

EPA 5030

Date Analyzed: 07/01/94

Method Reference:

EPA 8260

Analyst: JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Cont	cinued)		
1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-dichloropropene trans-1,3-dichloropropene Ethylbenzene Freon 113 Hexachlorobutadiene 2-Hexanone Isopropylbenzene p-Isopropyltoluene Methylene chloride 4-Methyl-2-pentanone Naphthalene n-Propylbenzene sec-Butylbenzene sec-Butylbenzene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethene Toluene 1,2,3-Trichlorobenzene	78-87-5 142-28-9 594-20-7 563-58-6 10061-01-5 10061-02-6 100-41-4 76-13-1 87-68-3 591-78-6 98-82-8 99-87-6 75-09-2 108-10-1 91-20-3 103-65-1 135-98-8 100-42-5 98-06-6 630-20-6 79-34-5 127-18-4 108-88-3 87-61-6 120-82-1	ND N	55555555055505555555555555555555555555
1,2,4-Trichlorobenzene 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethene Trichlorofluoromethane 1,2,3-Trichloropropane	71-55-6 79-00-5 79-01-6 75-69-4 96-18-4	ND ND ND ND ND	5 5 5 5 5 5 5

Page 19 of 26

#### Analytical Results

for

Clayton Environmental Consultants, Inc.
Client Reference: 56418.00
Clayton Project No. 94062.88

Sample Identification: TRIP BLANK #0052094 Date Sampled: 06/21/94
Lab Number: 9406288-06A Date Received: 06/22/94
Lample Matrix/Media: WATER Date Prepared: 06/30/94
Preparation Method: EPA 5030 Date Analyzed: 07/01/94
Method Reference: EPA 8260 Analyst: JP

Method Relerence:	SPA 8260		Analyst:	JP
analyte		CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Tolatile Organic Compour	nds (Continu	ed)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes		95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	ND ND ND ND ND	5 5 10 5 5 5
Surrogates			Recovery (%)	OC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane Toluene-d8		460-00-4 1868-53-7 2037-26-5	109 98 98	74 - 121 80 - 120 81 - 117

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

Page 20 of 26

#### Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 56418.00 Clayton Project No. 94062.88

Sample Identification: FIELD BLANK Lab Number:

9406288-07A

Date Sampled: 06/21/94 06/22/94

ample Matrix/Media: Preparation Method:

WATER EPA 5030 Date Received: Date Prepared: 06/30/94 Date Analyzed: 07/01/94

Method Reference:

EPA 8260

Analyst: JP

			Method
			Detection
1		Concentration	Limit
nalyte	CAS #	(ug/L)	(ug/L)

nalyte	CAS #	Concentration (ug/L)	Limit (ug/L)
Colatile Organic Compounds			
Acetone	67-64-1	ND	20
Benzene	71-43-2	ND	5
Bromobenzene	108-86-1	ND	
Bromochloromethane	74-97-5	ND	5 5 5 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 5 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 5 5 5 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

Page 21 of 26

#### Analytical Results

for

Clayton Environmental Consultants, Inc.
Client Reference: 56418.00

Clayton Project No. 94062.88

Sample Identification: FIELD BLANK Date Sampled: 06/21/94 Lab Number: 9406288-07A Date Received: 06/22/94 Bample Matrix/Media: WATER Date Prepared: 06/30/94 **EPA 5030** Preparation Method: Date Analyzed: 07/01/94 Method Reference: EPA 8260 Analyst: JP

Method Detection Concentration Limit CAS. # (ug/L) Analyte (ug/L) olatile Organic Compounds (Continued) 78-87-5 1,2-Dichloropropane ND 5 1,3-Dichloropropane 142-28-9 ND 5 -594-20-7 ND ·2,2-Dichloropropane 5 1,1-Dichloropropene 563-58-6 ND 5 10061-01-5 ND cis-1,3-dichloropropene 5 10061-02-6 ND trans-1,3-dichloropropene 5 100-41-4 ND Ethylbenzene 5 76-13-1 ND Freon 113 5 Hexachlorobutadiene 87-68-3 ND 591-78-6 20 2-Hexanone ND 5 98-82-8 ND Isopropylbenzene 5 99-87-6 ND p-Isopropyltoluene 5 Methylene chloride 75-09-2 ND 20 4-Methyl-2-pentanone 108-10-1 ND 91-20-3 ND 5 Naphthalene 5 n-Propylbenzene 103-65-1 ND 5 135-98-8 ND sec-Butylbenzene 5 Styrene 100-42-5 ND tert-Butylbenzene 98-06-6 ND 5 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 5 108-88-3 Toluene ND 5 1,2,3-Trichlorobenzene 87-61-6 ND 5 120-82-1 ND 1.2.4-Trichlorobenzene 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 ND Trichlorofluoromethane 75-69-4 5 96-18-4 ND 1,2,3-Trichloropropane



Page 22 of 25

#### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 94062.88

Sample Identification: FIELD BLANK
Lab Number: 9406288-07A Date Received: 06/21/94
Lample Matrix/Media: WATER Date Prepared: 06/30/94
Preparation Method: EPA 5030 Date Analyzed: 07/01/94
Method Reference: EPA 8260 Analyst: JP

Method Reference: EPA 826	60	Analyst:	JP
nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Colatile Organic Compounds (Co	ontinued)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	ND ND ND ND ND	5 5 10 5 5 5
Surrogates		Recovery (%)	OC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane Toluene-d8	460-00-4 1868-53-7 2037-26-5	112 95 102	74 - 121 80 - 120 81 - 117

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

Page 23 of 26

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 94062.88

Sample Identification: METHOD BLANK

Date Sampled:

Lab Number:

9406288-08A

Date Received:

Sample Matrix/Media: Preparation Method: EPA 5030

WATER

Date Prepared: 06/30/94 Date Analyzed: 06/30/94

Method Reference:

EPA 8260

Analyst: JP

		,	Method Detection
•		Concentration	Limit
Analyte	CAS #	(ug/L)	(ug/L)

Analyte	CAS #	(ug/L)	(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 5 5 5 5 5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	
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 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 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
Erduzar, vantementos chens	120-00-2	MD	<b>J</b>

Page 24 of 26

### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00

Clayton Project No. 94062.88

Sample Identification: METHOD BLANK

Lab Number:

9406288-08A

Sample Matrix/Media: Preparation Method:

WATER EPA 5030

Method Reference:

EPA 8260

Date Sampled:

Date Received:

Date Prepared: 06/30/94 Date Analyzed: 06/30/94

--

Analyst: JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Cont	inued)		
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 5 5 5 5 5 5 5 5 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	555555555555555555555555555555555555555
Trichloroethene	79-01-6	ND	5
■ Trichlorofluoromethane	75-69-4	ND	5
1,2,3-Trichloropropane	96-18-4	ND	5

Page 25 of 26

### Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 56418.00 Clayton Project No. 94062.88

Sample Identification: METHOD BLANK Date Sampled: Date Received: --Lab Number: 9406288-08A

Date Prepared: 06/30/94 Sample Matrix/Media: WATER

Preparation Method: Method Reference:		5030 8260		Date Analyzed: Analyst:	06/30/94 JP
Analyte			CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Comp	ounds	(Continue	ed)		
1,2,4-Trimethylbenz 1,3,5-Trimethylbenz -Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes			95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	ND -ND ND ND ND ND	5 10 5 5 5
Surrogates				Recovery (%)	OC Limits (%)
4-Bromofluorobenzen Dibromofluoromethan Toluene-d8			460-00-4 1868-53-7 2037-26-5	108 96 98	74 - 121 80 - 120 81 - 117

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



Page 26 of 26

#### Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 56418.00 Clayton Project No. 94062.88

Sample Identification: See Below

Date Received: 06/22/94

Lab Number:

9406288

Date Prepared: 06/28/94

Sample Matrix/Media:

WATER

Date Analyzed: 06/28/94

Preparation Method:

EPA 5030

Method Reference:

EPA 8015 (Modified)

Lab Number	Sample Identification	Date Sampled	TPH-G (ug/L)	Method Detection Limit (ug/L)
01	MW-1	06/21/94	ND	50
.02	MW-2	06/21/94	ND	50
03	MW-3	06/21/94	2900	50
04	MW-4	06/21/94	7600	50
.05	OB-1	06/21/94	·-1600 a	50
06	TRIP BLANK #0052094	-06/21/94	ND	50
07	FIELD BLANK	06/21/94	ND	50
08	METHOD BLANK		ND	50

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

TPH-G = Volatile petroleum hydrocarbons from C5 to C12 quantitated as gasoline. Purgeable hydrocarbons quantitated as gasoline do not match typical gasoline pattern.



## REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Clayton U	se Only	Page_		_ ol	
Project No.	94	065	88		
Batch No.					
Ind. Code			W.P.		
Date Logged I	n 42	394	Ву (	COL	
Cli	dot Job N	lo. 5	6418	3.00	
5K5					
1			Ir	) a m t	

									Date	Logge	d In	42319	14 E	By (OL	
Name JOHN YARLAS Title Company CLAYTON Mailing Address City, State, Zip Telephone No. Telefax No.	)			Purch	ase	Order No					Client J	ob No.	564	418.00	
Company CLAYTON	D	ept.		iii	N	lame =	1044	YA	e 4 6	<u> </u>					
Mailing Address				SEND INVOICE	$\circ$	ompany	CLA	470	4					Dept.	
City, State, Zip				B >	F	ddress						·			
Telephone No. Telefax No.	). E 5 1	·			<u>_[c</u>	ity, State	, Ζiρ								
Date Results Req.: Rush Charges Authorized? Phone /	Fax Results	Campic		3TS	Œη	ler an 'X'	in the b	ox bel		ALYSIS ndicate			a 'P' if i	Preservative ad	ded. 1
Special Instructions: (method, limit of detection, etc.)			applicable)	Containers	<u> </u>		7	7 A	1/0	7	7	/ /	7	77	7
-position in a detection, site.		Drinki	-	E	1		\ \ \	BI	W					///	
4 Fundamentan of Barranestics			ted in the	o C	1		8 / L	<b>Y</b>				/ /	/ /	' / /	
*Explanation of Preservative: P= HCL	·	State	of New York			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	X J							/ /_	
CHENT SAMPLE IDENTIFICATION	DATE	MATRIX/	AIR VOLUME	Number	1/	4/4	<b>γ*/</b>					/ /	/ /	FOR	LAB
CLIENT SAMPLE IDENTIFICATION	SAMPLED	MEDIA	(specify units)	ź		4/	<u> </u>							USE C	ONLY
mw-1	6-21-94	H20	40 MLS	2	X									OI A-P	<b>)</b>
MW -2				2.	X									(jà)	
MW-3				2	X	$\rho \mid X \rho \mid$								03	
MW-4				2	X	PXP								04	
0B-1				2	X	e Xe								05	
TRIP BLANK \$ 0052094				2	X	e Xe								Op	
FIELD BLANK	业	<u> </u>	Ł	2	X	PXP								CIVI	IJ
			:					- 1			i		İ		ļ
Collected by: RICHARD SILV	A-		(print)	Colle	ctor'	s Signatu	ire: 🍾	2	lan	1	1,2	1	-		
OF Relinquished by: Richard Sit	200	Date/Time	4/0820	Rece			-	-					Date	/Time	
CUSTODY Relinquished by:		Date/Time	7	Rece	ived	at Lab b	r: ( U	وارا	(0)	llen			Date	Time (122) 9	1824
Method of Shipment:				Sam	ple C	ondition l	Jpon Re	eceipt	Ç	Acc	eptable		☐ Ot	ther (explain)	
Authorized by:	Authorized by: Date								,	`					
(Client Signature Must Accompany Re															
Please return completed form and samples to one of the	Clayton Envir	onmental (	Consultants, Inc	. labs	listed	d below:			· · · · · · · · · · · · · · · · · · ·			10.00	DIBLITE		

22345 Roethel Drive Novi, MI 48375 (313) 344-1770 Raritan Center 160 Fieldcrest Ave. Edison, NJ 08837 (908) 225-6040

400 Chastain Center Blvd., N.W. Suite 490

Suite 490 Kennesaw, GA 30144 (404) 499-7500 1252 Quarry Lane Pieasanton, CA 94566 (510) 426-2657 DISTRIBUTION: WHITE - Clayte YELLOW - CI-

PINK

2/92



Quality Assurance Results Summary

Matrix Spike/Matrix Spike Duplicate Results

for

Clayton Project No. 94062.88

#### Quality Assurance Results Summary for Clayton Project No. 94062.88

Clayton Lab Number: Ext./Prep. Method:

9406288-MB EPA 5030 06/30/94

Date: Analyst: Std. Source:

H940623-01W

Sample Matrix/Media:

H940623-0 WATER Analytical Method: Instrument ID: Date: Time:

Analyst:

Units:

EPA8260 05381 06/30/94 22:18 JP UG/L

3-01W

Analyte	Sample Result	Spike Level	Matrix Spike Result	HS Recovery (%)	Matrix Spike Duplicate Result	HSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
1,1-DICHLOROETHENE	ND	50.0	52.0	104	54.0	108	106	80	120	3.8	20
BENZENE	ND	50.0	51,0	102	51.0	102	102	80	120	0.0	20
CHLOROBENZENE	ND	50.0	51.0	102	52.0	104	103	80	120	1.9	20
TOLUENE .	ND	50.0	52.0	104	53.0	106	105	80	120	1.9	20
TRICHLOROETHENE	ND	50.0	52.0	104	53.0	106	105	80	120	1.9	20

#### Quality Assurance Results Summary for Clayton Project No. 94062.88

Clayton Lab Number: Ext./Prep. Method: Date:

9406303-06A EPA 5030 06/28/94

NAN

Std. Source: Sample Matrix/Media:

Analyst:

V940621-03W WATER

Analytical Method: Instrument ID: Date: Time: Analyst: Units:

EPA8015 8020 05587 06/28/94 16:05 NAN ug/L

Analyte		Sample Result	Spike Level	Matrix Spike Result	HS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
BENZENE	(PID)	ND	8.96	9.30	104	8.81	98	101	81	118	5.4	20
ETHYLBENZENE	(PID)	ND	4.23	4.29	101	4.23	100	101	81	114	1.4	20
GASOLINE	(FID)	ND	500	558	112	556	111	111	80	150	0.4	25
TOLUENE	(PID)	ND	23.1	23,6	102	22.1	96	99	84	118	6.6	20
TOTAL XYLENE	(010)	ND	20.8	21.2	102	21.0	101	101	85	115	0.9	20

	418.∞ Site: <u>I</u>			Date:	JUNE 21 1994
Well # /	110-1 Sampling 1	Team: _	RICHARD SIL	VA	
Sampling N	Method: DISPOSAR	LE BAILER			
Field Cond	ittions: CLEAR	SKIES	COOL SUGAT	ECEEZF -7	· <del>· · · · · · · · · · · · · · · · · · </del>
<u></u>					
Describe E	quipment D-Con Bef	ore Samplin	ng This Well:	WASH WITH A	SOAP AND TRIPLE
Total Depti of Well:	h <u>18.84</u> fee	t Time:	1215	Depth to Water Before Pumping	: <u>12,98</u> feet
Volume		Dia	meter	P:	urge
deight of Vater		2-inch	4-inch Volum		actor To Purge
Column:	5.86 feet •	.16	(65) = 3.8		5 = 19.05
Depth Purgi	ing From: <u>18</u> fe	et . ~		legins: 123	
		• • •			·
lotes on In	itial Discharge:	BROWNIE	IH, SILTY NO	OPOR	• •
Time	<u>Volume Puraed</u>	•	•		
1233		<u>DH</u>	Conductivity	<u>T</u>	Notes
			470	16.7	BROWNISH NO ODOR
1236	•	7.8	<u> 589 </u>	17.4	PURGED DRY
1245	15-15AL		575	17.7	BROWNISH HE ODOR
1= 45	20-GAL	7.9	<u> 579</u>	17.8	PURBED DRY
				<del></del>	

-	Rep #1	Rep #2	Rep #3	Rep #4
рH	8,/	8.0	8.0	7.9
Conductivity	576	564	<u> 568</u>	569
T*C	18.2	17.7	17.7	17.8
Pre-Sample Collection Gal	lons Purged:	20		
Time Sample Collection Be	gins: 1315	_		
Time Sample Collection En		•	n nan ay ma	
otal Gallons Purged:	23			
• ""			•	
omments:				
3				
•••				
• • • • • • • • • • • • • • • • • • •	• • •		•	
<del> </del>	e (esta e e e e e		A1.	
<del></del>	<del></del>			
7			. :	

METT W MID-	Sampling '	Team:	MCHARD SI	LVA	June 21,1994
Sampling Methor	ons: <u>CLEAR</u>	SLE BAILE SKIEZ, O	ES FOR PURG.	146 \$ Sampus. - ~ 75°=	V6,
Describe Equip	≖ent D-Con Bef	ore Sampling	This Well:	NOT APPLIC	-48LE
Total Depth of Well: /4	70 fee	: Time: _	1059 B	epth to Water efore Pumping:	13,86 feet
Volume Height of Water Column: 0.8	- <del></del>	2-inch .16	4-inch Volum  65 = 0.5  Time Surging B		irge  ictor
Notes on Initia	• •	CLEAR,	NO ODOR		
1110	1-GAL 2-GAL 3-GAL	7.7 7.5 7.5	1351   1212   1204	19.5 19.2 19.2	NOTES  CLEAR, NO ODOR  CLEAR, NO ODOR  ALEAR, NO ODOR

	Time Field Para	meter Measureme	ent Begins: .	1155		
			Rep #1	Rep #2	Rep_#3	Rep #4
	рн	•	7.7	7.7	7:4	7.6
•	Conductiv	ity _	1208	1203	1195	1190
cel	т•с	_	19.0	19,1	19.2	19.2
_	Pre-Sample Colle	ection Gallons	Purged:3			
	Time Sample Coll	ection Begins:	1145	k esstate	e e e e e e e e e e e e e e e e e e e	
٠	Time Sample Coll	ection Ends: _	1150	, constituting species -	. · · · ·	· · · ~ ·
	Total Gallons Pu	rged: 4				•
.T.\$7	Comments:		••	•		•
n maker i			-			
Vanisand .		* * *		5g · •	g Na Waling Company	& ecolor
ه بره <mark>ااه</mark> بسیور،	process And		`	. 1	par etc	
					- 175 ·	
	e /h *s					
'		· · · · · · · · · · · · · · · · · · ·				

	6418.00 Site: I			_ Date: .	JUNE 21 1594
MOTT % _	<u>Μω-3</u> Sampling T	eam:	KICHARD SIL	v fe-	,
Sampling	Method: Dispos	ABLE B	AILER		
Field Con	ditions: <u>CLEAR</u>	SKIES	WARM WIND	7 ~ 75°F	
·					
	Equipment D-Con Befo	ore Samplin	g This Well:	DR=4 1017H	50A-P A 40
Total Dept of Well:	n 20.20 feet		7330 B	epth to Water efore Pumping:	16.28 feet
Volume	•	Diag	leter	Pu	rge
Height of Water		2-inch	4-inch Volume		To Purge
Column: _	3.92 feet *	.16	(85) = 2.S	学B gal *	
Depth Purg:	ing From: 19 fee	et	Time Surging Be		
•		•			
Notes on In	nitial Discharge:	GRAYISA	SILTY STRO	NS SDOR	
Time	<u>Yolume Pursed</u>		-		
1602		<del>DH</del>	Conductivity	- Icc	Notes
1504	3-6K1	7.4	835	19.3	CLEAR, ODOR
	<u>6-Gpl.</u>	7,4	245	19.2	PURGED DRY
1,25	9-6pc	7.5	854	19.5	GRAVISH SLIGHT
1625	12-GAL	7.5	851	19.5	PURGED DRY
			-	<del></del>	
<del></del>	-			<del></del>	
				<del></del>	

•	Rep #1	Rep #2	Rep #3	Rep #4
рН	7.4	7.4	<u>7.3</u>	_7.5
Conductivity	861	874	881	_893
T°C	19.4		19.3	
re-Sample Collection Gal	lons Purged:	<u>ک</u>		
ime Sample Collection Be	-			٠,
ime Sample Collection En				• • •
otal Gallons Purged:	<u>14</u>			,
		•		
Caments:	·			
				• • • • • • • • • • • • • • • • • • • •
	<u></u>			·
			411 41 94	•
	-			

Sampling Method: DISPOSABLE BALLER Field Conditions: CLEAR SKIEA WARM WINDY ~75°F  Describe Equipment D.Con Before Sampling This Well: WASH WITH SOMP AND  TELPLE SINSE  Total Depth of Well: 27.64 feet Time: 1402 Depth to Water Before Pumping: 18.46 feet  Volume Height of Water Column: 9.36 feet 18 (65) = 6.047 gal 5 = 20.49  Depth Purging From: 27 feet Time Surging Begins: 1410  Notes on Initial Discharge: ERFVIEW, SILTY, SUBHET ODOR  Time Volume Purged DH Conductivity T' Notes  1414 10 - 6KL 7.4 998 19.0 CLEAR SILGHT ODOR  1416 15-GAL 7.3 1914 18.8 CLEAR 1900 CLEAR SILGHT WARM  1419 20-66L 7.3 1024 18.6 CLEAR 1900 CLEAR SILGHT WARM  1419 20-66L 7.3 1024 18.6 CLEAR 1900 CLEAR 1900 CLEAR SILGHT WARM  1410 25-66L 7.3 1024 18.6 CLEAR 1900 CL	Job # 560	418.00 Site: In	GÉRBOLL.	- RIND	Date:	JUNE 21, 1994
Describe Equipment DCon Before Sampling This Well: WASH WITH SOMP AND  TE (PLE EINSE  Total Depth of Well: 27.84 feet Time: 1402 Depth to Water Before Pumping: 18.46 feet  Volume Height of 2-inch 4-inch Volume Factor To Purge Water Golumn: 9.36 feet 18 (185) = 6.097 gal 5 = 30.49  Depth Purging From: 27 feet Time Surging Begins: 1410  Notes on Initial Discharge: 6-247164, 51677 Subht ode  [414 10 - 6kc 7.4 998 19.0 Comme Subht ode 1416 1416 15-646 7.3 1014 18.6 Comme Subht ode 1416 1416 15-646 7.3 1014 18.6 Comme Subht ode 1416 1416 15-646 7.3 1014 18.6 Comme Subht ode 1416 1416 15-646 7.3 1014 18.6 Comme Subht ode 1416 1416 15-646 7.3 1014 18.6 Comme Subht ode 1416 1416 15-646 7.3 1014 18.6 Comme Subht ode 1416 1416 1416 1416 1416 1416 1416 141	Well # 1	1W-4 Sampling Te	en:	KICHARD SILV	A-	
Describe Equipment D-Con Before Sampling This well: WASH WITH EDIP AND  TEMPLE EINSE  Total Depth of Well: 27.84 feet Time: 1402 Depth to Water Before Pumping: 18.46 feet Water Pumping: 18.46 feet Pumping:	Sampling M	ethod: DISPOSK	BLE BAI	LER	-	
Describe Equipment D-Con Before Sampling This well: WASH WITH EDIP AND  TEMPLE EINSE  Total Depth of Well: 27.84 feet Time: 1402 Depth to Water Before Pumping: 18.46 feet Water Pumping: 18.46 feet Pumping:	Field Cond	itions: <u>CLEA</u>	e skifa	WARM WI	404 -75	~
Total Depth of Well: 27.64 feet Time: 1402 Depth to Water Before Pumping: 18.46 feet Volume    Diameter						
Total Depth of Well: 27.64 feet Time: 1402 Depth to Water Before Pumping: 18.46 feet Volume    Diameter			<u></u>			
Total Depth of Well: 27.64 feet Time: 1402 Depth to Water Before Pumping: 18.46 feet Volume    Diameter	Describe Ed	quipment D-Con Befo	re Samplin	g This Well: 4	DKSH 40177	1 Sale Lux
Of Well:         27.84         feet         Time:         1402         Before Pumping:         18.46         feet           Volume         Height of Water Column:         9.36         feet         2-inch         4-inch         Volume         Factor         To Purge           Column:         9.36         feet         .18         665         = 6.097         gal * 5         = -30.49           Depth Purging From:         27         feet         Time Surging Begins:         1410           Notes on Initial Discharge:         CERTYIEM, SILTY, SLIGHT ODOR           Time         Volume Purged         pH         Conductivity         T = Notes           1414         10 - 6kL         7.4         998         19.0         CLEAR         Sudart           1416         15-6aL         7.3         1014         18.8         CLEAR         Sudart           1419         20-6aL         7.3         1024         18.6         CLEAR         CLEAR           1420         25-6aL         7.3         1024         18.6         CLEAR						TO A A A A A A A A A A A A A A A A A A A
Of Well:         27.84         feet         Time:         1402         Before Pumping:         18.46         feet           Volume         Height of Water Column:         9.36         feet         2-inch         4-inch         Volume         Factor         To Purge           Column:         9.36         feet         .18         665         = 6.097         gal * 5         = -30.49           Depth Purging From:         27         feet         Time Surging Begins:         1410           Notes on Initial Discharge:         CERTYIEM, SILTY, SLIGHT ODOR           Time         Volume Purged         pH         Conductivity         T = Notes           1414         10 - 6kL         7.4         998         19.0         CLEAR         Sudart           1416         15-6aL         7.3         1014         18.8         CLEAR         Sudart           1419         20-6aL         7.3         1024         18.6         CLEAR         CLEAR           1420         25-6aL         7.3         1024         18.6         CLEAR						
Of Well:         27.84         feet         Time:         1402         Before Pumping:         18.46         feet           Volume         Height of Water Column:         9.36         feet         2-inch         4-inch         Volume         Factor         To Purge           Column:         9.36         feet         .18         665         = 6.097         gal * 5         = -30.49           Depth Purging From:         27         feet         Time Surging Begins:         1410           Notes on Initial Discharge:         CERTYIEM, SILTY, SLIGHT ODOR           Time         Volume Purged         pH         Conductivity         T = Notes           1414         10 - 6kL         7.4         998         19.0         CLEAR         Sudart           1416         15-6aL         7.3         1014         18.8         CLEAR         Sudart           1419         20-6aL         7.3         1024         18.6         CLEAR         CLEAR           1420         25-6aL         7.3         1024         18.6         CLEAR	Total Denth			_		
Notes on Initial Discharge:   GRAYICH   SILTY   SUIGHT   DOR	of Well: _	27.84 feet	Time:	1402 Be	pth to Water fore Pumping:	18.46 ten
Height of Water Column: 9.38 feet * .18	Volume		Dia:	eeter	· Pu	rge
Column: 9.38 feet18 (.65) = 6.097 gal . 5 = 30.49  Depth Purging From: 27 feet Time Surging Begins: 1410  Notes on Initial Discharge: 6247/54, 51477 51447 0002  Time Volume Purged ph Conductivity T'= Notes  1414 10-6k4 7.4 998 19.0 CLEAR 51647  1416 15-6a4 7.3 1014 18.8 CLEAR 0002  1410 25-6a4 7.3 1024 18.6 CLEAR 1420  1420 25-6a4 7.3 1038 18.8 CLEAR 1420	Height of		2-1nch	4-inch Volume		
Depth Purging From: 27 feet   Time Surging Begins: 1410     Notes on Initial Discharge: 62   62   71   64   64   64   64   64   64   64   6	Column:	1.38 feet *	•			
Notes on Initial Discharge: GRAVIEW, SILTY, SLIGHT ODOR  Time Volume Purged of Gonductivity T.C. Notes  1414 10-6kL 7.4 998 19.0 CLEAR SHIGHT  1416 15-6AL 7.3 1014 18.8 CLEAR, ODOR  1418 20-6AL 7.3 1024 18.6 CLEAR "  1420 25-6AL 7.3 1038 18.8 CLEAR "	Depth Purgi	ng From: <u>27</u> fee				
Time Volume Purped on Gonductivity TE Notes  1414 10-6KL 7.4 998 19.0 CLEAR SLIGHT  1416 15-GAL 7.3 1014 18.8 CLEAR DOOR  1419 20-6AL 7.3 1024 18.6 CLEAR "  1420 25-6AL 7.3 1024 18.6 CLEAR "  1420 25-6AL 7.3 1024 18.6 CLEAR "	•					
Time Volume Purped on Gonductivity TE Notes  1414 10-6kL 7.4 998 19.0 CLEAR SHIGHT  1416 15-6AL 7.3 1014 18.8 CLEAR DOOR  1418 20-6AL 7.3 1024 18.6 CLEAR "  1420 25-6AL 7.3 1024 18.6 CLEAR "  1420 25-6AL 7.3 1038 18.8 CLEAR "	Notes on In:	itial Discharge:	GRAVIE	4, SILTY SL	IHHT ODOR	· ·
1414 10-6KL 7.4 998 19.0 CLEAR, SLIGHT 1416 15-GAL 7.3 1014 18.8 CLEAR, DDOR 14.9 20-6AL 7.3 1024 18.8 CLEAR, DDOR 14.70 25-6AL 7.3 1038 18.8 CLEAR "	Palls 4	•		•	_	ŧ
1416 15-GAL 7.3 1014 18.8 CLEAR, SWETHT 1418 20-GAL 7.3 1024 18.6 CLEAR, DOOR 1420 25-GAL 7.3 1038 18.8 CLEAR "						
14:0 20-60L 1.3 1024 18.6 CLEAR, DDOR 14:00 25-60L 7.3 1038 18.8 CLEAR					, ,	CLOKE OTOR
1420 25-61AL 7,3 1038 18.8 CLEAR "					18.8	CLEAR, ODOR
11.20					18.6	CLEAR
1422/ 20-64/ 73	<del></del>	25-6AL	7,3	1038	18.8	CLEAR "
1040 18.8 CLEAR N	1477	30-6AL	7.3	1046	18.3	CLEAR "

· <del>-</del>	Rep #1	Rep #2	Rep #3	Rep #4
рН	7.3	7.4	7.3	7.2
Conductivity	1109	1088	1088	1063
T*C	19.0	18.8	18.7	18.6
Pre-Sample Collection (	Gallons Purged:3	<u>,                                     </u>		
Time Sample Collection	Begins: <u>1438</u>	•		
Time Sample Collection	• • • •			
otal Gallons Purged: _	· · · · · · · · · · · · · · · · · · ·	•		•
omments:				
		g verv		
-			· · · · · · · · · · · · · · · · · · ·	. 6-
	'e, 🎿			
	2	,	in	
			ong the leaf	
		1 #	" " " " " " " " " " " " " " " " " " "	

	OB -1 Sampling T	A22.	RICHARD SIL		WHE 21, 1994
	Method: DISPOSA			V A-	
_	ditions: CLEAR				
		<del></del>		37 , 37 , 5	
		<del></del>			
	quipment D-Con Befo	ore Samplin	g This Well: 2	ASH WITH 50	LP LND
TR	IPLE RINGE				
		<del>**</del>			
otal Dent	·h		_		
f Well:	n 49.64 feet	: Time:	<u> 1458</u> De	pth to Water fore Pumping:	19.56
				, 5	
lume		Dia	meter	Purg	10
light of iter	_	2-inch	4-inch Volume		
<del>-</del>	30.08 feet *	.16	.65 = <u>4.81</u>	gal * <u>_</u>	= - 24,00
pth Purgi	ing From: 45 te	et	Time Surging Be	gins: <u>/5</u> 2	25
					•
		_	1/2 12 2		
	nitial Discharge:	CLEAR	100000E		
tes on Ir	•			_0.	
tes on Ir	Volume Purged	<u>Ha</u>	Conductivity		Notes
Time	Volume Purced  5-4A-C		Conductivity 872	,	Notes CLEAK, NO 0
Time   508	Volume Purced  5-4A-L  10-6A-L		Conductivity 872 952	19.4	_
Time   509   510   512	Volume Purced  5-4A-L  10-6A-L  15-6A-L	7.5 7.5	Conductivity 872	19.4	CLEAR, NO OD
Time   509   510   512   514	Volume Purced  5-4A-L  10-6A-L  15-6A-L  20-GAL	7.5 7.5 7.4	Conductivity 872 952	19.4 19.2 19.1	CLEAR, NO OD
Ot <b>es</b> on Ir	Volume Purced  5-4A-L  10-6A-L  15-6A-L	7.5 7.5 7.4	Conductivity 872 952 	19.4 19.2 19.1 19.0	CLEAR, NO OD

	Time Field Parameter Me	easurement Begins: _	1574		
•	•	Rep #1	Rep #2	Rep #3	Rep #4
	′ рн	17.5	7.5	7.5	7.5
	Conductivity	1120	1105	1098	1097
	T°C	18.9	18.8	18.7	18.7
	Pre-Sample Collection G	allons Purged:2		,	
•	Time Sample Collection	Begins: <u>1533</u>			•
ur ik paddings	Time Sample Collection	Ends: 1538	* e = FA *		•
يد يغليقلسها	Total Gallons Purged: _	27			•
'1957' _					
.4v+ ,	Comments:			<u> </u>	
	:	- w a	4 (4*-		
h (N = 4 P		. 4			
and the same	p mages 11	147	. Ĕ		·
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				,	
				,	
والمحامل والمحامل	gradient serif				

Job # $564/8.00$ Site Well # $8\omega$ Samp Sampling Method:  Field Conditions:	ling Team:	eichard s	·LVA	20-94
Describe Equipment D-Co	on Before Samplin	_		
Total Depth of Well: 51.14	feet Time: _	2:05	Depth to Water Before Pumping:	20.37 feet
Volume		eter	Purge	
Height of Water	2-inch	4-inch Volu	Factor	<u>To Purge</u>
Column:feet	and the second of the second		gal *	
Depth Purging From:	feet	Time Surging	Begins:	•
Notes on Initial Dischar		THE STATE OF THE S		
Time Volume Pur	raed pH	Conductivity		Notes
		<del></del>		
	· -	<del></del>		
	<del></del>			

## WATER SAMPLING FIELD SURVEY FORM (CONTINUED)

. ,	Time Field Parameter Measure	ment-Begins: _	· · · · · · · · · · · · · · · · · · ·		
•		Rep #1	Rep #2	Rep #3	Rep #4
	pH ,_		***************************************		
•	Conductivity			•	
	T°C				
	Pre-Sample Collection Gallon	s Purged:			
***	Time Sample Collection Begin	s:			
	Time Sample Collection Ends:			w.e. = W	W
•	Total Gallons Purged:	<del></del>			, 1
		•		eresal kir or - godi	,
•	Comments:		<u></u>		
	<b>*</b> 100				
	- 4 /				
<del></del>	7 ver mener		*	***	
					:
			<u>.</u>	, pre-	

1

Well # 08-1 Sampling Team: RICHTED SILVE	20-94
Sampling Method:	• • • •
Field Conditions:	
Describe Equipment D-Con Before Sampling This Well:	
Total Depth of Well: 49.82 feet Time: 2:10 Depth to Water Before Pumping:	<u>19.48</u> fee
/olume Purge	
leight of 2-inch 4-inch Volume 5	
olumn: feet * (.16) .65 * gal *	. = -
epth Purging From:feet Time Surging Begins:	·
otes on Initial Discharge:	
Time Volume Purged pH Conductivity T	Notes

## WATER SAMPLING FIELD SURVEY FORM

rement Begins: _			
Rep #1	Rep #2	Rep #3	Rep #4
		****	
<del></del>		•	
ons Purged:	•		
,			
•			
······································			
		<u> </u>	- ,
	Rep #1	Rep #1 Rep #2	Rep #1 Rep #2 Rep #3

Well # Sampling W	$\frac{9B-2}{\text{Sampling To}}$	Par:	RICHART	- SILVA		
	itions:					
<u> </u>		<u> </u>	<u> </u>			
			****	W		
escribe E	quipment D-Con Befo	re Samplin	g This Well:			
otal Depti	1	•			to Water	
f Well:	45.48 feet	Time:	2:13	Before	Pumping:	19.70
lume		Oia	meter		Purge	
gight of		2-inch	4-inch	Volume	Facto	or To Pur
olumn:	feet *	.16	.65 =		gal *	<u> </u>
pth Purgi -	ng From: fee	et	Time Surg	ing Begins:		<del></del>
tes on In	itial Discharge:					•
•	•					<del></del>
LINE	Volume Purged	<u> </u>	Conductiv	TTX _		Notes
· · · · · · · · · · · · · · · · · · ·	<del></del>	<del></del>				
			<del></del>			

	Time Field Parameter Mea:	encement padrum:	<del></del>		•
	•	Rep #1	Rep #2	Rep: #3	Rep #4
	pH		<del></del>	****	
	Conductivity		« <del>«</del>	•	
	T*C				4
	Pre-Sample Collection Gal	lons Purged:			
	Time Sample Collection Be	gins:	•		
	Time Sample Collection En	ds:			-
, quitable /	Total Gallons Purged:	·			
, wh	,		•	•	
	Comments:				
		·			
	a silika arr	·			
			· · · · · · · · · · · · · · · · · · ·		
China V.	* *				

Job # $\frac{66+1500}{200}$ Site:	Team: _	KICHARD	Date	ı: <u>6-</u>	20-44
Sampling Method:					
Describe Equipment D-Con Bet	fore Sampli	ng This Well:			
Total Depth of Well: 44.88 fee	t Time:	217	Depth to War Before Pump:	er ing:	20.08 feet
Volume	D1;	ameter	•	Purge	
Height of Water		4-inch Vol	Lume	Fantas	
Column: feet *	.16	.65 =	cai +	7 40 101	10 Purge
Depth Purging From:fo	Bet	Time Surging	Begins:		*
Notes on Initial Discharge:			···		• .
Time <u>Volume Purged</u>	BH	<u>Conductivity</u>	<u> </u>		Notes
			•	-	
			-		
	<del></del>			-	
	<del></del>			****	
	-		<del></del>		

Time Field Parameter Mea:	surement Begins: _			
~	Rep #1	Rep #2	Rep #3	Rep #4
pH <sub>.</sub>	<del></del>		:	
Conductivity			•	
T°C		<del></del>		
Pre-Sample Collection Gal	lons Purged:	· ·		
ime Sample Collection Se	gins:	• •		
ime Sample Collection En				
otal Gallons Purged:	1			
•		٠		
Comments:				
	<u> </u>			
	_			

Well # WW-4 Sampling	Tubers	RICHARD	Da	ite: <u></u> 2	c-94
Sampling Method:					
			<del></del>	<u> </u>	
			· <del>/ / / / / / / / / / / / / / / / / / /</del>		
Describe Equipment D-Con Be	fore Samplin	ng This Well:			
			· · · · · · · · · · · · · · · · · · ·		
			<del></del>	<del></del>	
Total Depth of Well: 28.06 fee	ot Time:	2:20	Depth to ! Before Pu	Water Mping:	18.42 feet
	0ia	meter		Purge	
Volume Height of	2-inch	4-inch Vo			
Water Column: feet *				ractor_	<u>To Purge</u>
Column: feet * Depth Purging From: f	. 10				
· · ·	861	Time Surgin	g Begins:		·
Notes on Initial Discharge:					٠.,
Time Volume Purged					
		THE STATE OF THE S	<del></del>		Notes
	<del></del>	<del></del>			
		-	<del>-</del>		
	<del></del>		<del>-</del>		
	-			-	
			-	<del></del>	

ilme wield bacameter Wei	· -	000 40	<b>A</b>	
<b>-</b>	Rep #1	Rep #2	Rep #3	Rep #4
рH		<del></del>		
Conductivity			•	
T*C		**************************************		***************************************
re-Sample Collection Ga	llons Purged:	·.		
ime Sample Collection 8	egins:	-		
ime Sample Collection E	nds:	-		
otal Gallons Purged:				•
•	· · · · · · · · · · · · · · · · · · ·			
omments:				
-	· · · · · · · · · · · · · · · · · · ·			•
		<del></del>		
	<u> </u>			
	· · · · · · · · · · · · · · · · · · ·			•
•				

Job # 47.4	HS @ Site:	INGERSOL	L-RAKID	Date:	6-20-	5 J
Well # _U	$1\omega$ -/ Sampling T	ean:	RICHARD	5/1/A		
Sampling Me	ethod:					
	Ltions:					
					<del></del>	
						······································
Describe Eq	ulpment D-Con Befo	ore Samplin	g This Well:			
Total Depth of Well: _	19.06 feet			Depth to Water Before Pumping	•	12.96_ feet
Volume		Dia	neter	P	urge	•
Height of		2-inch	4-inch Vol	uae F	-	To Purso
Column:	feet*	.16	(.85) =	gal *	=	10 FOI 08
Depth Purgin	ng From:fe	et	Time Surging	Begins:		•
Notes on Ini	tial Discharge:					
Time	<u>Yolume Purged</u>			<b>T</b>	-	Notes
					***************************************	<del></del>
	<del></del>	<del></del>		-		
•		<del></del>			***************************************	
				***************************************		
<del>~</del>						

Time Field Parameter Mea	surement Begins: .	<del></del>		
-	Rep #1	Rep #2	Rep #3	Rep #4
pH	<del></del>		•	
Conductivity	<del></del>		•	
T*C	*	·		
re-Sample Collection Ga	llons Purged:			
ime Sample Collection B	egins:	•		
ime Sample Collection E	nds:			
otal Gallons Purged:				
	,			
omments:				
	· · · · · · · · · · · · · · · · · · ·			

Job #	0416,00 Site:	46ERSO	P-RAND	Dat	e: <u>4-2</u>	0-94
Complement	uw-2 Sampling Te	)2E:	NICHRO	5/4/4-		
	Method:					
LISTE CONC	litions:	· · · · · · · · · · · · · · · · · · ·		<u> </u>	<del> </del>	
Describe E	quipment D-Con Befo	re Samplin	ng This Well:			
Total Depti of Well:	n 14.70 feet	Time:	2:33	Depth to Wa Before Pump	iter iing:	/3.80 feet
Volume		Dia	meter		Purge	
Height of Water		2-inch	<u>4-ілсн</u> Vo.		-	<u>To Purae</u>
Column:	feet *	.16		gal *		
Depth Purgi	ing From: fee	it	Time Surging			
lotes on In	itial Discharge: _					
Time	Volume Purged	Ha	Conductivity	<u> </u>		Notes
			<del></del>	-	<del></del>	
				• <del></del>	<del></del>	
	<del></del>					
		************		•	<del></del>	
· · · · · · · · · · · · · · · · · · ·		<del></del>		•	<del></del>	

lime Field Parameter Meast	rement Begins: _			
-	Rep #1	Rep #2	Rep #3	Rep #4
рН				
Conductivity		****		
T°C				
Pre-Sample Collection Gall	ons Purged:			
Time Sample Collection Beg	ins:	•		
Time Sample Collection End	s:			•
Total Gallons Purged:				
,				
Comments:				
<del></del>				
	·			
*			•	

Job # 5,412 0	D Site: IL	16CCSOL	L-RAN	D	Date	: <u>6-2</u>	0-94
Well # MW-3	3 Sampling Tea	am:	RICHAR	D 5/2	14		
Sampling Method	•						
Field Conditions	S: TEHLE						
			<del></del>				
				· · · · · · · · · · · · · · · · · · ·			
Describe Equipme	nt D-Con B <b>et</b> or	e Samplin	g This We	L <b>1</b> :			
							-
Total Depth			_	Dans	-h +a 111-a		
Total Depth of Well: 20.	39 feet	Time:	239	Bef	th to Wat	er .ng:	16.23 feet
1/a1		Dia	meter			Purge	
Volume Height of						•	To Purge
Water Column:	_ feet *	. 16	(55)	=	eal t	PACTOR	10 Purge
Depth Purging Fro	- om:fee:	t	Time Su	raina Read	- Aar	<del></del>	3 -
		-		. arna negi		<del></del>	<del></del> .
Notes on Initial	Discharge: _						٠.
	•					· · · · · ·	
Time Yol	11100 1-111-000	<u> </u>	Conduct	ivity			Notes
	-	······································	-	<del></del>			
	-					<del></del>	
						<del></del>	
	-	<del> </del>	···		<del></del>		
		<del> </del>	<del></del>		<del></del>		
						<del></del> -	

ITMO LIGITO LALAMOTOL WORS	mrement pedius: '	<del></del>		
-	Rep #1	Rep #2	Rep #3	Rep #4
рН	<del></del>		·	
Conductivity			·	
T°C				
Pre-Sample Collection Gal	lons Purged:			
Time Sample Collection Be				
Time Sample Collection En				
Total Gallons Purged:				
				•
Comments:	-74***			
•	·			
·	<del> </del>			
,				

Job # 56418.00 Site: The Well # VU   Sampling Te Sampling Method: Field Conditions:	AR: KICHA	es SILYA	: 6-20-94
Describe Equipment D-Con Befor	re Sampling This We	11:	
Total Depth 17.44 feet		Depth to Wat Before Pumpi	ar
Volume Height of Water Column: feet *			Purge Factor To Purge
Depth Purging From: fee  Notes on Initial Discharge:	t Time Su	erging Begins:	
•	oH Conduct	· · · · · · · · · · · · · · · · · · ·	Notes

Time Fieid-Parameter Measur	rement Begins:	·		
	<u>Rep #1</u>	Rep #2	Rep #3	Rep #4
рН		<del></del>		
Conductivity			•	
T°C	·			
Pre-Sample Collection Gallo	ns Purged:			
Time Sample Collection Begi	ns:	•		
Time Sample Collection Ends	:	•		•
Total Gallons Purged:	<del></del>			
Comments:				
				•
				•
<del></del>				
	····	······································		

Job # 5641600 Site: INGERSOLL - RAND Date: 6 Well # VW-2 Sampling Team: RICHARD 511VE Sampling Method: Field Conditions:	-28-94
Describe Equipment D-Con Before Sampling This Well:	
Total Depth of Well: 17.08 feet Time: 2'53 Depth to Water Before Pumping:	15,95 feet
Volume Height of Water Column: feet * .16 .65 = gal *  Depth Purging From: feet	To Purge
Notes on Initial Discharge:	
	Notes

## CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

# WATER SAMPLING FIELD SURVEY FORM (CONTINUED)

ime Field Parameter Measu	rement Begins: _			,
<b>-</b>	Rep #1	Rep #2	Rep #3	Rep #4
pH			•	
Conductivity		- Proposition of the state of t	•	
T°C		***************************************		
re-Sample Collection Gall	ons Purged:	·····		
ime Sample Collection Beg	ins:			
ime Sample Collection End	S:			•
otal Gallons Purged:				
omments:				
	·			

# CLAYTON ENVIRONMENTAL CONSULTANTS, INC. WATER SAMPLING FIELD SURVEY FORM

Job # 564/9 02 Site: Twell # VW-4 Sampling Te Sampling Method: Field Conditions:	as:		Date: <u>6-2</u> e	0-94
Describe Equipment D-Con Befor	re Sampling This	Well:		
Total Depth 20,54 feet	Time: <u>37/</u>	Depth t Before	o Water Pumping:	19.18 feet
Volume Height of Water Column: feet *	Diameter  2-inch 4-inch .16 (.65)	Volume_	Purge <u>Factor</u>	<u>To Purge</u>
Depth Purging From:fee  Notes on Initial Discharge:		Surging Begins:		
		ictivity	T	Notes

## CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

# WATER SAMPLING FIELD SURVEY FORM (CONTINUED)

Time Field Parameter Measur	'ement Begins:			
•	Reo #1	_Rep #2	Rep · #3	Rep #4
рН	·		· · · · · · · · · · · · · · · · · · ·	
Conductivity			•	
T°C		•		
Pre-Sample Collection Gallo	ns Purged:	•,		
Time Sample Collection Segi	ns:	-		
Time Sample Collection Ends	:	_	-	
Total Gallons Purged:				•
•				. '
Comments:				
				,
	, , , , , , , , , , , , , , , , , , ,	· · · · · · · · · · · · · · · · · · ·		
				· · · · · · · · · · · · · · · · · · ·

### APPENDIX B - October 1994 Analytical Results

Rev 0 061295

#### Western Operations

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





December 9, 1994





Mr. William Block CAPSULE ENVIRONMENTAL ENGINEERING, INC. 1970 Oakcrest Avenue, Suite 213 St. Paul, Minnesota 55113-2624

Clayton Project No. 59125.00

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 October 20, and 21, 1994 at the Ingersoll-Rand facility located at 1944 Marina Boulevard in San Leandro, California.

Groundwater samples were collected from wells MW-1, MW-2, 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. 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-1, MW-2, MW-3, and MW-4, observation well OB-1, and the purged water DS-1 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-1 was analyzed for reactivity, corrosivity, and ignitability (RCI).

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



Mr. William Block CAPSULE ENVIRONMENTAL ENGINEERING December 9, 1994 Page 2 Clayton Project No. 59125.00

NO. 5046

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

Supervisor, Geosciences and Remediation

Western Operations

JFV/rjs Enclosures

ACTIVE\5912500.REP

Western Operations

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



December 20, 1994

Mr. William Block CAPSULE ENVIRONMENTAL ENGINEERING, INC. 1970 Oakcrest Avenue, Suite 213 St. Paul, Minnesota 55113-2624

Clayton Project No. 59125.00

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

Leandro, California

Dear Mr. Block:

As we discussed in our telephone conversation, we have reviewed the analytical results for the two sampling events at the Ingersoll-Rand facility. This site was sampled by Clayton on June 21, 1994 and October 20 and 21, 1994. Two issues were noted during our review. These issues are discussed below.

The detection limit for the analyte 2-Butonone in well MW-1, sampled in October, was reported as  $5 \mu g/L$ , however the detection limit for 2-butonone in the other wells was reported as  $20 \mu g/L$ . The detection limit was reported in error for well MW-1. Attached to this letter is a revised report for well MW-1. Please insert these results into the previous report.

The detection limits for well MW-4, sampled in June, were higher than those reported in October. The detection limits, reported in June and October, were the same for the other wells. There are two factors which contributed to the higher detection limits for well MW-4. Firstly, the available sample volume transported to Clayton's laboratory was half that collected. As you may recall the sample was split for comparison with another laboratory. In addition, the concentrations of several constituents in the sample from well MW-4 was significantly higher than the other wells. These two factors contributed to a higher dilution factor for well MW-4 and resulted in higher detection limits. Please note that the higher dilution factor was noted on the analytical report on page 13.



Mr. William Block CAPSULE ENVIRONMENTAL ENGINEERING December 20, 1994 Page 2 Clayton Project No. 59125.00

Acetone was detected in the samples, collected in October, from wells MW-3 and MW-4 at concentrations of 50 and 160  $\mu$ g/L. Acetone was not detected in the samples collected in June. It is possible that the acetone is a laboratory contaminant. We are rerunning the samples to evaluate this possibility. We will forward the results to you as soon as we receive them.

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

Sincerely.

John F. Vargas, R.G

Supervisor, Geosciences and Remediation

Western Operations

JFV/jfv Attachment

Page 2 of 23

## Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59129.00 Clayton Project No. 94102.69

Sample Identification: MW-1 Lab Number:

9410269-01A

Sample Matrix/Media:

WATER

Preparation Method: EPA 5030 Method Reference:

EPA 8260

Date Received: Date Prepared: Date Analyzed:

Date Sampled:

10/20/94 10/28/94

10/20/94

10/28/94

Analyst:

JΡ

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone	67-64-1 71-43-2	ND ND	20

			•
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 5 5 5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	
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 5 5 5 5 5 5 5 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	
1,2-Dibromoethane	106-93-4	ND	5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5 5 5 5 5 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	
1,2-Dichloroethane	107-06-2	ND	5 5
1,1-Dichloroethene	75-35-4	ND	
cis-1,2-Dichloroethene	156-59-2	ND .	5
trans-1,2-Dichloroethene	156-60-5	ND	5

Page 3 of 23

## Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59129.00 Clayton Project No. 94102.69

Sample Identification: MW-1

9410269-01A

Lab Number: Sample Matrix/Media:

WATER

Preparation Method: Method Reference:

EPA 5030

EPA 8260

Date Sampled:

Date Received: 10/20/94 Date Prepared: 10/28/94 Date Analyzed:

10/28/94

10/20/94

Analyst: JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Co	ontinued)		
1,2-Dichloropropane 1,3-Dichloropropane 2,2-Dichloropropane 1,1-Dichloropropene cis-1,3-dichloropropene trans-1,3-dichloropropene Ethylbenzene Freon 113 Hexachlorobutadiene 2-Hexanone Isopropylbenzene p-Isopropyltoluene Methylene chloride 4-Methyl-2-pentanone Naphthalene n-Propylbenzene sec-Butylbenzene Styrene tert-Butylbenzene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane Tetrachloroethene Toluene 1,2,3-Trichlorobenzene 1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane	78-87-5 142-28-9 594-20-7 563-58-6 10061-01-5 10061-02-6 100-41-4 76-13-1 87-68-3 591-78-6 98-82-8 99-87-6 75-09-2 108-10-1 91-20-3 103-65-1 135-98-8 100-42-5 98-06-6 630-20-6 79-34-5 127-18-4 108-88-3 87-61-6 120-82-1 71-55-6 79-00-5 79-01-6	ND N	55555555555555555555555555555555555555
1,1,2-Trichloroethane	79-00-5	ND	

Page 4 of 23

### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59129.00 Clayton Project No. 94102.69

10/20/94 Sample Identification: MW-1 Date Sampled: Date Received: 10/20/94 9410269-01A Lab Number: Date Prepared: 10/28/94 Sample Matrix/Media: WATER Preparation Method: EPA 5030 Date Analyzed: 10/28/94 Method Reference: EPA 8260 Analyst: JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Con	tinued)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	ND ND ND ND ND	5 5 10 5 5
<u>Surrogates</u>		Recovery (%)	OC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane Toluene-d8	460-00-4 1868-53-7 2037-26-5	97 93 102	74 - 121 80 - 120 81 - 117

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



### REQUEST FOR LABORATORY **ANALYTICAL SERVICES**

	-	_			, ——
For Clayton U	se Only	Page_		L of	
Project No.			-,	Ţ	
Batch No. <b>9</b>	4102	<b>395</b>		· · · · · · · · · · · · · · · · · · ·	
Ind. Code	1	1 1	W.P.	. /	
Date Logged I	n <i>10  21  </i>	199	Ву	KI	
	ent Job N				

										Dat	e Logo	jed In	<u> [0 [2</u>	1/9	B	<u> </u>	
O Name	O Name JEHN YARUKS Title P				Purch	nase Or	der No	).				Clie	nt Job	Ńο.			
C Comp	pany CLHYTZ'A/ ng Address State, Zip hone No Telef	D	ept.		m	Nan	ne										
Mailin	g Address				달음	Nan Con Add	npany	THE	GER	SOLL	-7	AN	<i>D</i>			Dept.	
E Si City.	State, Zip				╏╏	Add	ress										
1.0.0	10.10	ax No.				City	, State	, Zip									
Date Result	ts Reg.: Rush Charges Authorized? Ph	one / Fax Results	Sample	s are: if applicable)	818	(Enter	an 'X'	in the	box be	AN of wole	ALYSI indica	S REC te req	QUEST uest; E	ΓED ∃nter a	.b. it b	reservati	ve added. *
	ructions: (method, limit of detection, etc	: 1	1	• •	aj.			7	7	7	7	1	7	$\overline{}$	$\mathcal{T}$	7	7 7
poolar mor	, bollono, (mothod, mint of dotoblon, die	·· <i>)</i>	l	ing Water	Containers				/.i./	/ /	/	/	/ ,		/ /	/ /	
* Explanation	on of Preservative: $f = HC \mathcal{C}$		1	cted in the of New York	ō	/	Q1	10/3		/,	/				/,	/_	
(	CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	MATRIX/ MEDIA	AIR VOLUME (specify units)	Number	/4			N ST		$\angle$						FOR LAB ISE ONLY
	'UR-1	16-21-94	tro	4cmes	2	ΧP										QLA	.13
	013-1			+omis	2		$\chi_{P}$									02	7
	P5-/			40 MLS	2	Хρ										<u> </u>	
	<u> </u>			4CMLS	2		XP						<u> </u>			04	₩.
TEIP	BLANK & CICE 294	<u>Y</u>	¥.	40mLs	1		,	Xρ								05	A
-													1				
											· · · · · ·						
													<u> </u>				
	Collected by: RICHARD SI	LVA		(print)	Colle	ctor's S	Signatu	ıre: 🗡	211		d,	de 1	/1/2				
CHAIN OF	Relinquished by: Ruhan	Lug.	Date/Time	4/1810	Rece	ived by	(a	re(	77	meil	ia				Date/I	im# 1/94	6:10pm
CUSTODY	Relinquished by:		Date/Time		Rece	eived at	Lab b	y: <b>'</b>			Λ				Dafe/	ime	
	Method of Shipment:				Sam	ple Con	dition	Upon I	Receipt	t: <u> </u>	Ac Ac	cepta	ble		Oth	er (expl	ain)
Authorized	l by:	Da	ate								1						
	(Client Signature Must Accompan		<del>- , .</del>														
Please retu	rn completed form and samples to one o	f the Clayton Envi	roomental	Consultants Inc	labs	listed h	elow:						1			<del></del>	

22345 Roethel Drive Novi, MI 48375 (313) 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

DISTRIBUTION:

Clayton Laboratory WHITE YELLOW - Clayton Accounting - Client Retains PINK



## **ATTACHMENT 2**

## FIELD SAMPLING SURVEY FORMS

# CLAYTON ENVIRONMENTAL CONSULTANTS, INC. WATER SAMPLING FIELD SURVEY FORM

	25.00 Site: <u>I</u>				60 1001 × 20 1994
Well # <u>/1</u>	ا Sampling T	eam: 🔀	( )-AC) SILV	4	·
Sampling Me	ethod: <u>Disfusi</u>	FLE RA	EC-		
Field Condi	Ltions: FARTLY	Claud:	1, LOGE, SUIL	HT BREEZE	
	•				
					F Pump was
WA- HED	WITH DETER	ENT AN	DTRIPLE ZI	USED	
Total Depth	1 42 4 .			epth to Water	,
Total Depth of Well: _	18.80 fee	t Time:		efore Pumping	
		Dia	ameter	P	urge
Volume Height of	•	2-inch			actor To Purge
Water	+.46_ feet *			·2 gal *	
<del></del>					
Depth Purgi	ing From: <u>iB</u> fo	9 <b>0</b> T	lime Surging B	egins: <u>708</u>	<u> </u>
		<i>a</i> <sub>2</sub>	, , , , ,	/	
Notes on In	nitial Discharge:	PKOWH	15H, 31LTY L	10 ODOP	
Time	Volume Purged	pH	Conductivity		Notes
1008	at -leke	8.2	595	17.7	CERE
1011	£-6xc	6.0	573	17.4	GEAR PURGED DRY
1033	12-6-14c	€.2	541	17.7	CLEAR
1634	16-61AL		534	17.5	CLERR PLZEED DE
<u></u>		- <u>*</u> -	<del></del>	<del>- 1 - 1   1   1   1   1   1   1   1   1 </del>	The the the
	<del></del>				
				<del></del>	

### CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

# WATER SAMPLING FIELD SURVEY FORM (CONTINUED)

•	Rep #1	<u>Rep #2</u>	Rep #3	Rep #4
рН	8.2	6.2	8.2-	£1.1
Conductivity	_515_	5/8	<u>5]3</u>	516
T°C	17.2	17.5	17.5	17.5
		,,,		
e-Sample Collection Ga				
ime Sample Collection B				
ime Sample Collection E	nds: <u>//09</u>			
otal Gallons Purged:				
omments:				
January T.				
			······································	
		· · · · · · · · · · · · · · · · · · ·	, ,	

# CLAYTON ENVIRONMENTAL CONSULTANTS, INC. WATER SAMPLING FIELD SURVEY FORM

Job # 59/2	5.00 Site: FAIC	-1-6-2260	·· ///(,	Date:	CHERER 1444
Well # 1/14	Sampling Te	am: <u></u>	LUCED SIA	4	
Sampling Met	hod: Diskes	BLE B	HILEC		
Field Condit	ions: كنات	DKIEN,	2001 501047	- BOEFE	<u> </u>
		<u> </u>			
		·			
Describe Equ	ipment D-Con Befo	re Samplin	g This Well: 🔼	WBMEASIB	CE PUMP NAS
•			THEN TRIPLE		
		•	_		
Total Depth of Well:	20.15 feet	Time:	//22 Be	epth to Water efore Pumping	: <u>/4.3(</u> feet
		Dia	meter	Pi	urge
Volume Height of		2-inch	4-inch Volume	F:	actor To Purge
Water	.84 feet *		<u>(65)</u> = 3.8		
	<del>.</del>		Time Surging Be	-	
<b></b>	<b>3</b>			<u></u>	
Notes on Ini	tial Discharge:	BLOWN	WH SILTY NO	ODOR	
			,		
Time	Volume Purged		Conductivity		PLRES DRY
1141	<u>5-9AL</u>		972	20.4	BRUDAISH SILTY
1144	10-6x2	7.1	<u>97c</u>	20.7	CLEAR PRESENT
1147	15-GAL	1.2	969	30.8	CLEAR, DRY
1150	20-64-	7.0	961	20.6	CLEAR
-2					
		· · · · · · · · · · · · · · · · · · ·			

### CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

# WATER SAMPLING FIELD SURVEY FORM (CONTINUED)

Time Field Parameter Meas	urement Begins: .	1200		
	Rep #1	Rep #2	Rep #3	Rep #4
рН	7.4	7.6	7.6	7.6
Conductivity	918	922	93c	929
T°C	7-0.1	20.2	20,3	20.2
Pre-Sample Collection Gal	lons Purged:	<u>C</u>		
Time Sample Collection Be	jins: <u>/2c5</u>	_		
Time Sample Collection En	is: 1210	-		
Total Gallons Purged:	A.			
,				
Comments:		AT		<del></del>

# CLAYTON ENVIRONMENTAL CONSULTANTS, INC. WATER SAMPLING FIELD SURVEY FORM

Job # <u>59125</u>	TOO Site: IN	FERSOLL	RALL	Date: _	COTOBER 201994
Well # Mi	5 Sampling Te	am: 🔀	ICHTED SILLA	_	·
Sampling Met	nod: DIEROSAB	CE BAILE	R.		
Field Condit:	Lons: Clerke	EKLET	WARM, JUG	HT PREEZE	2
					,
				<b>-</b>	
•					E PUMP WAS
WASHED	WITH DETINE	ERLE N. 1 Y	ALD TRIPLE A	AR SED	
Total Depth of Well:	10 20		1 ( ) D	epth to Water	82 16- <b>83</b> feet
of Well:	70. 26 feet	Time:	/450 B	efore Pumping:	<u>/€-€€\$</u> feet
		Dia	meter	Pu	ırge
Volume Height of		2-inch	4-inch Volum	e Fa	ctor To Purge
Water Column: 3	3 <u>6</u> feet *	.16	(.65) = 2.7	20 gal *	5 = 11.0
Depth Purging	From: <u>20</u> fe	et	Time Surging B	egins: <u>/4/</u>	ر خ
,			•	-	
Notes on Init	ial Discharge:	BLACKIS	H, SLTY, SLIG	UT ODER	
			,		
Time	<u> Volume Purged</u>	pH	Conductivity	<u> </u>	Notes
1419	3-GH	7.4	734	20.7	CLEAR_
1420	E-GAL	7.3	<u>736</u>	20.4	CLEAR, PURHED DR
1452	9-6AL	7.5	717	20.6	CLEAR.
1457	12-6Hz	7.4	726	20.4	CLEAR, PURGED DRY
				4	

### CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

# WATER SAMPLING FIELD SURVEY FORM (CONTINUED)

Time Field Parameter Measu	Time Field Parameter Measurement Begins: 1505						
	Rep #1	<u>Rep #2</u>	Rep #3	Rep #4			
рН	7.7	7.7	_ 7.7_	7.7			
Conductivity	703	703	703	697			
T°C	20.3	20.4	20.3	26.3			
Pre-Sample Collection Gall		2					
Time Sample Collection Beg		<del>-</del>					
Time Sample Collection End	s: <u>1575</u>	<b></b>		٠			
Total Gallons Purged:/	4						
Comments:							

# CLAYTON ENVIRONMENTAL CONSULTANTS, INC. WATER SAMPLING FIELD SURVEY FORM

Job # <u>59125.00</u> Site: <u>ING</u> Well # <u>Mu-4</u> Sampling Team	- RICHARD SIL		TOPER 201994
Sampling Method: DISPOSH		_	
Field Conditions: Custo 5	CLES WAFM, SLIGHT	EPER ZE	
Describe Equipment D-Con Before  WASHED COTH DESTRICATION	·		Punt was
Total Depth of Well: 27.86 feet	Time: 1255	Depth to Water Before Pumping:	19.20 feet
Volume Height of Water Column: 8.66 feet * Depth Purging From: 27 feet	<del> </del>	Purg   Fac   63   gal *   S   Begins:   1301	<u>To Purge</u> = 28.15
Notes on Initial Discharge:	GRAYISH, SILTY, S	WHIT CDER	
Time Volume Purged	pH Conductivity	T	Notes
1304 5-GAZ	6.c 789	19.3	CLEAR
1359 10-GAL	7.7 798	19.4	CLEAR
1311 15-GXL	7.6 801	19.3	CERR
1314 20-64	7.6 \$25	19.1	Ciopa
1317 25-622	7.6 811	<u> 1911                                 </u>	WOLF GLAF WURKY
1321 30-GA	7.6 822	19.1	War-CCAH AUCH

### CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

# WATER SAMPLING FIELD SURVEY FORM (CONTINUED)

Time Field Parameter Meas	surement Begins:	(33)		
	Rep_#1	Rep_#2	Rep #3	Rep #4
рН	7.6	7.6	7.6	7.5
Conductivity	872	2 <b>69</b>	370	869
T°C	19.4	17.2	19.1	19.1
Pre-Sample Collection Gal	llons Purged: 3	3 <i>0</i>		
Time Sample Collection Be	_			
Time Sample Collection Er		<del>-</del>		
Total Gallons Purged:				,
Comments:			•	
				·
		<u> </u>		
				<del></del>

# CLAYTON ENVIRONMENTAL CONSULTANTS, INC. WATER SAMPLING FIELD SURVEY FORM

					LTEBEL 241994
Well # [513-1			1,	4-	
Sampling Method:	DIZPE-AR	11. DAILER			
Field Conditions:	<u>ilerc</u>	sulan inst.	·一一一 ア	CEEZE	
Describe Equipmen					qump was
Total Depth 49	<u> 「ピ</u> feet	Time: _//3<		to Water e Pumping:	20.28 feet
		<u>Diameter</u>		Purg	е
Volume Height of 29.3		2-inch 4-inc	th Volume	<u> </u>	or <u>To Purge</u>
Water Column:	feet *	(16) .65		gal *5	
Depth Purging From			Surging Begin		
Notes on Initial [	Discharge: <u></u>	LEAR, NO	0708		
	ıme Purged	pH Cond	uctivity	T	Notes
1147 5	-GAL		-	. 13	CLEAR
			66	18.9	
		<del></del>	-		CLEAR
		<del></del>	<del></del>		CLEAR
	·			129	CLEAR
1158 25	GAL	7.9 8	21	18.9	CLEAR
		<del>"</del>			

### CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

# WATER SAMPLING FIELD SURVEY FORM (CONTINUED)

Time Field Parameter Measu	rement Begins:	1205		
	Rep #1	Rep #2	Rep #3	Rep #4
рН	7.€	_7.7	7.7	7.7
Conductivity	<u>e24</u>	631	234	£37
T°C	18.9	16.9	18.9	18.8
Pre-Sample Collection Gall	Lons Purged:	25		
Time Sample Collection Beg	ins: <u>  1210</u>	<del>_</del>		
Time Sample Collection End	is: <u>1215</u>			
Total Gallons Purged: 2	<del>-7</del>			
Comments:				
<del></del>				



### **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, kilndried 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.



### **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, kilndried 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.

#### Western Operations

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



December 20, 1994

Mr. William Block CAPSULE ENVIRONMENTAL ENGINEERING, INC. 1970 Oakcrest Avenue, Suite 213 St. Paul, Minnesota 55113-2624

Clayton Project No. 59125.00

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

Leandro, California

Dear Mr. Block:

As we discussed in our telephone conversation, we have reviewed the analytical results for the two sampling events at the Ingersoll-Rand facility. This site was sampled by Clayton on June 21, 1994 and October 20 and 21, 1994. Two issues were noted during our review. These issues are discussed below.

The detection limit for the analyte 2-Butonone in well MW-1, sampled in October, was reported as 5  $\mu$ g/L, however the detection limit for 2-butonone in the other wells was reported as 20  $\mu$ g/L. The detection limit was reported in error for well MW-1. Attached to this letter is a revised report for well MW-1. Please insert these results into the previous report.

The detection limits for well MW-4, sampled in June, were higher than those reported in October. The detection limits, reported in June and October, were the same for the other wells. There are two factors which contributed to the higher detection limits for well MW-4. Firstly, the available sample volume transported to Clayton's laboratory was half that collected. As you may recall the sample was split for comparison with another laboratory. In addition, the concentrations of several constituents in the sample from well MW-4 was significantly higher than the other wells. These two factors contributed to a higher dilution factor for well MW-4 and resulted in higher detection limits. Please note that the higher dilution factor was noted on the analytical report on page 13.



Mr. William Block CAPSULE ENVIRONMENTAL ENGINEERING December 20, 1994 Page 2 Clayton Project No. 59125.00

Acetone was detected in the samples, collected in October, from wells MW-3 and MW-4 at concentrations of 50 and 160  $\mu$ g/L. Acetone was not detected in the samples collected in June. It is possible that the acetone is a laboratory contaminant. We are rerunning the samples to evaluate this possibility. We will forward the results to you as soon as we receive them.

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

Sincerely

John F. Vargas, R.

Supervisor, Geosciences and Remediation

Western Operations

JFV/jfv Attachment

Page 2 of 23

### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59129.00

Clayton Project No. 94102.69

Sample Identification: MW-1

9410269-01A

Date Sampled: Date Received: 10/20/94

Lab Number: Sample Matrix/Media:

WATER

Date Prepared:

10/20/94 10/28/94

Preparation Method:

EPA 5030

Date Analyzed:

10/28/94

Method Reference:

EPA 8260

Analyst:

JP

			Method Detection
L	a.a. #	Concentration	Limit
Analyte	CAS #	(ug/L)	(ug/L)
·			

Analyte	CAS #	(ug/L)	(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 5 5 5 5 5
Bromodichloromethane	75-27-4	ND	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	
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 5 5 5 5 5 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	
1,2-Dibromo-3-chloropropane	96-12-8	ND	5
1,2-Dibromoethane	106-93-4	ND	5 5 5
Dibromomethane	74-95-3	ND	5
1,2-Dichlorobenzene	95-50-1	ND	5
1,3-Dichlorobenzene	541-73-1	ND	
1,4-Dichlorobenzene	106-46-7	ND	5
Dichlorodifluoromethane	75-71-8	ND	5
1,1-Dichloroethane	75-34-3	ND	5 5 5 5 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
			-



Page 3 of 23

## Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59129.00 Clayton Project No. 94102.69

Sample Identification: MW-1

Lab Number: 9410269-01A

Sample Matrix/Media: WATER

Preparation Method: EPA 5030

Date Sampled: 10/20/94

Date Received: 10/20/94

Date Prepared: 10/28/94

Date Analyzed: 10/28/94

Method Reference: EPA 8260 Analyst: JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Con	tinued)		
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 5 5 5 5 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 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	ИD	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	55555555555555
Trichloroethene	79-01-6	11	5
Trichlorofluoromethane	75-69-4	ND	5
1,2,3-Trichloropropane	96-18-4	ИD	5

Page 4 of 23

### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59129.00

Clayton Project No. 94102.69

Sample Identification: MW-1 Date Sampled: 10/20/94 Date Received: 10/20/94 9410269-01A Lab Number: Date Prepared: 10/28/94 Sample Matrix/Media: WATER EPA 5030 Date Analyzed: 10/28/94 Preparation Method: Method Reference: EPA 8260 Analyst: JΡ

<b>3</b>	CAC #	Concentration	Method Detection Limit
Analyte	CAS #	(ug/L)	(ug/L)
Volatile Organic Compounds (Cont	tinued)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	ND ND ND ND ND	5 5 10 5 5 5
Surrogates		Recovery (%)	QC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane Toluene-d8	460-00-4 1868-53-7 2037-26-5	97 93 102	74 - 121 80 - 120 81 - 117

#### Western Operations

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



January 6, 1995

Mr. William V. Block Process Chemist CAPSULE ENVIRONMENTAL ENGINEERING, INC. 1970 Oakcrest Avenue, Suite 215 St. Paul, MN 55113-2624

Clayton Project No. 59125.00

Dear Mr. Block:

Clayton Environmental Consultants, Inc. is pleased to submit the revised analytical reports for the groundwater samples collected on October 20 and 21, 1994. Initially acetone was identified in the groundwater samples from monitoring wells MW-3 and MW-4. However, subsequent review of the analytical results indicated that acetone was not detected in the groundwater samples, and the reported acetone in the initial report was due to a laboratory error.

Thank you for the opportunity to provide these sampling services. If you have any questions, please call me at (510) 426-2676.

Sincerely,

John F. Vargas, R.O.

Supervisor, Geosciences and Remediation

Western Operations

JFV/jfv

Western Operations

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



December 22, 1994

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

> REVISED REPORT Client Ref.: 59125.00 Clayton Project No.: 94102.69

Dear Mr. Vargas:

Attached is our revised analytical laboratory report for the samples received on October 20, 1994 and originally reported on November 3, 1994. Results for Acetone have been revised for samples MW-3 and MW-4. Due to a laboratory error, this compound was misidentified.

We appreciate the opportunity to be of assistance to you. you have any questions, please contact Suzanne Haus, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Michael Lynch For Harriotte A. Hurley, CIH Director, Laboratory Services

Western Operations

HAH/caa

Attachments

Page 2 of 23

## Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59125.00 Clayton Project No. 94102.69

Sample Identification: MW-1 Date Sampled: 10/20/94 Lab Number: 9410269-01A Date Received: 10/20/94 Date Prepared: 10/28/94 Sample Matrix/Media: WATER Preparation Method: EPA 5030 Date Analyzed: 10/28/94 JР Method Reference: . EPA 8260 Analyst:

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 5 5 5
Bromodichloromethane	75-27-4	ИD	5
Bromoform	75-25-2	ND	5
Bromomethane	74-83-9	ND	
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 <b>-</b> 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	ИD	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 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

Page 3 of 23

### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59125.00 Clayton Project No. 94102.69

Date Sampled: Sample Identification: MW-1 10/20/94 9410269-01A Date Received: 10/20/94 Lab Number: Date Prepared: Sample Matrix/Media: 10/28/94 WATER Preparation Method: EPA 5030 Date Analyzed: 10/28/94 Analyst: JP Method Reference: EPA 8260

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Con	tinued)		
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 5 5 5 5 5 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	11	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
- Trichlorofluoromethane	75-69-4	ND	5
1,2,3-Trichloropropane	96-18-4	ND	5

Page 4 of 23

#### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59125.00 Clayton Project No. 94102.69

Sample Identification: MW-1 Date Sampled: 10/20/94 Date Received: 10/20/94 Lab Number: 9410269~01A Sample Matrix/Media: Date Prepared: 10/28/94 WATER Date Analyzed: 10/28/94 Preparation Method: EPA 5030 EPA 8260 Method Reference: Analyst: JΡ

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Cont	cinued)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	ND ND ND ND ND	5 5 10 5 5 5
Surrogates		Recovery (%)	OC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane Toluene-d8	460-00-4 1868-53-7 2037-26-5	97 93 102	74 - 121 80 - 120 81 - 117

Page 5 of 23

## Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59125.00 Clayton Project No. 94102.69

Date Sampled: 10/20/94 Sample Identification: MW-2 9410269-02A Date Received: 10/20/94 Lab Number: 10/28/94 Sample Matrix/Media: Date Prepared: WATER Preparation Method: EPA 5030 Date Analyzed: 10/28/94 Method Reference: EPA 8260 Analyst: JP

Method Detection Concentration Limit CAS # (ug/L) (ug/L) Analyte Volatile Organic Compounds 67-64-1 ND 20 Acetone 71-43-2 ND 5 Benzene 5 108-86-1 ND Bromobenzene ND 5 Bromochloromethane 74-97-5 5 75-27-4 ND Bromodichloromethane 5 75-25-2 Bromoform ND 74-83-9 ND 5 Bromomethane 20 2-Butanone 78-93-3 ND 104-51-8 ND 5 n-Butylbenzene 5 Carbon disulfide 75-15-0 ND 56-23-5 5 ND Carbon tetrachloride 5 108-90-7 ND Chlorobenzene 5 75-00-3 ND Chloroethane 67-66-3 5 Chloroform ND 5 74-87-3 ND Chloromethane 5 2-Chlorotoluene 95-49-8 ND 5 4-Chlorotoluene 106-43-4 ND 5 124-48-1 ND Dibromochloromethane 5 1,2-Dibromo-3-chloropropane 96-12-8 ND 5 1,2-Dibromoethane 106-93-4 ND 5 74-95-3 ND Dibromomethane 95-50-1 ND 1,2-Dichlorobenzene 5 541-73-1 ND 1,3-Dichlorobenzene 5 106-46-7 ND 1,4-Dichlorobenzene 75-71-8 ND 5 Dichlorodifluoromethane 75-34-3 5 ND 1,1-Dichloroethane 5 107-06-2 ND1,2-Dichloroethane 5 75-35-4 ND 1,1-Dichloroethene 156-59-2 ND cis-1,2-Dichloroethene 5 156-60-5 ND trans-1,2-Dichloroethene

Page 6 of 23

## Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59125.00 Clayton Project No. 94102.69

Sample Identification: MW-2 Date Sampled: 10/20/94 Date Received: Lab Number: 9410269-02A 10/20/94 Sample Matrix/Media: Date Prepared: 10/28/94 WATER EPA 5030 Date Analyzed: 10/28/94 Preparation Method: JP

Method Reference: EPA 8260 Analyst:

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Cont	tinued)		en e
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 5 5 5 5
trans-1,3-dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	ND	5
Freon 113	76-13-1	ND	
Hexachlorobutadiene	87-68-3	ND	5
2-Hexanone	591-78-6	ND	20
Isopropylbenzene	98-82-8	ND	5
<pre>p-Isopropyltoluene</pre>	99-87-6		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
<pre>1,2,3-Trichlorobenzene</pre>	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	6	5
Trichlorofluoromethane	75-69-4	ND	5 5 5 5 5 5 5 5 5
1,2,3-Trichloropropane	96-18-4	ИD	5

Page 7 of 23

### Analytical Results

for

Clayton Environmental Consultants, Inc.
Client Reference: 59125.00
Clayton Project No. 94102.69

10/20/94 Date Sampled: Sample Identification: MW-2 9410269-02A Date Received: 10/20/94 Lab Number: 10/28/94 Date Prepared: Sample Matrix/Media: WATER 10/28/94 Preparation Method: EPA 5030 Date Analyzed: JP Method Reference: EPA 8260 Analyst: Method Detection Concentration Limit CAS # (ug/L) (ug/L) Analyte olatile 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

4-Bromofluorobenzene       460-00-4       113       74 - 121         Dibromofluoromethane       1868-53-7       94       80 - 120         Toluene-d8       2037-26-5       102       81 - 117	Surrogates		Recovery (%)	OC Limits (%)
	Dibromofluoromethane	1868-53-7	94	80 - 120

Page 8 of 23

## Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59125.00 Clayton Project No. 94102.69

Sample Identification: MW-3
Lab Number: 9410269-03A
Date Received: 10/20/94
Sample Matrix/Media: WATER
Date Prepared: 10/28/94
Preparation Method: EPA 5030
Date Analyzed: 10/28/94

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	9	5
Bromobenzene	108-86-1	ND	5
Bromochloromethane	74-97-5	ND	5
Bromodichloromethane	75-27-4	ND	5 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	13	5
Carbon disulfide	75-15-0	ND	5
Carbon tetrachloride	56-23 <b>-</b> 5	ND	5 5 5 5
Chlorobenzene	108-90-7	19	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	64	5
1,3-Dichlorobenzene	541-73-1	9	5
1,4-Dichlorobenzene	106-46-7	18	5
Dichlorodifluoromethane	75-71-8	ND	5
1,1-Dichloroethane	75-34-3	ND	555555555555555
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

Page 9 of 23

## Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59125.00 Clayton Project No. 94102.69

Date Sampled: 10/20/94 Sample Identification: MW-3 Date Received: 10/20/94 Lab Number: 9410269-03A Date Prepared: 10/28/94 Sample Matrix/Media: WATER Preparation Method: EPA 5030 10/28/94 Date Analyzed: Method Reference: EPA 8260 Analyst: JР

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Cont	inued)		
1,2-Dichloropropane	78-87-5	ND	5
■ 1,3-Dichloropropane	142-28-9	ND	5
2,2-Dichloropropane	594-20-7	ND	5 5 5 5 5 5 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	90	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	20	5
<pre>p-Isopropyltoluene</pre>	99-87-6	ND	5 5
Methylene chloride	75-09-2	ND	
<pre>4-Methyl-2-pentanone</pre>	108-10-1	ND	20
Naphthalene	91-20-3	29	5
<pre>n-Propylbenzene</pre>	103-65-1	43	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 5 5 5 5 5 5 5 5 5 5 5 5 5 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	
<ul> <li>Trichlorofluoromethane</li> </ul>	75-69-4	ND	5
1,2,3-Trichloropropane	96-18-4	ND	5



Page 10 of 23

#### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59125.00

Clayton Project No. 94102.69

Sample Identification: MW-3 Date Sampled: 10/20/94 9410269-03A Date Received: 10/20/94 Lab Number: Date Prepared: 10/28/94 Sample Matrix/Media: WATER Date Analyzed: 10/28/94 Preparation Method: EPA 5030

Method Reference:	EPA 8260		Analyst:	JP
Analyte		CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compou	unds (Continu	<u>led)</u>		
1,2,4-Trimethylbenzer 1,3,5-Trimethylbenzer Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes	ne	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	150 46 ND ND 68 140	5 5 1 5 5 5 5
<u>Surrogates</u>			Recovery (%)	OC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane Toluene-d8		460-00-4 1868-53-7 2037-26-5	114 96 100	74 - 121 80 - 120 81 - 117

Not detected at or above limit of detection

Information not available or not applicable

Page 11 of 23

## Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59125.00

Clayton Project No. 94102.69

Sample Identification: MW-4 Lab Number:

9410269-04A

10/20/94 Date Sampled: Date Received: 10/20/94 Date Prepared: 10/28/94

Sample Matrix/Media: Preparation Method:

WATER EPA 5030

Date Analyzed: 10/28/94

JP Method Reference: EPA 8260 Analyst:

CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
67-64-1	ND	20
71-43-2	260	5
108-86-1	ND	5
74-97-5	ND	5
75-27-4	ND	5 5
75-25-2	ND	
74-83-9	ND	5
78-93-3	ND	20
104-51-8	17	5
75-15-0	ND	5
56-23-5	ND	5
108-90-7	ND	5 5 5 5 5 5
75-00-3	ND	5
67-66-3	ND	5
74-87-3	ND	5
95-49-8	ND	5
106-43-4	ND	5 5 5
124-48-1	ND	5
96-12-8	ND	5
106-93-4	ND	5
74-95-3	ND	5 5 5 5 5 5
95-50-1	7	5
541-73-1	ND	5
106-46-7	ND	5
75-71-8	ND	5
75-34-3	ND	5
107-06-2	ND	5
75-35-4	ИD	5
156-59-2	ND	5 5 5 5
156-60-5	12	5
	67-64-1 71-43-2 108-86-1 74-97-5 75-27-4 75-25-2 74-83-9 78-93-3 104-51-8 75-15-0 56-23-5 108-90-7 75-66-3 74-87-3 95-49-8 106-43-4 124-48-1 96-12-8 106-93-4 74-95-3 95-50-1 541-73-1 106-46-7 75-34-3 107-06-2 75-35-4 156-59-2	CAS # (ug/L)  67-64-1 ND 71-43-2 260 108-86-1 ND 74-97-5 ND 75-27-4 ND 75-25-2 ND 74-83-9 ND 78-93-3 ND 104-51-8 17 75-15-0 ND 56-23-5 ND 108-90-7 ND 75-00-3 ND 67-66-3 ND 74-87-3 ND 95-49-8 ND 106-43-4 ND 124-48-1 ND 96-12-8 ND 106-93-4 ND 74-95-3 ND 106-93-4 ND 74-95-3 ND 75-71-8 ND 75-34-3 ND 107-06-2 ND 75-35-4 ND 107-06-2 ND 75-35-4 ND

Page 12 of 23

## Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59125.00 Clayton Project No. 94102.69

Date Sampled: 10/20/94 Sample Identification: MW-4 9410269-04A Date Received: 10/20/94 Lab Number: Date Prepared: 10/28/94 Sample Matrix/Media: WATER Preparation Method: EPA 5030 Date Analyzed: 10/28/94 Analyst: Method Reference: EPA 8260 JΡ

ND ND ND	5
ND	5
ND ND ND 240 ND	55555555555555555555555555555555555555
	ND ND ND 34 ND ND

Page 13 of 23

#### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59125.00

Clayton Project No. 94102.69

Sample Identification: MW-4 Date Sampled: 10/20/94 9410269-04A Date Received: 10/20/94 Lab Number: Date Prepared: 10/28/94 Sample Matrix/Media: WATER Preparation Method: EPA 5030 Date Analyzed: 10/28/94 Method Reference: EPA 8260 Analyst: JΡ

Analyte	Concentration CAS # (ug/L)		Method Detection Limit (ug/L)
Volatile Organic Compounds (Con-	tinued)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	300 100 ND ND 110 330	5 5 10 5 5 5
<u>Surrogates</u>		Recovery (%)	OC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane Toluene-d8	460-00-4 1868-53-7 2037-26-5	118 89 97	74 - 121 80 - 120 81 - 117

Page 14 of 23

## Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59125.00 Clayton Project No. 94102.69

Sample Identification: METHOD BLANK Date Sampled: 9410269-07A Date Received: ---Lab Number:

Sample Matrix/Media: WATER Date Prepared: 10/27/94 Preparation Method: EPA 5030 Method Reference: EPA 8260 Date Analyzed: 10/27/94

JΡ Analyst:

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 5 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 <b>-</b> 3	ND	5 5 5 5 5 5
2-Chlorotoluene	95-49-8	ND	5
4-Chlorotoluene	106-43-4	ND	5 5 5
Dibromochloromethane	124-48-1	ND	5
1,2-Dibromo-3-chloropropane	96-12-8	ND	
1,2-Dibromoethane	106-93-4	ND	5
Dibromomethane	74-95-3	ND	5 5 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 5 5 5 5
1,2-Dichloroethane	107-06-2	ND	5
1,1-Dichloroethene	75-35-4	ND	
cis-1,2-Dichloroethene	156-59-2	ND	5
trans-1,2-Dichloroethene	156-60-5	ИD	5



Page 15 of 23

## Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59125.00 Clayton Project No. 94102.69

Sample Identification: METHOD BLANK Date Sampled: -Lab Number: 9410269-07A Date Received: --

Sample Matrix/Media: WATER Date Prepared: 10/27/94
Preparation Method: EPA 5030 Date Analyzed: 10/27/94

Method Reference: EPA 8260 Analyst: JP

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Con-	tinued)		
1 2 Dishleyensons	78-87-5	ND	<b>E</b>
1,2-Dichloropropane	142-28-9	ND	5 5
1,3-Dichloropropane	594-20-7	ND	5
2,2-Dichloropropane 1,1-Dichloropropene	563-58-6	ND	5 5
cis-1,3-dichloropropene	10061-01-5	ND	5 5
trans-1,3-dichloropropene	10061-02-6	ND	
Ethylbenzene	100-41-4	ND	5 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 5 5 5 5 5
_ Tetrachloroethene	127-18-4	ND	5
Toluene	108-88-3	ND	5
<pre>1,2,3-Trichlorobenzene</pre>	87-61-6	ND	
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



Page 16 of 23

#### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59125.00 Clayton Project No. 94102.69

Sample Identification: METHOD BLANK Date Sampled: 9410269-07A Date Received: Lab Number:

Date Prepared: 10/27/94 WATER Sample Matrix/Media: Preparation Method: EPA 5030
Method Reference: EPA 8260 Date Analyzed: 10/27/94

Method Reference: EPA 8260		Analyst:	JP	
Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)	
Volatile Organic Compounds (Con	cinued)			
1,2,4-Trimethylbenzene	95-63-6	ND	5 5 10	
1,3,5-Trimethylbenzene	108-67-8	ND	5	
Vinyl acetate	108-05-4	ND	10	
Vinyl chloride	75-01-4	ND	5 5 5	
o-Xylene	95-47-6	ND	5	
p,m-Xylenes	<b></b>	ND	5	
Surrogates		Recovery (%)	OC Limits (%)	
	460-00-4	96	74 - 121	
4-Bromofluorobenzene				
4-Bromofluorobenzene Dibromofluoromethane	1868-53-7	93	80 - 120	

Page 17 of 23

## Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59125.00 Clayton Project No. 94102.69

Sample Identification: MW-1 Date Sampled: 10/20/94 Date Received: 10/20/94 Lab Number: 9410269-01C Sample Matrix/Media: WATER Date Prepared: 10/31/94 EPA 5030 Date Analyzed: 10/31/94 Preparation Method: EPA 8015/8020 WAS Method Reference: Analyst:

nalyte	CAS #		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	
urrogates		Recovery (%)	OC Limits (%)	
a,a,a-Trifluorotoluene	98-08-8	76	50 - 150	

Page 18 of 23

#### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59125.00

Clayton Project No. 94102.69

Sample Identification: MW-2

a,a,a-Trifluorotoluene

Date Sampled:

10/20/94

Lab Number:

Surrogates

9410269-02C

Date Received:

10/20/94 10/31/94

Sample Matrix/Media: Preparation Method: EPA 5030

WATER

Date Prepared: Date Analyzed:

Recovery (多)

90

10/31/94

OC Limits (%)

50 - 150

Method Reference:

EPA 8015/8020

Analyst:

WAS

-	E111 0013/0020	11101150.	112 224
Analyte	CAS	Concentration # (ug/L)	Method Detection Limit (ug/L)
BTEX/Gasoline			
Benzene Ethylbenzene Toluene o-Xylene p,m-Xylenes Gasoline	71-4 100-4 108-8 95-4	1-4 ND 8-3 ND	0.4 0.3 0.3 0.4 0.4

98-08-8



Page 19 of 23

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59125.00 Clayton Project No. 94102.69

Sample Identification: MW-3 Date Sampled: 10/20/94 Date Received: 10/20/94 Lab Number: 9410269-03C Date Prepared: 10/31/94 Sample Matrix/Media: WATER Preparation Method: EPA 5030 Date Analyzed: 10/31/94 WAS EPA 8015/8020 Analyst: Method Reference:

Analyte	Cor te CAS #			
BTEX/Gasoline				
Benzene	71-43-2	8.9	0.4	
Ethylbenzene	100-41-4	96	0.3	
Toluene	108-88-3	4.4	0.3	
o-Xylene	95-47-6	69	0.4	
p,m-Xylenes		160	0.4	
Gasoline		2600	50	
Surrogates		Recovery (%)	OC Limits (%)	
a,a,a-Trifluorotoluene	98-08-8	112	50 - 150	

Page 20 of 23

## Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59125.00 Clayton Project No. 94102.69

Date Sampled: 10/20/94 Sample Identification: MW-4 9410269-04C Date Received: 10/20/94 Lab Number: Date Prepared: 10/31/94 Sample Matrix/Media: WATER Preparation Method: Date Analyzed: 10/31/94 EPA 5030 Method Reference: EPA 8015/8020 Analyst: WAS

Analyte	Concentrat CAS # (ug/I		Method Detection Limit (ug/L)
STEX/Gasoline			
Benzene	71-43-2	360	0.4
Ethylbenzene	100-41-4	270	0.3
Toluene	108-88-3	33	0.3
o-Xylene	95-47-6	120	0.4
p,m-Xylenes		520	0.4
Gasoline	<del>-</del> -	7800	50
urrogates		Recovery (%)	QC Limits (多)
a,a,a-Trifluorotoluene	98-08-8	102	50 - 150

Page 21 of 23

## Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59125.00 Clayton Project No. 94102.69

Sample Identification: METHOD BLANK Date Sampled: -- Lab Number: 9410269-07A Date Received: --

Sample Matrix/Media: WATER Date Prepared: 10/31/94
Preparation Method: EPA 5030 Date Analyzed: 10/31/94

Method Reference: EPA 8015/8020 Analyst: WAS

110 0110 0 110 120 120 1100 1	miii 0010, 0010	100001	
Analyte	CAS #		Method Detection on 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-Trifluorotolue	ne 98-08-	-8 90	50 - 150



Page 22 of 23

## Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 59125.00 Clayton Project No. 94102.69

Sample Identification: COMPOSITE DRUM SAMPLE DS-1

9410269-06

Sample Matrix/Media: WATER

Lab Number:

Date Sampled: 10/20/94

Date Received: 10/20/94

Analyte	Concentration	Method Detection Limit	Units	Date Prepared	Date Analyzed	Prep Method	Method Reference
Flash Point	>200		Degrees F		10/31/94		EPA 1010
Reactive Cyanide	<0.1	0.1	mg/L		11/01/94		EPA 335.2
Reactive Sulfide	<10	10	mg/L		11/02/94		SW 7.3.4.2
рН	7.2		s.u.		10/20/94		EPA 150.1



Page 23 of 23

Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 59125.00 Clayton Project No. 94102.69

Sample Identification: METHOD BLANK

Lab Number:

9410269-07

Sample Matrix/Media:

WATER

Date Sampled: -Date Received: --

		Method Detection	L	Date	Date	Prep	Method
Analyte	Concentration	Limit	Units	Prepared	Analyzed	Method	Reference
Reactive Cyanide	<0.1	0.1	mg/L		11/01/94		EPA 335.2
Reactive Sulfide	<10	10	mg/L		11/02/94		SW 7.3.4.2

### APPENDIX C - January 1995 Analytical Results

Rev 0 061295

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



February 13, 1995

ID#:	
SERVICE:	
BG, CF, CO, MT, PL	
CORRESPONDENCE:	

FIIF

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

Clayton Project No. 60899.03

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 January 25, 1995 at the Ingersoll-Rand facility located at 1944 Marina Boulevard in San Leandro, California.

Groundwater samples were collected from wells MW-1, MW-2, 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. 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-1, MW-2, MW-3, and MW-4, observation well OB-1, and the purged water DC-1 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 DC-1 was analyzed for reactivity, corrosivity, and ignitability (RCI).

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



Mr. William Block CAPSULE ENVIRONMENTAL ENGINEERING December 9, 1994 Page 2 Clayton Project No. 59125.00

NO. 5046

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

JFV/rjs Enclosures

ACT1VE\60899-03.REP



## ATTACHMENT 1

## ANALYTICAL RESULTS

Western Operations

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



February 8, 1995

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

Client Ref.: 56418.00

Clayton Project No.: 95012.73

Dear Mr. Vargas:

Attached is our analytical laboratory report for the samples received on January 25, 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 March 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

Page 2 of 29

## Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 95012.73

sample Identification: MW-1

Date Sampled: 01/25/95

Lab Number:

9501273-01A

Date Received: 01/25/95

Sample Matrix/Media: reparation Method:

WATER EPA 5030 Date Prepared: 01/28/95 Date Analyzed: 01/28/95

Method Reference:

EPA 8260

Analyst:

JΡ

	Method	

analyte	CAS #	Concentration (ug/L)	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 5 5 5 5 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	5
■ n-Butylbenzene	104-51-8	ND	
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
<pre>1,4-Dichlorobenzene</pre>	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

Page 3 of 29

### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 95012.73

Cample Identification:MW-1Date Sampled:01/25/95Lab Number:9501273-01ADate Received:01/25/95Cample Matrix/Media:WATERDate Prepared:01/28/95Cample Method:EPA 5030Date Analyzed:01/28/95

Method Reference: EPA 8260 Analyst: JP

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Tolatile Organic Compounds (Con	tinued)		
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 5
Toluene	108-88-3	NĐ	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	16	5
Trichlorofluoromethane	75-69-4	ND	5
1,2,3-Trichloropropane	96-18-4	ND	5

Page 4 of 29

## Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 95012.73

Sample Identification: MW-1

Lab Number: Sample Matrix/Media:

9501273-01A WATER

Preparation Method: EPA 5030 Method Reference:

EPA 8260

Date Sampled:

01/25/95 Date Received: 01/25/95 Date Prepared: 01/28/95

Date Analyzed:

01/28/95

Analyst:

JP

<b>"</b>				
				Method
				Detection
			Concentration	Limit
Analyte	CAS :	Ħ	(ug/L)	(ug/L)

Molatile	Organic	Compounds	(Continued)
AOTOCTTO	Organic	COMPONITION	(COMPANIA CALLACA)

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

<u>Surrogates</u>		Recovery (%)	OC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane	460-00-4 1868-53-7	99 101	74 - 121 80 - 120
Toluene-d8	2037-26-5	98	81 - 117

Page 5 of 29

### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 95012.73

Sample Identification: MW-2

Date Sampled:

01/25/95

Lab Number:

9501273-02A WATER

Date Received: Date Prepared:

01/25/95 01/28/95

Bample Matrix/Media: Preparation Method:

EPA 5030

Date Analyzed:

01/28/95

Method Reference:

EPA 8260

Analyst:

JP

				Method
				Detection
			Concentration	Limit
analyte	CAS	#	(ug/L)	(ug/L)

Analyte	CAS #	Concentration (ug/L)	Limit (ug/L)
Talatile Organic Compounds			<del></del>
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	5
■ 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 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

Page 6 of 29

### Analytical Results

for

Clayton Environmental Consultants, Inc.
Client Reference: 56418.00
Clayton Project No. 95012.73

Sample Identification:MW-2Date Sampled:01/25/95Lab Number:9501273-02ADate Received:01/25/95Sample Matrix/Media:WATERDate Prepared:01/28/95Preparation Method:EPA 5030Date Analyzed:01/28/95

Method Reference: EPA 8260 Analyst: JP

malyte	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	ИD	5
trans-1,3-dichloropropene	10061-02-6	ND	5 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
<pre>4-Methyl-2-pentanone</pre>	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	ИD	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	ИD	5 5
Trichloroethene	79-01-6	ND	5
Trichlorofluoromethane	, 75-69-4	ND	5
1,2,3-Trichloropropane	96-18-4	ND	5

Page 7 of 29

# Analytical Results

for

Clayton Environmental Consultants, Inc.
Client Reference: 56418.00
Clayton Project No. 95012.73

Sample Identification: MW-2 Date Sampled: 01/25/95 9501273-02A Date Received: 01/25/95 Lab Number: Bample Matrix/Media: Date Prepared: 01/28/95 WATER Preparation Method: EPA 5030 Date Analyzed: 01/28/95 Method Reference: EPA 8260 Analyst: JP

method Reference. EFA 0200		Andryst.	O.F
Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Cont	cinued)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	ND ND ND ND ND	5 5 10 5 5 5
Surrogates		Recovery (%)	OC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane Toluene-d8	460-00-4 1868-53-7 2037-26-5	97 104 99	74 - 121 80 - 120 81 - 117

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

of 29 Page 8

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 95012.73

Sample Identification: MW-3

Date Sampled:

01/25/95

Lab Number:

9501273-03A WATER

Date Received: Date Prepared: 01/25/95 01/28/95

Bample Matrix/Media: Preparation Method:

EPA 5030

Date Analyzed:

01/28/95

Method Reference:

EPA 8260

Analyst:

JΡ

			Method Detection
nalyte	CAS #	Concentration $(\mathtt{ug}/\mathtt{L})$	Limit (ug/L)

Volatile Organic Compounds	nalyte	CAS #	Concentration (ug/L)	(ug/L)
Benzene	Volatile Organic Compounds			
1,2-Dichloroethane       107-06-2       ND       30         1,1-Dichloroethane       75-35-4       ND       30         cis-1,2-Dichloroethane       156-59-2       ND       30	Acetone Benzene Bromobenzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane 2-Butanone n-Butylbenzene Carbon disulfide Carbon tetrachloride Chlorobenzene Chlorotenane Chloroform Chloromethane 2-Chlorotoluene Dibromochloromethane 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane Dibromomethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane	71-43-2 108-86-1 74-97-5 75-27-4 75-25-2 74-83-9 78-93-3 104-51-8 75-15-0 56-23-5 108-90-7 75-00-3 67-66-3 74-87-3 95-49-8 106-43-4 124-48-1 96-12-8 106-93-4 74-95-3 95-50-1 541-73-1 106-46-7 75-71-8	970 ND	30 30 30 30 30 30 30 30 30 30 30 30 30 3
	1,2-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene	107-06-2 75-35-4 156-59-2	ND ND ND	30 30 30

Page 9 of 29

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 95012.73

Sample Identification: MW-3

Lab Number: 9501273-03A

Sample Matrix/Media:

Preparation Method: EPA 5030
Method Reference: EPA 8260 Method Reference:

WATER

EPA 8260

Date Sampled:

Date Received: 01/25/95 Date Prepared: 01/28/95

Date Analyzed:

01/28/95

01/25/95

Analyst:

JΡ

				Method Detection
Analyte	G3.G	п	Concentration	Limit
Analyte	CAS	#	(ug/L)	(ug/L)

Analyte CAS # (ug/L)  Volatile Organic Compounds (Continued)  1,2-Dichloropropane 78-87-5 ND 1,3-Dichloropropane 142-28-9 ND 2,2-Dichloropropane 594-20-7 ND 1,1-Dichloropropene 563-58-6 ND	30 30 30 30 30 30 30 30 30 30
1,2-Dichloropropane 78-87-5 ND 1,3-Dichloropropane 142-28-9 ND 2,2-Dichloropropane 594-20-7 ND	30 30 30 30 30 30 30
1,2-Dichloropropane       78-87-5       ND         1,3-Dichloropropane       142-28-9       ND         2,2-Dichloropropane       594-20-7       ND	30 30 30 30 30 30 30
1,3-Dichloropropane 142-28-9 ND 2,2-Dichloropropane 594-20-7 ND	30 30 30 30 30 30 30
2,2-Dichloropropane 594-20-7 ND	30 30 30 30 30 30
	30 30 30 30 30
1 1-Dichloropropens 563-58-6 ND	30 30 30 30
T'T DICHTOTOBEOBEHG 102.20.0 ND	30 30 30
cis-1,3-dichloropropene 10061-01-5 ND	30 30
trans-1,3-dichloropropene 10061-02-6 ND	30
Ethylbenzene 100-41-4 80	
Freon 113 76-13-1 ND	30
Hexachlorobutadiene 87-68-3 ND	
2-Hexanone 591-78-6 ND	100
Isopropylbenzene 98-82-8 ND	30
p-Isopropyltoluene 99-87-6 ND	30
Methylene chloride 75-09-2 ND	30
4-Methyl-2-pentanone 108-10-1 ND	100
Naphthalene 91-20-3 100	30
n-Propylbenzene 103-65-1 ND	30
sec-Butylbenzene 135-98-8 ND	30
Styrene 100-42-5 ND	30
tert-Butylbenzene 98-06-6 ND	30
1,1,1,2-Tetrachloroethane 630-20-6 ND	30
1,1,2,2-Tetrachloroethane 79-34-5 ND	30
Tetrachloroethene 127-18-4 ND	30
Toluene 108-88-3 410	30
1,2,3-Trichlorobenzene 87-61-6 ND	30
1,2,4-Trichlorobenzene 120-82-1 ND	30
1,1,1-Trichloroethane 71-55-6 ND	30
1,1,2-Trichloroethane 79-00-5 ND	30
Trichloroethene 79-01-6 ND	30
Trichlorofluoromethane 75-69-4 ND	30
1,2,3-Trichloropropane 96-18-4 ND	30

Page 10 of 29

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00

Clayton Project No. 95012.73

ample Identification: MW-3

9501273-03A

■ample Matrix/Media:

reparation Method: EPA 5030

WATER

Method Reference:

Vinyl chloride

o-Xylene

Lab Number:

EPA 8260

Date Sampled:

01/25/95

Date Received: Date Prepared:

ND

820

01/25/95 01/28/95

Date Analyzed:

01/28/95

30

30

Analyst:

JΡ

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
olatile Organic Compounds (Cont	inued)		
1,2,4-Trimethylbenzene	95-63-6	350	30
1,3,5-Trimethylbenzene	108-67-8	80	30
Vinyl acetate	108-05-4	ND	50
, <del></del>		4.44	

p,m-Xylenes		1000	30
Surrogates		Recovery (%)	OC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane Toluene-d8	460-00-4 1868-53-7 2037-26-5	98 101 97	74 - 121 80 - 120 81 - 117

75-01-4

95-47-6

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

Detection limits increased due to dilution necessary for quantitation. Note:

Page 11 of 29

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 95012.73

Sample Identification: MW-4 Date Sampled: 01/25/95 Date Received: Lab Number: 9501273-04A 01/25/95 Sample Matrix/Media: WATER Date Prepared: 01/28/95 Date Analyzed: Preparation Method: EPA 5030 01/28/95 Method Reference: EPA 8260 Analyst: JΡ

Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds			
Acetone	67-64-1	ND	100
Benzene	71-43-2	400	30
Bromobenzene	108-86-1	ND	30
Bromochloromethane	74-97-5	ND	30
Bromodichloromethane	75-27-4	ND	30
Bromoform	75-25-2	ND	30'
Bromomethane	74-83-9	ND	30
2-Butanone	78-93-3	ND	100
n-Butylbenzene	104-51-8	ND	30
Carbon disulfide	75-15-0	ND	30
Carbon tetrachloride	56-23-5	ND	30
Chlorobenzene	108-90-7	ND	30
Chloroethane	75-00-3	ND	30
Chloroform	67-66-3	ND	30
Chloromethane	74-87-3	ND	30
2-Chlorotoluene	95-49-8	ND	30
4-Chlorotoluene	106-43-4	ND	30
Dibromochloromethane	124-48-1	ND	30
1,2-Dibromo-3-chloropropane	96-12-8	ND	30
1,2-Dibromoethane	106-93-4	ND	30
Dibromomethane	74-95-3	ND	30
_ 1,2-Dichlorobenzene	95-50-1	ND	30
1,3-Dichlorobenzene	541-73-1	ND	30
1,4-Dichlorobenzene	106-46-7	ND	30
Dichlorodifluoromethane	75-71-8	ND	30
<pre>1,1-Dichloroethane</pre>	75-34-3	ND	30
1,2-Dichloroethane	107-06-2	ND	30
1,1-Dichloroethene	75-35-4	ND	30
cis-1,2-Dichloroethene	156-59-2	ND	30
trans-1,2-Dichloroethene	156-60-5	ND	30

Page 12 of 29

### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00

Clayton Project No. 95012.73

sample Identification: MW-4

Date Sampled: 01/25/95

Lab Number: ample Matrix/Media:

9501273-04A

Date Received: 01/25/95

reparation Method: EPA 5030

WATER

Date Prepared: 01/28/95

Date Analyzed: 01/28/95

Method Reference: EPA 8260 Analyst:

JΡ

		Method
		Detection
<u>_</u>	Concentration	Limit

nalyte	CAS #	Concentration (ug/L)	Limit (ug/L)
olatile Organic Compounds (Con	tinued)		
1,2-Dichloropropane	78-87-5	ND	30
1,3-Dichloropropane	142-28-9	ND	30
2,2-Dichloropropane	594-20 <i>-7</i>	ND	30
1,1-Dichloropropene	563-58-6 10061-01-5	ND ND	30 30
cis-1,3-dichloropropene	10061-01-3	ND	30
trans-1,3-dichloropropene Ethylbenzene	10001-02-0	420	30
Freon 113	76-13-1	ND	30
■ Hexachlorobutadiene	87-68-3	ND	30
2-Hexanone	591-78-6	ND	100
Isopropylbenzene	98-82-8	40	30
p-Isopropyltoluene	99-87-6	ND	30
Methylene chloride	75-09-2	ND	30
4-Methyl-2-pentanone	108-10-1	ND	100
Naphthalene	91-20-3	120	30
■ n-Propylbenzene	103-65-1	100	30
sec-Butylbenzene	135-98-8	ND	30
Styrene	100-42-5	ND	30
_ tert-Butylbenzene	98-06-6	ND	30
1,1,1,2-Tetrachloroethane	630-20-6	ND	30
<pre>1,1,2,2-Tetrachloroethane</pre>	79-34-5	ND	30
Tetrachloroethene	127-18-4	ND	30
Toluene	108-88-3	90	30
1,2,3-Trichlorobenzene	87-61-6	ND	30
1,2,4-Trichlorobenzene	120-82-1	ND	30
<pre>1,1,1-Trichloroethane</pre>	71-55-6	ND	30
1,1,2-Trichloroethane	79-00-5	ND	30
Trichloroethene	79-01-6	ND	30
Trichlorofluoromethane	75-69-4	ND	30
1,2,3-Trichloropropane	96-18-4	ND	30

Page 13 of 29

# Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 56418.00 Clayton Project No. 95012.73

Sample Identification: MW-4

Lab Number:

9501273-04A

Sample Matrix/Media:

Preparation Method: EPA 5030 Method Reference:

WATER

EPA 8260

Date Sampled:

01/25/95

Date Received: Date Prepared: 01/25/95 01/28/95

Date Analyzed:

01/28/95

Analyst.

method Reference: EPA 8260		Analyst:	JP
Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Cont	cinued)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	600 120 ND ND 310 550	30 30 50 30 30 30
Surrogates		Recovery (%)	OC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane Toluene-d8	460-00-4 1868-53-7 2037-26-5	98 100 97	74 - 121 80 - 120 81 - 117

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

Detection limits increased due to dilution necessary for quantitation. Note:

Page 14 of 29

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00

Clayton Project No. 95012.73

Sample Identification: OB-1

9501273-05A

Date Sampled:

01/25/95

Lab Number: Sample Matrix/Media:

WATER

Date Received: Date Prepared: 01/25/95 01/28/95

Preparation Method:

EPA 5030

Date Analyzed:

01/28/95

Method Reference:

EPA 8260

Analyst:

JΡ

			Method Detection
<b>.</b> .		Concentration	Limit
Analyte	CAS #	(ug/L)	(ug/L)

Analyte	CAS #	Concentration (ug/L)	Limit (ug/L)
Volatile Organic Compounds			
Acetone	67-64-1	ND	20
■ Benzene	71-43-2	180	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	5
■ 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	8	5
trans-1,2-Dichloroethene	156-60-5	ND	5

Page 15 of 29

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 95012.73

sample Identification: OB-1 Date Sampled: 01/25/95 Lab Number: 9501273-05A Date Received: 01/25/95 Sample Matrix/Media: WATER Date Prepared: 01/28/95 reparation Method: EPA 5030 Date Analyzed: 01/28/95 Method Reference: EPA 8260 Analyst: JΡ

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Con-	tinued)		
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 5 5 5
trans-1,3-dichloropropene	10061-02-6	ND	5
Ethylbenzene	100-41-4	32	5
Freon 113	76-13-1	ND	5
Hexachlorobutadiene	87-68-3	ND	5
2-Hexanone	591-78-6	ND	20
<pre>Isopropylbenzene</pre>	98-82-8	44	5
p-Isopropyltoluene	99-87 <b>-</b> 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	11	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	39	5
1,2,3-Trichlorobenzene	87-61-6	ND	5
1,2,4-Trichlorobenzene	120-82-1	23	5
■ 1,1,1-Trichloroethane	71-55-6	ND	5
1,1,2-Trichloroethane	79-00-5	ND	5
Trichloroethene	79-01-6	27	5
Trichlorofluoromethane	75-69-4	ND	5
1,2,3-Trichloropropane	96-18-4	ND	5

Page 16 of 29

### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00

Clayton Project No. 95012.73

sample Identification: OB-1

Lab Number:

9501273-05A

sample Matrix/Media: reparation Method:

WATER EPA 5030

Method Reference:

EPA 8260

Date Sampled:

01/25/95

Date Received: Date Prepared: 01/25/95 01/28/95

Date Analyzed:

01/28/95

Analyst:

JΡ

				Method
				Detection
			Concentration	Limit
nalyte	CAS	#	(ug/L)	(ug/L)

1,2,4-Trimethylbenzene	95-63-6	NĎ	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	21	5
p,m-Xylenes	<b></b>	45	5

<u>Surrogates</u>		Recovery (%)	OC Limits (웅)
4-Bromofluorobenzene	460-00-4	98	74 - 121
Dibromofluoromethane	1868-53-7	96	80 - 120
Toluene-d8	2037-26-5	99	81 - 117

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

Page 17 of 29

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 95012.73

Sample Identification: METHOD BLANK

9501273-07A

Lab Number:

WATER

ample Matrix/Media: reparation Method: EPA 5030 Method Reference: EPA 8260

Method Reference:

Date Sampled: Date Received: ---

Date Prepared: 01/28/95 Date Analyzed: 01/28/95

Analyst: JP

nalyte	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	5
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
<pre>2-Chlorotoluene</pre>	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
<pre>cis-1,2-Dichloroethene</pre>	156-59-2	ND	5
trans-1,2-Dichloroethene	156-60-5	ND	5

Page 18 of 29

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 95012.73

sample Identification: METHOD BLANK

Lab Number: ample Matrix/Media:

9501273-07A WATER

Preparation Method: EPA 5030 Method Reference: EPA 8260

Method Reference:

Date Sampled:

Date Received:

Date Prepared:

01/28/95 Date Analyzed: 01/28/95

Analyst:

JΡ

- -

analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (Con-	tinued)		
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
<pre>1,2,3-Trichlorobenzene</pre>	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

Page 19 of 29

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00

Clayton Project No. 95012.73

Sample Identification: METHOD BLANK

Lab Number:

9501273-07A

Sample Matrix/Media:

WATER

Preparation Method: EPA 5030

Method Reference:

EPA 8260

Date Sampled:

Date Received:

Date Prepared:

Date Analyzed:

01/28/95 01/28/95

Analyst:

JP

_		· • - · ·	
Analyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
Volatile Organic Compounds (	(Continued)		
1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene Vinyl acetate Vinyl chloride o-Xylene p,m-Xylenes	95-63-6 108-67-8 108-05-4 75-01-4 95-47-6	ND ND ND ND ND	5 5 10 5 5 5
<u>Surrogates</u>		Recovery (%)	QC Limits (%)
4-Bromofluorobenzene Dibromofluoromethane Toluene-d8	460-00-4 1868-53-7 2037-26-5	99 97 99	74 - 121 80 - 120 81 - 117

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

Page 20 of 29

# Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 56418.00 Clayton Project No. 95012.73

Sample Identification: MW-1

ab Number:

WATER

ample Matrix/Media: Preparation Method:

EPA 5030

Method Reference:

9501273-01C

EPA 8015/8020

Date Sampled:

01/25/95 Date Received: 01/25/95 Date Prepared: 01/27/95 Date Analyzed: 01/27/95

Analyst:

WAS

nalyte	CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)
TEX/Gasoline	<del>, , , , , , , , , , , , , , , , , , , </del>		

TEX.	<u>/Gasc</u>	line

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	<b>→</b> →	ND	0.4
Gasoline		ND	50

<u>Surrogates</u>		Recovery (%)	OC Limits (名)
a,a,a-Trifluorotoluene	98-08-8	92	50 - 150

 $\overline{N}D$ : Not detected at or above limit of detection Information not available or not applicable

Page 21 of 29

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 95012.73

Sample Identification: MW-2

Lab Number:

9501273-02C

Sample Matrix/Media: Preparation Method:

WATER EPA 5030 Date Sampled: 01/25/95

Date Received: 01/25/95 01/27/95 Date Prepared: Date Analyzed: 01/27/95

Method Reference:	EPA 8015/8020		Analyst:	WAS		
nalyte		CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)		
BTEX/Gasoline						
Benzene		71-43-2	ND	0.4		
Ethylbenzene Toluene		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		<del></del>	ND	50		
Gasoline  Surrogates			Recovery (%)	OC Limits (%)		
a,a,a-Trifluorotolue	ne	98-08-8	9,1	50 - 150		

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

Page 22 of 29

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00

Clayton Project No. 95012.73

Sample Identification: MW-3

Lab Number:

9501273-03C

sample Matrix/Media: Preparation Method:

WATER

EPA 5030

Date Sampled: 01/25/95

Date Received: 01/25/95 Date Prepared: 01/27/95

Date Analyzed:

01/27/95

Method Reference:	EPA 8015/8020		Analyst:	WAS			
nalyte		CAS #	Concentration (ug/L)	Method Detection Limit (ug/L)			
TEX/Gasoline							
Benzene Ethylbenzene Toluene o-Xylene p,m-Xylenes Gasoline		71-43-2 100-41-4 108-88-3 95-47-6	950 86 340 760 1100 7100	0.4 0.3 0.3 0.4 0.4			
<u>Surrogates</u>			Recovery (%)	OC Limits (名)			
a,a,a-Trifluorotolue	ene	98-08-8	104	50 - 150			

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

Page 23 of 29

# Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 95012.73

Sample Identification: MW-4 Date Sampled: 01/25/95 9501273-04C Date Received: 01/25/95 Lab Number: ample Matrix/Media: WATER reparation Method: EPA 5030 Date Prepared: 01/30/95 01/30/95 Date Analyzed: EPA 8015/8020 Method Reference: Analyst: WAS

method kererence.	SPR 0013/0020		Andryse.	41.70			
analyte	C	AS #	Concentration (ug/L)	Method Detection Limit (ug/L)			
BTEX/Gasoline							
Benzene	7	1-43-2	470	0.4			
	10	0-41-4	520	0.3			
Ethylbenzene Toluene	10	8-88-3	110	0.3			
o-Xylene	9	5-47-6	320	0.4			
•			730	0.4			
p,m-Xylenes Gasoline			9700	50			
Surrogates			Recovery (%)	OC Limits (%)			
a,a,a-Trifluorotoluene	9	8-08-8	79	50 - 150			

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

Page 24 of 29

### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 95012.73

Sample Identification: OB-1 Date Sampled: 01/25/95 Lab Number: 9501273-05C Date Received: 01/25/95 ample Matrix/Media: WATER Date Prepared: 01/27/95 reparation Method: EPA 5030 Date Analyzed: 01/27/95 Method Reference: EPA 8015/8020 Analyst: WAS

•				
analyte	CAS #		ncentration (ug/L)	Method Detection Limit (ug/L)
TEX/Gasoline				
Benzene	71-43	-2	280	0.4
Ethylbenzene	100-41		24	0.3
Toluene	108-88		29	0.3
o-Xylene	95-47	-6	15	0.4
_ p,m-Xylenes			35	0.4
Gasoline			3900	50
<u>Surrogates</u>		Rec	covery (%)	OC Limits (%)
a,a,a-Trifluorotoluen	e 98-08	-8	110	50 - 150

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

Page 25 of 29

## Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00 Clayton Project No. 95012.73

Sample Identification: METHOD BLANK

Date Sampled:

Lab Number:

9501273-07A

Date Received: **--**

ample Matrix/Media: reparation Method: EPA 5030

WATER

Date Prepared: 01/27/95 Date Analyzed: 01/27/95

Method Reference:

EPA 8015/8020

Analyst:

WAS

Method Relerence:	EPA 8015/8020		Analyst:	WAS		
nalyte		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 (%)	OC Limits (%)		
a,a,a-Trifluorotoluen	ıe	98-08-8	76	50 - 150		

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

Date Received:

Date Analyzed:

Page 26 of 29

01/25/95

02/06/95

Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00

Clayton Project No. 95012.73

Sample Identification: See Below

Lab Number:

9501273

Sample Matrix/Media: Method Reference:

WATER

EPA 1010

Lab Number	Sample Identification	Date Sampled	Flash Point (Degrees F)	Method Detection Limit (Degrees F)
06	DC-1	01/25/95	>200	<del>-</del> -

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

Date Received:

Date Analyzed:

Page 27 of 29

01/25/95

02/02/95

### Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00

Clayton Project No. 95012.73

Sample Identification: See Below

Lab Number:

9501273

Sample Matrix/Media:

WATER

Method Reference:

EPA 335.2

Lab Number	Sample Identification	Date Sampled	Reactive Cyanide (mg/L)	Method Detection Limit (mg/L)
-06	DC - 1	01/25/95	<0.1	0.1
-07	METHOD BLANK		<0.1	0.1

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

Page 28 of 29

Analytical Results

Clayton Environmental Consultants, Inc. Client Reference: 56418.00

Clayton Project No. 95012.73

sample Identification: See Below

Date Received: 01/25/95

Lab Number:

9501273

Date Analyzed: 02/03/95

ample Matrix/Media: WATER sethod Reference: SW 7.3.4.2 lethod Reference:

Lab Number	Sample Identification	Date Sampled	Reactive Sulfide (mg/L)	Method Detection Limit (mg/L)		
06	DC-1	01/25/95	<10	10		
-07	METHOD BLANK		<10	10		

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

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

Page 29 of 29

Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 56418.00

Clayton Project No. 95012.73

Sample Identification: See Below

Date Received: 01/25/95 Date Analyzed: 01/26/95

Lab Number:

9501273

Sample Matrix/Media:

WATER

Method Reference:

EPA 150.1

Lab Number	Sample Identification	Date Sampled	рН (S.U.)	Method Detection Limit (S.U.)
-06	DC-1	01/25/95	7.1	<b></b>

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



# REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Clayton Use Only Pa	geof
Project No.	
Batch No. 95	01273
Ind. Code	W.P.
Date Logged In /   とし	Ву 🗘 🖯

										Date Lo	ged In	1/21	l,	Ву 🕻	$h_{-}$	
OLUMBINA City. Telep	JOHN VARGAS Title	<del></del>			Purch	ase Or	der No.				Clien	t Job I	Vo.			
E & Comp	any RLAYTOW	D	ept.		Щ	Nan										
Hailin	g Address				SEND INVOICE	Con	pany	I	LGER	50L	-E	AH	<u> </u>	D	ept.	
	State, Zip				ਲ ≥ੇ	Add	ress									
Telep	hone No. Telefax No.		<u> </u>		<u> </u>	City	, State,	. Zip			===			<u> </u>		
Date Hesun	s Req.: Rush Charges Authorized? Phone /	Fax Hesuits	1 00.1.40.0.		S.	/Enter	an 'X' i	in the	hox helos	ANALY!				if Prese	ervative ad	ded -V
261111111		<u> </u>	I .	applicable)	Containers	(Eine	W. 7.	7	7	7 7	7	/	/	7 7	///////////////////////////////////////	7
Special Inst	ructions: (method, limit of detection, etc.)		Drink	ing Water	뚩			0	/*/		/ /	/ ,	/ /			
			1	ted in the				/`ر		/ /						1
* Explanation	on of Preservative:		State	of New York	ar of	١.	14.00)	$\sqrt{8}$	7/4/	78/			/ /			
	711-52	DATE	MATDINA	AIR VOLUME	ᇣ	/	XX	n		¥/ /	/ /				FORI	ΔR
(	CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED	MATRIX/	(specify units)		14	$N_{10}$		<b>▽</b> / 🕉				//		USEO	
	M4 L1 1		7	<del></del>	21	10	اميا							1		
	$m\omega$ -1	1-25-95	12-0	edones	1	XP	XP				1				IA,B,C	
	MW-2			40 MLS	4	XL	XΥ							- 03	3 7	
	MW-3			40 m 45	4	XP	M	Ì						03	3	
	MW-4			4046	4	XP	XP		· ·					0 4	1	
	$\phi^{\dagger}\beta^{}$ -/			40 mcs	4	VP	XP							06	<del>'                                    </del>	
				, ,		X!		X			1				· •	
70.4	DC-1			U LITER	-			$\Delta$						<u> 101</u>	laA 1	
TRIPI	3CANG #	<u> </u>	Y	40 mcs	2				X					_ <del>  (2</del> *	74.B	<u>~</u> ₹
															Sec B	E2674
			1										ŀ	1		j
	Collected by: RICHAR D 5		L	(print)	Colle	ctor's \$	Signatu	ro	D	<u> </u>	لــــــــــــــــــــــــــــــــــــ		<u> </u>	L		
CHAIN		ILVH	Data (Tim -	., ,	<b> </b>				RICH	ARD		W	A	ate/Time		
OF	Relinquished by: Rehard	flue	1-25-7	5/525	Rece	ived by	<b>'</b> :	1/	•		~ *		ID:	ate/Time	} 	
CUSTODY	Relinquished by:		Date/Time	7	Rece	ived at	Lab by	1/12	nelib	XX:-	シ 〜	Q	Ď	ate/Time	3/25/94	555
,	Method of Shipment: hand carried	bushing X			Sam	ole Con	dition V	<del></del>	Receipt: (	7 58 A	cceptal	ole		Other (	(explain)	62
Authorie		June	····		1 '			•		ア	•					
Authorized			ate													ļ
	(Client Signature Must Accompany Re	equest)			M	y N	A RE	ME!	IF TB	> KDY	ups	<b>,</b>				
Please retu	rn completed form and samples to one of the	Clayton Envir	ronmental	Consultants, Ind	labs	listed b	elow:									

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 DISTRIBUTION:

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

Quality Assurance Results Summary

Matrix Spike/Matrix Spike Duplicate Results

for

Clayton Project No. 95012.73

#### Quality Assurance Results Summary for

Clayton Project No. 95012.73

Clayton Lab Number: Ext./Prep. Method:

9501273-06A EPA7.3.4.2 02/03/95

Analyst: Std. Source:

Date:

Sample Matrix/Media:

HYW

**BAKER 61170** WATER

Analytical Method:

Instrument ID: Date:

EPA7 3 4 2 80000 02/03/95 17:40 HYW mg/L

Page 1 of 4

Time: Analyst: Units:

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	49.6	91	50.4	93	92	65	120	1.6	20

Clayton Lab Number:

Ext./Prep. Method: Date: 9501273-MB EPA5030 01/27/95

Analyst: Std. Source: JP M9/1123\_0

Sample Matrix/Media:

M941123-01W WATER Analytical Method: Instrument ID:

Instrumen Date: Time: EPA8260 02831 01/27/95 23:19

Analyst: Units: 25: 19 JP 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	55.0	110	52.0	104	107	80	120	5.6	20
BENZENE	ND	50.0	56.0	112	55.0	110	111	80	120	1,8	20
CHLOROBENZENE	ND	50.0	55.0	110	52.0	104	107	80	120	5.6	20
TOLUENE	ND	50.0	58.0	116	55.0	110	113	80	120	5.3	20
TRICHLOROETHENE	ND	50.0	53.0	106	51.0	102	104	80	120	3.8	20

#### Quality Assurance Results Summary for Clayton Project No. 95012.73

Page 3 of 4

Clayton Lab Number: Ext./Prep. Method: Date:

Sample Matrix/Media:

9501273-01C EPA 5030 01/27/95 WAS

Analyst: Std. Source:

V950111-01W WATER

Analytical Method: Instrument ID:

EPA8015 8020 05587 01/27/95

Date: Time: Analyst:

13:19 WAS UG/L

Units:

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	8.25	7.72	94	6.79	82	88	81	118	13	20
ETHYLBENZENE	(PID)	ND	7.91	7.37	93	6.55	83	88	81	114	12	20
GASOLINE	(FID)	ND	500	470	94	400	80	87	80	150	16	25
TOLUENE	(PID)	ND	40.0	36.9	92	32.7	82	87	84	118	12	20
TOTAL XYLENE	(PID)	ND	45.4	41.0	90	36.5	80	85	85	115	12	20

#### Quality Assurance Results Summary for

Clayton Project No. 95012.73

Clayton Lab Number: Ext./Prep. Method:

9501270-04K EPA335.2

Analyst: Std. Source:

Date:

01/31/95 HYW

Analytical Method: Instrument ID: Date: Time: Analyst: Units:

EPA335 2 07487 02/02/95 16:00 HYW

mg/L

Page 4 of 4

MALL 6881 Sample Matrix/Media: WATER

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	0.422	106	0.419	105	105	70	119	0.9	20



# **ATTACHMENT 2**

# FIELD SAMPLING SURVEY FORMS

# CLAYTON ENVIRONMENTAL CONSULTANTS, INC. WATER SAMPLING FIELD SURVEY FORM

Well # //dia	C3 Site: In 7-/ Sampling T od: DISTOSAR	eam: 🏒	ICHARD SILV		JANULAN 25, 1895
• -			Y, WINDY, CE	004	
			7		
			g This Well: <u>54</u> T THEH TRA		E Pump WAS
Total Depth of Well:	18.88 feet	: Time:	1125 De Be	pth to Water fore Pumping	: <u>/0.32</u> feet
Volume		Diam	neter	Pt	ırge
Height of	7	<u>2-inch</u>	4-inch Volume		actor To Purge
Column: 8.5		.16		<u> gal *</u>	
Depth Purging	From: <u>18</u> fe	et	Time Surging Be	gins: <u>/0</u> 3	3.1
Notes on Initi	.al Discharge:	CLEAN			
T1me	Volume Purged	Hq	Conductivity		Notes
1033	5-GKL	6.0	507	jk w	CLEAR
1035	10-CIAL	6.4	505	16.7	CLEAR
1038	15-GAL	6.8	522	17.0	CLEAR
1040	23-GKV	6.8	549	17.2	CLEAR DRY
				<del></del>	

# CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

# WATER SAMPLING FIELD SURVEY FORM (CONTINUED)

Time Field Parameter Measur	ement Begins: _	1155		
	Rep #1	Rep #2	Rep #3	Rep_#4
рН	6.6	6.7	6.8	6.9
Conductivity	537	535	533	535
T°C	16.8	16.4	16.9	17.0
Pre-Sample Collection Gallo	ns Purged:2	-3		,
Time Sample Collection Begi	ns: 1200			
Time Sample Collection Begi Time Sample Collection Ends	: 1205			
Total Gallons Purged:2	_			
•	- <del> </del>			
Comments:				
,				•

# CLAYTON ENVIRONMENTAL CONSULTANTS, INC. WATER SAMPLING FIELD SURVEY FORM

Well # <u>MW</u>	<u> </u>	Team:	RICHARD SI	_ Date:	JANUARY 25,1895
Field Condit	ions: <u>PARTL</u>	1 Cicupt,	SLIGHT BUZE	Zē, Ecci	
Describe Equi	ipment D-Con Be	fore Samplin	g This Well: S	TRIPLE RI	E PUMP USED
Total Depth of Well:	:20.14 fee	t Time:	<u>/0 20</u> B	epth to Water efore Pumping	: <u>[2.0]</u> feet
	13 feet *   From: <u>'/9</u> _ f	<u>2-inch</u> .16	neter 4-inch Volum 65 = 5.2 Time Surging Bo	e <u>Fa</u>	
   Notes on Init 	ial Discharge:	BROWN	ISH, SILTY,	Has ope	R
Time 1033 1035 1037 1039	Volume Purged 5-GAL 10-GAL 15-GAL 76-GAL	DH 6.8 6.4 6.6 6.8	Conductivity 1740 1639 1551 1559	19 8 19.7 19.7 19.7	Notes CLEAR CLEAR CLEAR CLEAR

# CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

# WATER SAMPLING FIELD SURVEY FORM (CONTINUED)

Time Field Parameter Measur	rement Begins: .	1050		
	Rep #1	Rep #2	Rep #3	Rep_#4
рН	6.9	<u>w.9</u>	6.9	6.9
Conductivity	1536	1549	1548	1546
T°C	19.3	19.5	19.6	19.6
Pre-Sample Collection Gallo	ons Purged: عرب	22_		,
Time Sample Collection Begi	Ins: 1055	<u> </u>		
Time Sample Collection Ends	: 1100	<b></b>		
Total Gallons Purged:2	_			
Comments:				

# CLAYTON ENVIRONMENTAL CONSULTANTS, INC. WATER SAMPLING FIELD SURVEY FORM

Job # 60899.03 Site: TAIGIECTUL - RAND Date: JANUARY 25/995 Well # MW-3 Sampling Team: RICHARO SILVA Sampling Method: DISPOSIBLE BAILER Field Conditions: CLOUDY, INGHT RAIN, COLD
Describe Equipment D-Con Before Sampling This Well: <u>SubmERSIBLE PUMP</u> WAS WASHED WITH DETERGENT THEN TRIFLE RIWSED
Total Depth of Well: 20.23 feet Time: 1410 Depth to Water Before Pumping: 14.25 feet
Volume Height of Water Column: $598$ feet * .16 $\overline{65} = 389$ gal * $\underline{4} = 15.57$ Depth Purging From: $\underline{19}$ feet Time Surging Begins: $\underline{1419}$
Notes on Initial Discharge:CLEAR
Time Volume Purged pH Conductivity T Notes  1421 5-GAL 6.9 824 19.4 CLEAR  1423 10-GAL 6.4 909 19.7 CLEAR  1425 15-GAL 6.7 954 19.8 CLEAR  1427 17-GAL 6.7 958 19.7 CLEAR

# CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

# WATER SAMPLING FIELD SURVEY FORM (CONTINUED)

Time Field Parameter Meas	urement Begins: _	1440		
pH Conductivity T°C	Rep #1 6.8 1009 19.4	Rep. #2 6.8 1025 19.3	Rep #3 - 6.8 - 1027 - 19.5	Rep_#4 6.B 1037 19.4
Pre-Sample Collection Gal Time Sample Collection Be Time Sample Collection En Total Gallons Purged:	gins: 1445 ds: 1450	<u>7</u>		
· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·			

# CLAYTON ENVIRONMENTAL CONSULTANTS, INC. WATER SAMPLING FIELD SURVEY FORM

Job # 1069843 Site: Well # 100 4 Sampli Sampling Method: 12500 Field Conditions: 1260	ng Team: <u>Ri</u> SABLE BAILE	CHARD SIL	V.A.	JANUARY 25 1885
Describe Equipment D-Con				•
Total Depth 27.86	feet Time: _/	230 De	pth to Water fore Pumping:	15,94 feet
Volume Height of Water Column: 11.42 feet Depth Purging From: 27	* .16	$\frac{4-\text{inch}}{65} = \frac{7-7}{2}$	Fa /S gal *	
Notes on Initial Discharg	ge: <u>CLEAR</u>	-		
Time Volume Pure  1237 10-9A2  1239 15-9A2  1241 20-9A2  1243 25-9A2  1245 34-9A2	5.6 5.8 5.7 5.7	Conductivity 943 972 899 854 884	19.5 19.5 19.5 19.5 19.5	NOTES CIFAR CIFAR CIFAR CIFAR

## CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

## WATER SAMPLING FIELD SURVEY FORM (CONTINUED)

Time Field Parameter Measu	rement Begins: _	1300		
	Rep #1	Rep #2	Rep #3	Rep #4
рН	<u>5.8</u>	5.8	5.8	<u></u>
Conductivity	727	716	716	722
T°C	19.1	19.2	19.2	19.2
Pre-Sample Collection Gallo	ons Purged:	3/		,
Time Sample Collection Begi	ins: 1305	-		
Time Sample Collection Ends	s: <u>13/0</u>	-		
Total Gallons Purged:3	2			
Comments:				

# CLAYTON ENVIRONMENTAL CONSULTANTS, INC. WATER SAMPLING FIELD SURVEY FORM

Job # <u>6089903</u> Site: Well # <u>€6-(</u> Samplin		-RAND RICHARD SI		JANUARY 25,1845
Sampling Method: Disper	EARLE BALL	ER		
Field Conditions: <u>Par</u>	TLY CLUMP	DY, WINDY	0001-	
			71M	
Describe Equipment D-Con	Before Samplin	a This Well:	SUBMERICE	SLE PUMP
LOAS WASHED W				
Total Depth of Well: 49.62	feet Time:	1318	Depth to Water Before Pumping:	:
	,,,,,,		bo. o. o i ampring.	<u> 76,73</u> 1881
Volume	Dia	meter	Pu	ırge
Height of Water	2-inch	4-inch Volu	me Fa	actor <u>To Purge</u>
Column: <u>32.67</u> feet	(16)	.65 = <u>5.</u>	23 gal *	$\frac{4}{20.92}$
Depth Purging From: 45	feet	Time Surging	Begins: 13	25
Notes on Initial Discharge	: CLEAR			
Time Volume Purg	nd pH	Conductivity	·T	Notes
1328 5-GAL	5.8	1134	19.1	CLEAR
1331 lo-GAL	5.9	1192	19.2	CLEAR
1334 15-GAL	5.9	1257	19.1	CLEAR
1337 20-GAL	5.8	1285	192	CLEAR
				<u> </u>
			Palada, m.,	
	····		<del></del>	

## CLAYTON ENVIRONMENTAL CONSULTANTS, INC.

## WATER SAMPLING FIELD SURVEY FORM (CONTINUED)

Time Field Parameter Mea	surement Begins:	1350		
	Rep #1	Rep #2	Rep #3	Rep #4
рН	5.7	5,7	5.8	_5.8_
Conductivity	1245	1185	1226	1251
T°C	189	18.8	18.9	18.9
Pre-Sample Collection Ga	llons Purged:	20_		•
Time Sample Collection B	egins:			
Time Sample Collection E	nds:	<b></b>		
Total Gallons Purged:	21			
Comments:	<u></u>			
	<del></del>			



## **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

ргогосоі.гер 1



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, kilndried 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

protocol.rep 2



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.

protocol.rep 3



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.

protocol.rep 4

Western Operations

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



FILE 100 - 06

CORRESPONDENCE:

February 13, 1995

Mr. Jay Mattsfield Manager, Field Support Operations CAPSULE ENVIRONMENTAL ENGINEERING, INC. 1970 Oakcrest Avenue, Suite 215 Saint Paul, Minnesota 55113-2624

Clayton Project No. 59125.00

Subject: Analytical Report and Chain-of-Title for the Schlage Lock Company

. .

located in San Leandro, California

Dear Mr. Mattsfield:

Clayton Environmental Consultants, Inc. is pleased to submit the enclosed analytical report and the chain-of-title as requested for the subject property.

If you have any questions or need additional information, call me or Mr John Vargas at (510) 426-2600.

Sincerely,

Richard J. Silva, R.E.A.

Richard J. John

Geologist

RJS/ris



# REQUEST FOR LABORATORY ANALYTICAL SERVICES

	/_/
For Clayton Use O	nly Page of
Project No.	
Batch No.	)410269
Ind. Cođe	W.P.
Date Logged In /	2/20/94 By (B)

														1 **	
0 1		<del> </del>							D	ate Log	ged In	10/2	2/94	By (\$2)	
L Carre	JUHN VARUAS TH				Purchase Order No. Client Job No.										
E S Comp			ept.		_ M	Na	те ,_	SUHN	YAZGA	<u></u>					<del></del>
ROUTH City, SCOMP	g Address				불응	<sub>ပ</sub> ြင်	mpany	P.C. V	RNE	4 VIR	W 12	EHT	46	Dept.	FAS
<u> </u>	none No. Telefax N	<u> </u>	·		ไตรั	Add	dress	P.C. P	ex 1c	19					1 1
	s Reg.: Rush Charges Authorized? Phone	Cay Docute			<del>  -</del>	City	, State	e, Zip / 2	12/12/	472	4 , C	· H	<u>-745</u>	66.	
NORMA	∠ 7A7 □ Yes □ No □		Campic		ত	(Ento	r an 'Y'	in the be	A Luckalau	NALYS	SPEQ	UESTE	ED ID	" D	
	uctions: (method, limit of detection, etc.)			if applicable)	Containers	Trine		7	Z Delow I	o maica	e tedn	est; En	iter a P	if Preservati	ve added.
HOLD	AZLC AND GAS/BIEN - ITAC			ing Water	nta				1.		/ ,	/ ,	/ /	' / /	′ /
1	n of Preservative: AWALYZE ELECT	GAS/BIES		cted in the		1		9 / K	7/						
Explanatio	n of Preservative: AMALYZE ELECT	44 PS	State	of New York	ar of	١,		5 (4)	1.		/ ,	/ /	/ /	///	<i>/</i>
	LIENT SAMPLE IDENTIFICATION	DATE	MATRIX/	AIR VOLUME			14	W 2 182					//		FOR LAB
		SAMPLED		(specify units)	2	<del>r</del>		<u> </u>	<del>-</del> Y_			{			SE ONLY
	K(12-1	11 - 20 44	1/20	41,.11.	ㅅ	Xr			_	-			_	-01	4B
	1212 /			Hemis	ユ	<b> </b>	Xr					$oldsymbol{\perp}$			
	File - 2			40mes	2	Xr								02	4 B
<b></b>	nic 3			40 11.65	2		XP								- N
	Mico. 3			40 MLS	2	$\chi_P$								03	AR
	MW. 3			40mls	2		XP							6	, D
	Mic 4			40 mes	ユ	XP								hil I	D
	m10 · 4			40000	.7.		$\chi_f$				$\neg$			17-7	75
11210 B	WHIS # 0100274	火	¥	40 mus	1			Ye						05 A	<del>1 1 2</del>
Comos	ITE DRUM SHILLED DS-1	10-20-94	H20	500 4656	.3.			X						06 1	-
	Collected by: LICHARD SILV			(print)		ctor's S	Signatu		-//		11	———— ~- /	1	00 7.	<i>1</i>
CHAIN OF	Relinquished by: Richard Sul		Date/Time	1945am	Rece	ived by	·		7	7	<u> </u>		Dat	le/Time	
CUSTODY	Relinquished by:		Date/Time	,	Rece	ived at	Lab by	10-12	uly	15-1	1.0	9/	Dai	te/Time //2	hold.
<u> </u>	Method of Shipment:							Jpon Rec	eipt.	Ac	eptabl	6		Other (expla	m) 540
Authorized	by:	Da	te							1`					0/15
	(Client Signature Must Accompany Re			<del></del>											
Please return	completed form and samples to one of the	Clayton Enviro	onmental (	Consultants, Inc.	labs	listed h	elow.	<del></del>		<del></del> -					<del></del> .

22345 Roethel Drive Novi, MI 48375

(313) 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 DISTRIBUTION.

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



## REQUEST FOR LABORATORY ANALYTICAL SERVICES

For Claytor	Use Only	Page		L of	
Project No.		<del>-</del>	,	——————————————————————————————————————	
Batch No.	9410	295			
Ind. Code		1	W.P.	- 4	
Date Logge	d In 10/2	1194	Ву	K1	
	Client Job	No.			

			Ind. Code / /	/ W.P.
			Date Logged In 10/21/9	- By KT
P Name JEHU YKELIKS Title		Purchase Order No.	Client Job No.	
Company CLHYTC'A/ Mailing Address City, State, Zip Telephone No.	Dept.	ய Name		
Mailing Address		O Company THEERS	LL-RAND	Dept.
1 2		Name Company TAIGER St Address	<u> </u>	
Telephone No.  Date Results Reg.: Rush Charges Authorized? Phone / Fax	5 :-	City, State, Zip		
LORMAL TAT 1 Yes 12-No 1	Campies are.	8	ANALYSIS REQUESTED	
Special Instructions: (method, limit of detection, etc.)	(check if applicable)	(Enter an 'X' in the box below	w to indicate request; Enter a	'P' if Preservative added.
Chacial instructions: (matriod, little of detection, etc.)	☐ Drinking Water	l at a		
	Collected in the	8 /0/+/	/////	/ / / /
Explanation of Preservative: $P = HCR$	State of New York	Number of So		
CLIENT SAMPLE IDENTIFICATION	DATE MATRIX/ AIR VOLUME	Number A	/////	FOR LAB
SA	MPLED MEDIA (specify units)	$\frac{1}{2}$		USE ONLY
	21-94 Hro 4cmes	2/10		OLA B
03-1	+cml5	Z XP		02 4
D5-/	40 mis	2 XP		03
55-1	4cmes	2 XP		04
TELP BLANK # CICE 294	Y 40m25	1 1 1 1 1 1		
				05 A
		<del></del>		
		<del></del>		
		<del></del>		
Collected by: Press Sanda	/i-n			
ATER RED SILVA		Collector's Signature:	ed delin	
OF Relinquished by Ruhard Sides	Date/Time / /8/0	Received by: (are hamme		Date/Time 6:100m
CUSTODY Relinquished by:		Received at Lab by:	- Marcel	10/21/94 6:10pm
Method of Shipment:		Sample Condition Upon Receipt:		Other (explain)
Authorized by:	Date _		/ \	
(Client Signature Must Accompany Reques	it)		l	
Please return completed form and samples to one of the Clayto	on Environmental Consultants, Inc.	labs listed below:		

22345 Roethel Drive Rari

Novi, MI 48375 (313) 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

DISTRIBUTION:

PINK

WHITE - Clayton Laboratory YELLOW - Clayton Accounting

- Client Retains

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



December 20, 1994

Mr. Dariush Dastmalchi CLAYTON ENVIRONMENTAL CONSULTANTS, INC. 1252 Quarry Lane Pleasanton, CA 94566

Client Ref.: 59124.00

Clayton Project No.: 94121.19

Dear Mr. Dastmalchi:

Attached is our analytical laboratory report for the samples received on December 7, 1994. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of after January 19, 1995, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Suzanne Haus, Client Services Supervisor, at (510) 426-2657.

Sincerely,

Harriotte A. Hurley, CIH

Director, Laboratory Services

Western Operations

HAH/tjb

Attachments



Page 2 of 5

### Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 59124.00 Clayton Project No. 94121.19

Sample Identification: CS-1 Lab Number: 9412119-01A

Sample Matrix/Media: SOLID

Preparation Method: Method Reference:

EPA 5030

EPA 8020

Date Sampled:

Date Received: 12/07/94 Date Prepared: 12/09/94

Date Analyzed:

12/12/94

12/07/94

Analyst: WAS

			Method Detection
Analyte	CAS #	Concentration (mg/kg)	Limit (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3 95-47-6	ND ND	0.005 0.005
o-Xylene p,m-Xylenes	93-47-0	ND	0.005
<u>Surrogates</u>		Recovery (%)	QC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	107	50 - 150

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



Page 3 of 5

## Analytical Results

for

Clayton Environmental Consultants, Inc.

Client Reference: 59124.00 Clayton Project No. 94121.19

Sample Identification: METHOD BLANK Date Sampled: -Lab Number: 9412119-02A Date Received: --

Sample Matrix/Media: SOLID Date Prepared: 12/09/94
Preparation Method: EPA 5030 Date Analyzed: 12/12/94

Method Reference: EPA 8020 Analyst: WAS

Analyte	te CAS #		Method Detection Limit (mg/kg)
BTEX			
Benzene	71-43-2	ND	0.005
Ethylbenzene	100-41-4	ND	0.005
Toluene	108-88-3	ND	0.005
o-Xylene	95-47-6	ND	0.005
p,m-Xylenes	<del></del>	ND	0.005
Surrogates		Recovery (%)	OC Limits (%)
a,a,a-Trifluorotoluene	98-08-8	89	50 - 150

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



Page 4 of 5

## Analytical Results for

Clayton Environmental Consultants, Inc.

Client Reference: 59124.00 Clayton Project No. 94121.19

Sample Identification: CS-1

Lab Number: 9412119-01

Sample Matrix/Media: SOLID

Date Sampled: 12/07/94

Date Received: 12/07/94

		Method					
		Detection		Date	Date	Prep	Method
Analyte	Concentration	Limit	Units	Prepared	Analyzed	Method	Reference
Antimony	1	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Arsenic	<1	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Barium	120	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Beryllium	0.3	0.1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Cadmium	<0.5	0.5	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Chromium	28	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Cobalt	10	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Copper	23	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Lead	12	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Mercury	<0.1	0.1	mg/kg	12/12/94	12/12/94	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Nickel	40	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Selenium	<1	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Silver	<0.5	0.5	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
TRPH	400	30	mg/kg	12/08/94	12/12/94	EPA 9071	EPA 9073
Thallium	4	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Vanadium	30	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Zinc	47	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A

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. TRPH = Total Recoverable Petroleum Hydrocarbons



Page 5 of 5

## Analytical Results

for

Clayton Environmental Consultants, Inc. Client Reference: 59124.00 Clayton Project No. 94121.19

Sample Identification: METHOD BLANK Lab Number:

9412119-02

Sample Matrix/Media: SOLID Date Sampled: Date Received: --

		Method					
		Detection	ı	Date	Date	Prep	Method
Analyte	Concentration	Limit	Units	Prepared	Analyzed	Method	Reference
Antimony	<1	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Arsenic	<1	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Barium	<1	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Beryllium	<0.1	0.1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Cadmium	<0.5	0.5	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Chromium	<1	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Cobalt	<1	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Copper	<1	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Lead	<1	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Mercury	<0.1	0.1	mg/kg	12/12/94	12/12/94	EPA 7471	EPA 7471
Molybdenum	<1	1	mg/kg	12/15/94	12/15/94	EPA 3050	EPA 6010A
Nickel	<1	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Selenium	<1	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Silver	<0.5	0.5	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
TRPH	ND	30	mg/kg	12/08/94	12/09/94	EPA 9071	EPA 9073
Thallium	<1	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Vanadium	<1	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A
Zinc	<1	1	mg/kg	12/15/94	12/16/94	EPA 3050	EPA 6010A

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. TRPH = Total Recoverable Petroleum Hydrocarbons



## REQUEST FOR LABORATORY **ANALYTICAL SERVICES**

For Clayton	Use On	y Page		of	
Project No.					
Batch No.		941	2119		
Ind. Code		- ( /	W.P.		
Date Logge	d In	78/9	4 By	27	
	Client Jo	b No. ろ	9127/	00	

										Date	e Logg	jed In	7	<b>B</b> /9	14 By	1002
O Name	DARIUSH DASTMALCHI Title	•	•		Purch	ase O	der No					Clien	t Job I	No. خ	5912	7,00
ု Comp	any CLAYTOY	D	ept.		щ	Nar										
	g Address				SEND INVOICE	O Cor	npany	IN	GER:	50LL	R	410	>			Dept.
	State, Zip				ພ ≷	Add	ress									
	none No. Telefax No					City	State	, Zip						==		
ORMAL	s Req.: Rush Charges Authorized? Phone /	Tax Hesuits	Campic	s are: Lapplicable)	ers.	(Ente	an 'X'	in the	box be	AN. olow to	ALYSI indica	S REC	ioest; E	nter a	'P' if P	reservative added. *)
	ructions: (method, limit of detection, etc.)		Drinki	• •	ntain			7	7	7	/		7	/	$\overline{/}$	
Explanatio	n of Preservative:			cted in the of New York	er of Containers		× .	/	/ 5							
(	CLIENT SAMPLE IDENTIFICATION	DATE SAMPLED		AIR VOLUME (specify units)		/	0 / V			_	$\angle$	$\angle$		$\angle$	$\angle$	FOR LAB USE ONLY
	C5-1	12-7-94	SOLID	2x4 BRASS	l	X	X	X								OIA
	/															
	<u> </u>															
																·
						<b></b>										
						<b></b>										
					ļ	<b> </b>							···			
						ļ										
·						<b> </b>										
· · · · · · · · · · · · · · · · · · ·	Collected by: RICHARD SILV	<u> </u>	<u> </u>	(print)	Colle	ctor's	l Signati	ıre: -	Rec	lin	en!	L /	W	رد	ł	
CHAIN OF	Relinquished by: Ruchard hih	Date/Time /2ーァイ	41310	Rece	eived b	<b>y</b> :		,						Date/		
CUSTODY	Relinquished by:		Date/Timé			eived a		kk_	and.		3	سد	<b>)</b>			Time 77/94 1:10
	Method of Shipment:		Sam	ple Co	ndition	Opon	Receip	t: [	XAC	ceptal	ole		] Oth	ner (explain)		
Authorized	by:							/								
	(Client Signature Must Accompany Re															
lease retu	rn completed form and samples to one of the	Clayton Envi	ronmental (	Consultants, Inc	c. labs	listed l	elow:						ſ	DISTR	BUTIC	N·

22345 Roethel Drive Raritan Center Novi, MI 48375 (810) 344-1770

(908) 225-6040

160 Fieldcrest Ave. Edison, NJ 08837

400 Chastain Center Blvd., N.W. Suite 490

Kennesaw, GA 30144 (404) 499-7500

1252 Quarry Lane Pleasanton, CA 94566 (510) 426-2657

WHITE - Clayton Laboratory YELLOW - Clayton Accounting Client Retains PINK



Quality Assurance Results Summary

Matrix Spike/Matrix Spike Duplicate Results

for

Clayton Project No. 94121.19

03891

16:09

MG/KG

RAH

Clayton Lab Number: Ext./Prep. Method:

9411299-01B EPA3050 12/15/94 RAH

Date: Analyst: Std. Source:

VHG401953A

Sample Matrix/Media:

SOLE

Analytical Method: Instrument ID:

EPA6010 12/16/94

Date: Time: Analyst: Units:

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)
ANTIMONY	1.80	50.0	41.4	79	44.4	<b>8</b> 5	82	68	112	7.0	25
ARSENIC	ND	50 <b>.0</b>	42.0	84	42.9	86	85	72	115	2.1	25
BARIUM	136	50.0	186	100	180	88	94	54	151	3.3	25
BERYLLIUM	ND	50.0	46.0	92	46.3	93	92	80	110	0.7	25
CADMIUM	ND	50.0	47.9	96	47.9	96	96	76	113	0.0	25
CHROMIUM	51.4	50.0	102	101	98.0	93	97	64	127	4.0	25
COBALT	11.0	50 <b>.0</b>	57.2	92	56.9	92	92	72	116	0.5	25
COPPER	20.2	50.0	71.6	103	69.2	98	100	67	133	3.4	25
LEAD	17.4	50.0	63.9	93	63.2	92	92	64	121	1.1	25
MAGNESIUM	8,830	50.0	9,630	SOR	8,900	SOR	SOR	75	125	7.9	25
MANGANESE	367	50.0	425	SOR	416	SOR	SOR	5 <b>0</b>	150	2.1	25
MOLYBDENUM	ND	50.0	44.2	88	45.2	90	89	75	113	2.2	25
NICKEL	63.4	50 <b>.0</b>	113	99	108	89	94	61	124	4.5	25
SELENIUM	ND	50.0	46.8	94	47.2	94	94	73	111	0.9	25
SILVER	ND	50.0	46.8	94	47.0	94	94	79	115	0.4	25
SODIUM	138	50 <b>.0</b>	189	102	183	90	96	75	125	3.2	25
STRONTIUM	40.2	50.0	87.4	94	86.2	92	93	79	117	1.4	25
THALLIUM	4.30	50.0	48.3	88	48.1	88	88	62	118	0.4	25
VANADIUM	31.5	50.0	80.6	98	79.2	95	97	70	122	1.8	25
ZINC	49.9	50.0	99.2	99	96.8	94	96	64	133	2.4	25

LCS = Laboratory Control Sample

ND = Not detected at or above limit of detection

#### Quality Assurance Results Summary for Clayton Project No. 94121.19

Page 2 of 6

Clayton Lab Number: Ext./Prep. Hethod:

Date:

Analyst:

Std. Source:

9412035-04A EPA7471 12/12/94

Sample Matrix/Media:

RAH A941012C SOLL

Analytical Method: Instrument ID:

EPA7471 05583 12/12/94 13:06 RAH

Date: Time: Analyst: 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)	RPO	UCL (%RPD)
MERCURY	ND	1.00	0.970	97	0.990	99	98	75	125	2.0	25

Clayton Lab Number: Ext./Prep. Method:

9412119-01A EPA 5030 12/09/94

Date:
Analyst:

WAS

Std. Source: Sample Matrix/Media: V941111-01W

SOIL

Analytical Method: Instrument ID: EPA8015 8020 05587 12/12/94

Date: Time: Analyst: Units:

14:33 WAS 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 (%)	UCŁ (%RPD)
BENZENÉ	(PID)	ND	0.0379	0.0369	97	0.0358	94	96	53	140	3.0	28
ETHYLBENZENE	(PID)	NÐ	0.0339	0.0336	99	0.0322	95	97	56	134	4.3	25
GASOLINE	(FID)	ND	2.50	2.20	88	2.18	87	88	41	164	0.9	37
TOLUENE	(PID)	ND	0.174	0.166	95	0.158	91	93	60	139	4.9	22
TOTAL XYLENE	(PID)	ND	0.187	0.180	96	0.170	91	94	61	129	5.7	26

#### Quality Assurance Results Summary for Clayton Project No. 94121.19

Page 4 of 6

Clayton Lab Number: Ext./Prep. Method:

9412119-01A EPA418 1

Date: Analyst: 12/08/94 MBN

Std. Source:

Sample Matrix/Media:

E941130-01W

SOIL

Analytical Method: Instrument ID:

EPA418 1 TAHYD 12/12/94

Date: Time: Analyst: Units:

06:00 AMN 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)
TOTAL PETROLEUM HYDROCARBONS	405	206	497	45	517	55	50	50	150	4.0	25

## Quality Assurance Results Summary

Clayton Project No. 94121.19

Clayton Lab Number: Ext./Prep. Hethod:

9412119-LCS EPA418 1 12/08/94

Analyst:

Date:

Std. Source: Sample Matrix/Media: MBN

ERA 91029 # 1

SOIL

Analytical Method: Instrument ID: Date:

EPA418 1 TAHTD 12/12/94 06:15

Page 5 of 6

Analyst: Units:

Time:

AMN MG/KG

Analyte	Sample Result	Spike Levet	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
TOTAL PETROLEUM HYDROCARBONS	ND	905	563	62	563	62	62	50	150	0.0	25

## Quality Assurance Results Summary for

Clayton Project No. 94121.19

Clayton Lab Number: Ext./Prep. Method: 9412083-LCS EPA418 1 12/08/94

Date: Analyst:

М

Std. Source: Sample Matrix/Media: MBN ERA # 1 91029

SOIL

Analytical Method: Instrument ID:

Date: Time: Analyst: Units: EPA418 1 THAÑA 12/09/94 05:00 AMN MG/KG

Page 6 of 6

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)
TOTAL PETROLEUM HYDROCARBONS	ND	905	412	46	412	46	46*	50	150	0.0	25



CAPSULE DISCOURTED THE	PRO	JECT CALC	ULATION	SHEE	T
	Gradunt	ndro 1 Calen(stron	<u> </u>	Page:	JJM 10/17/95 1 of 2
Calculate The area of June 1995 a approxim Using dis The attach prepared	MW-4  MW-4  MW-4  And Gr  On Up (	Pewbre 8-WV, race Bis mort	roran E cacula mag	ingt.	map.
from 1 w 11.45 for	11.60 fee 0.15ft	ris approximation	od maril	575	The feet
بقند	0027				

hydroulu gradient in aren is approximately

Checked by: // M?

Date: /0/27/95

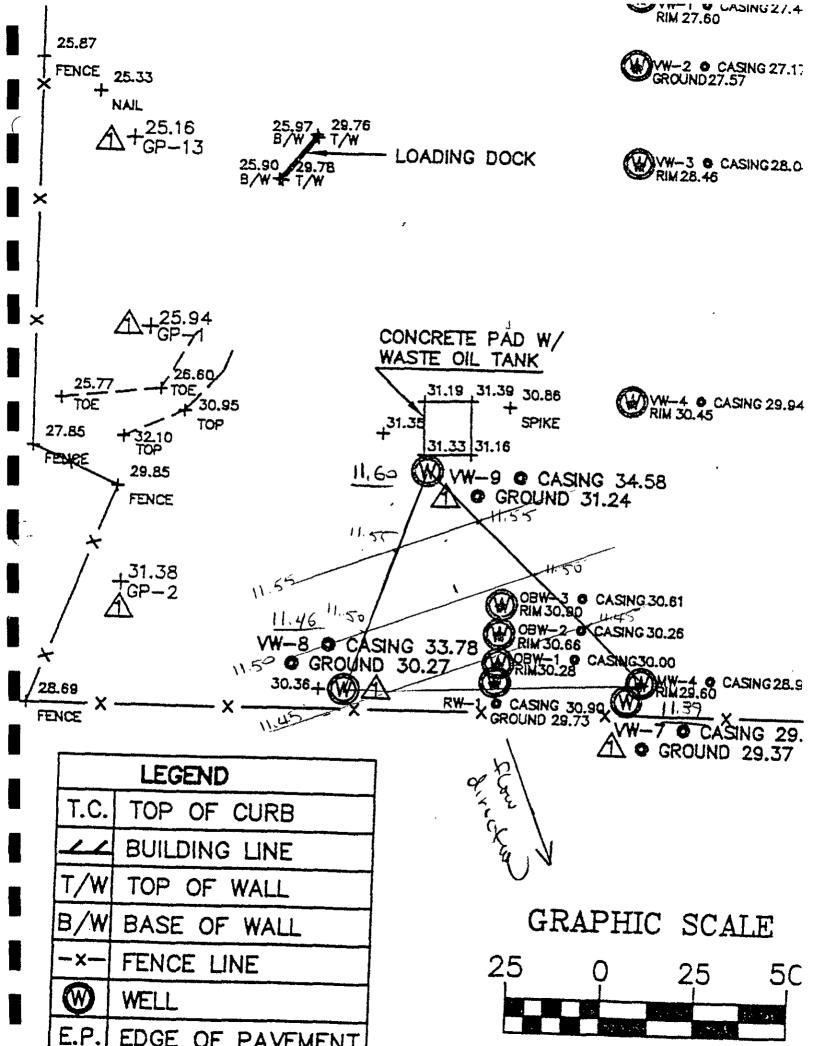


Table 1
Project: San Leandro Groundwater Sampling Points and Analytical Methods for June 1995 Sampling Event

					In Situ
	Water	EPA	EPA	Dissolved	Dissolved
Well	Level	8015/8020	8260	Nitrate (1)	Oxygen
MW-1	X		,	X	X
MW-2	X			X	Х
MW-3	X	X	X	X	X
MW-4	X	X	X	X	X
OB-1	X	X	X	X	X
VW-5	X	X	X	X	X
<b>∨</b> W-6	X	X	X	X	X
<b>VW</b> -8	×	X	X	) x	X
VW-9	X	X	Χ	X	X

Note (1): nitrate analysis by EPA method 353.2

File: i:\staff\lmeland\excel\sanlean\jun95sum.xls

#### Table 2 Water Level Summary Table

Project: Ingersoli-Rand Company, San Leandro, CA water level data

Date prepared: April 15, 1995 Latest update: August 24, 1995

Prepared by: JJM

Well	Date of measurement	Measuring point elevation (feet)	Depth to water (feet)	Water level elevation (feet)
MVV-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
	30-Jun-95	24.95	11.92	13.03
MW-2	13-Dec-89 16-Nov-90 03-Apr-92 21-Jun-94 20-Oct-94 25-Jan-95 25-Apr-95 30-Jun-95	24.70 24.64 24.64 24.68 24.68 24.68 24.68 24.68	14.57 15.05 13.60 13.86 14.31 12.01 12.54 13.22	10.13 9.59 11.04 10.82 10.37 12.67 12.14 11.46
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
	30-Jun-95	27.51	15.44	12.07
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
	30-Jun-95	28.92	17.53	11.39
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
	30-Jun-95	30.28	18.57	11.71
VW-5	30-Jun-95	33.16	21.65	11.51
w-6	30-Jun-95	31.92	20.62	11.30
VW-8	30-Jun-95	33.78	22.32	11.46
VW-9	30-Jun-95	34.58	22.98	11.60
AAA-A	20-201-92	34,30	44.50	11.00

#### 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

elev, source for vent wells: Moran Engineering map,7/95

FILE: H:\SLWATLEV.WB1

Table 3: San Leandro Groundwater Analytical Data Summary

								<del>,                                    </del>									· · · · · · · · · · · · · · · · · · ·		T T		1 !	d		126-		1.2-5	1,3-6-	1,4-6-	detion	1,1-6-	1.2-6-	1.1-4		Tara-1.2-	1,2-	1,3-	2.2-	11-
						1 1		bromo-	bromo	j	- 1	ļ.	- 1	- 1	CB/DON					2-chioro-	4-chlore-		2-dibromo	brome	abrono-	chiors-	chiore-	choro-	-	chioro-	chiare-	chioro-	dichloro- ethene	diction-	dictions-	dictions-		dictrioro-
		ample		!		1	агото-	chiore	dictrioro-	bromo-	bromo-		n-butyt-	carbon	thirs- chloride	chioro- benzene	chloro- ethene	form	chloro- methane	Divisions .	tokuene	metene	propers	metherne	Unit Sample	pentane			methers	others	(upf)	enade (Ngu)	(ACM)	(lug/l)	(rds) blobere	(ug/l)		propere
i i		Lector		EPA	acetone	benzene	benzene	methans	wearing }	form	metrene	none i	(ug/l)	charter (Agu)	(ug/l)	(Light)	(hgu)	(var)	(ug/l)	(ug/l)	(/20/)	(vg/t)	(ligh)	(ugf)	(ug/l)	(ug/l)	(vg/l)	(Ug/I)	(vo/)	(vg/)	(494)	(1921)	(454)	(ugn)	(ugr)	(ugr)	<del></del>	10277
VALUE OF	ollected	b <del>y</del>	الامعا	Method	(ug/!)	(vg/)	(ug/1)	(ugit)	(Ngu)	(ug/i)	(494)	(191)	199.7	1987																<del></del>			- 1					
						+		<del></del>													<10	<10	<b>610</b>	410	<10	<10	<10	<1.0		ব০	410 I	<10	90	<0.0	40	<10		
WW-1						×10	<10	<10	<10	410	<1 O		<10		<1 D	<1.0	<1.0	<del></del>	*10		<del> </del> -								ব০						ৰ	<del></del>		<10
	1.4004	CEC	- ARC	8015 6290 8015 5260 8015/6020			<b> </b>									ব	- 3		ব	- <5	ব	43	ব	<b>&lt;</b> 5	ধ	ব	< > <	45	ব	-	<		-0	<	9	8	<del>-3-+</del>	
	27~km-941	CEC	CEC	6290	<b>&lt;20</b>	<5	45	<5	<	- ব	- 4	<20		-3-1	<del></del>												<del></del>			<del></del> +	उ	ਰ	3	ৰ	ৰ	ड	હ	ব
•	21-10-04	CEC	CEC	8015				<del> </del>		~ ਤ	-3	420	उ ।	ব	ব	ड	હ	9	٨	<≤	-45	<	-9-1	4	-	- 9	<del></del>			<del></del>			1					
	20-Oct-94	CEC	CÈC	8260	(20	404	45	-5	<del>- 3 +</del>	<del>~~</del>	~									4	<del> </del>	~		ৰ	8	45	ड	<5	ઢ	٥ ]	< ≤	ड	उ	ব	ব	45	8	
	20-0ct-041	CEC	CEC	8260			- 3	- <5	8	<5	45	ঙ	6	8	<u> </u>	45		<5	- 45		<del></del>														<b></b>	<del>}</del>	<del></del>	
	->	CEC	CEC	8015/8020	<del></del>	404		.i																											<del> </del>	<del> </del>		
		ucc_		1											<del></del>												<del>                                     </del>			<del></del>					<del> </del>	<del>                                     </del>		
			1		<u> </u>		1																				<del></del> +	-										
				Į	<del></del>	+	1		<del> </del>	- "									ļ	<b></b>	-	<del></del>		<del></del>	<del>                                     </del>		1	i										
			<del> </del>	-	<del></del>	NO	+	+	<del>  </del>											<10	<10	<10	<1.0	<10	<1 Q	<10	ব্য	<10	ব০	<10	<10	<10	<10	~ 0	<10	<u> </u>	410	<10
144-2	7.740V-00	CEC	400	8010/8020 8260		<1.0	<10	<10	<10	<1 Q	<10		<10		<10	<b>41 D</b>	<10	7.0									-			+	<5	- 6		_ <	-		ব	ৰ
	21-14-94	CEC	ARC	8015	1	T	T	i					- 45			- 3	ৰ	ব	<5_	<	<5	ব	4	<5	4	ব	4	ব	-9			7				1		
					420	ধ	<5	<5	-5	9	ব	<u> </u>	<del>- ~ +</del>								Ţ	<b></b>		3		3		- 3	8	<del>ੂ</del> ਰ 1	- ভ	4	ड	ৰ	ड	ਤ	ਰ	্ ও
	21-Jun-94	CEC	CEC	8015		1	1-2		3	ব	ন	- 20	ৰ	ব	ব	ব	ও	ধ	ধ	ব	45	- 9 -	۵.		<del></del>		<del>  ~  </del>											
	.70-Oct-04	CEC	CEC	8200	(20	404	+	+	<del>  ~</del> -								<u> </u>	- 45	-	<5		-	ব	ভ	<5_	ব	ব	45	ব	ব	ধ	8	ধ	প	4	3	4	
	-0-00t-04	CEC	1 CEC	52.5002	<20	- 3	ধ	<5	ব	ধ	ধ	(20	< <u> &lt;</u>	4	<u> </u>		< 5		<del>  ~ ~</del>	† <del></del>	T														<del> </del>	<del> </del>	<del></del>	
	25-Jen-951	CEC	CEC	8015/802	4	4 4 4 4 4	L .					<del> </del>							<b></b>		I			ļ	<b></b>	ļ	<del>                                     </del>					<del></del>				11.		
											<del> </del>										I			<del> </del>	<b></b>	<del> </del>	<del>                                     </del>											
					<u> </u>		<del></del>		+		<del>                                     </del>										<del> </del>	বচ	<1.0	ব্য	<10	42	66	13	410	<10	<10	<10	>10640	<10	<10	<10	<u> </u>	<10
MV43	17-Nov-89	IT.	PAL			<del>-   7</del>	7 <10	<10	<10	<1.0	<1.0		<10		<10	17	<10	<10	1 410	~; u	+ ""	1													<u>.                                    </u>	<del> </del>	45	- 5
	21-Jun-84				5	<del></del>	<u></u>							6		10	ব	ব	1 6	- 45	4	3	<5	<5	ব	45	7	14	ব	<u> </u>	45	ধ	45	< <	45	-9-1	<del></del>	
	34 - 341	- CCC	7 CEC	829	1 (20	3	4 <5	<5	ব	45	<5	<20		. 9	4	1.3	<del>  ~ </del>	<del> </del>							ৰ	ļ	<del>   </del>			उ	<del>                                     </del>	- ड	ব	ৰ	ड	ৰ	उ	جة ا
	21-Jun-94	CEC	CEC	801	5				<del>   </del>	<5	-3	-20	13	ৰ	ব	19	ত	<5	હ	45	<5	4	ধ	<5	1	5-8	* *	101				1						
	20-Oct-84	CEC	CEC	526		50 6	9 <5	<5	_ ≪		<del>                                     </del>	<del>  ``</del>								30		30	<30	30	<30	<30	- 30 T	<b>430</b>	700	<∞	<30	<30	<b>9</b> 0	<30	<b>Q0</b>	<30	<30	
	30-Oct-94	CEC	CEC	8011 826 8015/802 829 8015/802 526 8015/802	1 <100		o 30	<30 **	<30	<30	<30	<100	<30	≪9	<30	30	⊲30	<00	<30	1 30	<del>                                     </del>	1		<del>                                     </del>											45	3	-3	<del>-</del>
J	25-Jan-95	CEC	- CEC	7015/802	31 1.00	95	sol								- 5	15	8		<5	<5	< -	ব	প	ব	ধ	43	6	11	8	<		4		3-	+ -	<del>                                     </del>	<del></del>	
	26-Acr-95	CEC	CEC	529	· <20	110	xo <s< td=""><td>&lt; 5</td><td>&lt; 5</td><td>&lt;5</td><td>&lt;5</td><td>20</td><td></td><td>- 9</td><td></td><td><del> - '*</del></td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td><del> </del></td><td><del> </del></td><td>17</td><td>&lt;</td><td></td><td>8</td><td>8</td><td>ব</td><td>&lt;</td><td>&lt;5</td><td>ব</td><td>&lt;</td><td><b>S</b></td></s<>	< 5	< 5	<5	<5	20		- 9		<del> - '*</del>	-									<del> </del>	<del> </del>	17	<		8	8	ব	<	<5	ব	<	<b>S</b>
	.6 Apr-95	CEC	CEC	8015/802		120			<del> </del>	<5	ব	20	- 5	45	<	<b>S</b>	< 5	<5	ব্য	- 5	4	<5	প	⋖	45	30	3							1				
	30-Jun-95	CEC	CEC	520	01 420	<5_	<5	<5	+ -		+ -	1						Γ	<del> </del>	+	<del>                                     </del>	-	<del></del>	1	<del> </del>	<del></del>	1				T			<b></b>		1	<del></del>	
	30-Jun-95	CEC	CEC	8015/802	0	<del>- </del>	101	-	<del> </del>							ļ		-		+	-					1						[		1	<del></del>	<del> </del>	<del></del>	
			<del></del>	+		<del></del>	-									<del> </del>	+	<del> </del>	+		<u> </u>											ব০	21 0 4 45 0	15	5 <10	1 410	>1 0 4 <50	<10
3004	16-Nov-90	ΙŤ	MCL	503 826 801	Ó	150	00	II.			<10	<del> </del>			<10	>108<50	<10	<10	<10	<10	<1.0	<10	<10	<10	<10	13108420	<10	٥١٥	40		<del>                                     </del>	1						
	21-Jun-94	CEC	ARC	526	0	37	70 <10	<10	<10	<10	1 210	<del> </del>				T							-30			<30	<00	<30	<30	<30	<30	<30	<30	<30	<>0	⊲30	<30 ↓	<30
	21-Jun-64	CEC	ARC	801	5	- 43	70 <30	<30	-30	<30	<30	<100	<30	<30	<36	90	<30	30	<30	<30	+	<u> </u>	<del></del>	<del></del>	+			· ·							-	<u> </u>		
Ţ	21-Jun-84	CEC	CEC	827	0 <100	<del></del>	70, 30	<del></del>		1						<del> </del>	<5		<	<5	ভ	ব	45	<5	<5		7 5	<5	<5	4	<u> </u>	45	<5_	12	4	+ 3 +	<del></del>	<del></del>
<b> </b>	21-041-64	CEC	CEC	826	0 1	60 2	<del>5</del> 0 <5	<5	ব	্ভ	<5	<20	17	ধ	<del>                                     </del>	<5	+	<del>                                     </del>											-20	<30	< 0	<30	<30	<30	<30	30	<30	<30
	30-Oct-94	CEC	CEC	826 8015/802 8015/802 8015/802 8015/802	0	3	80		4	<del> </del>	1	<100	<30	<30	<20	<30	<30	<30	<30	<b>√30</b>	<b>400</b>	<00	<30	<30	<30	<30	<30	<30	<del></del>	<u>~~</u>								
	25-Jan-65	CEC	CEC	826	0 <100		00 <30 70	<30	430	- 30	+								1	1-6	<	+	45	1	্ব		ব	<5	6	3	ব	ব	ব		৪ ব	্ ও	ধ	ব
	25-Jan-85	CEC	CEC	8015/803	80 <20	7	70 <s< td=""><td>&lt;5</td><td>া ত</td><td>&lt;5</td><td>&lt;5</td><td>&lt;20</td><td>&lt;5</td><td>ধ</td><td>ব</td><td>&lt;5</td><td>&lt;5</td><td>1 4</td><td>&lt;5</td><td>&lt;5</td><td>+ -9-</td><td><del> `</del></td><td><del> - ~-</del></td><td><del></del></td><td></td><td></td><td></td><td></td><td></td><td></td><td><b></b></td><td></td><td></td><td><u></u></td><td></td><td>5</td><td><del></del></td><td></td></s<>	<5	া ত	<5	<5	<20	<5	ধ	ব	<5	<5	1 4	<5	<5	+ -9-	<del> `</del>	<del> - ~-</del>	<del></del>							<b></b>			<u></u>		5	<del></del>	
<b>-</b>	26-Apr-95	CEC	CEC	8015/80	20 20	1 - 5	00								<del> </del>	<del>-</del>		45	- 3	<5	45	<5	<5	<5	<5	<	ß	ব	<	1 2	11	1-9-	<u> </u>	<del> </del>	+	+	<del></del>	
	30-Jun-95	CEC	<u> </u>	821	C <20	- 3	000 <5	<5	- ত	<5	4	<20	13	9-	+	<del>  ~</del>	+	1	1						-		<del></del> -			<del></del>	<del>                                     </del>	<del>                                     </del>	·		1			
	30-Jun-95	CEC	CÉC	8015/80 821 8015/80	20	3	90				+	<del></del>	<del>                                     </del>									<del>                                     </del>	<del> </del>	<del>- </del> -	+	<del> </del>	<del></del> -		<del> </del>		<b>T</b>		T			1		
										+	+	+								+ 410	610	<10	<10	<10	<1.0	>104<50	0 <10	ব০	<1.0	>104<50	বঞ	<10	6.7	12	21 <1.0	ব০	<u> </u>	<1.0
			100		50		<b>83</b> <10	<10	<10	<10	<10		>106 <50		<10	<10	<10	<10	<1.0	+ *10	×1.0	+	<del>                                     </del>		1	T		<u> </u>			<u> I</u>	1	ļ <u>.</u>		4 3	<u> </u>	<5	3
OB-1	21-Jun-94 21-Jun-94 21-Jun-94	CEC	ARC	50		<del></del>	-							-		<5			ব	<5	ব	ব	ব	4	<5	5	<5	<	<	<u> </u>	ব	ব	<del> </del>		7 7	+ ~ 1		
-	21-3421-94	CEC	CEC	82	60 <20	1	30 <5	<5	ব	<5	্ব	<20	ধ		<del></del>	+ ~	<del>                                     </del>	1	1					<b></b>		4	<5	ব	-	<5	1 3	45		10	0 45	ব	6	ৰ্ব
_	21 Jun 34				15					1	-	<20	- 3	- 5	ৰ	<5	ব্য	ঙ	<5	<5	ব	5	(5)	- 9	+ 9-	+	+	<del>                                     </del>	<del></del>									
	20-Oct-94	CEC	CEC	52	50	120	48 5	<del></del>	<del></del>	+-~	<del></del>	<del>                                     </del>											45	3	- 5	ৰ	<5	ব	<	ব	45	4		31 10	0 45	<5	45	- 9
	20-Oct-94	CEC	CEC	5015/80	80 220	+	80 45		<5	<5	<5	<20	<5	٥	45	<5_	- 45	+	+ 3	<del></del>	+	<del>                                     </del>	<del>                                     </del>									1	<del>                                     </del>	,	4 -4	-	5	45
8	23-Jan-95	CEC	CEC	8015/80	20	2	250							1	+			3	<5	<5	<5	<5	<5	<5	<5	6_		<5	<5	<del>  'S</del> -	4	<del>  '</del> -	<del>                                     </del>	15	<del>'                                    </del>	+	<del></del>	
<b> </b>	26-Anr-96	CEC	CEC	. 52	60 <20			. 5	<	<5	ব	<20	4	- 4	9_	<del>  ~</del>	+ -	1							<del></del>	ব	্ব	<5	ব	ব	ব	<5	12	2 15	5 <5	ব	6	<5
	26-Apr-95	CEC	CEC	8015/80	20	2	200	F		<5	ব	<20	<5	ব		ও	- 45	<5	<5	<5	- 45	4 5	<5	<u> </u>	<5_	+	<del>  ``</del> -	<del>                                     </del>	<del>                                     </del>				I	T	J			
	30-Jun-95	CEC	CEC	82	90 <20		160 <5	<5	<5	+ 3-	+ '-	1 20	T				1			ı		L	٠			1										_		
	30-Jun-99	SEC CEC	CE	82 8015/80 82 8015/80 52 8015/80 82 9015/80	[20]		140																															
																												T -	<del>,                                     </del>		া ও	ি < <b>১</b>	1 6	ব	ા હ	ব	ा खा	্ৰ
_														T - 45	T -4	1 3	1 45	ব	- 5	<5	<5	<5	ব	< 5	\$	4	<u>  &lt;5                                   </u>		5	1 3	+-~	+ ~	+	1 - <del>-</del>	<del></del>			
VW-5	30-Jun-90	5 CEC	CE	8.	90 <20	- 5 - 404	<	<5	<u> </u>	<5	<del></del> -	<u> ~20</u>	+ -	+	<del>  ~</del>	112						ļ	1				+	<del>                                     </del>	<del>                                     </del>	<del>                                     </del>	1							
	30-Jun-9:	5 CEC	CE	3015/8X	720	-04							<del>                                     </del>	+								-	+	<del></del>		+	+	<del>                                     </del>			I				Ţ.,			
					1	<del></del>		1	<del></del>	+	+	<del>                                     </del>							<del> </del> _	<5		<5	<5	- 5	<5	ব		<	ব	<5	ধ	<5	ব	4	<	45	<u> </u>	<del></del>

ARC - Ascen Research Laboratories
CEC - Clayfon Environmental Consultants
Ti- Internacional Technology Corporation

MCL - Mooile Chem Labs Inc. PAL - Precision: Analytical Laboratory: Inc.

FILE HIGUATTROISEWATNEW WBT precisited by JUM 195 updated 8/22/95

Table 3. San Leandro Groundwater Analytical Data Summary

		Sample		EPA	cre-1-3- dichtoro- propene	trans-1 3- dictions- propers	ethyl- benzene	freon 113	hexachio- robuta- dene	2-hexa-	reopropyl- benzene	priso- propyl-	chionde	4-metryl- 2-persi- snone (upif)	napreta- lene (up/l)	n-propyl- benzens (ug/l)	sec- butyf- benzene (ugf)	styrene (ug/t)	tert- butyf- benzarie (ugif)	1,112- letta- chloro- effere (us/l)	1,1 2.2- bits- chloro- ethana (ugf)	crioro- estiene (ug/l)	Solution (ug/l)	1,2,3- Inchioro- benzene (ug/l)	124- snchlaro- benzene (ug/l)	1,1,1- inchioro- ethane (ug/l)	1,1.2 trations- ettens (ug/l)	trichtoro- ethene (ug/l)	trichloro- fluoro- mathene (ug/l)	1.2.3- trichlore- propiere (ug/f)	1,2,4- tremetryl- benzene (ug/i)	1 3 5- timethyl- benzene (ug/l)	veryi acutata (ug/i)	veryl chionde (ug/l)	zyterus (ug/i)	e-sylene (ug/l)	pm sylmen (vg/)		TPH EPA 8015 gaspare (upf)
<u>₩-</u> ,	Colected	by	1 140	Metrod	(ug/l)	(ug/t)	rugh)	fug/11	(vg/l)	(vgA)	( <b>'94</b> ')	(ug/t)	(ug/t)	(1991)	( <b>ugr</b> i)	1994	(יקטי)	1997)					NO.					29			<b>—</b>				NO.			HeD	
W.	7-1-09-09	11	PAL	8010/802	43.0-	<10	NO _		<1.0		<1.0	<10	<10		<10	<10	<10	<10	<1 Q	<10	<10	10440	<10	<10	<10	<10	<10	16	<10	410	<1.0	41 D		<10		<10	<1.0		-89
	1-un-94	CEC	ARC	8013	· <u> </u>						ਤ		3	<20	-3	उ	ত	-3	-3	- 3-		3	ব	ব	ਰ	ৱ	ਫ	20	उ	-5	ব	ਫ	<10	ਤ		ব	ड	=	
	21-Jun-94	CEC	CEC	8260 8015	45	<5		<5	ব	<20										-	-3		ક	3	- 3		- ਰ	11	હ	-		ਫ	<10	ৰ		- ਫ਼	ৰ		<b>≪</b> 0
	.0-Oct-94	CEC	CEC	8200	ত	-45	403	- 3	ধ	<20	લ	<u> </u>	1	- CSO		હ	-	ਰ					@3 - G	-3			-3			-3		3	<10	-3		84	<del>- व</del>	=	- ব্ৰু
	-5-an-95	CEC	232	5280	<5	उ	<5	-45	હ	<20	- ও	उ	उ	-26	-3	उ	ত	-45	<	- 9	3	-9	43													ব্	404		- ব্ৰু
	3-an-95	CEC	CEC	8015/802		1	43	<u> </u>																															
		ļ., "				Ţ																																	
								-															NO.			<10		10							NO		<1.0	MO	
IMW-Z	17-Nov-89	CEC	PAL	5250	410	<10	<10_		<10		<10	<10	<10		<10	<10	<10	<1 C	<1.0	<10	<10	>106 <50	<1.0	<10	<10	<10	<10	>104<50	<1.0	410	<10	<1.0		<10		×10	110		≪0
						<10	- 3	-3	3	<b>~20</b>	- લ	ভ	ड	<20_	ব	ব	ব	उ	-લ	હ	ত	ব	ड	ব	ব	હ	ব	- 5	ड	3	্র	ব	<10	3		- 43	্ৰ		- 30
	21-Jun-04	CEC	CEC	801					-2-		ব	ব	-8-	20	ठ	3	- 3	હ	ৰ	હ	ৰ	ৰ	હ	ઢ	ব	ব	ব	6	હ	હ	ઢ	ব	<10	ব		<u>ड</u>	ব ব		- 30
┕┼┈	.0-Oct-94 .0-Oct-94	CEC	CEC CEC CEC CEC	5015 602	S 45	1	403			- 44	Ţ,			- 20	- (	-	હ	- 3		ड	હ	3	- ব্য	ड	ड	ব	ड	ड	ত	ব	उ	ৰ	<10	ব		उ	ৰ -		
	->-un-95	CEC	CEC	8250	া ও	<5	403		<5	<20	45	9	હ	- 2		7							403													<0.4	≪0.4		-50
								<b></b>					$\overline{}$																										
MW-3	•7-Nov-89	·	+	<del>                                     </del>	<del>1</del>	<del> </del>	-									71	>10450	<1.0	<1.0	<10	<10	<b>41 0</b>	3104 SO	<10	<1 Q	<10	<10	<10	<10	410	<10	63		<10		31	100		
	21-Jun-34	CEC	ARC	526	0 <10	<1 0	120	9	<10		. 13	>104<50	<b>410</b>			- 33				1			હ		I	45		-3	- 3	ৰ	120	72	<10	-3-		40	150		2/00
	21-Jun-94	CEC	ĈĔĈ	829	0 <5	-45	170	ò <5	ধ	<20	17	ও	ব	45	< 5	- 43	4	8	⋖5	<5	ব					İ					150		<10	હ		44	160		2900
	21-Jun-94 23-Oct-94	CEC	ARC CEC CEC CEC	801	0 45	ব	90	া ও	3	<20	20	ব	ব	ও	29	43	- 6	હ	<5	ব	<	حح ا	<b>44</b>		<5	ধ	\$		- ⋖	ব	150			1		89	180		2900
<del>  </del>	70-Oct-94	CEC 1	- CEC	ani san	0 -30	-30	90	61 01 <30	<30	<100	-30	<00	- 30	<100	100	<30	<b>⊘</b> 0	-36	<30	30	<30	<30	410 340		<30	< 00	<∞	<∞	<30	<36	350	- 60	<30	<30		820 760	1000	-	7100
	25-Jan-95	CEC	CEC	8015/80	2 0		644	6	ধ	<20	29	હ	ક	<20	150	83	5	ব	62	ব	- ≪	ব	1600		<5	ও	ও	ও	ব	- ≤	650	160	<10	ব		900 940			14000
	26-Apr-95 25-Apr-95	SI CEC	CEC	8015/80	2	<5	72	ol								8	ব্য	ধ	ভ	ব	3-	ব	1700	ব	<5	<5	<5	45	ব	ৰ	54	40	<10	ব্		26	41		
	30-Jun-95	S CEC	CEC	826	০ ব	<	45	0 3	<5_	₹20	- 4	9	હ	ব			~_						17		ļ			<del>-</del>	-					ļ		331	99		)aw
	300-3	- CEC		100.00												<del> </del>																			27000			32000	
MVV-4	16-Nov-90	0 17	WCL	503	ю		72	0								- 4	>104<50	<10	<10	<10	<10	<10	2000	<10	<10	<10	<10	15	<10	<1.0	<10	110		>104<50	2.00	- 44	270		
	21-Jun-94	4 CEC	ARC	826	10 <10 5	<10	23	-	<1.0	-	1	>104 <50											<30	< 20	-30	<30	<30	- 30	30	30	530	110	-80	<30		50	530		
	71-00-04	41 CEC	CEC	100	0 00	<30	36	0 <30	<30	<100	50	<b>30</b>	- 36	<100	<30	- 50	<30	<30		1					<u> </u>	i			ৰ	उ		100		- 2		1101	330		7600
	20-Oct-94	4 CEC	CEC CEC	826	ঠ ব	ব	24	० ड	<5	ভ	96	ত	ઢ	<20	96	78		- 45	<5	ৰ	4	ح	33	હ		હ				1						120	520		7800
	20-Oct-94	4 CEC	CEC	8015/80	2 i 30 <30	30	42	0 <30	<30	<30	<100	40	<30	<b>30</b>	120	100	<30	<30	<30	<30	<30	<30	90	<00_	<30	<30	⊲∞	90_	<30	30	800	120	<50	<b>480</b>		370	730		9700
	S Jan-05	5 CEC	CEC	8015/80	2	ও	52	0 <5	<5	<20	51	ধ্য	ઢ	<20	54	61	6	<5	<5	ব	≪ ≪	ব	17	ड	ব	ব	ব	14	ঙ	্ৰ	490	51	<10	ठ		60) 24)	210		6100
<b>"</b>	26-Apr-90	6 CEC	CEC	8015/80	2			.0		- 3		હ		<20	948	120	10	ব	<5	-8-	ব	ৰ	19	ৰ	<5	ব	ব	8	ব	- 5	660	130	<10	ব		74 53	520	==	7200
	30-Jun-95	6 CEC	CEC	8015/80	20 30 20 20 20 30 30 30 30 30 30 30 30 30 30 30 30 30	<5	57 38	ण <b>४</b>			-												18	<b></b>				<u> </u>	<u> </u>				<u> </u>			33			
				_						<del> </del>	<del> </del>												>101-50		<b>210</b>	61.0	<1.0	31	<1.0	510	>104<50	410		<10		>104<50	661		
OB-1	21-Jun-94	CEC	ARC	826	<b>50</b> <1.0	<1 0 <5	1	0	<10		26	<10	ব্য	<u> </u>	>104<50	54	<104>50	<10_	<10	<10	<b>410</b>			1	1		1						<10			<5	,	=	2800
ſ <b></b> -	21-Jun-94 21-Jun-94	MI CEC	ARC	82	15i 50i <5	<5	1	C <5	-45	<20	39	ব	ਫ	<20	ड	5	ব	<u>ड</u>	ব	ব	⊲	ব	- 4	ব	- 3	<5_	ব	42	ব	-	্ব	< _		<5					•00e
	, Jun-9	CEC	باعيا ا		131			<5	<5	<20	30	<5	ব	<20	ব	<5	<5	<5	<5	ব	ব	<	- 5	ব	- 6	5	< _	66	45	3	ব	4	<10	- 4		<5 09	5		2600
	20-Oct-9	M CEC	CEC	8015/80	2		5	2		<20			45	₹20	45	11	ક	<5	<5	<5	ব	ব	39	<	72	ও	ও	. 27	ৎ	ব	<5	ব	<10	ব		21	45		3900
<b></b>	25-Jan-95 25-Jan-95	S CEC	CEC	8015/80	SUI <5	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1	24			Ħ			- Za	8		8	3	ব্য	ব্	- 3	ৰ	3	ৰ	8	<5	<3	57	<5	ব	5	ব	<10	ব		45	8		
	26-Apr-90	6 080	CEC	82 8015/96	<b>50</b> <5	<5	7	4 <5	<5	<20	3	ব ব			1	<u> </u>		<u> </u>			-3	- 3	34	-		- 45	<5	55	<5	- 6	8	ও	<10	ব		2	62 15		4400
L ===	30-un-3	S CEC	CEC	32	60 <5	- S - S - S		7 <5	<5	<20	4	<5	4	73)	ব	11	<5	9	- 9	<b>S</b>			7			<del></del>					Ι			Ι		31	13		2900
	30-Jun-9	DI CEC	CEC	[8015/90	4!				1		<u> </u>	<u> </u>																											
								•		·								1	1 35	1	ব		<b>S</b>	1 6	1 65	1 45	T &	ा ड	1 3	ा उ	ा ड	T &	<10	ব	<u> </u>	<5			
VVV-5	XX-Jun-3	ST CEC	CEC	82	60 <5 )2	<5		<5	<5	<20	ধ	ব	- 6	<20	- 5	<5	-	- 45	9.	<5			403			ΙÌ					1		<u> </u>			<04	40.4		<50
L <u></u>	30-Jun-9	SI CEC	CEC	8015/80	14		403		<u> </u>			<del></del>					-	-	-	-	<del></del>			<del> </del>		<u> </u>			1							<5			
VV-6	Value 3	6	C CÉC	82	60 <5	<5	<5	ব	<5	<20	- 6	ব	હ	<20	ব	ব	ব	ব	-65	<5	ঙ	ব	<b>4</b> 3	ব	-65	<5	<5	4	-65	<5	<5	<	<10	<5			<5 <0.4		<50

MCL Mobile Chemicabs inc PAL - Precision Analysical Eaboratory inc

File Hinguarmons (warnew w81 prepared by ILM 1/95 updated \$/22/95

Table 4 SanLaandro Geoprobe Groundwater Analytical Data Summery of Analytical Results for Geoprobe Investigation, June 1995 Project San Leandro Caldonia Prepared by JJM 8/25/95

Geoprobe	Date	Sample Collection	Lab	EPA Method	acetone (ugit)	benzene (ug/l)	bromo- benzene (ug/l)	bromo- chiore methene (ug/l)	bromo dechoro- methane (ugfl)	bramo- form (ug/l)	bromo- methere (ug/l)		n-butyi- benzene (ugA)	carbon drauffide (ug/l)	carbon bitra- chlorida (ug/l)	chioro- benzene (ugf)	chioro- ethene (ug/l)	chloro- form (ug/l)	chloro- methene (ugil)	2-crioro- toluene (ug/l)	4-chloro- toluene (ug/l)	dibromo- chloro- methene (ug/l)	1,2-dibromo- 3-chlore- properte (ugft)	1	dibroma- methene (ug/l)	1,2-di- chloro- benzene (ug/l)	1 3-di- charro- benzene (ug/l)	T,4-di- chlare- benzana (ug/t)	dichloro- difluoro- methane (ug/f)	1,1-di- chloro- ettane (ug/l)	12-di- chloro- ytens (ug/l)						2.2- dicretoro- propurso rugiti
SP-1	Coffected	- CAP	CEC																							· · · · · · · · · · · · · · · · · · ·	<b>300</b>	<300	COM	300	<b>300</b>	<300	<300	<300	<300	<b>Q</b> 00	<3000
	5/25/95	CAP		8015/8020		<20			<u> </u>		<300	<1000	<300	<300	<300	<000	₹000	√300	<88	<300	<000	<300	<b>⊘00</b>	<300	<300	<300	30	<del></del>									
GP-2	6/28/95	CAP	CEC	5260	<1000	<300	√300	<300	<300	<300	300	11000														<del></del>											
	6/28/95	CAP	CEC	5015/8020		74			1		<del> </del>									<u> </u>				+	<del> </del>												
GP-3		CAP	CEC						<u> </u>	<del> </del>	-								ļ	<u> </u>				1	+	<del>l                                      </del>	<del></del>										
GP-3		CAP	CEC			<u> </u>			<del> </del>	<del></del>	<del> </del>								<u> </u>			-		+	1	<del>                                     </del>		-						<del></del>			
GP-4		CAP	CEC		<u> </u>	1			+								<u></u>							+	1	<u> </u>											
GP-4	6/28/95	CAP		8015/8020	<u> </u>	44			<del> </del>		<del>                                     </del>								<del> </del>		<del> </del>				1	1						<del> </del>		<5	ভ	-55	8
GP-5		CAP	CEC		<del> </del>				<del>                                     </del>	<del>                                     </del>	1						<del></del>	6	- 3	-5	ৰ	ৰ	4	ব	ব	ব	ব	9	ব	<5	< 5	<5	⋖	<del>_==+</del>			
GP-5		CAP	CEC		<20	3	ব	<5	ৰ	<	<5	<20	<5	ধ	ব	<u> </u>	<5	1	<del>                                     </del>	<del></del>	1	<del></del>							<u> </u>	<u> </u>	ļ <u>.</u>	-5	ব	- 3	4	ব	6
GP-6	6/29/95	CAP	CEC	8260 8015/8020		404	-							<u> </u>	<u> </u>	¥5	<5	- 45	- 45	-45	<5	<5	<5	- 45	٧	ধ	ব	δ.	ব	্ব	45	<del>                                     </del>		<del></del>		<del></del>	,
32-6	5/29/95	CAP	CEC	8280	<20	<5	<5	<5	ব	ধ	<5	<20	<5_	<u> </u>	ব		<del>                                     </del>	<del></del>	<del>  ~~</del>	1						<u> </u>				<del> </del>	্ৰ	14	- 65	ৰ	- 45	ধ	ব
GP-7	6/27/95	CAP	CEC	8015/8020		40.4		1			T	ļ., <u>.</u>	<u> </u>	- ত	ব	45	- 45	- 55	ঙ	4	<5	<5	<5	<5	⊺ ⊲	4	ব	ব	্ব	ব	<del>                                     </del>	<del>                                     </del>		_ <del></del>			
3P-7	6/27/95	CAP	CEC	5250	<20	- 5	<5	<5_	<5	্ত	ব	<20	<5			<del>                                     </del>	-	<del>                                     </del>	1	T	Τ				4	<del> </del>		ব্য	4	<5	<5	- 45	<5	<5	<5	ৰ্থ	<5
SP-8	6/29/95 6/29/95	CAP	CEC	8015/8020		404							<5	8	<5	- 5	4	-5	ব্	ব্য	-65	<5	< ≤	ব	ব	45	ব	- 9			<b>—</b>	<del> </del>		,			
GP-8	6/27/95	CAP	CEC	8260	<20	ব	<5	-45	<5	<5	<5	<20	<del></del>	<del>  ~</del>	<del>                                     </del>	<del>                                     </del>	1					<u> </u>	ļ	_		<del> </del>		-	<del> </del>	<del>                                     </del>		-					
GP-9 GP-9	6/27/95	CAP	CEC	8015/8020		<b>404</b>		<u> </u>		<u> </u>		<del>                                     </del>			1	<del>                                     </del>				<u> </u>	ļ		ļ			<del> </del>	<del> </del>		<del> </del>		<del>                                     </del>						<u></u>
GP-10		CAP	CEC				<u> </u>	ļ	<del></del>		+		┼──	<del>                                     </del>	1				1		<del> </del>		<100	<100	<100	<100	5100	400	<100	<100	<100	<100	<100	<100	<100	<100	<100
GP-10		CAP	CEC			<u> </u>		1	<100	<100	<100	<400	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	1100		- · · · · ·	+										لسيس	
GP-11	6/29/95	CAP	CEC	8260	<400		<100	<100	100	1 100	1	-				T	<u> </u>		<del> </del>			45	6	<5	<5	ব	ব	ব	45	45	4	<5	45	<5	<5	45	ব
	5/29/95	CAP	CEC	8015/8020		120	+	<5	<5	<5	<5	<20	<5	ব	<	<5_	<5	<5	45	ধ্য	<del>                                     </del>	<del>  ~</del>	<del>                                     </del>	+ -	1	1			T		<u> </u>	<b></b> '		استيسا		<5	45
GP-12	6/27/95	CAP	CEC	8260	<20	45	<5	3	+	<del>                                     </del>	<del>                                     </del>	1					<del> </del>	1	45	- 65	<5	હ	ব	<5	<5	<5	45	<5	<b>4</b> 5	্ব	<5	<5	<5	<5	<5		<del>_~~</del>
GP-12	6/27/95	CAP	CEC	8015/8020		04   <5	- 5	<5	- 3	4	<5	<20	<5	ব	<5	<5	<5	<5_	+ 3	<del>  ~~</del>	<del>                                     </del>	<del>                                     </del>	1			I			<u> </u>		1	1					
GP-13	5/28/95	CAP	CEC	8260	<20	404	<del></del>	<del>                                     </del>	<del> </del>						ــــــــــــــــــــــــــــــــــــــ	1				1																	
GP-13	5/28/95	CAP	CEC	8015/8020	<u></u>	1		-																				1									

CAP - Capeule Environmental Engineering CEC - Clayton Environmental Consultanta

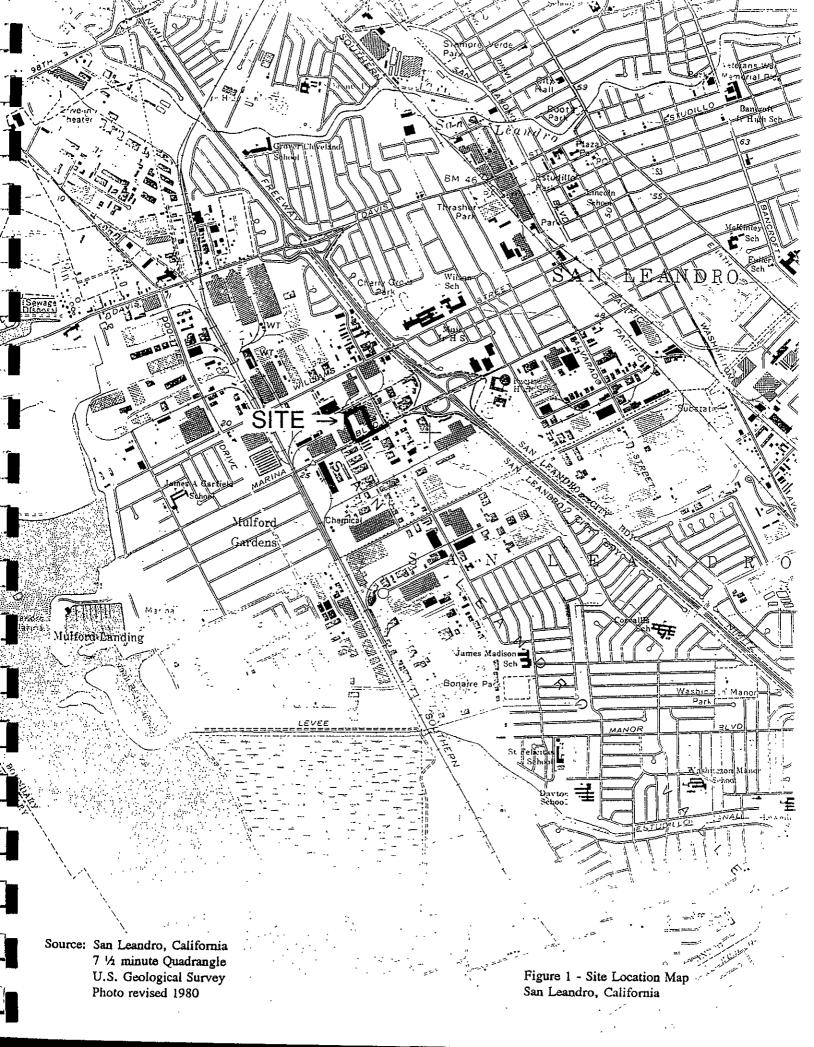
FILE | \staff\ime:andexce\taniearx\talgeopro.xis

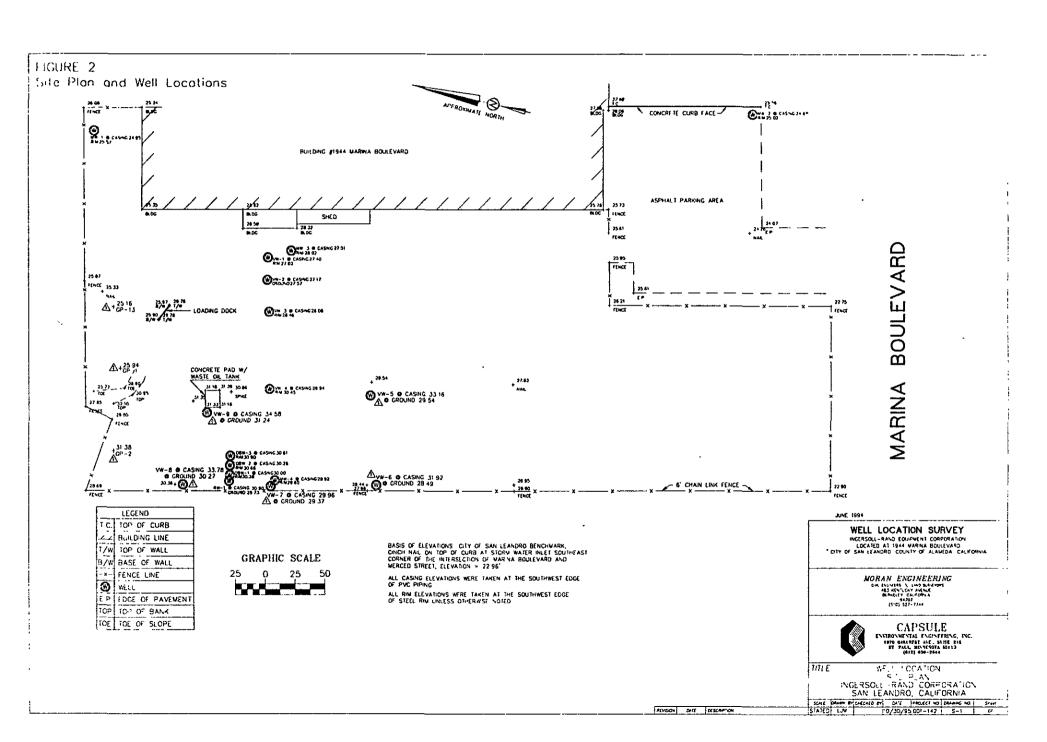
Table 4 SanLeandro Geoprobe Groundweter Analytical Deta Summery of Analytical Results for Geoprobe Investigation, June, 19 Project: San Leandro, California Prepared by JJM, 8/23/95

Geogrape Location	Cate Collected	Sample Collection By	واها	EPA Method	1,1- dichloro- propene (ugil)	cre-1-3- dichloro- properte (ug/l)	trans-1,3- dichloro- propiene (ug/l)	ethyl- benzane (ugf)	freat 113 (ug/l)	hexachio- robuta- dene (ug/l)	2-hexa- none (ug/l)	reapropyl- benzene (ug/t)	p-eo- propyl- tokuene (ug/l)	metry- lane chlonds (ug/l)	4-methyl- 2-pens- anone (ug/l)	rephthe- iens (ug/i)	n-propyl- benzene (ug/l)	sec- buryl- benzene (ugft)	styrene (ug/l)	tert- butyl- benzens (ug/l)	1,1,1,2- bitra- chloro- ethane (ug/l)	1,1,2,2- tetra- chloro- ethana (ug/l)	tetra- chioro- ethene (ug/l)	toluene (legi)	1,2,3- trichlaro- benzene (ug/l)	1.2.4- trictions- benzene (upli)	ettere (ugf)	1,1,2 trichloro- ethere (ug/l)	Inchioro- elfrene (ug/l)	fuctions fuctor methens (ug/l)	1,2.3- trichloro- propane (ug/l)	1.2.4- treatryi- benzarie (ugil)	1,3,5- transtyl- benzene (ug/l)	veryl acetata (ug/l)	venyt chlonde (ug/f)	(Ngu)	zylenes (ug/t)	TPH EPA 80151 geometric (ugf)
€9.1		CAP	CEC		<u> </u>		ļ			<del>                                     </del>			<del></del>			-	<del>                                     </del>							[ <20_			•			<del></del>	<300	3800	1100	⊲800	-300		9400	- 2200
SP-1	6/28/95	CAP	CEC	8015/8020	<u> </u>			310	<300	₹300	<1000	₹300	<300	<300	<1000	500	800	<300	₹300	<300	<300	<300	<3000	1400	<300	<b>(300)</b>	<300	<000	<b>⊘</b> 00	<300	1,300		1100				8200	56000
3P-2	6/28/95	CAP	CEC	6260	<300	<b>⊘8</b>	<300		130	<del></del>	4.000													900	<u> </u>	<b>└</b>	1	-		<del> </del>	<del> </del>					<del></del> +		
GP-2	6/28/95	CAP	CEC	5015/6020	Ļ		<del></del>	2800	<del> </del>	<del> </del>		<del>-</del>										<u> </u>		<u> </u>	<del></del>	<b></b>	ļ	<del></del>										
3P-3		CAP	CEC	<u> </u>	<u> </u>			<del></del>		<del>                                     </del>	<del> </del>	<del></del>					1							Ļ	<del></del>	<del></del>	<b>├</b> ──	ļ		ļ		<del>                                     </del>				<del></del>		
3P-3		CAP	CEC	<u> </u>	<u> </u>		<b>↓</b>	<del> </del>	<del> </del>	<del> </del>	-					1	1			L				<u> </u>	ļ	ļ	ļ	<del>                                     </del>		<del></del>	<del> </del>	<del></del>	<del> </del>			19	46	380
GP-4		CAP	CEC		<del> </del>			21	<del></del>	-			-			1	1		Г			L		38	<del> </del>	ļ	<u> </u>		ļ	<del></del>		<del> </del>						
3P-4	6/28/95		CEC	8015/8020	<del>                                     </del>	ļ <u> </u>	<del> </del>	21	<del></del>		-					1		1	[		<u> </u>			ļ	↓	<del> </del>	<del> </del>				<del> </del>	<del> </del> -						
3P-5		CAP	CEC	ļ.,	<del> </del>		<del> </del>									1		1						<del> </del>	4	ļ	<del> </del>		<5	- 65	<5	8	-	<10	-	ड	-3	
3P-5		CAP	CEC	<u> </u>	<del></del>		<del></del>	- 3	-6	- 3	-20	- 6	ব	<5	<20	ব	<5	া ব	<5	<	<5	<5	<5	4	<u> </u>	<u> </u>	<-	<u> </u>			<del></del>	<del>                                     </del>				40.4	404	<50
⊋P-6	6/29/95	CAP	CEC	8260	4 3	<5	\ '5	- 403		<del>  ~~</del>	<del>                                     </del>							L		<u> </u>		ļ		₹03	<del> </del>	<del></del>	<del> </del>	- 5	- 4		- 55	21	-	<10	্ব	8	18	
3P-8	6/29/95	CAP	CEC	8015/8020	<del> </del>	·		1. 43	<5	- 3	<20	હ	ব	<5	<20	18	<5	<5	্ৰ	< <	<5_	<5	4		4 5	0	1-3-	<del>  9</del> -			<del>  -~-</del>	<del> </del>	<del></del>			404	404	<50
3P-7	6/27/95	CAP	CEC	5280	<5	<5	<5	<03	~	+						1						<u></u>		≪3	<del> </del>	<del>  </del>	<del>                                     </del>	<b>-</b>	55	- 55	- 3	21	8	<10	- 4	6	18	
3 <b>P-7</b>	6/27/95	CAP	CEC	8015/8020			<5	<5	<5	- <5	- <del>2</del> 20	-5	ব	<5	<b>720</b>	45	<5	45	<5	<5	্ৰ	<5	ح _	<5	1 9	<	41	- 45	-	- 9	<del>  ~</del>		<del>                                     </del>				<0.4	<50
SP-8	6/29/95	CAP	CEC	5260	<5	<5	1 13	<del>2</del> 03	<del></del>	<del>                                     </del>	<del>                                     </del>	<del> </del>					T			<u> 1</u>				403	<del> </del>	<del> </del>	<del> </del>	4	- 45	- 55	<5	3	8	<10	4	ব	<5	
3P-8	6/29/95	CAP	CEC	8015/8020	<del> </del> _		<5	- 65	- 55	<5	<20	ব	<5	ব	<b>~20</b>	ব	<5	ব	ব	< 5	<5·	45	<u> </u>	1 8	<u> </u>	<	≪_	+-		<del>-~</del> -	<del></del>	<del>                                     </del>	<del></del>			404	84	<50
GP-9	6/27/95	CAP	CEC	8290	1 5	<5	<del>                                     </del>	403	<del> ~-</del>	1	<del> </del>	-					.1	Ī.,				ļ	ļ	403	<del></del>		<del> </del>	<del> </del>		<del>!</del>	<del> </del>	<del> </del>	-			, <del></del>		
GP-9	6/27/95		CEC	8015/8020	+		<del> </del>	+ ~~	<del> </del>	-				T		Ī	Ī	1		<del>!</del>	<del></del>	ļ	ļ <u> </u>	<del> </del>	<del> </del>	<del> </del>	╂	<del> </del> -	<del> </del>	<del> </del>	<del>                                     </del>	<del> </del>	<del>                                     </del>					
GP-10	<u> </u>	CAP	CEC	ļ	<del> </del>	<del> </del>	+	+	<del>†          </del>	<del>                                      </del>	<del>                                     </del>	-						Ī	<u> </u>	<del></del>	<u> </u>	<b></b>				<100	<100	<100	<100	<100	<100	2000	500	<200	<100	400	1800	
GP-10	<u> </u>	CAP	CEC		<100	<100	<100	900	<100	<100	<400	<100	<100	<100	<400	500	200	<100	<100	<100	<100	<100	<100	<100	<100	1.00	100	1 ···-	1		1	<del> </del>				320	1500	14000
GP-11	6/29/95	CAP	CEC	8290		- T.W	1 100	770	1100							İ.,			ļ			ļ <u>.</u>		57	-	<del>                                      </del>	- 5	- 5	- 5	- 6	- 5	6	3	<10	-65	ব	ح ا	
GP-11	6/29/95	CAP	CEC	8015/8020		<5	<5	<5	<5	- 65	<20	- 45	<5	- <5	<20	<5	<5	<5	<5	1 4	<u> </u>	1 5	<u> </u>	1 4	+ 45	<del>                                     </del>	1-3-	<del> -~-</del>	<del></del>	<del>                                     </del>	<del>                                     </del>	<del>                                     </del>	1			404	0.5	<50
3P-12		CAP	CEC	8280	1 9	<del>  \3</del>	<del>                                     </del>	04	<del>                                     </del>	<del>  ~~</del>	<del></del>					I	1	1		<del> </del>	ļ <u>.</u>	ļ		<del>403</del>	+ =-			8	18	<5	<5	ব্য	<5	<10	45	<5	ধ	
GP-12	6/27/95	CAP	CEC	5015/8020		<5		<5	<5	<5	<20	45	<5	ব	₹20	ব	<5	<5	্ৰ	্ৰ	<5_	45	্ব	403		+ -	+ ->-	<del>                                     </del>	<del></del>	1	<del>                                     </del>	<del>                                     </del>	<del></del>			404	40.4	<50
GP-13	6/28/95	CAP	CEC	8290	1-9-	- 9	1 .3	<del>- 403</del>	+	<del>  ~~</del>	<del>-</del> -	T			Ī		Ι	1	<u> </u>					403	٠	٠	ــــــــــــــــــــــــــــــــــــــ	L	<u> </u>		<u> </u>		<u>'</u>					
GP-13	6/28/95	CAP	CEC	8015/8020	٠	<u> </u>	-	1 -03																														

CAP - Capsule Environmental Engineering CEC - Clayton Environmental Consultants

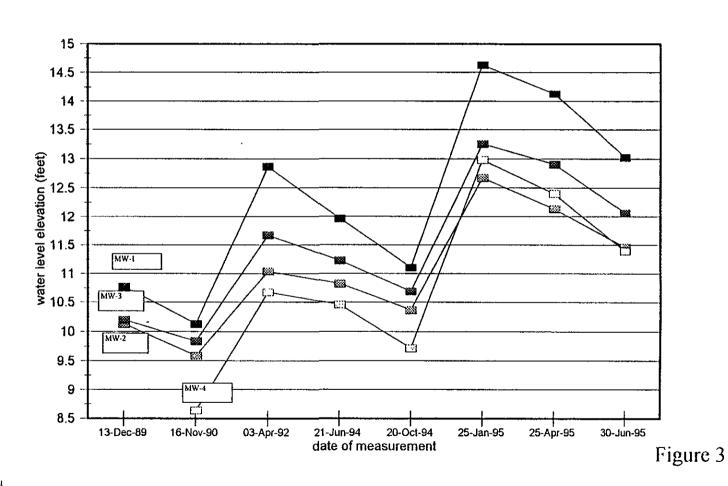
FILE +\staffilmeiandlexcellsanieandleigecore xis

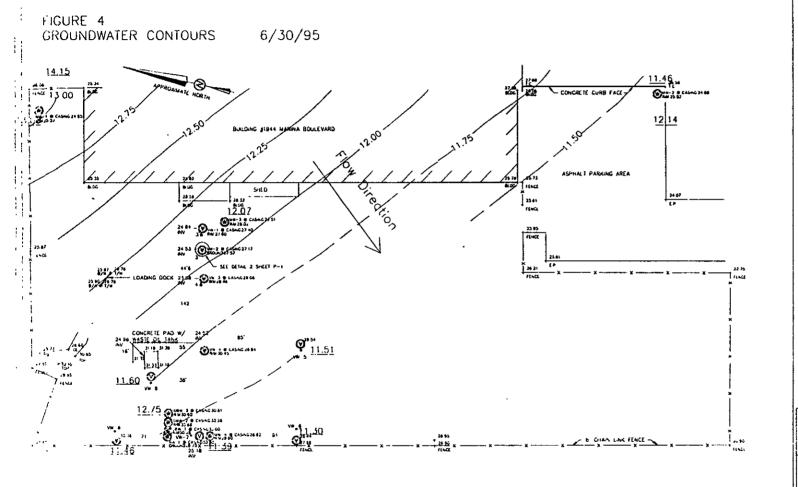




## **Water Level Elevations**

San Leandro, California





-		I (GINO
-	10	TOP OF CURB
	72	BULLDING LINE
-	1/4	CO OF WALL
	e/w	BASE OF WALL
- 1		FENCE LINE
- 1		MILL EXSTANG
	9.	MELL ENGINEE
	(Ø)	SOL VAPOR VENT
1	E P	EDGE OF PAYENENT
	100	TOP OF BANK
	11OC	TOL OF SLOPE

BASS OF ELEVATIONS CITY OF SAN ICANORO BENCHMARK, CACH NAI, ON TOP OF CLAB AT STONE WATER MLET SQUINEAST CONNER OF THE MITRISCETION OF MARMA BOLIEVARD AND MERCO STREET ELEVATION N 22 88

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

ALL HE ELEVATIONS MHE TAKEN AT THE SOUTHWEST EDER OF STEEL HE UNIESS CHICANSE AUTED

\* DEHOTES APPROXIMATE LOCATION OF VW - 5 THRU 9

Approximate Scale: 1" = 85°

WELL EOCATION SURVEY ACCESS, CHANDED TO THE TO THE ACCESS, CHANDED TO THE TOTAL THE ACCESS OF THE AC

-------

MORAN ENCINEERING
ON EMPLIES \ LAW EAR ON 
623 CLIVICAT AND LE
REGILLY CA. JOHA
80 707
[370] 527 7744



CAPSULE ENGINEERS, INC. 1878 BARERS AVE. AUGUSTESS, INC. 1878 BARERS AVE. 1879 BARERS ASSESS (617) BARERS ASSESS

THE GROUNDWATER CONTOUR

MAP 6/30/95

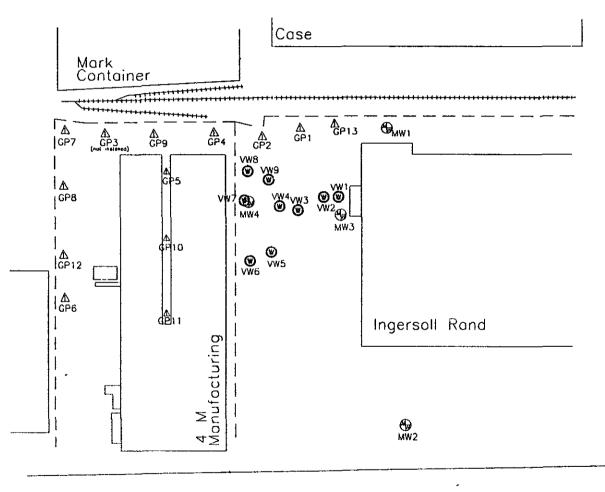
INGERSOLL-RAND CORPORATION

SAN LEANDRO, CALIFORNIA

SLAL PARAM PROCESSED AND MALERY STATES

N'S VER 01/28/53/1703/54 CCT 1/42 51/5 2 4

FIGURE 5



O See of

### LEGEND

--- Fence

⚠ Geoprobe Location

Monitoring Well

Soil Vapor Extraction Vent

= logs available

APPROXIMATE SCALE
1"=300"



CAPSULE
EXVIRONMENTAL ENGINEERING, INC
1870 OAKCARST AVE., SUTE 715
ET PAIL, MONESOTA 60113
1612) 520-20-4

TITLE

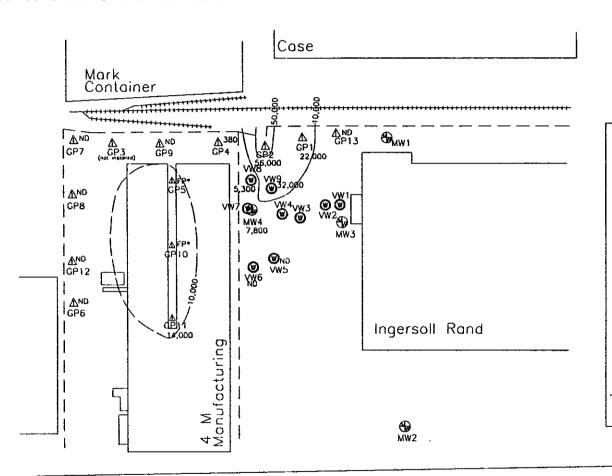
MENSON JAIL DESCRAIGA

SAN LEANDRO, CA GEOPROBE SAMPLING LOCATIONS

SCAL CAME BY DISCRETE BY 2012 PREMED NO 20A4

Marina Drive

FIGURE 6
TPH Concentrations and Contours



Marina Drive

Secretary Secret

#### LEGEND

Fence

HHHHH Railroad Track

Monitoring Well

Soil Vapor
Extraction Vent

ND not detected at limit of detection

FP\* free product sheen

7800 TPH as gasoline (ug/l)

-10,000 Contour showing TPH concentration in (ug/l)

\* assumes TPH > 10,000 ug/l

APPROXIMATE SCALE
1"=300"



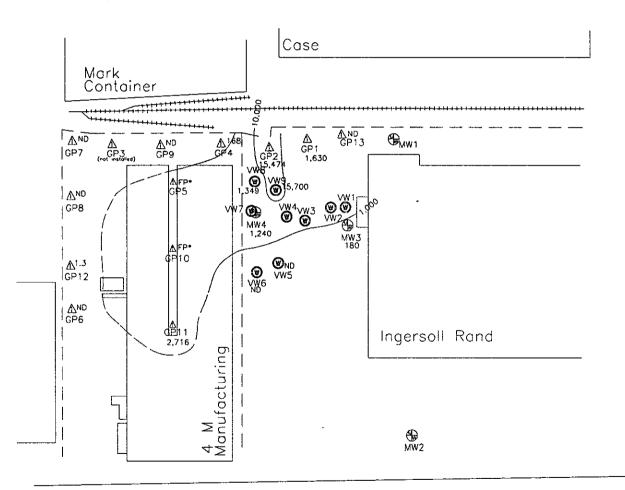
CAPSULE
ENVIRONMENTAL ENGINEERING, INC
1979 GARCARET AVE. MITTE 214
ET. PAIL, MENALIOTA 56112
(012) 030-030

TITLE

REVISION CATE DESCRIPTION

SAN LEANDRO, CA TPH Concentrations and Contaurs

LIGURE 7 Sum of BETX Compounds and Contours



Marina Drive

APPROXIMATE NORTH

### LEGEND

- Fence

\*\*\*\*\*\* Railroad Track

⚠ Geoprobe Location

Monitoring Well

Soil Vapor Extraction Vent

ND not detected at limit of detection

FP\* free product sheen

2716 sum of BETX concentration (ug/l) (EPA 8020)

-1,000 contour showing BETX concentration (ug/l)

\* assumes sum of BETX > 1,000 ug/l

APPROXIMATE SCALE
1"=300'



CAPSULE
ENVIRONMENTAL ENGINEERING, INC.
1970 DAKCESST ATE, SUITE 215
ST PAUL MINIESOTA 55113
(612) 638-2844

TITLE

SAN LEANDRO, CA Sum of BETX Compounds and Contours

REVISION DATE DESCRIPTION