

**SUBSURFACE ENVIRONMENTAL
INVESTIGATION REPORT**

For

**J.E. Higgins Lumber Company
600 Daggett Avenue
Union City, California**

For

CITATION HOMES CENTRAL

March 19, 99

By

TERRASEARCH, inc

**Project No. E7744
March 19, 1999**



Environmental • Geotechnical • Special Inspections • Materials Testing

TERRASEARCH inc.

SERVING NORTHERN CALIFORNIA SINCE 1969

Project No. E7744
March 19, 1999

Mr. John Hughes
Citation Homes
404 Saratoga Avenue, Suite 100
Santa Clara, California 95050

Subject: J.E. Higgins Lumber Company
600 Daggett Avenue
Union City, California

SUBSURFACE ENVIRONMENTAL INVESTIGATION REPORT

Dear Mr. Hughes:

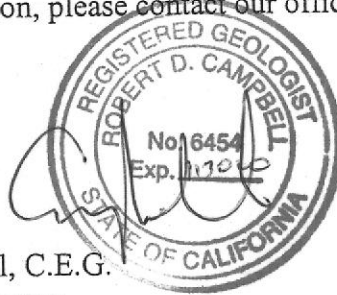
As per your request, *TERRASEARCH, inc.* has conducted a revised additional subsurface environmental investigation and report for the above referenced site.

The following is a copy of the final report, which includes the results and findings of our subsurface environmental investigation.

Should you have any questions relating to the contents of this final report or require any additional information, please contact our office at your convenience.

Reviewed by:

Robert D. Campbell, C.E.G.
Environmental Manager



Very truly yours,
TERRASEARCH, inc.

Chris Winn
Staff Geologist

Copies: 3 to Citation Homes Central

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INTRODUCTION

At the request of Citation Homes, *TERRASEARCH, inc.* has prepared this report, which presents the findings and results of this subsurface environmental investigation at the above referenced site. The purpose of this assessment was to evaluate the lateral and vertical extent of halogenated volatile organics (HVOs), petroleum hydrocarbons, and organochloride pesticides that may have impacted the soil and groundwater in the vicinity and beneath the subject site.

This work has been conducted in accordance with the recommendations in our Phase I Environmental Site Assessment dated May 11, 1998, and at the request of the Union City Environmental Programs in their letter dated January 5, 1999.

SITE DESCRIPTION AND BACKGROUND

General

The subject site is the J.E. Higgins Lumber Company at 600 Daggett Avenue in Union City, California (see Site Vicinity Map, Figure 1). The site consists of approximately 10 acres is used to store lumber for sale and transportation. Large storage sheds, offices occupy the perimeter of the site, a drying kiln, and other structures. The middle of the site is paved with asphalt and concrete.

Two USTs containing diesel fuel were located at the central southern edge of the site. (See Site Plan, Figure 2). Buried fuels lines carried diesel from the UST to the boiler room at the southeastern portion of the property. The diesel USTs were removed from the property, but the fuel lines remain in place at the site.

Before the J.E. Higgins Lumber facility was constructed in the 1960s, the site was used for agricultural purposes. Organochloride and metal pesticides may have been applied to the site when the site was used for agricultural purposes, and organochloride and metal pesticide residues may be present within the surficial soil.

In addition, the subject site is located down-gradient from the former McKesson Chemical Company site. Leaking USTs containing HVOs impacted soil and groundwater. The McKesson site is still under investigation and is being reviewed by the Cal EPA and the US EPA.

Local Geology and Hydrogeology

Based on published materials by Helley et al. (1979), the materials underlying the site consist of Pleistocene alluvium (Qpa), consisting of weakly consolidated, slightly weathered, poorly sorted, irregular interbedded clay, silt, sand, and gravel. Alluvium was deposited by flowing water in stream channels, on stream terraces, and on alluvial fans. Deposits are about 10,000 years old and older and have a thickness of at least 150 feet.

The Hayward Fault is situated along the base of the Diablo Range less than 0.5 miles northeast of the site. The Hayward Fault is also considered active according to the Alquist-Priolo Earthquake Fault Zones Act.

First encountered groundwater beneath the subject site is approximately 31 feet below ground surface (bgs). Based on wells located in the vicinity used for the Omega Environmental Management, Inc. Quarterly Groundwater Quality Report - February 1998, for the former McKesson Chemical Company Facility located immediately north of the subject site, groundwater flows toward the south-southwest at a gradient ranging from 0.01 to 0.02.

PREVIOUS ENVIRONMENTAL WORK

In August 1985, a diesel tank was excavated at the central southern edge of the J.E. Higgins Lumber facility. A soil boring was drilled by McKesson Environmental Systems, a few feet north of the excavation area to groundwater. Soil and groundwater analytical results showed negligible impact to the subsurface environment from the diesel tank. The soil boring was converted into monitoring well OW-1.

TERRASEARCH, inc. performed a Phase I environmental site assessment for the subject site and adjacent vacant parcel (621 Daggett Avenue). The Phase I environmental site assessment revealed that the site was formerly used for agricultural purposes (prior to the development of Higgins Lumber). Two former diesel-USTs were located on the site. They were removed in 1985, but the product lines were not removed and they were still present at the site at the time of this Phase I. In addition, a State Cleanup List site and RCRA corrective action site (McKesson Chemical) was found to be located 100 feet west of the site. The McKesson Chemical site leaked halogenated volatile organic compounds into the groundwater and the plume has migrated beneath the subject site. Based on the findings of the Phase I environmental site assessment, *TERRASEARCH, inc.* recommended the following: Collecting surficial soil samples to be analyzed for organochloride pesticides and metals arsenic, lead, and mercury; drilling two soil borings to groundwater beneath the subject site and the soil and groundwater "grab" samples

analyzed for HVOs; and drilling one soil boring in the vicinity of the former diesel USTs. Soil samples and groundwater "grab" samples (if encountered) to be analyzed for total petroleum hydrocarbons reported as diesel (TPHd).

On June 8, 1998, a *TERRASEARCH, inc.* field geologist was on-site to observe the drilling of one soil boring at the north side of the former diesel UST location. The boring was logged according to the United Soil Classification System and soil samples were collected at 6 feet, 11.5 feet, and 16.5 feet for laboratory analysis. The soil samples were capped, labeled, and temporarily placed in a pre-chilled ice chest, which was kept at a constant temperature of 4° Celsius. The soil samples were then delivered under chain-of-custody documentation to Chromalab, Inc. of Pleasanton, California, a State-certified hazardous waste testing laboratory (Certification No. 1096), for analysis. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and diesel (TPHd), and benzene, toluene, ethyl benzene, and total xylenes (BTEX) using Environmental Protection Agency (EPA) Methods 5030/8015 (modified) and 8020. Laboratory analysis reported that the soil samples were below the detection limits for each constituent analyzed. Based on these results, it appears that the soil beneath the former diesel UST was not impacted by petroleum hydrocarbons.

EnTox & Associate prepared a Human Health Risk Assessment of Daggett Avenue dated September 14, 1998. This assessment showed that "potential human health risks due to exposure to volatilization of the chlorinated hydrocarbon solvent in the groundwater fall within acceptable ranges". Direct contact with the groundwater could pose health risks. However, considering that drinking water is provided by ACWD, contact with groundwater (nearly 30 feet below ground surface), is highly unlikely.

SUBSURFACE ENVIRONMENTAL INVESTIGATION

A work plan was submitted to the Alameda County Water District (ACWD) for review. After the work plan was accepted, ACWD issued the necessary permits for the drilling activities. Prior to commencement of any field work, Underground Service Alert (USA) was contacted two days before drilling activities were initiated at the site to identify any underground utilities beneath the subject site.

Drilling Activities

On March 2, 1999, a *TERRASEARCH, inc.* field geologist observed the drilling of eleven borings by Pacific Drilling of San Jose, California (C57-749318) using a truck-mounted drilling rig with 4-inch diameter solid-stem augers. Soil borings B-1, B-2, and B-3 were drilled to approximately 35

feet below ground surface (bgs), and soil borings FL-1 through FL-8 were drilled along the existing fuel lines to approximately 4 feet bgs. The locations of the borings are shown in Figure 2, Site Plan. An ACWD inspector was on-site to observe the drilling, sampling, and grouting methods performed at the site.

Soil Sampling and Description

Soil samples were collected at approximately 10-foot intervals from borings B-1 through at B-3 (not including the initial soil samples collected at 2 feet bgs). Soil samples were collected at approximately 4 feet bgs from borings FL-1 through FL-8, respectively. All samples were collected using a California Modified split-spoon soil sampler that was allowed to fall 30-inches under a 140-pound hammer until the sampler was driven 18-inches into the soil. The blow counts needed to drive the sampler 18-inches were recorded for each sampling interval within the borings. Each soil sample was observed for any odors or staining, and were used to log each boring by a *TERRASEARCH, inc.* geologist according to the United Soil Classification System (USCS). The logs of borings are attached to Appendix A. The ends of each soil sample were covered with Teflon tape, capped with plastic end caps, and immediately placed in a pre-chilled ice-chest that was constantly kept at a temperature of approximately four degrees Celsius for temporary storage. Selected samples were then delivered to Sequoia Analytical of Walnut Creek, California, for analysis.

Groundwater Sampling

Once the soil samples were collected from each boring and groundwater was encountered, a disposable bailer was lowered into each boring and allowed to fill with groundwater. The bailer was then raised to the surface, and the groundwater was carefully decanted into sample bottles that were immediately placed into a pre-chilled ice-chest (held at a temperature of approximately 4 degrees Celsius) for temporary storage. All groundwater samples were delivered under chain-of-custody documentation to Sequoia Analytical in Walnut Creek, California for analysis.

Upon completions of all sampling activities within the borings, each boring was backfilled with neat Portland cement to grade.

LABORATORY METHODS

Soil Samples

Fourteen soil samples were submitted under chain-of-custody documentation to Sequoia Analytical, a State-certified hazardous waste laboratory (Certification No. 1271), in Walnut Creek,

California, for analysis. Soil samples collected at approximately 2 feet bgs from borings B-1 through B-3 were analyzed for organochloride pesticides using EPA Method 8080 and metals arsenic, lead, and mercury using EPA Method series 7000. Soil samples collected at 21 feet bgs from borings B-1 through B-3 were analyzed for HVOs using EPA method 8010. The soil sample collected at 21 feet from B-3 was also analyzed for total petroleum hydrocarbons as gasoline (TPHg) and TPHd, BTEX, and MTBE using EPA methods 5030, 8015 (modified), and 8020. All soil samples collected at 4 feet bgs from FL-1 through FL-8 were analyzed for TPHd using EPA Methods 5030/8015 (modified).

Groundwater Samples

A total of four groundwater sample points were collected from the borings B-1 through B-3 and monitoring well OW-1. The groundwater samples were analyzed for HVOs using EPA method 8010. Samples from B-3 and OW-1 were also analyzed for TPHg, TPHd, BTEX, and MTBE using EPA Methods 5030,8015 (modified), and 8020.

FIELD WORK RESULTS

Drilling Observations

The subsurface soil encountered beneath the site generally consisted of brown silty sand. Varying clay concentrations were encountered in the first 8 feet of a few of the borings. Gravel concentrations were also evident in borings B-1 and B-2. The silty sand units were medium dense in consistency. No hydrocarbon odors were detected in any of the borings.

Groundwater stabilized at 30 to 32 feet bgs in all borings. A more detailed description of the subsurface materials encountered at the site is shown on the exploratory boring logs in Appendix A.

RESULTS OF LABORATORY ANALYSES

Soil Samples

Soil samples analyzed from borings B-1 and B-2 reported non-detectable concentrations of organochloride pesticides. DDE and Endrin were detected in the sample 3-2 from B-3 at 370 µg/Kg and 42 µg/Kg, respectively. Lead was detected at concentrations ranging from 21 to 30 mg/Kg, mercury was detected at 0.054 to 0.081 mg/Kg, and arsenic was not detected in borings B-1 through B-3. Soil samples collected at 21 feet bgs from each borings reported non-

detectable concentrations of HVOs. In addition, sample 3-21 from boring B-3 reported non-detectable concentrations of TPHg, TPHd, MTBE, benzene, toluene, and ethyl benzene, respectively. For samples FL-1 through FL-8, Petroleum hydrocarbons were detected in the soil sample collected from boring FL-3 at a concentration of 54 mg/Kg. Soil sample laboratory results are summarized on Table 1 and the Sequoia Analytical laboratory report and chain-of-custody forms are attached to Appendix B.

Groundwater Samples

Groundwater samples collected from borings B-2, B-3, and monitoring well OW-1 reported non-detectable concentrations of HVOs. Detectable concentrations of 1,1-Dichloroethane (1,1-DCA) at 23 µg/L, Tetrachloroethene (PCE) at 110 µg/L, 1,1,1-Trichloroethane (1,1,1-TCA) at 15 µg/L, and Trichloroethene (TCE) at 41 µg/L were detected in groundwater sample collected from boring B-1. In addition, groundwater samples B-3 and OW-1 reported non-detectable concentrations of TPHg, benzene, toluene, ethyl benzene, total xylenes, and MTBE. TPHd was detected in groundwater samples collected from OW-1 and B-3 at 150 µg/L, respectively. Groundwater sample laboratory results are summarized in Table 2 and the Sequoia Analytical laboratory report and chain-of-custody forms are attached to Appendix B.

DISCUSSION OF RESULTS

The laboratory analytical results of surficial soil samples reported low levels of organochloride pesticides within one surficial soil sample. Organochloride pesticides appear to have been sparingly used at the site, and did not significantly impact the site. Low levels of weathered diesel appear to have impacted the soil in limited areas beneath the existing diesel product lines; however, do not pose a significant risk to the site. TPHd was also detected in groundwater samples collected from boring B-3 and well OW-1 (near the former diesel USTs) at very low levels (150 µg/L), and these levels are below the action level for TPHd. In addition, TPHd was the only petroleum hydrocarbon detected at the site. The laboratory reported that the chromatogram did not match the typical diesel pattern. After discussing these results with Sequoia Analytical, they suspected that the pattern was probably weathered diesel (greater than carbon [C]-15 chain). Low to moderate concentrations of HVOs were detected in a groundwater sample collected from boring B-1, which is located closest to the former McKesson Chemical facility. These low concentrations of HVOs in groundwater probably represent the McKesson Chemical groundwater solvent plume that has migrated beneath the site. Entox & Associate have stated that these concentrations will not impact human health, since groundwater is not going to be used at this site.

CONCLUSIONS

TERRASEARCH, inc. concludes the following, based on the results of this additional subsurface environmental investigation:

- Petroleum hydrocarbons reported as weathered diesel (TPHd) was the only petroleum hydrocarbon detected in one soil sample and two groundwater samples collected from the site, and were reported below the action levels for TPHd. In addition, these very low concentrations of weathered TPHd should continue to naturally attenuate with time.
- Low concentrations of organochloride pesticides DDE and Endrin, and metals lead and mercury were detected in surficial soil samples collected from the site; however, these organochloride pesticides and metals are well below the action levels for pesticides and metals lead and mercury.
- HVOs 1,1-DCA, 1,1,1-TCA, PCE, and TCE were detected in at low to moderate concentrations (23 µg/L to 110 µg/L) in a groundwater sample from boring B-1, which was located closest to the former McKesson Chemical facility. The HVO groundwater plume has not migrated to beneath borings B-2, B-3 or well OM-1. Since groundwater is not going to be used at the site for drinking and/or domestic purposes and is at least 30 feet bgs, no health risk to people is anticipated.

RECOMMENDATIONS

Based on the findings and conclusions presented in this report, *TERRASEARCH, inc.* recommends that further investigation of this site is **not warranted**, and formal closure to further environmental work at this site should commence.

DISTRIBUTION

TERRASEARCH, inc. recommends that copies of this additional subsurface environmental investigation be distributed to the following:

Mr. Lorenzo Perez
Hazardous Materials Inspector
City of Union City
34009 Alvarado-Niles Road
Union City, California 94587

LIMITATIONS

This report was prepared in accordance with generally accepted standards of environmental geological practice in California at the time this investigation was conducted. This subsurface environmental investigation was conducted solely for the purpose of evaluating environmental conditions of subsurface soil and groundwater with respect to potential chemicals associated with the Higgins Lumber facility located at 600 Daggett Avenue in Union City, California. These chemicals are limited to: TPHg, TPHd, gasoline constituent's BTEX and MTBE, HVOs, organochloride pesticides, and metals arsenic, lead, and mercury. No soil engineering or geotechnical implications are stated or should be inferred. Evaluation of the hydrogeologic conditions at the site for the purpose of this assessment was conducted from a limited number of observation points. Subsurface conditions may vary away from the data points available at the site.

REFERENCES

EnTox & Associate, September 14, 1998. *Human Health Risk Assessment at Future Residential Tract 7003, 621 Daggett Avenue, Union City, California.*

City of Union City Environmental Programs Division, January 5, 1999. *Review of Phase I Environmental Assessment for Lumber Facility, 600 Daggett Avenue, Union City, California.*

Helley, E.J. and LaJoie, K. R., 1979. *Flatland Deposits - Their Geology and Engineering Properties and Their Importance to Comprehensive Planning*, U.S.G.S. Geological Professional Paper 943.

Terrasearch, Inc., May 11, 1998. *Phase I Environmental Site Assessment at Higgins Lumber and Adjacent Site, 600 and 621 Daggett Avenue, Union City, California.* Project No. E7744.

Terrasearch, Inc., February 11, 1999. *Workplan for Phase II Environmental Site Assessment at Higgins Lumber Company, 600 Daggett Avenue, Union City, California.* Project No. E7744.

Terrasearch, Inc., February 25, 1999. *Limited Phase II Environmental Site Assessment for Higgins Lumber, 600 Daggett Avenue, Union City, California.* Project No. E7744.

TABLE 1
 LABORATORY ANALYTICAL RESULTS OF SOIL SAMPLES
 Higgins Lumber
 600 Daggett Avenue
 Union City, California

Sample I.D.	HVOs (µg/Kg)	TPHg (mg/Kg)	TPHd (µg/Kg)	BTEX (mg/Kg)	MTBE (mg/Kg)	Pesticides (µg/Kg)	Arsenic (mg/Kg)	Lead (mg/Kg)	Mercury (mg/Kg)
1-3	N.A.	N.A.	N.A.	N.D.	N.D.	N.D.	N.D.	23	0.081
1-21	N.D.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2-2	N.A.	N.A.	N.A.	N.A.	N.A.	N.D.	N.D.	21	0.063
2-21	N.D.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3-2	N.A.	N.A.	N.A.	N.A.	N.A.	DDE - 370 Endrin - 42	N.D.	30	0.010
3-21	N.D.	N.D.	N.D.	N.D.	N.D.	N.A.	N.A.	N.A.	N.A.
FL-1	N.A.	N.A.	N.D.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FL-2	N.A.	N.A.	N.D.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FL-3	N.A.	N.A.	54	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FL-4	N.A.	N.A.	N.D.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FL-5	N.A.	N.A.	N.D.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FL-6	N.A.	N.A.	N.D.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FL-7	N.A.	N.A.	N.D.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FL-8	N.A.	N.A.	N.D.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

1300 ppb
 200 ppm
 2000 ppb

Explanation

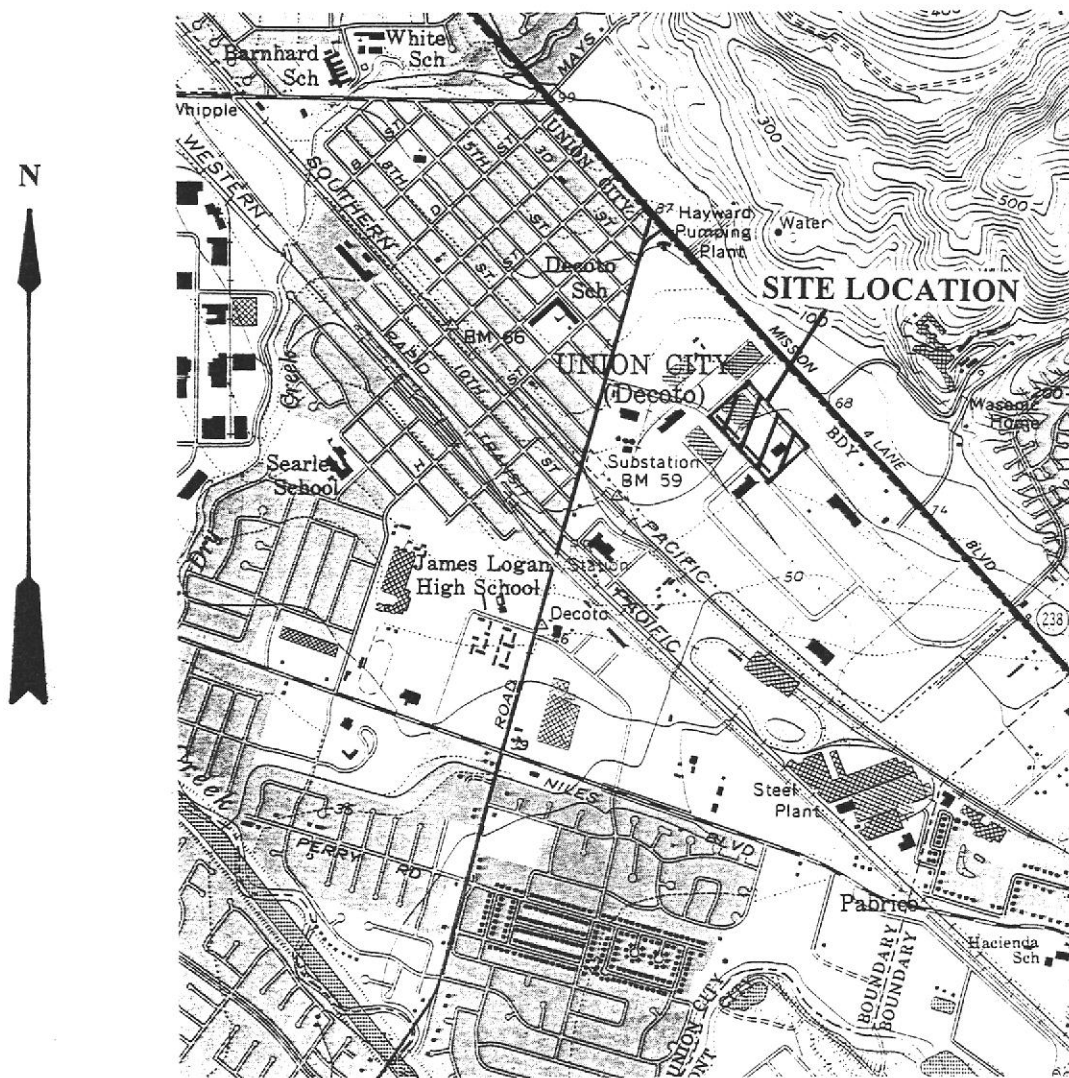
- HVOs - Halogenated Volatile Organics
- TPHg - Total Petroleum Hydrocarbons reported as gasoline
- TPHd - Total Petroleum Hydrocarbons reported as diesel
- BTEX - Benzene, Toluene, Ethyl Benzene, Xylenes
- N.A. - Not Analyzed
- N.D. - Not Detected (below detection limits)

TABLE 2
LABORATORY ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
Higgins Lumber
600 Daggett Avenue
Union City, California

Sample I.D.	HVOs (µg/L)	TPHg (µg/L)	TPHd (µg/L)	BTEX (µg/L)	MTBE (µg/L)
B-1	1,1-Dichloroethene - 23 Tetrachloroethene - 110 1,1,1-Trichloroethane - 15 Trichloroethene - 41	N.A.	N.A.	N.A.	N.A.
B-2	N.D.	N.A.	N.A.	N.A.	N.A.
B-3	N.D.	N.D.	150	N.D.	N.D.
OW-1	N.D.	N.D.	150	N.D.	N.D.

Explanation

HVOs - Halogenated Volatile Organics
 TPHg - Total Petroleum Hydrocarbons reported as gasoline
 TPHd - Total Petroleum Hydrocarbons reported as diesel
 BTEX - Benzene, Toluene, Ethyl Benzene, Xylenes
 N.A. - Not Analyzed
 N.D. - Not Detected (below detection limits)



Scale: 1" = 2,000'

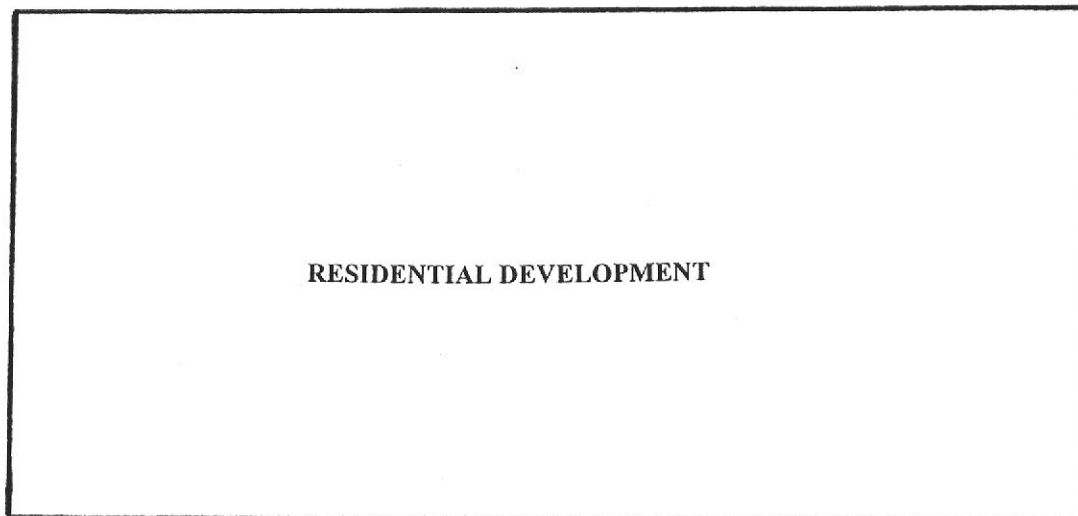
Source: U.S.G.S. Newark Quadrangle 7.5-Minute Topographic Map, 1980.



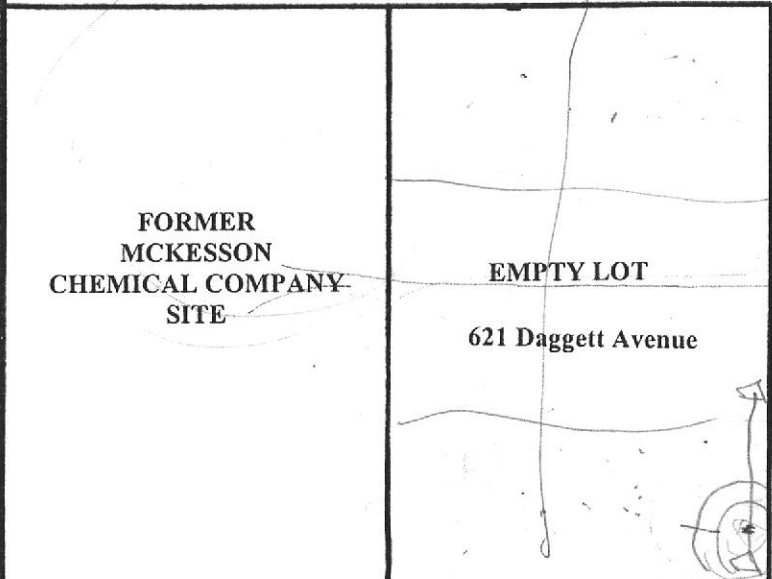
Explanation:

- Surficial soil samples and borings to groundwater
- Soil borings to 4 feet along existing fuel lines

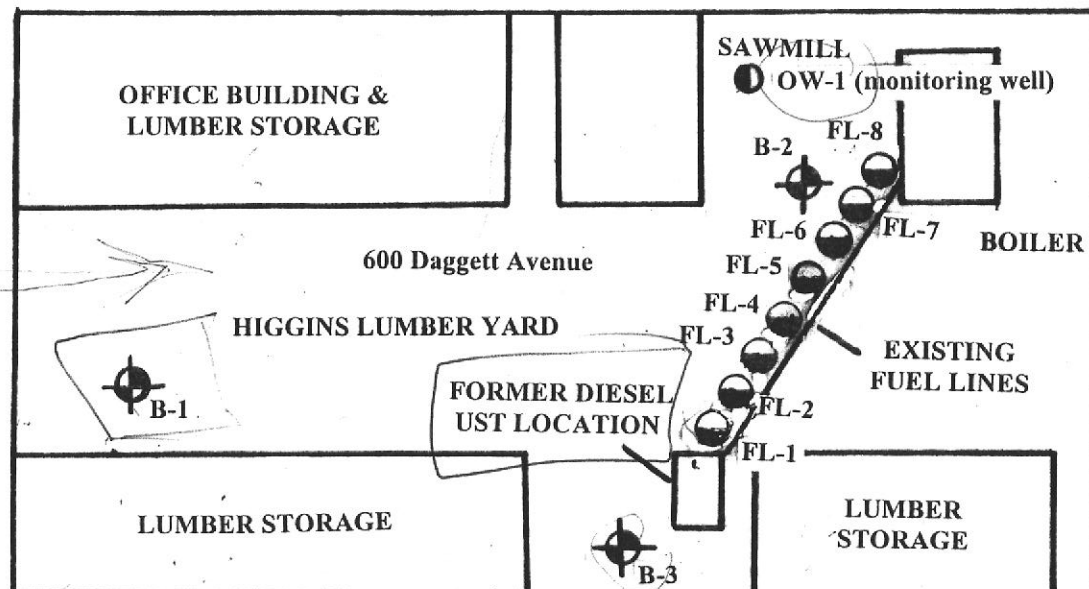
FIGURE NOT TO SCALE



MYRTLE LANE



DAGGETT AVENUE



7th STREET

APPENDIX A

**LOGS OF BORINGS
AND ACWD DRILLING PERMIT**

LOGGED BY: CEW	SURFACE ELEVATION:	BORING NO. B-1
DRILL RIG: Pacific Drilling	BORING DIAMETER: 4 inch	DATE DRILLED: 3/2/99

DEPTH (feet)	SAMPLE NO.	SAMPLE GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	SOIL CLASSIFICATION	CONVERTED SPT BLOW COUNT (BLOWS/FT.)	DRY DENSITY (PCF)	MOISTURE CONTENT (PERCENT)	REMARKS
0			Dark brown silty SAND, dry, medium dense, coarse sand, no odor.					
1-3					27			
5								
10			Orangish brown silty SAND, dry, medium dense, trace gravel, no odor.		24			
11-11								
15								
20			Brown silty SAND with gravel, dry, medium dense, no odor.		19			
21-21								
25								
30			Brown silty SAND, wet, medium dense, no odor.		17			
31-31								
35			Borehole terminated at 35 feet. Groundwater encountered and stabilized at 31 feet. Borehole backfilled with grout.					



GEOTECHNICAL ENGINEERS AND GEOLOGISTS

TERRASEARCH INC.

11840 DUBLIN BLVD., DUBLIN, CALIFORNIA 94568. (510) 833-9297

EXPLORATORY BORING LOG


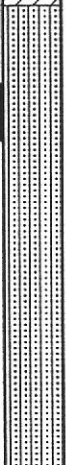
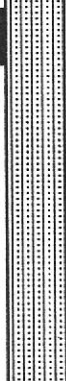

J.E. Higgins Lumber Company

600 Daggett Avenue, Union City, California

PROJECT NO.
E7744

FIGURE
3


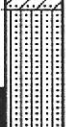


LOGGED BY: CEW	SURFACE ELEVATION:	BORING NO. B-2
DRILL RIG: Pacific Drilling	BORING DIAMETER: 4 inch	DATE DRILLED: 3/2/99

DEPTH (feet)	SAMPLE NO.	SAMPLE GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	SOIL CLASSIFICATION	CONVERTED SPT BLOW COUNT (BLOWS/FT.)	DRY DENSITY (PCF)	MOISTURE CONTENT (PERCENT)	REMARKS
0			Black silty CLAY, dry, stiff, no odor.	CL				
2-2					16			
5								
10	2-11		Brown silty SAND, dry, medium dense, trace gravel, no odor.	SM	25			
15								
20	2-21		Brown silty SAND, dry, medium dense, no odor.		12			
25								
30	2-31		Brown silty SAND, moist, medium dense, no odor.		14			
35			Borehole terminated at 35 feet. Groundwater encountered at 34.5 feet and stabilized at 32 feet. Borehole backfilled with grout.					


GEOTECHNICAL ENGINEERS AND GEOLOGISTS
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EXPLORATORY BORING LOG
J.E. Higgins Lumber Company
 600 Daggett Avenue, Union City, California
 PROJECT NO. E7744 FIGURE 4

LOGGED BY: CEW	SURFACE ELEVATION:	BORING NO. B-3
DRILL RIG: Pacific Drilling	BORING DIAMETER: 4 inch	DATE DRILLED: 3/2/99

DEPTH (feet)	SAMPLE NO.	SAMPLE GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	SOIL CLASSIFICATION	CONVERTED SPT BLOW COUNT (BLOWS/FT.)	DRY DENSITY (PCF)	MOISTURE CONTENT (PERCENT)	REMARKS
0			Dark brown clayey SAND, dry, medium dense, no odor.	SC				
3-2					26			
5								
10			Brown silty SAND, dry, dense, no odor.	SM				
3-11					38			
15								
20			Orangish brown silty SAND, dry, medium dense, no odor.					
3-21					20			
25								
30			Brown silty SAND, moist, medium dense, no odor.					
3-31					16			
35			Borehole terminated at 35 feet. Groundwater encountered at 31 feet and stabilized at 30 feet. Borehole backfilled with grout.					

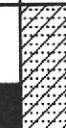


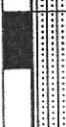


EXPLORATORY BORING LOG

J.E. Higgins Lumber Company
600 Daggett Avenue, Union City, California

PROJECT NO. E7744	FIGURE 5
----------------------	-------------

LOGGED BY: CEW	SURFACE ELEVATION:	BORING NO. B-3
DRILL RIG: Pacific Drilling	BORING DIAMETER: 4 inch	DATE DRILLED: 3/2/99

DEPTH (feet)	SAMPLE NO.	SAMPLE GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	SOIL CLASSIFICATION	CONVERTED SPT BLOW COUNT (BLOWS/FT.)	DRY DENSITY (PCF)	MOISTURE CONTENT (PERCENT)	REMARKS
0			Dark brown clayey SAND, dry, medium dense, no odor.	SC				
3-2					26			
5								
10			Brown silty SAND, dry, dense, no odor.	SM				
3-11					38			
15								
20			Orangish brown silty SAND, dry, medium dense, no odor.					
3-21					20			
25								
30			Brown silty SAND, moist, medium dense, no odor.					
3-31					16			
35			Borehole terminated at 35 feet. Groundwater encountered at 31 feet and stabilized at 30 feet. Borehole backfilled with grout.					


GEOTECHNICAL ENGINEERS AND GEOLOGISTS
TERRA SEARCH INC.
 11840 DUBLIN BLVD., DUBLIN, CALIFORNIA 94568. (510) 833-9297

EXPLORATORY BORING LOG
J.E. Higgins Lumber Company
 600 Daggett Avenue, Union City, California
 PROJECT NO. **E7744** FIGURE **5**

LOGGED BY: CEW	SURFACE ELEVATION:	BORING NO. FL-1
DRILL RIG: Pacific Drilling	BORING DIAMETER: 4	DATE DRILLED: 3/2/99

DEPTH (feet)	SAMPLE NO.	SAMPLE GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	SOIL CLASSIFICATION	CONVERTED SPT BLOW COUNT (BLOWS/FT.)	DRY DENSITY (PCF)	MOISTURE CONTENT (PERCENT)	REMARKS
0			Brown silty SAND, dry, medium dense, no odor.	SM				
FL-1					15			
5			Borehole terminated at 4.5 feet. Groundwater not encountered. Borehole backfilled with grout.					
10								
15								
20								
25								
30								
35								



GEOTECHNICAL ENGINEERS AND GEOLOGISTS

TERRASEARCH INC.

11840 DUBLIN BLVD., DUBLIN, CALIFORNIA 94568. (510) 833-9297

EXPLORATORY BORING LOG


J.E. Higgins Lumber Company

600 Daggett Avenue, Union City, California

PROJECT NO.
E7744

FIGURE
6

LOGGED BY: CEW	SURFACE ELEVATION:	BORING NO. FL-2
DRILL RIG: Pacific Drilling	BORING DIAMETER: 4	DATE DRILLED: 3/2/99

DEPTH (feet)	SAMPLE NO.	SAMPLE GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	SOIL CLASSIFICATION	CONVERTED SPT BLOW COUNT (BLOWS/FT.)	DRY DENSITY (PCF)	MOISTURE CONTENT (PERCENT)	REMARKS
0			Brown silty SAND with gravel, dry, medium dense, no odor.	SM				
4.5	FL-2		Borehole terminated at 4.5 feet. Groundwater not encountered. Borehole backfilled with grout.		20			
5								
10								
15								
20								
25								
30								
35								



GEOTECHNICAL ENGINEERS AND GEOLOGISTS

TERRASEARCH inc.

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EXPLORATORY BORING LOG

J.E. Higgins Lumber Company

600 Daggett Avenue, Union City, California

PROJECT NO.
E7744

FIGURE
7

LOGGED BY: CEW	SURFACE ELEVATION:	BORING NO. FL-3
DRILL RIG: Pacific Drilling	BORING DIAMETER: 4	DATE DRILLED: 3/2/99

DEPTH (feet)	SAMPLE NO.	SAMPLE GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	SOIL CLASSIFICATION	CONVERTED SPT BLOW COUNT (BLOWS/FT.)	DRY DENSITY (PCF)	MOISTURE CONTENT (PERCENT)	REMARKS
0			Dark brown silty SAND with gravel, dry, medium dense, no odor.	SM				
4.5	FL-3		Borehole terminated at 4.5 feet. Groundwater not encountered. Borehole backfilled with grout.		21			
5								
10								
15								
20								
25								
30								
35								



GEOTECHNICAL ENGINEERS AND GEOLOGISTS

TERRASEARCH INC.

11840 DUBLIN BLVD., DUBLIN, CALIFORNIA 94568. (510) 833-9297

EXPLORATORY BORING LOG

J.E. Higgins Lumber Company

600 Daggett Avenue, Union City, California

PROJECT NO.
E7744

FIGURE
8

LOGGED BY: CEW	SURFACE ELEVATION:	BORING NO. FL-4
DRILL RIG: Pacific Drilling	BORING DIAMETER: 4	DATE DRILLED: 3/2/99

DEPTH (feet)	SAMPLE NO.	SAMPLE	GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	SOIL CLASSIFICATION	CONVERTED SPT BLOW COUNT (BLOWS/FT.)	DRY DENSITY (PCF)	MOISTURE CONTENT (PERCENT)	REMARKS
0				Brown silty SAND, dry, medium dense, no odor.	SM				
FL-4						22			
5				Borehole terminated at 4.5 feet. Groundwater not encountered. Borehole backfilled with grout.					
10									
15									
20									
25									
30									
35									



GEOTECHNICAL ENGINEERS AND GEOLOGISTS

TERRASEARCH INC.

11840 DUBLIN BLVD., DUBLIN, CALIFORNIA 94568. (510) 833-9297

EXPLORATORY BORING LOG

J.E. Higgins Lumber Company

600 Daggett Avenue, Union City, California

PROJECT NO.
E7744

FIGURE
9

LOGGED BY: CEW	SURFACE ELEVATION:	BORING NO. FL-5
DRILL RIG: Pacific Drilling	BORING DIAMETER: 4	DATE DRILLED: 3/2/99

DEPTH (feet)	SAMPLE NO.	SAMPLE	GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	SOIL CLASSIFICATION	CONVERTED SPT BLOW COUNT (BLOWS/FT.)	DRY DENSITY (PCF)	MOISTURE CONTENT (PERCENT)	REMARKS
0				Dark brown clayey SAND, dry, medium dense, trace gravel, no odor.	SM				
FL-5						19			
5				Borehole terminated at 4.5 feet. Groundwater not encountered. Borehole backfilled with grout.					
10									
15									
20									
25									
30									
35									



GEOTECHNICAL ENGINEERS AND GEOLOGISTS

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EXPLORATORY BORING LOG

J.E. Higgins Lumber Company

600 Daggett Avenue, Union City, California

PROJECT NO.
E7744

FIGURE
10

LOGGED BY: CEW	SURFACE ELEVATION:	BORING NO. FL-6
DRILL RIG: Pacific Drilling	BORING DIAMETER: 4	DATE DRILLED: 3/2/99

DEPTH (feet)	SAMPLE NO.	SAMPLE GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	SOIL CLASSIFICATION	CONVERTED SPT BLOW COUNT (BLOWS/FT.)	DRY DENSITY (PCF)	MOISTURE CONTENT (PERCENT)	REMARKS
0			Dark grayish brown clayey SAND, dry, medium dense, no odor.	SM				
FL-6					18			
5			Borehole terminated at 4.5 feet. Groundwater not encountered. Borehole backfilled with grout.					
10								
15								
20								
25								
30								
35								



GEOTECHNICAL ENGINEERS AND GEOLOGISTS

TERRASEARCH inc.

11840 DUBLIN BLVD., DUBLIN, CALIFORNIA 94568. (510) 833-9297

EXPLORATORY BORING LOG

J.E. Higgins Lumber Company

600 Daggett Avenue, Union City, California

PROJECT NO.
E7744

FIGURE
11

LOGGED BY: CEW	SURFACE ELEVATION:	BORING NO. FL-7
DRILL RIG: Pacific Drilling	BORING DIAMETER: 4	DATE DRILLED: 3/2/99

DEPTH (feet)	SAMPLE NO.	SAMPLE	GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	SOIL CLASSIFICATION	CONVERTED SPT BLOW COUNT (BLOWS/FT.)	DRY DENSITY (PCF)	MOISTURE CONTENT (PERCENT)	REMARKS
0				Grayish brown silty SAND, dry, medium dense, no odor.	SM				
FL-7						18			
5				Borehole terminated at 4.5 feet. Groundwater not encountered. Borehole backfilled with grout.					
10									
15									
20									
25									
30									
35									



GEOTECHNICAL ENGINEERS AND GEOLOGISTS

TERRASEARCH INC.

11840 DUBLIN BLVD., DUBLIN, CALIFORNIA 94568. (510) 833-9297

EXPLORATORY BORING LOG

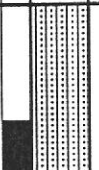
J.E. Higgins Lumber Company

600 Daggett Avenue, Union City, California

PROJECT NO.
E7744

FIGURE
12

LOGGED BY: CEW	SURFACE ELEVATION:	BORING NO. FL-8
DRILL RIG: Pacific Drilling	BORING DIAMETER: 4	DATE DRILLED: 3/2/99

DEPTH (feet)	SAMPLE NO.	SAMPLE GRAPHIC LOG	GEOTECHNICAL DESCRIPTION AND CLASSIFICATION	SOIL CLASSIFICATION	CONVERTED SPT BLOW COUNT (BLOWS/FT.)	DRY DENSITY (PCF)	MOISTURE CONTENT (PERCENT)	REMARKS
0			Dark brown clayey SAND, dry, medium dense, no odor.	SM				
5	FL-8		Borehole terminated at 4.5 feet. Groundwater not encountered. Borehole backfilled with grout.		19			
10								
15								
20								
25								
30								
35								



GEOTECHNICAL ENGINEERS AND GEOLOGISTS

TERRASEARCH INC.

11840 DUBLIN BLVD., DUBLIN, CALIFORNIA 94568. (510) 833-9297

EXPLORATORY BORING LOG

J.E. Higgins Lumber Company

600 Daggett Avenue, Union City, California

PROJECT NO.
E7744

FIGURE
13

ALAMEDA COUNTY WATER DISTRICT

43885 South Grimmer Blvd. • P.O. Box 5110

Fremont, California 94537

Engineering Department 1 (510) 659-1970 ext. 460 (APPLICATION TO BE TYPED)

**APPLICATION
FOR
DRILLING PERMIT**

WELL ORDINANCE

City of Fremont No. 963

City of Newark No. 136

City of Union City No. 109-73

Application Received Date: 2/11/99 By: 52 Permit Issued Date: 2/25/99 Permit Expiration Date: 7/25/99 Job No. 1025 Permit No. 99-0071 Well No. N/A

JOB ADDRESS 600 Daggett Avenue
Union City, CA

PROPERTY OWNER
NAME: Citation Homes
ADDRESS: 404 Saratoga Avenue Suite 100
San Jose, CA 95050
TELEPHONE: (408) 865-8000

CONSULTING ENGINEER
NAME: Terrasearch, Inc.
ADDRESS: 11840 Dublin Blvd
Dublin, CA 94568
TELEPHONE: (925) 833-9297 RG/CEG/RCE NO. 6454

WELL DRILLING CONTRACTOR
NAME: Pacific Drilling
ADDRESS: 14908 San Pablo Avenue
San Jose, CA 95127
TELEPHONE: (408) 666-7331 STATE LIC. NO. C57 749310

When properly signed
**THIS APPLICATION
IS A VALID PERMIT**

to perform only work described below at the given job address, in accordance with the City Ordinance checked above and all other applicable laws and regulations. Discontinuation of work may result in revocation of permit by Inspecting Officer. **Permittee must schedule the work in advance with the Inspecting Officer.** ACWD's approval of drawings, designs, specifications, reports and incidental work or materials shall not in any way relieve the applicant of responsibility for the technical adequacy of the work. Except for special circumstances, all work to be inspected must be performed within ACWD work hours - 7:30 a.m. to 4:30 p.m., Monday through Friday.

PLEASE CHECK TYPE OF PROPOSED WORK

WATER (Pumping) WELL	GEOTECHNICAL INVESTIGATION	CHEMICAL INVESTIGATION
Construction <input type="checkbox"/>	Exploratory Holes <input type="checkbox"/>	Exploratory Holes <input checked="" type="checkbox"/>
Repair or Reconstruction <input type="checkbox"/>	Monitoring Wells, Construction <input type="checkbox"/>	Vapor Sampling Investigation <input type="checkbox"/>
Destruction <input type="checkbox"/>	Monitoring Wells, Destruction <input type="checkbox"/>	Monitoring Well Const. (Chemical Leak) <input type="checkbox"/>
Cathodic Protection Hole <input type="checkbox"/>	Monitoring Wells, Construction <input type="checkbox"/>	Monitoring Well Const. (Compliance Wells) <input type="checkbox"/>
Dewatering <input type="checkbox"/>	Monitoring Wells, Destruction <input type="checkbox"/>	Monitoring Well Const. (Baseline Study) <input type="checkbox"/>
	Air Sparging Well <input type="checkbox"/>	Vapor Extraction Well <input type="checkbox"/>

Description of Proposed Work ~~Two~~ Three environmental borings to approximately 20 feet.
~~Five~~ Six environmental borings to 4 feet.

TOTAL ESTIMATED COST \$ _____

PERMIT CONDITIONS
EXPLORATORY BORINGS TO BE BACKFILLED FROM BOTTOM OF BOREHOLE TO SURFACE WITH NEAT CEMENT.

FEES:

ESTIMATE	Private <input checked="" type="checkbox"/>	
	Public (Governmental) Agency <input type="checkbox"/>	
	Public Utility <input type="checkbox"/>	
	Permit Issuance Fee	\$ <u>250.</u>
	Field Investigation and Inspection Fee	\$ _____
	ESTIMATE TOTAL	\$ <u>250.</u>
ACTUAL	Permit Issuance Fee	\$ <u>250.</u>
	Field Investigation and Inspection Fee	\$ _____
	TOTAL	\$ <u>250.</u>

DEPOSIT:

Date Received	<u>2/11/99</u>
P.O. NO. _____	Cash <input type="checkbox"/> Check No. <u>4435</u>
	Estimated Amount \$ <u>250.</u>
	Actual Amount \$ <u>250.</u>
	Difference \$ <u>0</u>
Refund \$ _____	Date _____
Billed \$ _____	Date _____
GUARANTEE OF PERFORMANCE	
Cash Deposit _____	Bond _____
Amount \$ _____	Date _____
(NOT TO EXCEED TOTAL ESTIMATED COST)	
Return Amount \$ _____	Date _____

ACWD SITE NO. 141 APPROVED FOR SCHEDULING BY: 87 DATE: 2/18/99 INSPECTING OFFICER APPROVAL: [Signature] DATE: 2/25/99

I hereby agree to comply with all conditions of this permit in accordance with the City Well Ordinance checked above, and to furnish the Alameda County Water District a completed copy of D.W.R. water well Drillers Report (form 188) or acceptable facsimile as well as any chemical testing results within fifteen (15) days after completion.

Title: Registered Geologist Signature: [Signature] Date: 2/9/99

Representing: Terrasearch, Inc Name (printed): Curtis Winn Robert D. Campbell

APPENDIX B

**LABORATORY ANALYTICAL REPORTS AND
CHAIN-OF-CUSTODY DOCUMENT**



Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8
1455 McDowell Blvd. North, Ste. D

Redwood City, CA 94063
Walnut Creek, CA 94598
Sacramento, CA 95834
Petaluma, CA 94954

(650) 364-9600
(925) 988-9600
(916) 921-9600
(707) 792-1865

FAX (650) 364-9233
FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342

Terrasearch
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Chris Winn

Client Project ID: 600 Daggett Ave., Union City
Sample Matrix: Water
Analysis Method: EPA 5030/8015 Mod /8020
First Sample #: 903-0398

Sampled: Mar 2, 1999
Received: Mar 3, 1999
Reported: Mar 17, 1999

QC Batch Number:

GC031099 GC031099
802002A 802002A

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX / MTBE

Analyte	Reporting Limit µg/L	Sample I.D. 903-0398 OW-1	Sample I.D. 903-0401 B-3
Purgeable Hydrocarbons	50	N.D.	N.D.
Benzene	0.50	N.D.	N.D.
Toluene	0.50	N.D.	N.D.
Ethyl Benzene	0.50	N.D.	N.D.
Total Xylenes	0.50	N.D.	N.D.
MTBE	2.5	N.D.	N.D.
Chromatogram Pattern:		--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Analyzed:	3/10/99	3/10/99
Instrument Identification:	HP-2	HP-2
Surrogate Recovery, %: (QC Limits = 70-130%)	107	103

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Dimple Sharma
Dimple Sharma
Project Manager



Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8
1455 McDowell Blvd. North, Ste. D

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FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342

Terrasearch
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Chris Winn

Client Project ID: 600 Daggett Ave., Union City
Sample Matrix: Water
Analysis Method: EPA 3510/8015 Mod.
First Sample #: 903-0398

Sampled: Mar 2, 1999
Received: Mar 3, 1999
Reported: Mar 17, 1999

QC Batch Number: SP030499 SP030499

8015EXB 8015EXB

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit µg/L	Sample I.D. 903-0398 OW-1	Sample I.D. 903-0401 B-3
Extractable Hydrocarbons	50	150	150
Chromatogram Pattern:		Unidentified Hydrocarbons > C15	Unidentified Hydrocarbons > C15

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0
Date Extracted:	3/5/99	3/5/99
Date Analyzed:	3/5/99	3/5/99
Instrument Identification:	HP-3A	HP-3B

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

D Sharma
Dimple Sharma
Project Manager





Sequoia Analytical

680 Chesapeake Drive
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FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342

Terrasearch
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Chris Winn

Client Project ID: 600 Daggett Ave., Union City
Sample Descript: Water, OW-1
Analysis Method: EPA 8010
Lab Number: 903-0398

Sampled: Mar 2, 1999
Received: Mar 3, 1999
Analyzed: Mar 14, 1999
Reported: Mar 17, 1999

QC Batch Number: GC031499801006A

Instrument ID: HP-6

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L	Sample Results µg/L
Bromodichloromethane.....	0.50	N.D.
Bromoform.....	0.50	N.D.
Bromomethane.....	1.0	N.D.
Carbon tetrachloride.....	0.50	N.D.
Chlorobenzene.....	0.50	N.D.
Chloroethane.....	1.0	N.D.
Chloroform.....	0.50	N.D.
Chloromethane.....	1.0	N.D.
Dibromochloromethane.....	0.50	N.D.
1,3-Dichlorobenzene.....	0.50	N.D.
1,4-Dichlorobenzene.....	0.50	N.D.
1,2-Dichlorobenzene.....	0.50	N.D.
1,1-Dichloroethane.....	0.50	N.D.
1,2-Dichloroethane.....	0.50	N.D.
1,1-Dichloroethene.....	0.50	N.D.
cis-1,2-Dichloroethene.....	0.50	N.D.
trans-1,2-Dichloroethene.....	0.50	N.D.
1,2-Dichloropropane.....	0.50	N.D.
cis-1,3-Dichloropropene.....	0.50	N.D.
trans-1,3-Dichloropropene.....	0.50	N.D.
Methylene chloride.....	5.0	N.D.
1,1,2,2-Tetrachloroethane.....	0.50	N.D.
Tetrachloroethene.....	0.50	N.D.
1,1,1-Trichloroethane.....	0.50	N.D.
1,1,2-Trichloroethane.....	0.50	N.D.
Trichloroethene.....	0.50	N.D.
Trichlorofluoromethane.....	0.50	N.D.
Vinyl chloride.....	1.0	N.D.
Surrogates	Control Limit %	% Recovery
Dibromodifluoromethane.....	50 150.....	119
4-Bromofluorobenzene.....	50 150.....	104

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

D Sharma
Dimple Sharma
Project Manager



Sequoia Analytical

680 Chesapeake Drive
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819 Striker Avenue, Suite B
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FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342

Terrasearch
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Chris Winn

Client Project ID: 600 Daggett Ave., Union City
Sample Descript: Water, B-1
Analysis Method: EPA 8010
Lab Number: 903-0399

Sampled: Mar 2, 1999
Received: Mar 3, 1999
Analyzed: Mar 14, 1999
Reported: Mar 17, 1999

QC Batch Number: GC031499801006A

Instrument ID: HP-6

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L	Sample Results µg/L
Bromodichloromethane.....	2.5	N.D.
Bromoform.....	2.5	N.D.
Bromomethane.....	5.0	N.D.
Carbon tetrachloride.....	2.5	N.D.
Chlorobenzene.....	2.5	N.D.
Chloroethane.....	5.0	N.D.
Chloroform.....	2.5	N.D.
Chloromethane.....	5.0	N.D.
Dibromochloromethane.....	2.5	N.D.
1,3-Dichlorobenzene.....	2.5	N.D.
1,4-Dichlorobenzene.....	2.5	N.D.
1,2-Dichlorobenzene.....	2.5	N.D.
1,1-Dichloroethane.....	2.5	N.D.
1,2-Dichloroethane.....	2.5	23
1,1-Dichloroethene.....	2.5	N.D.
cis-1,2-Dichloroethene.....	2.5	N.D.
trans-1,2-Dichloroethene.....	2.5	N.D.
1,2-Dichloropropane.....	2.5	N.D.
cis-1,3-Dichloropropene.....	2.5	N.D.
trans-1,3-Dichloropropene.....	2.5	N.D.
Methylene chloride.....	25	N.D.
1,1,2,2-Tetrachloroethane.....	2.5	110
Tetrachloroethene.....	2.5	15
1,1,1-Trichloroethane.....	2.5	N.D.
1,1,2-Trichloroethane.....	2.5	41
Trichloroethene.....	2.5	N.D.
Trichlorofluoromethane.....	2.5	N.D.
Vinyl chloride.....	5.0	N.D.
Surrogates	Control Limit %	% Recovery
Dibromodifluoromethane.....	50	113
4-Bromofluorobenzene.....	50	113

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL, #1271

Sharma
Dimple Sharma
Project Manager





Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8
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Redwood City, CA 94063
Walnut Creek, CA 94598
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Terrasearch
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Chris Winn

Client Project ID: 600 Daggett Ave., Union City
Sample Descript: Water, B-2
Analysis Method: EPA 8010
Lab Number: 903-0400

Sampled: Mar 2, 1999
Received: Mar 3, 1999
Analyzed: Mar 14, 1999
Reported: Mar 17, 1999

QC Batch Number: GC031499801006A

Instrument ID: HP-6

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L	Sample Results µg/L
Bromodichloromethane	0.50	N.D.
Bromoform	0.50	N.D.
Bromomethane	1.0	N.D.
Carbon tetrachloride	0.50	N.D.
Chlorobenzene	0.50	N.D.
Chloroethane	1.0	N.D.
Chloroform	0.50	N.D.
Chloromethane	1.0	N.D.
Dibromochloromethane	0.50	N.D.
1,3-Dichlorobenzene	0.50	N.D.
1,4-Dichlorobenzene	0.50	N.D.
1,2-Dichlorobenzene	0.50	N.D.
1,1-Dichloroethane	0.50	N.D.
1,2-Dichloroethane	0.50	N.D.
1,1-Dichloroethene	0.50	N.D.
cis-1,2-Dichloroethene	0.50	N.D.
trans-1,2-Dichloroethene	0.50	N.D.
1,2-Dichloropropane	0.50	N.D.
cis-1,3-Dichloropropene	0.50	N.D.
trans-1,3-Dichloropropene	0.50	N.D.
Methylene chloride	5.0	N.D.
1,1,2,2-Tetrachloroethane	0.50	N.D.
Tetrachloroethene	0.50	N.D.
1,1,1-Trichloroethane	0.50	N.D.
1,1,2-Trichloroethane	0.50	N.D.
Trichloroethene	0.50	N.D.
Trichlorofluoromethane	0.50	N.D.
Vinyl chloride	1.0	N.D.
Surrogates	Control Limit %	% Recovery
Dibromodifluoromethane	50	150
4-Bromofluorobenzene	50	150

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Alharma
Dimple Sharma
Project Manager



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Terrasearch
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Chris Winn

Client Project ID: 600 Daggett Ave., Union City
Sample Descript: Water, B-3
Analysis Method: EPA 8010
Lab Number: 903-0401

Sampled: Mar 2, 1999
Received: Mar 3, 1999
Analyzed: Mar 14, 1999
Reported: Mar 17, 1999

QC Batch Number: GC031499801008A

Instrument ID: HP-6

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/L	Sample Results µg/L
Bromodichloromethane.....	0.50	N.D.
Bromoform.....	0.50	N.D.
Bromomethane.....	1.0	N.D.
Carbon tetrachloride.....	0.50	N.D.
Chlorobenzene.....	0.50	N.D.
Chloroethane.....	1.0	N.D.
Chloroform.....	0.50	N.D.
Chloromethane.....	1.0	N.D.
Dibromochloromethane.....	0.50	N.D.
1,3-Dichlorobenzene.....	0.50	N.D.
1,4-Dichlorobenzene.....	0.50	N.D.
1,2-Dichlorobenzene.....	0.50	N.D.
1,1-Dichloroethane.....	0.50	N.D.
1,2-Dichloroethane.....	0.50	N.D.
1,1-Dichloroethene.....	0.50	N.D.
cis-1,2-Dichloroethene.....	0.50	N.D.
trans-1,2-Dichloroethene.....	0.50	N.D.
1,2-Dichloropropane.....	0.50	N.D.
cis-1,3-Dichloropropene.....	0.50	N.D.
trans-1,3-Dichloropropene.....	0.50	N.D.
Methylene chloride.....	5.0	N.D.
1,1,2,2-Tetrachloroethane.....	0.50	N.D.
Tetrachloroethene.....	0.50	N.D.
1,1,1-Trichloroethane.....	0.50	N.D.
1,1,2-Trichloroethane.....	0.50	N.D.
Trichloroethene.....	0.50	N.D.
Trichlorofluoromethane.....	0.50	N.D.
Vinyl chloride.....	1.0	N.D.
Surrogates	Control Limit %	% Recovery
Dibromodifluoromethane.....	50	126
4-Bromofluorobenzene.....	50	92

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Sharma
Dimple Sharma
Project Manager





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Terrasearch
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Chris Winn

Client Project ID: 600 Daggett Ave., Union City
Sample Matrix: Soil
Analysis Method: EPA 5030/8015 Mod./8020
First Sample #: 903-0407

Sampled: Mar 2, 1999
Received: Mar 3, 1999
Reported: Mar 17, 1999

QC Batch Number:

SP030599

8020EXC

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX / MTBE

Analyte	Reporting Limit mg/Kg	Sample I.D. 903-0407 3-21
Purgeable Hydrocarbons	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Total Xylenes	0.0050	N.D.
MTBE	0.050	N.D.

Chromatogram Pattern: ..

Quality Control Data

Report Limit Multiplication Factor: 1.0
Date Analyzed: 3/6/99
Instrument Identification: HP-4
Surrogate Recovery, %: 89
(QC Limits = 40-140%)

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

Alhaema
Dimple Sharma
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Terrasearch
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Chris Winn

Client Project ID: 600 Daggett Ave., Union City
Sample Matrix: Soil
Analysis Method: EPA 3550/8015 Mod.
First Sample #: 903-0407

Sampled: Mar 2, 1999
Received: Mar 3, 1999
Reported: Mar 17, 1999

QC Batch Number:

SP030599	SP030599	SP030599	SP030599	SP030599	SP030599	SP030599
8015EXA	8015EXA	8015EXA	8015EXA	8015EXA	8015EXA	8015EXA

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 903-0407 3-21	Sample I.D. 903-0408 FL-1	Sample I.D. 903-0409 FL-2	Sample I.D. 903-0410 FL-3	Sample I.D. 903-0411 FL-4	Sample I.D. 903-0412 FL-5
Extractable Hydrocarbons	1.0	N.D.	N.D.	N.D.	54	N.D.	N.D.
Chromatogram Pattern:		Unidentified Hydrocarbons > C18

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	25	1.0	1.0
Date Extracted:	3/5/99	3/5/99	3/5/99	3/5/99	3/5/99	3/5/99
Date Analyzed:	3/8/99	3/8/99	3/8/99	3/9/99	3/8/99	3/8/99
Instrument Identification:	HP-3A	HP-3A	HP-3A	HP-3B	HP-3A	HP-3A

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

D Sharma

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Project Manager





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Terrasearch
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Chris Winn

Client Project ID: 600 Daggett Ave., Union City
Sample Matrix: Soil
Analysis Method: EPA 3550/8015 Mod.
First Sample #: 903-0413

Sampled: Mar 2, 1999
Received: Mar 3, 1999
Reported: Mar 17, 1999

QC Batch Number:

SP030599 SP030599 SP030599
8015EXA 8015EXA 8015EXA

TOTAL EXTRACTABLE PETROLEUM HYDROCARBONS

Analyte	Reporting Limit mg/kg	Sample I.D. 903-0413 FL-6	Sample I.D. 903-0414 FL-7	Sample I.D. 903-0415 FL-8
Extractable Hydrocarbons	1.0	N.D.	N.D.	N.D.

Chromatogram Pattern:

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0
Date Extracted:	3/5/99	3/5/99	3/5/99
Date Analyzed:	3/9/99	3/9/99	3/9/99
Instrument Identification:	HP-3A	HP-3A	HP-3A

Extractable Hydrocarbons are quantitated against a fresh diesel standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL, #1271

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Terrasearch
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Chris Winn

Client Project ID: 600 Daggett Ave., Union City
Sample Descript: Soil, 1-21
Analysis Method: EPA 5030/8010
Lab Number: 903-0403

Sampled: Mar 2, 1999
Received: Mar 3, 1999
Analyzed: Mar 15, 1999
Reported: Mar 17, 1999

OC Batch Number: SP0315998010EXA

Instrument ID: HP-6

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane.....	25	N.D.
Bromoform.....	25	N.D.
Bromomethane.....	50	N.D.
Carbon tetrachloride.....	25	N.D.
Chlorobenzene.....	25	N.D.
Chloroethane.....	50	N.D.
Chloroform.....	25	N.D.
Chloromethane.....	50	N.D.
Dibromochloromethane.....	25	N.D.
1,2-Dichlorobenzene.....	25	N.D.
1,3-Dichlorobenzene.....	25	N.D.
1,4-Dichlorobenzene.....	25	N.D.
1,1-Dichloroethane.....	25	N.D.
1,2-Dichloroethane.....	25	N.D.
1,1-Dichloroethene.....	25	N.D.
cis-1,2-Dichloroethene.....	25	N.D.
trans-1,2-Dichloroethene.....	25	N.D.
1,2-Dichloropropane.....	25	N.D.
cis-1,3-Dichloropropene.....	25	N.D.
trans-1,3-Dichloropropene.....	25	N.D.
Methylene chloride.....	250	N.D.
1,1,2,2-Tetrachloroethane.....	25	N.D.
Tetrachloroethene.....	25	N.D.
1,1,1-Trichloroethane.....	25	N.D.
1,1,2-Trichloroethane.....	25	N.D.
Trichloroethene.....	25	N.D.
Trichlorofluoromethane.....	25	N.D.
Vinyl chloride.....	50	N.D.
Surrogates	Control Limit %	% Recovery
1-Chloro-2-fluorobenzene.....	50 150.....	90
4-Bromofluorobenzene.....	50 150.....	79

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Dimple Sharma
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Terrasearch
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Chris Winn

Client Project ID: 600 Daggett Ave., Union City
Sample Descript: Soil, 2-21
Analysis Method: EPA 5030/8010
Lab Number: 903-0405

Sampled: Mar 2, 1999
Received: Mar 3, 1999
Analyzed: Mar 15, 1999
Reported: Mar 17, 1999

QC Batch Number: SP0315998010EXA
Instrument ID: HP-6

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	25	N.D.
Bromoform	25	N.D.
Bromomethane	50	N.D.
Carbon tetrachloride	25	N.D.
Chlorobenzene	25	N.D.
Chloroethane	50	N.D.
Chloroform	25	N.D.
Chloromethane	50	N.D.
Dibromochloromethane	25	N.D.
1,2-Dichlorobenzene	25	N.D.
1,3-Dichlorobenzene	25	N.D.
1,4-Dichlorobenzene	25	N.D.
1,1-Dichloroethane	25	N.D.
1,2-Dichloroethane	25	N.D.
1,1-Dichloroethene	25	N.D.
cis-1,2-Dichloroethene	25	N.D.
trans-1,2-Dichloroethene	25	N.D.
1,2-Dichloropropane	25	N.D.
cis-1,3-Dichloropropene	25	N.D.
trans-1,3-Dichloropropene	25	N.D.
Methylene chloride	250	N.D.
1,1,2,2-Tetrachloroethane	25	N.D.
Tetrachloroethene	25	N.D.
1,1,1-Trichloroethane	25	N.D.
1,1,2-Trichloroethane	25	N.D.
Trichloroethene	25	N.D.
Trichlorofluoromethane	25	N.D.
Vinyl chloride	50	N.D.
Surrogates	Control Limit %	% Recovery
1-Chloro-2-fluorobenzene	50 150	96
4-Bromofluorobenzene	50 150	86

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Dimple Sharma
Dimple Sharma
Project Manager





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Terrasearch
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Chris Winn

Client Project ID: 600 Daggett Ave., Union City
Sample Descript: Soil, 3-21
Analysis Method: EPA 5030/8010
Lab Number: 903-0407

Sampled: Mar 2, 1999
Received: Mar 3, 1999
Analyzed: Mar 15, 1999
Reported: Mar 17, 1999

QC Batch Number: SP0315998010EXA
Instrument ID: HP-6

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane.....	25	N.D.
Bromoform.....	25	N.D.
Bromomethane.....	50	N.D.
Carbon tetrachloride.....	25	N.D.
Chlorobenzene.....	25	N.D.
Chloroethane.....	50	N.D.
Chloroform.....	25	N.D.
Chloromethane.....	50	N.D.
Dibromochloromethane.....	25	N.D.
1,2-Dichlorobenzene.....	25	N.D.
1,3-Dichlorobenzene.....	25	N.D.
1,4-Dichlorobenzene.....	25	N.D.
1,1-Dichloroethane.....	25	N.D.
1,2-Dichloroethane.....	25	N.D.
1,1-Dichloroethene.....	25	N.D.
cis-1,2-Dichloroethene.....	25	N.D.
trans-1,2-Dichloroethene.....	25	N.D.
1,2-Dichloropropane.....	25	N.D.
cis-1,3-Dichloropropene.....	25	N.D.
trans-1,3-Dichloropropene.....	25	N.D.
Methylene chloride.....	250	N.D.
1,1,2,2-Tetrachloroethane.....	25	N.D.
Tetrachloroethene.....	25	N.D.
1,1,1-Trichloroethane.....	25	N.D.
1,1,2-Trichloroethane.....	25	N.D.
Trichloroethene.....	25	N.D.
Trichlorofluoromethane.....	25	N.D.
Vinyl chloride.....	50	N.D.
Surrogates	Control Limit %	% Recovery
1-Chloro-2-fluorobenzene.....	50 150	88
4-Bromofluorobenzene.....	50 150	83

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

D Sharma

Dimple Sharma
Project Manager





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Terrasearch
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Chris Winn

Client Project ID: 600 Daggett Ave., Union City
Sample Descript: Soil
Analysis for: Arsenic
First Sample #: 903-0402

Sampled: Mar 2, 1999
Received: Mar 3, 1999
Digested: Mar 15, 1999
Analyzed: Mar 16, 1999
Reported: Mar 17, 1999

LABORATORY ANALYSIS FOR: Arsenic

Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg	QC Batch Number	Instrument ID
903-0402	1-3	5.0	N.D.	ME0315996010MDB	MV-4
903-0404	2-2	5.0	N.D.	ME0315996010MDB	MV-4
903-0406	3-2	5.0	N.D.	ME0315996010MDB	MV-4

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

D Sharma
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Project Manager





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Terrasearch
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Chris Winn

Client Project ID: 600 Daggett Ave., Union City
Sample Descript: Soil
Analysis for: Lead
First Sample #: 903-0402

Sampled: Mar 2, 1999
Received: Mar 3, 1999
Digested: Mar 15, 1999
Analyzed: Mar 16, 1999
Reported: Mar 17, 1999

LABORATORY ANALYSIS FOR: Lead

Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg	QC Batch Number	Instrument ID
903-0402	1-3	1.0	23	ME0315996010MDB	MV-4
903-0404	2-2	1.0	21	ME0315996010MDB	MV-4
903-0406	3-2	1.0	30	ME0315996010MDB	MV-4

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

D Sharma
Dimple Sharma
Project Manager





Sequoia Analytical

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Terrasearch
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Chris Winn

Client Project ID: 600 Daggett Ave., Union City
Sample Descript: Soil
Analysis for: Mercury
First Sample #: 903-0402

Sampled: Mar 2, 1999
Received: Mar 3, 1999
Digested: Mar 9, 1999
Analyzed: Mar 10, 1999
Reported: Mar 17, 1999

LABORATORY ANALYSIS FOR: Mercury

Sample Number	Sample Description	Detection Limit mg/kg	Sample Result mg/kg	QC Batch Number	Instrument ID
903-0402	1-3	0.010	0.081	ME0309997471MDA	MV-1
903-0404	2-2	0.010	0.063	ME0309997471MDA	MV-1
903-0406	3-2	0.010	0.054	ME0309997471MDA	MV-1

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

D Sharma
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Sequoia Analytical

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Terrasearch
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Chris Winn

Client Project ID: 600 Daggett Ave., Union City
Sample Descript: Soil, 1-3
Analysis Method: EPA 8080
Lab Number: 903-0402

Sampled: Mar 2, 1999
Received: Mar 3, 1999
Extracted: Mar 15, 1999
Analyzed: Mar 17, 1999
Reported: Mar 17, 1999

QC Batch Number: GC0315998080EXA
Instrument ID: GCHP-27

ORGANOCHLORINE PESTICIDES (EPA 8080)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Aldrin.....	1.0	N.D.
alpha-BHC.....	1.0	N.D.
beta-BHC.....	1.0	N.D.
delta-BHC.....	1.0	N.D.
gamma-BHC (Lindane).....	1.0	N.D.
Chlordane.....	20	N.D.
4,4'-DDD.....	6.0	N.D.
4,4'-DDE.....	2.0	N.D.
4,4'-DDT.....	6.0	N.D.
Dieldrin.....	2.0	N.D.
Endosulfan I.....	2.0	N.D.
Endosulfan II.....	2.0	N.D.
Endosulfan sulfate.....	6.0	N.D.
Endrin.....	2.0	N.D.
Endrin aldehyde.....	6.0	N.D.
Heptachlor.....	1.0	N.D.
Heptachlor epoxide.....	1.0	N.D.
Methoxychlor.....	20	N.D.
Toxaphene.....	80	N.D.

Surrogates	Control Limit %	% Recovery
Dibutylchloroendate.....	30 150.....	94
Tetrachloro-m-xylene.....	30 150.....	31

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1210

Dimple Sharma
Dimple Sharma
Project Manager





Sequoia Analytical

680 Chesapeake Drive
404 N. Wiget Lane
819 Striker Avenue, Suite 8
1455 McDowell Blvd. North, Ste. D

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(707) 792-1865

FAX (650) 364-9233
FAX (925) 988-9673
FAX (916) 921-0100
FAX (707) 792-0342

Terraresearch
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Chris Winn

Client Project ID: 600 Daggett Ave., Union City
Sample Descript: Soil, 2-2
Analysis Method: EPA 8080
Lab Number: 903-0404

Sampled: Mar 2, 1999
Received: Mar 3, 1999
Extracted: Mar 15, 1999
Analyzed: Mar 17, 1999
Reported: Mar 17, 1999

QC Batch Number: GC0315998080EXA
Instrument ID: GCHP-27

ORGANOCHLORINE PESTICIDES AND PCB'S (EPA 8080)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Aldrin.....	1.0	N.D.
alpha-BHC.....	1.0	N.D.
beta-BHC.....	1.0	N.D.
delta-BHC.....	1.0	N.D.
gamma-BHC (Lindane).....	1.0	N.D.
Chlordane.....	20	N.D.
4,4'-DDD.....	6.0	N.D.
4,4'-DDE.....	2.0	N.D.
4,4'-DDT.....	6.0	N.D.
Dieldrin.....	2.0	N.D.
Endosulfan I.....	2.0	N.D.
Endosulfan II.....	2.0	N.D.
Endosulfan sulfate.....	6.0	N.D.
Endrin.....	2.0	N.D.
Endrin aldehyde.....	6.0	N.D.
Heptachlor.....	1.0	N.D.
Heptachlor epoxide.....	1.0	N.D.
Methoxychlor.....	20	N.D.
Toxaphene.....	80	N.D.

Surrogates	Control Limit %	% Recovery
Dibutylchloroendate.....	30	108
Tetrachloro-m-xylene.....	30	29 Q

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1210

Dimple Sharma
Dimple Sharma
Project Manager

Please Note:
* Surrogate Recovery for Tetrachloro-m-xylene was outside of the lower control limit.





Sequoia Analytical

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Terrasearch
11840 Dublin Blvd.
Dublin, CA 94568
Attention: Chris Winn

Client Project ID: 600 Daggett Ave., Union City
Sample Descript: Soil, 3-2
Analysis Method: EPA 8080
Lab Number: 903-0406

Sampled: Mar 2, 1999
Received: Mar 3, 1999
Extracted: Mar 15, 1999
Analyzed: Mar 17, 1999
Reported: Mar 17, 1999

QC Batch Number: GC0315998080EXA
Instrument ID: GCHP-27

ORGANOCHLORINE PESTICIDES AND PCB'S (EPA 8080)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Aldrin.....	20	N.D.
alpha-BHC.....	20	N.D.
beta-BHC.....	20	N.D.
delta-BHC.....	20	N.D.
gamma-BHC (Lindane).....	20	N.D.
Chlordane.....	400	N.D.
4,4'-DDD.....	120	N.D.
4,4'-DDE.....	40	370
4,4'-DDT.....	120	N.D.
Dieldrin.....	40	N.D.
Endosulfan I.....	40	N.D.
Endosulfan II.....	40	N.D.
Endosulfan sulfate.....	120	N.D.
Endrin.....	40	42
Endrin aldehyde.....	120	N.D.
Heptachlor.....	20	N.D.
Heptachlor epoxide.....	20	N.D.
Methoxychlor.....	400	N.D.
Toxaphene.....	1,600	N.D.

Surrogates	Control Limit %	% Recovery
Dibutylchloroendate.....	30	150
Tetrachloro-m-xylene.....	30	150

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL, #1210

D Sharma
Dimple Sharma
Project Manager

Please Note:
The surrogate recoveries were below detection limit due to sample dilution.



SEQUOIA ANALYTICAL CHAIN OF CUSTODY

- 680 Chesapeake Drive • Redwood City, CA 94063 • (650) 364-9000 FAX (916) 921-0100
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- 404 N. Wiget Lane • Walnut Creek, CA 94598 • (925) 988-9600 FAX (925) 988-9673
- 1455 McDowell Blvd. North, Suite D • Petaluma, CA 94954 • (707) 792-1865 FAX (707) 792-0342

Company Name: Terrasearch Project Name: 600 Daggett Avenue, Union City, CA

Mailing Address: 11840 Dublin Blvd Billing Address (if different): _____

City: Dublin State: CA Zip Code: 94611 **9903107**

Telephone: (925) 833-9297 FAX #: (925) 833-9548 P.O. #: E 7744

Report To: Chris Winn Sampler: Chris Winn QC Data: Level D (Standard) Level C Level B Level A

Turnaround 10 Working Days 3 Working Days 2 - 8 Hours

Time: 7 Working Days 2 Working Days

5 Working Days 24 Hours

Analyses Requested

Drinking Water

Waste Water

Other

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	Purgeable Halocarbons (2010)	TPHg/BTEX	TPHd	MTBE	Pesticides (2010)	Metals: As, Pb, Hg	Comments
1. OW-1	3/2/99-3:30	Water	7	6 VOCs 1 AMB	9030398	X	X	X	X			
2. B-1	3/2/99-1005	Water	3	3 VOCs	9030399	X						
3. B-2	3/2/99-1210	Water	3	3 VOCs	9030400	X						
4. B-3	3/2/99-1500	Water	7	6 VOCs 1 AMB	9030401	X	X	X	X			
5. 1-3	3/2/99-830	Soil	1	Brass Liner	9030402				X	X		HOLD
6. 1-11	3/2/99-845											
7. 1-21	3/2/99-900				9030403	X						HOLD
8. 1-31	3/2/99-930								X	X		
9. 2-2	3/2/99-1030				9030404							HOLD
10. 2-11	3/2/99-1050											

Relinquished By: <u>[Signature]</u>	Date: <u>3/2/99</u> Time: <u>1610</u>	Received By: _____	Date: _____ Time: _____
Relinquished By: _____	Date: _____ Time: _____	Received By: _____	Date: _____ Time: _____
Relinquished By: _____	Date: _____ Time: _____	Received By Lab: <u>[Signature]</u>	Date: <u>3/2/99</u> Time: <u>1610</u>

Samples on Ice? Yes No Method of Shipment _____

03/17/99 16:56 :20/22 NO:364
925 988 9673
SEQUOIA ANALYTICAL

Pink - Client
Yellow - Sequoia
White - Sequoia



SEQUOIA ANALYTICAL CHAIN OF CUSTODY

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 404 N. Wiget Lane • Walnut Creek, CA 94598 • (925) 988-9600 FAX (925) 988-9673
 1455 McDowell Blvd. North, Suite D • Petaluma, CA 94954 • (707) 792-1865 FAX (707) 792-0342

Company Name: Terrasearch Project Name: 600 Daggett Ave, Union City, CA
 Mailing Address: 11840 Dublin Blvd Billing Address (if different): _____
 City: Dublin State: CA Zip Code: 94611 **9903107**
 Telephone: (925) 833-9297 FAX #: (925) 833-9548 P.O. #: E7744
 Report To: Chris Winn Sampler: Chris Winn QC Data: Level D (Standard) Level C Level B Level A

Turnaround 10 Working Days 3 Working Days 2 - 8 Hours
 Time: 7 Working Days 2 Working Days
 5 Working Days 24 Hours

Drinking Water
 Waste Water
 Other
 Analyses Requested:

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	Pyrrolizidine Alkaloids (SDB)	TPHA/BTEX	TPHD	MTBE	Pesticides (Atrazine, DDT, Dieldrin, Endosulfan, Heptachlor, Heptachlor Epoxide, Heptachlor Hydrolysis Product, Heptachlor Hydrolysis Product Epoxide, Heptachlor Hydrolysis Product Epoxide Oxide, Heptachlor Hydrolysis Product Epoxide Oxide Oxide, Heptachlor Hydrolysis Product Epoxide Oxide Oxide Oxide)	Metals: As, Pb, Cu, Fe, Ni, Zn, Cd, Cr, Mn, Hg, Mo, Se, V, W, Bi, Br, Ca, Co, K, Li, Mg, Na, P, S, Si, Sr, Ti, U, Y, Ba, Be, B, Bi, Br, Ca, Cd, Ce, Cl, Cr, Cs, Cu, Fe, F, Ga, Ge, Hg, I, In, Ir, K, Kr, La, Li, Lu, Mg, Mn, Mo, Na, Nb, Ni, Np, O, Os, Pb, Pt, Rb, Rh, Ru, S, Sb, Se, Si, Sn, Sr, Te, Th, Tl, U, V, W, Y, Zn, Zr	Comments		
1. 2-21	3/2/99-1110	Soil	1	Grass Cur	9030405	X								HOLD
2. 2-31	3/2/99-1135													
3. 3-2	3/2/99-1250				9030406				X	X				HOLD
4. 3-11	3/2/99-1310													
5. 3-21	3/2/99-1335				9030407	X	X	X	X					HOLD
6. 3-31	3/2/99-1405													
7. FL-1	3/2/99-1600				9030408				X					
8. FL-2	3/2/99-1605				9030409				X					
9. FL-3	3/2/99-1610				9030410				X					
10. FL-4	3/2/99-1615				9030411				X					

Relinquished By: Chris Winn Date: 3/3/99 Time: 1610 Received By: _____ Date: _____ Time: _____
 Relinquished By: _____ Date: _____ Time: _____ Received By: _____ Date: _____ Time: _____
 Relinquished By: _____ Date: _____ Time: _____ Received By Lab: J. Davis Date: 3/3/99 Time: 1610

03/17/99 16:56 : 21/22 NO:364
 925 988 9673
 SEQUOIA ANALYTICAL

Pink - Client
 Yellow - Sequoia
 White - Sequoia



SEQUOIA ANALYTICAL CHAIN OF CUSTODY

680 Chesapeake Drive • Redwood City, CA 94063 • (650) 364-9600 FAX (650) 364-9600
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 1455 McDowell Blvd. North, Suite D • Petaluma, CA 94954 • (707) 792-1865 FAX (707) 792-0342

Company Name: Terrasearch Project Name: 600 Daggett Ave, Union City, CA
 Mailing Address: 11840 Dublin Blvd Billing Address (if different):
 City: Dublin State: CA Zip Code: 94611 P.O. #: E7744 **9903107**
 Telephone: (925) 833-9297 FAX #: (925) 833-7548 QC Data: Level D (Standard) Level C Level B Level A
 Report To: Chris Winn Sampler: Chris Winn

Turnaround 10 Working Days 3 Working Days 2 - 8 Hours
 Time: 7 Working Days 2 Working Days
 5 Working Days 24 Hours

Drinking Water
 Waste Water
 Other

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Sequoia's Sample #	TPHd	Analyses Requested							Comments	
1. FL-5	3/2/99-1620	Soil	1	Bios liner	9030412	X									
2. FL-6	3/2/99-1625	↓	↓	↓	9030413	X									
3. FL-7	3/2/99-1630	↓	↓	↓	9030414	X									
4. FL-8	3/2/99-1635	↓	↓	↓	9030415	X									
5.															
6.															
7.															
8.															
9.															
10.															

Relinquished By: [Signature] Date: 3/2/99 Time: 1610 Received By: _____ Date: _____ Time: _____
 Relinquished By: _____ Date: _____ Time: _____ Received By: _____ Date: _____ Time: _____
 Relinquished By: _____ Date: _____ Time: _____ Received By Lab: [Signature] Date: 2/3/99 Time: 1610

Samples on Ice? Yes No Method of Shipment _____

03/17/99 16:56 □ :22/22 NO:364
 925 988 9673
 SEQUOIA ANALYTICAL

Pink - Client
 Yellow - Sequoia
 White - Sequoia

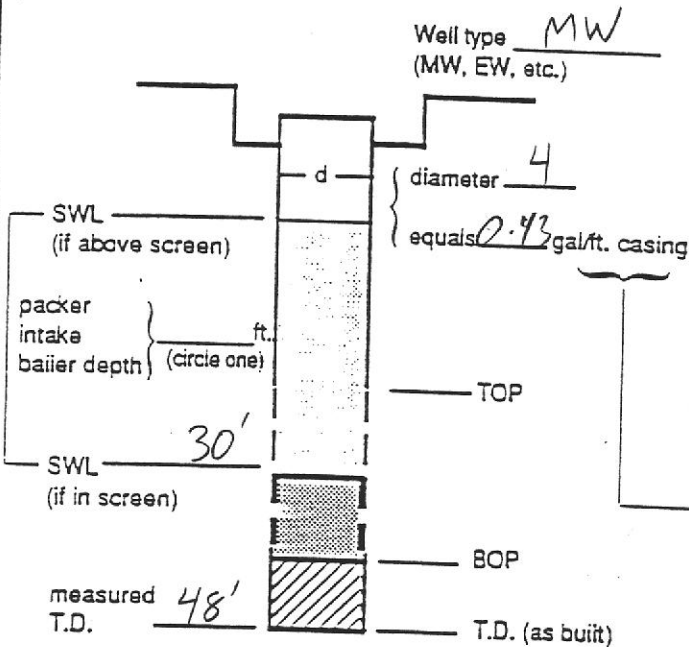
SAMPLING EVENT DATA SHEET

(fill out completely)

WELL OR LOCATION aw-1

PROJECT E7744 EVENT _____ SAMPLER Chlorine DATE 3/2/99

Well / Hydrologic statistics



Action	Time	Pump rate	IWL (low yield)
Start pump / Begin			
Stop			
Sampled (Final IWL)			

Purge calculation

$0.43 \text{ gal/ft.} \cdot 16 \text{ ft.} = 7.9 \text{ gals} \times 3 = 23.7 \text{ gals.}$

SWL to BOP or packer to BOP one volume purge volume - 3 casings

Head purge calculation (Airlift only)

_____ gal/ft. _____ ft. = _____ gals.

packer to SWL

Equipment Used / Sampling Method / Description of Event:

Actual gallons purged	_____
Actual volumes purged	_____
Well yield (see below)	⊕ _____
COC #	_____
Sample I.D.	Analysis Lab
_____	_____
_____	_____
_____	_____
_____	_____

Additional comments:

Sampled after
24 gallons purged

Gallons purged *	TEMP °C / °F (circle one)	EC (µs / cm)	PH	TURBIDITY (NTU)
1. <u>0</u>	<u>58</u>		<u>7.5</u>	
2. <u>8</u>	<u>58</u>		<u>7.3</u>	
3. <u>16</u>	<u>59</u>		<u>7.3</u>	
4. <u>24</u>	<u>60</u>		<u>7.3</u>	
5.				

* Take measurement at approximately each casing volume purged.

⊕ HY - Minimal W.L. drop MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump.

LY - Able to purge 3 volumes by returning later or next day. VLY - Minimal recharge - unable to purge 3 volumes.