

**Phase I Subsurface Investigation  
Workplan**

**K/D Cedar Supply Company**

Hayward, California

March 12, 1991

BEI No. 91020



Prepared By:

Blymyer Engineers, Inc.  
1829 Clement Avenue  
Alameda, CA 94501-1396

Site:

22008 Meekland Avenue  
Hayward, CA 94541-3895

## LIMITATIONS

The conclusions and recommendations presented herein were prepared in accordance with generally accepted professional engineering and/or geologic practices and principles. The scope of work for the project will be conducted within the limitations prescribed by the client. Our opinions will be based upon observations made at the site; review of available environmental, climatological, and geological data pertaining to the site; review of boring logs and subsurface data obtained during the investigation; and evaluation of analytical soil and/or groundwater data provided by an approved testing laboratory. All data obtained from investigations of this type are reviewed by the state or local regulatory agency for conformance with its criteria. Therefore, there is no guarantee that additional borings, soil or groundwater analytical tests, or remedial work will not be required at the site. This warranty is in lieu of all other warranties either expressed or implied pertaining to this project.



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Ramon Khu  
Environmental Engineer



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Harry W. Short, R.G., C.E.G.  
Senior Geologist

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dated December 6, 1989

## **1.0 INTRODUCTION**

### **1.1 Background**

Blymyer Engineers has been retained by K/D Cedar Supply Company to perform a Phase I Subsurface Investigation at its office and warehouse located at 22008 Meekland Avenue in Hayward, California. This report represents a workplan for the Alameda County Health Care Services Agency (ACHCSA) and the San Francisco Bay Regional Water Quality Control Board (RWQCB).

The following background information is Blymyer Engineers' understanding of prior site work as based on telephone conversations, letters, and laboratory reports provided by the client.

On November 20, 1989, R. L. Stevens Company removed two 550-gallon underground gasoline storage tanks from the warehouse yard of K/D Cedar Supply Company in Hayward, California (Figures 1 and 2). Available information revealed that the two tanks held only gasoline, however, the tanks were empty when removed. The ages of the tanks are not known.

Blaine Tech Services, Inc. collected four soil samples from the excavation after the tank removal. Two of the samples (#1 and #2) were collected from the beneath the middle of each tank at the interface of the backfill and native soil. Samples #1 and #2 were collected at an approximate depth of 8.5 feet below grade surface. The remaining two samples (#3 and #4) were collected at the bottom of the excavation at a depth of 13.5 feet below grade surface. No groundwater was encountered in the excavation.

Samples #1 and #2 were analyzed for Total Petroleum Hydrocarbons (TPH) as gasoline using modified EPA Method 8015, and benzene, toluene, ethylbenzene, and

xylenes (BTEX) using EPA Method 8020. The December 7, 1990 laboratory report, included in Blaine Tech Services' tank removal sampling report 891120-A-1 (Appendix A), showed TPH as gasoline levels of 130 parts per million (ppm) in sample #1 and 1 ppm in sample #2. Xylenes were also detected in sample #1. Sample #4 was subsequently analyzed because of the analytical results of sample #1. Sample #4 was collected 5 feet below sample #1. The December 12, 1990 laboratory report, also included in Appendix A, showed sample #4 to contain 1,300 ppm of TPH as gasoline, 0.24 ppm of benzene, 8.7 ppm of toluene, 14 ppm of ethylbenzene, and 130 ppm of xylenes.

Due to the documented presence of petroleum-contaminated soil remaining in the ground at the site, the ACHCSA is currently requiring that a Preliminary Site Assessment be performed to assess the extent of petroleum contamination in soil and groundwater beneath the site.

## **1.2 Site Conditions**

K/D Cedar Supply Company is located at 22008 Meekland Avenue in Hayward, in a mixed residential, industrial, and commercial area. The site is bounded to the north by residential homes and vacant commercial offices, to the west by a construction supply company (Nave's Supply Co.) and a countertop manufacturer (Versital Enterprises), to the south by a fenced empty lot and an unoccupied warehouse, and to the east by residential homes and an automobile repair shop (Vargas Performance). The subject site is located on Meekland Avenue between Sunset Boulevard and Poplar Avenue and is surrounded by high cinder block walls on three sides. The entire site is paved with concrete, with several small asphalt-patched areas. The site is presently occupied by K/D Cedar Supply Company.

### 1.3 Project Objectives

The primary objectives of this preliminary site assessment are:

1. To assess the horizontal and vertical extent of soil contamination by petroleum hydrocarbons released from the former underground storage tanks;
2. To assess the extent of potential groundwater contamination by petroleum hydrocarbons released from the former underground storage tanks;
3. To determine the local groundwater gradient direction; and
4. To locate potential sensitive receptors in the area.

## **2.0 ENVIRONMENTAL SETTING**

### **2.1 Regional Geology and Anticipated Site Stratigraphy**

The K/D Cedar Supply Company facility is located in the gently sloping East Bay Plain, approximately 3½-miles east of San Francisco Bay at an approximate elevation of 65 feet based on the National Geodetic Vertical Datum (NGVD). A cross section of the generalized stratigraphy underlying the area in the vicinity of the subject site is illustrated in Figure 3. The generalized stratigraphy from the surface down is described as follows: Holocene and younger alluvium up to 50 feet thick is composed of unconsolidated sand and silt. The younger alluvium yields little water. Pleistocene and older alluvium, approximately 650 feet thick, is composed of clay, silt, sand, and gravel. The regional aquifer is contained in the older alluvium, and is confined. Groundwater recharge for this aquifer is along the Hayward fault to the east (Hickenbottom and Muir, 1988).

When the underground storage tanks were removed in November 20, 1989, groundwater was not encountered. Research of water depths from nearby monitoring wells show that groundwater was at approximately 30 feet in August 1986.

The Alameda Flood Control and Water Conservation District 205(J) report indicates that the site is located in the San Lorenzo Cone and local groundwater flow is directed toward the west.

### **2.2 Climate**

The East Bay Plain exhibits a Mediterranean-type climate with cool, wet winters and warmer, dry summers. Mean annual precipitation in Oakland is 25.42 inches. Mean monthly rainfall is 5.13 inches in January and 0.04 inches in August. At the time of this writing the entire Bay Area has experienced below-normal precipitation for the



past five years. The mean monthly temperature in Hayward is 47.6 degrees Fahrenheit in January and 64.1 degrees Fahrenheit in August (Soil Conservation Service, 1981).

## **3.0 METHODS OF INVESTIGATION**

### **3.1 Soil Investigation**

#### **3.1.1 Soil Sample Collection**

Blymyer Engineers intends to install three soil bores (MW-1, MW-2, and MW-3 on Figure 2) to a depth of 40 feet each using a hollow-stem auger mobile drill rig. The 10-inch diameter bores will be placed around the former tank location (including one bore within 10 feet of the tank in the presumed downgradient direction) in order to assess the horizontal and vertical extent of petroleum soil contamination. These will be converted into 4-inch diameter groundwater monitoring wells. If it becomes necessary, a fourth well is proposed in the event that the water sample from the well closest to the former tank location contains detectable levels of petroleum constituents, or if this well is not in the verified downgradient direction.

The total depth of each well is based on the assumption that groundwater will be encountered at a depth of 30 feet. If groundwater is deeper than 30 feet below the surface, the soil bores will be installed 10 feet into groundwater.

Drill cuttings will be stored on-site in labeled D.O.T.-approved 55-gallon drums for later disposal by the client.

Soil samples will be collected at 5-foot intervals below grade surface and immediately above the water table in each bore. The augers will be advanced to the desired sampling depth and a California split-spoon sampler, lined with three clean 6-inch long brass sleeves, will be driven 18 inches ahead of the augers. The sampler will be retrieved and the brass sleeves removed. The desired sample will be sealed in its brass sleeve with aluminum foil, plastic end-caps, and duct tape. The samples will be labeled and placed on ice for transportation to the analytical laboratory. All

proper chain-of-custody procedures will be observed. Soil samples will be field-screened using a photoionization detector.

### **3.1.2 Analytical Methods**

The soil samples will be sent to NET Pacific, Inc., a California-certified laboratory. The samples will be analyzed for TPH as gasoline and for BTEX on a standard 5-day turnaround.

## **3.2 Groundwater Investigation**

### **3.2.1 Monitoring Well Installation**

The 10-inch diameter, 40-foot soil bores will be converted to 4-inch diameter monitoring wells at the locations indicated in Figure 2. One well will be located within 10 feet of the former tank excavation in the presumed downgradient direction (west).

Each well will be constructed of Schedule 40 PVC casing. The casing will be factory slotted from the bottom of the bore to 2 feet above the water table. The remainder of the casing will be blank. A threaded cap or a slip cap with machine screws will be attached to the bottom of the casing.

The annulus between the borehole wall and the casing will be backfilled with sand, appropriate for the chosen slot size, from the bottom of the borehole to 2 feet above the screened interval. One foot of bentonite pellets will be placed in the annulus and then hydrated to form a seal. The annulus will be backfilled to grade with a cement slurry composed of neat cement and 4% bentonite. The top of the casing will be secured with a locking well cap and a flush-mounted traffic box will be installed over each well.

Each well will be developed by surging and pumping approximately 6 to 10 well volumes. Development water will be stored on the site in labeled, D.O.T.-approved 55-gallon drums for later disposal by the client.

### **3.2.2 Groundwater Sample Collection**

A groundwater sample will be collected from each well at least 24 hours after development. At least three well volumes will be removed prior to sampling using a decontaminated PVC hand pump or a Teflon bailer. Water temperature, pH, and conductivity will be measured prior to and after the removal of each well volume. The well will be sampled only after these measurements are all within 15% of each other for three consecutive well volumes. The water samples will be placed in appropriate containers provided by the laboratory, labeled, and placed on ice for transportation to the analytical laboratory. All proper chain-of-custody procedures will be observed.

### **3.2.3 Analytical Methods**

The groundwater samples will be analyzed for TPH as gasoline and for BTEX at NET Pacific, Inc., a California-certified laboratory, on a standard 10-day turnaround.

### **3.2.4 Groundwater Elevation Survey**

The water levels in all of the wells at the site will be measured from the top-of-casing (TOC). The TOC elevation for each well will be surveyed with a rod and level to a local benchmark. This will allow the determination of the local groundwater gradient direction.

### **3.2.5 Sensitive Receptor Survey**

A survey of all existing wells within a ½-mile radius will be performed to determine potential sensitive receptors in the area.

#### **4.0 HEALTH AND SAFETY PLAN**

A site-specific health and safety plan will be prepared to cover all phases of the work. The plan will address key personnel and their responsibilities relative to health and safety, chemical and physical hazards, risk evaluation and management, personal protective equipment, and emergency procedures. A "tail-gate meeting" will be conducted prior to each phase of the work to discuss pertinent health and safety issues and review the site safety plan with all site workers.

## **5.0 FINAL REPORT**

Upon completion of the work described in the preceding sections, a final report will be prepared for submittal to the Alameda County Health Care Services Agency and the San Francisco Bay Regional Water Quality Control Board. The final report will include a description of all field work performed at the site, analytical results and interpretation, conclusions, and recommendations.

## 6.0 REFERENCES

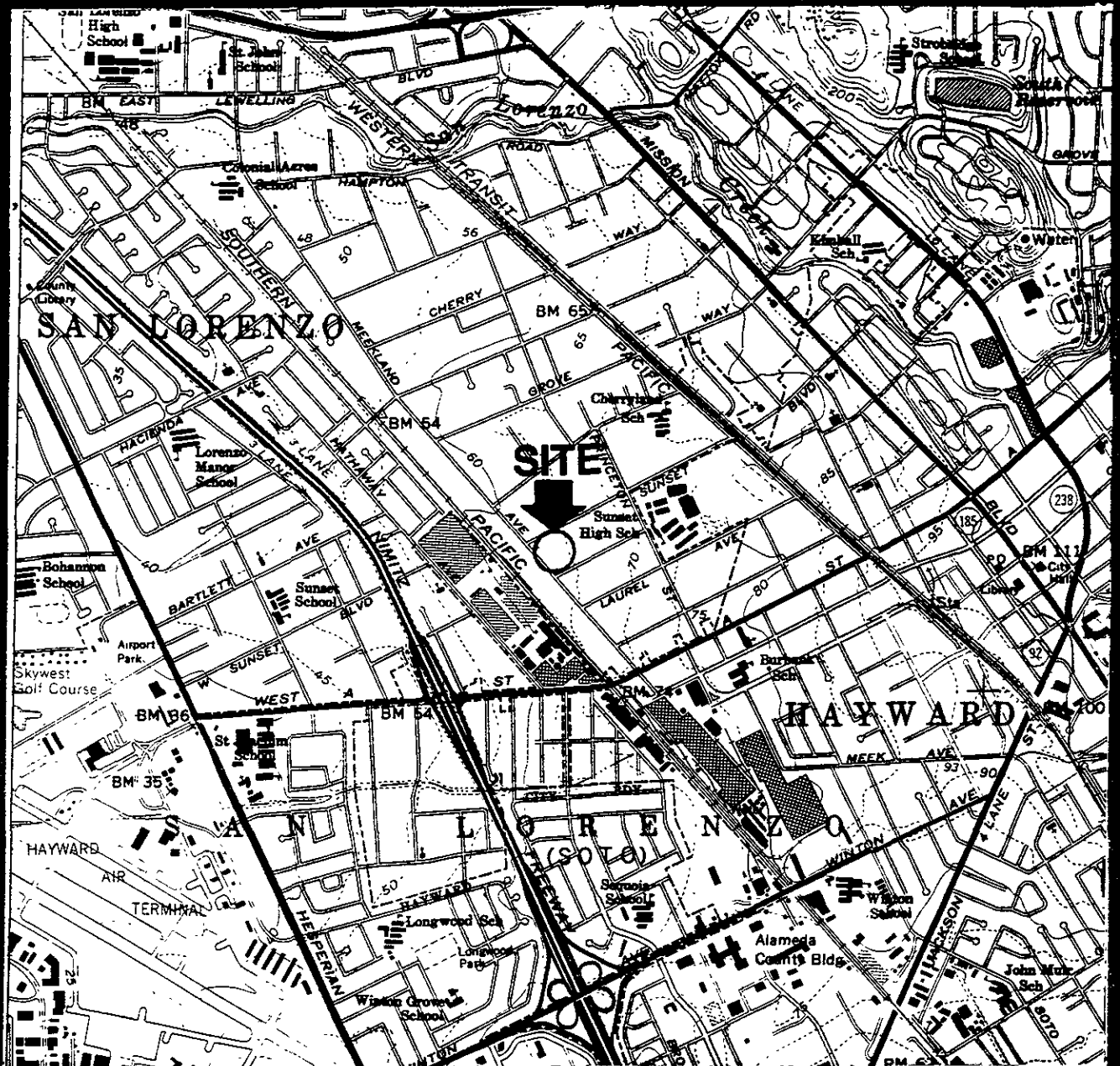
Hickenbottom, Kelvin, and Kenneth Muir, 1988. *Geohydrology and Groundwater Quality Overview of the East Bay Plain Area, Alameda County, California, 205(J) Report*, submitted to the San Francisco Bay Regional Water Quality Control Board.

United States Department of Agriculture, Soil Conservation Service, 1981. *Soil Survey of Alameda County, California, Western Part*.



# Figures

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Source: United States Geological Survey, "Hayward, Ca", photorevised 1980.

**K/D CEDAR SUPPLY**  
**2208 MEEKLAND AVE.**  
**HAYWARD, CA**

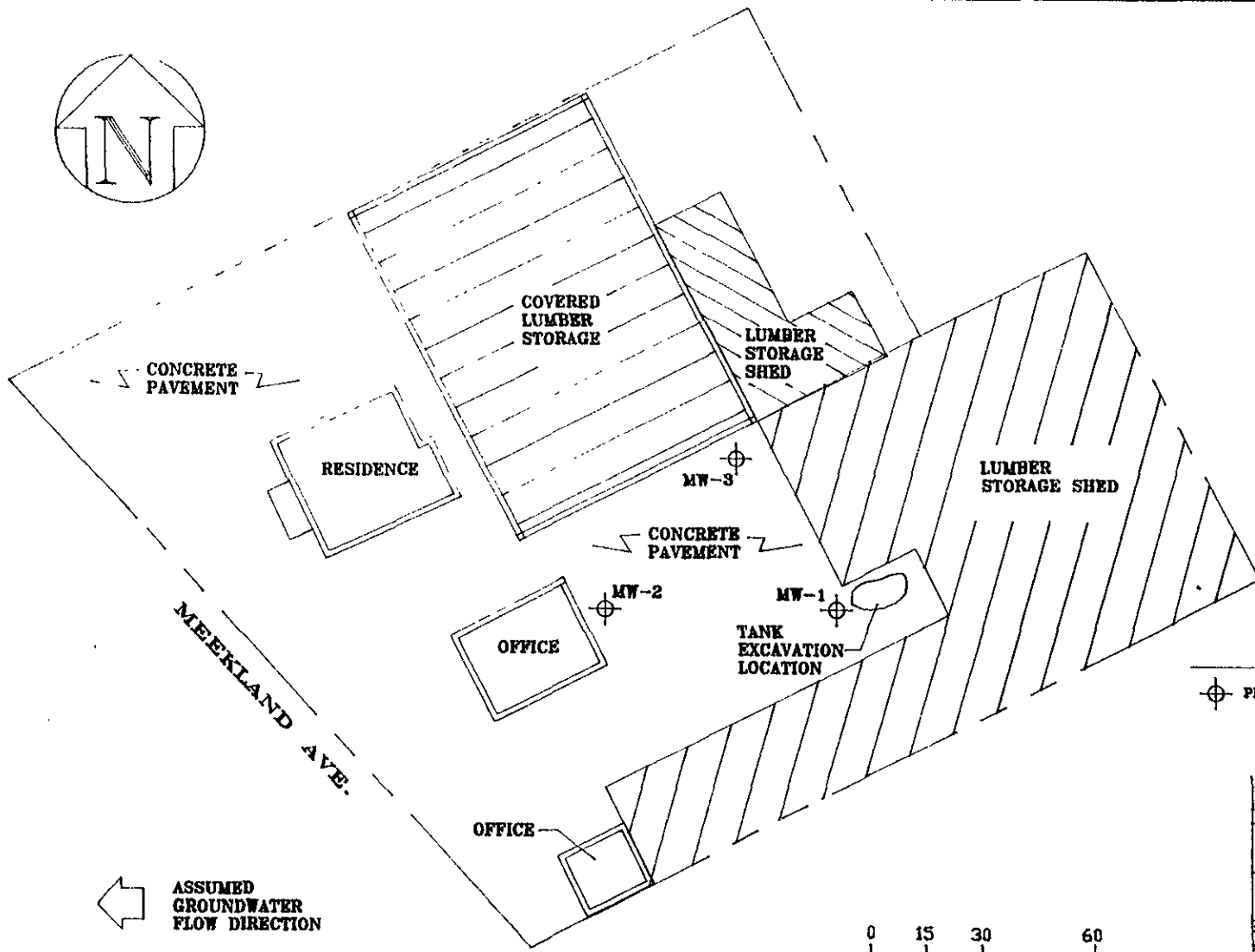
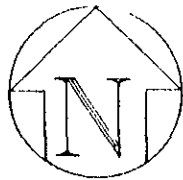


FIGURE 1

JOB #91020

0 1000 2000

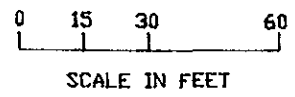
SCALE IN FEET



**LEGEND**

 PROPOSED MONITORING WELL LOCATION

 ASSUMED GROUNDWATER FLOW DIRECTION



REV	DESCRIPTION	DATE	BY
BLYMYER ENGINEERS, INC ALAMEDA, CALIFORNIA			
SCALE SHOWN	FOR K/D CEDAR SUPPLY HAYWARD, CA		
DRW DATE	LW 2/01		
APPROVED	TITLE SITE PLAN		
JOB NO. 01020	PLAN NO. FIGURE 2		

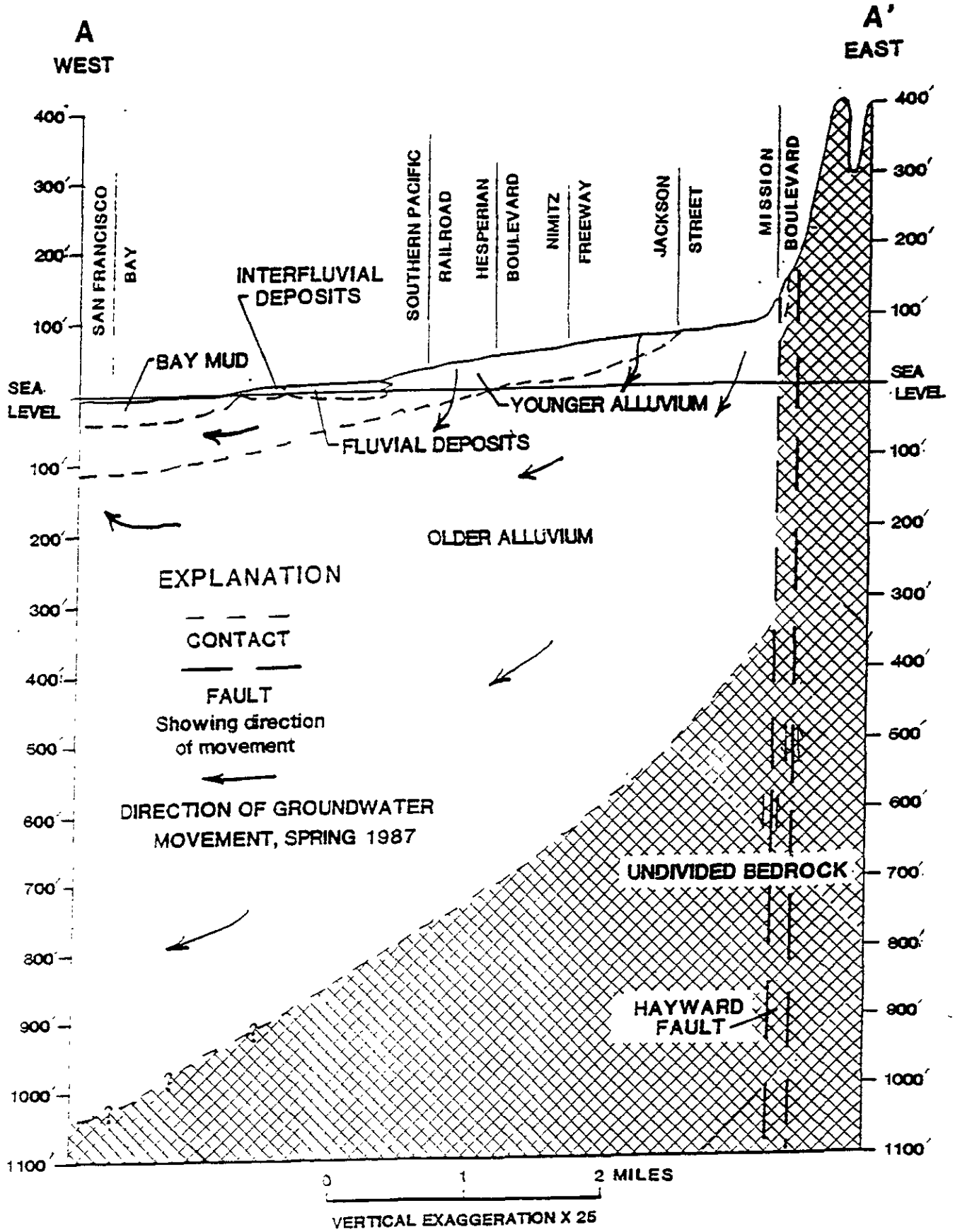


Figure 3: Area Geologic Cross Section (Hickenbottom and Muir, 1988)



# Appendix A

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December 6, 1989

R.L. Stevens  
22240 Meekland Avenue  
Hayward, CA 94541

Attn: Bob Stevens

SITE:  
K.D. Cedar Company  
22008 Meekland Avenue  
Hayward, California

PROJECT:  
Tank Removal

SAMPLED ON:  
November 20, 1989

TANK REMOVAL SAMPLING REPORT 891120-A-1

Blaine Tech Services, Inc. performs specialized environmental sampling and documentation as an independent third party. In order to avoid compromising the objectivity necessary for the proper and disinterested performance of this work, Blaine Tech Services, Inc. does not participate in the interpretation of analytical results or become involved with the marketing or installation of remedial systems. The interpretation of results should be performed by representatives of interested regulatory agencies and/or those professionals who are engaged as paid consultants in the business of providing opinions and proposals for further investigation or clean-up activities.

This report describes the initial environmental sampling and documentation performed by our firm on this project. In addition to the text of the Sampling Report, supporting documents are provided as attachments. These include the chain of custody and the certified analytical laboratory report. All of these documents should be kept together and preserved as a file of interrelated records which, together, comprise the documentation of the work performed at the site.

## Scope of Requested Services

In accordance with your request, field personnel would be dispatched to the site to observe the tank removal, collect samples, arrange for the proper analyses of the samples, and maintain adequate documentation resulting in the issuance of a formal Sampling Report. The collection of environmental samples was to be performed in accordance with the requirements of the State Water Resources Control Board and the specific directions of the Local Implementing Agency (LIA) inspector present at the site at the time of removal.

## Execution of the Tank Removal Sampling

The subject site is located within the overall jurisdiction of the Regional Water Quality Control Board -- San Francisco Bay Region. Initial inspection and evaluation of the site is customarily conducted by the local implementing agency (LIA), which was the Alameda County Health Department and Eden Consolidated Fire Protection District. The Alameda County Health Department was represented by Mr. Thomas F. Peacock and Eden Consolidated Fire Protection District was represented by Mr. James Ferdinand. Both representatives were present for the tank removal and sampling.

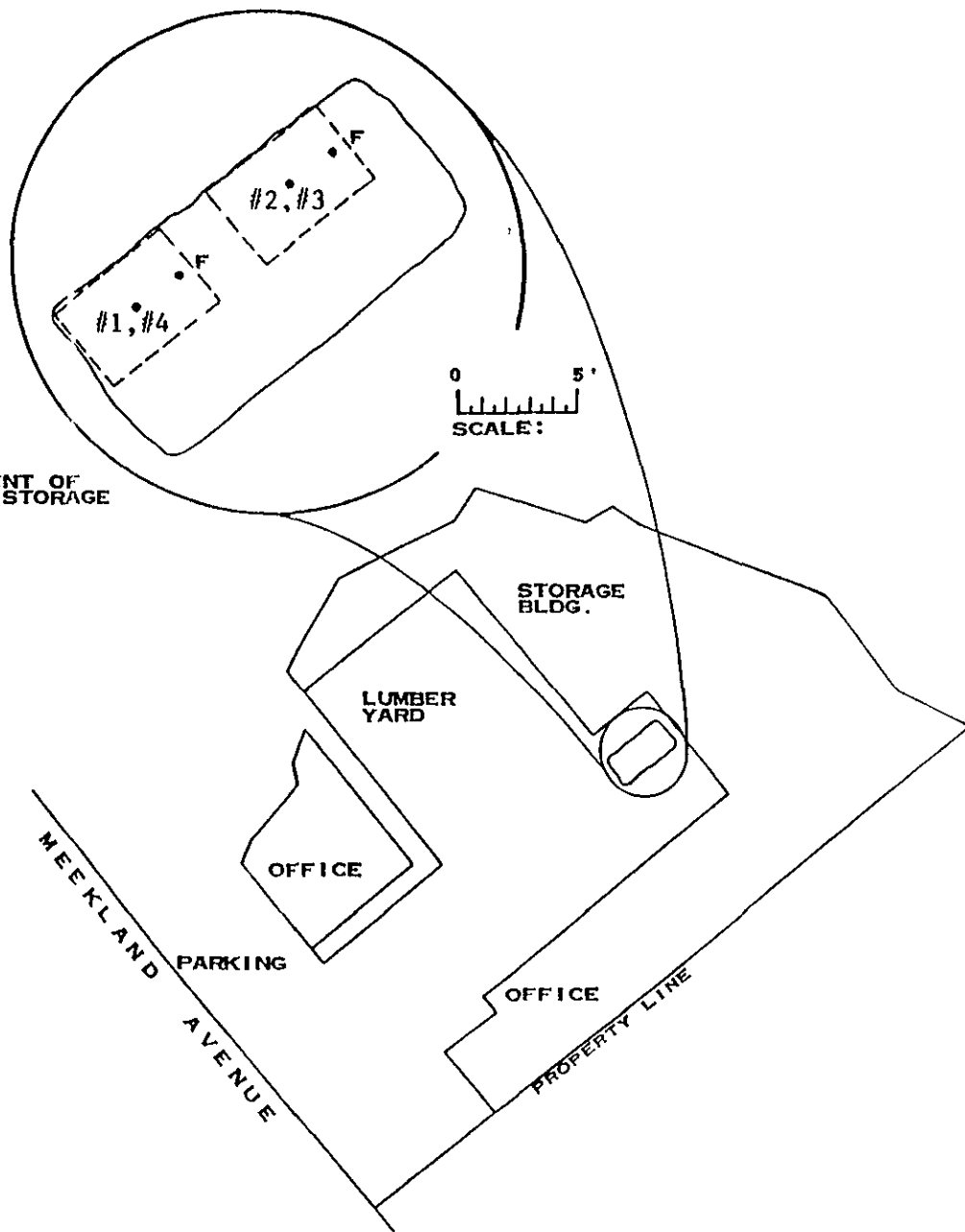
Personnel were dispatched from our office and arrived at K.D. Cedar Company on Monday, November 20, 1989. Mr. Bob Stevens of R.L. Stevens was present for a portion of the sampling activity.

In accordance with the local regulations and the field judgment of the LIA representative, a brief inspection was made of the tanks following their removal from the subsurface. No holes were observed in either of the tanks.

TANK I.D.	SIZE IN GALLONS	TANK CONTENT	MATERIAL OF CONSTRUCTION	INSPECTION FOUND
A	550	GASOLINE	STEEL	NO HOLES
B	550	GASOLINE	STEEL	NO HOLES

In accordance with the direction of LIA representative, Mr. Peacock, a standard interface sample was obtained from beneath the middle of each tank. Sample #1 was obtained from beneath the middle of Tank A at a depth of eight and a half feet (8.5') and sample #2 was obtained from beneath the middle of Tank B at a depth of eight and a half feet (8.5') below grade. Mr. Stevens of R.L. Stevens also requested the collection of deeper samples in the same location as the interface samples. Sample #3 was obtained from beneath the middle of Tank A and sample #4 was obtained from beneath the middle of Tank B. Both samples were obtained at a depth of thirteen and a half feet (13.5') below grade. Samples #3 and #4 were placed on hold at the laboratory pending the results of samples #1 and #2.

The location of individual sampling points is shown on the diagram on page three. Additional information on the exact method of sample collection will be found in the **Sampling Methodology** section of this report.



SCALE: 0 50'

MAP REF: THOMAS BROS.  
ALAMEDA COUNTY  
P.58 B-1

LEGEND: F = FILL END

- #1 SOIL SAMPLE FROM 8.5'  
ANALYSIS FOR TOTAL PETROLEUM  
HYDROCARBONS (TPH) AS GASOLINE,  
AND BENZENE, TOLUENE, XYLENES,  
AND ETHYLBENZENE (BTXE) AT  
SEQUOIA ANALYTICAL LABORATORY  
SEQUOIA LAB NO. 911-2660
- #2 SOIL SAMPLE FROM 8.5'  
ANALYSIS FOR TPH AS GASOLINE  
AND BTXE.  
SEQUOIA LAB NO. 911-2661
- #3 SOIL SAMPLE FROM 13.5'  
PLACED ON HOLD
- #4 SOIL SAMPLE FROM 13.5'  
ANALYSIS FOR TPH AS GASOLINE  
AND BTXE  
SEQUOIA LAB NO. 912-1111

SAMPLING PERFORMED BY BRENT ADAMS  
DIAGRAM PREPARED BY BRENT ADAMS



After completion of the field work, the sample containers were delivered to Sequoia Analytical Laboratory in Redwood City, California. Sequoia Analytical Laboratory is a California Department of Health Services certified Hazardous Materials Testing Laboratory and is listed as DOHS HMTL #145.

It was requested that the analytical procedures used for these analyses be those specified by the Regional Water Quality Control Board -- San Francisco Bay Region. The methods are defined in attachments to the San Francisco RWQCB (Region 2) publication, Guidelines For Addressing Fuel Leaks and in documents issued to clarify the Board's interpretation of the California LUFT Manual.

## **SAMPLING METHODOLOGIES USED ON THIS PROJECT**

**Standard RWQCB Interface Samples:** Samples taken immediately following a tank removal are required to conform to criteria established by the Regional Water Quality Control Boards. Interpretation of these criteria is usually entrusted to the discretion of the local implementing agency inspector, but are widely known and conformance with these criteria is expected even when no regulatory agency personnel are present to direct the procedures. Accordingly, "Standard Interface samples" are those which have been taken in accordance with the standard protocol for obtaining interface samples. These samples fall into the category of samples which are known to be of primary concern to the interested regulatory agencies for determining if additional action will be required at a site and the methodology has been closely defined in state and RWQCB publications, supplements, and presentations. These specify both the acceptable depth and lateral situation of sample collection points. In accordance with these specifications, sample collection is executed as close as possible to the center line (longitudinal axis) of the tank and on a vertical axis with the fill pipe. A corresponding location is also found at the opposite end of the tank whenever standard interface samples are being collected.

Briefly, the method consists of digging up native soil from directly below the fill pipe and the corresponding opposite end of the tank and obtaining a sample from the backfill/native soil interface or a short distance below the interface. A short distance has been defined by Region 2 Board engineers as not greater than twenty-four inches below the backfill/native soil interface and is generally taken to be one foot below the backfill/native soil interface. This soil is brought up in the backhoe bucket. A shovel or trowel is used to cut away surface soil and backfill material which may have been included in the bucket, and the sample is taken by pushing or driving a brass sample liner into the newly exposed soil from the designated depth and location. Additional clarifications by Region 2 Board engineers have indicated that when there is an obvious difference in the relative contamination of soil brought up from the interface depth, then it is the relatively more contaminated soil that should be selected for inclusion in the sample.

**Elective Exploratory Samples:** This type of sampling employs the same sample collection and handling procedures as are used in standard RWQCB interface sampling, but soil is typically obtained at a greater depth or from a position that is laterally offset from the interface location.

## **SAMPLE CONTAINERS**

Our firm uses new sample containers of the type specified by either EPA or the RWQCB for the collection of samples at sites where underground storage tanks are involved. Soil samples for volatile, semivolatile and nonvolatile analyses are all collected in properly prepared new brass liners which are 2 inches in diameter by 4 inches in length. Closure is accomplished with press fit plastic end caps which are fitted to the open ends of brass tube liners after a sheet of aluminum foil is wrapped over the exposed sample material. A noncontributing/nonsubtractive tape is wrapped completely around the joint areas where the plastic caps meet the outer wall of the brass tube. No preservative other than cold storage is used on samples captured in sample containers of this type.

## **SAMPLE HANDLING PROCEDURES**

Solid sample material is captured by advancing the liner into the soil. This may be done by pushing the liner into soft soils or by containing the liner in a drive shoe which can be advanced and then retracted by means of a slide hammer. The open ends of the sample liner are covered with aluminum foil and plastic end caps. Excess aluminum foil is removed and the edge of the plastic end caps is tightly sealed against the outer surface of the brass liner with an unbroken wrap made with a tape which has been tested to confirm that it does not contribute compounds that would be detected in the type of analyses intended for the sample contained inside of the brass liner. The brass liner is then labeled with the appropriate identification numbers which specify the sampling activity designation number, sample collection area, depth etc. that apply to that particular sample. The sample liner is then placed in an ice chest which contains pre-frozen blocks of an inert ice substitute such as Blue Ice or Super Ice.

## **SAMPLE DESIGNATIONS**

All sample containers are identified with both a sampling event number and a discrete sample identification number. Please note that the sampling event number is the number that appears on our chain of custody. It is roughly equivalent to a job number, but applies only to work done on a particular day of the year rather than spanning several days as jobs and projects often do. This is followed by the sample I.D. number which is usually a simple number such as #1, #2, #3.

## **CHAIN OF CUSTODY**

Samples are continuously maintained in either a chilled ice chest, refrigerator, or freezer from the time of collection until acceptance by the State certified Hazardous Materials Testing Laboratory selected to perform the analytical procedures. If the samples are taken charge of by a different party (such as another person from our office, a courier, etc.) prior to being delivered to the laboratory, appropriate release and acceptance records are made on the chain of custody (time, date, and signature of person releasing the samples followed by the time, date and signature of the person accepting custody of the samples).

## LABORATORY IDENTIFICATION NUMBERS

Following receipt of the samples and completion of the Chain of Custody form, the laboratory then assigns their own identification numbers to the samples. Different laboratories use different numbering systems and, according to their own internal conventions, may or may not assign sequential numbers to samples which are placed on temporary "hold", pending the results of other analyses. Laboratory identification numbers (if assigned and available) are included on the DIAGRAM page, and will be found on the certified analytical report by the analytical laboratory.

## CERTIFIED ANALYTICAL REPORT

The certified analytical report generated by the laboratory is the official document in which they issue their findings. The certified analytical report is included as an attachment at the close of this report.

## GENERAL ADVISORY ON POSITIVE RESULTS

Blaine Tech Services, Inc. provides sampling and documentation. The proper technical execution of this work demands a high level of dedication to the principle that data gathering should be performed by impartial individuals who are also disinterested in the outcome of the analytical procedures. To function as a disinterested and independent third party Blaine Tech Services, Inc. makes it a policy to not become involved in either the interpretation of results or the sale of any consulting services or remediation packages. There are an ample number of firms who can provide consulting services and make proposal on whatever level of work they feel should be undertaken.

Even though we do not engage in the interpretation of analytical results, the making of recommendations, or the issuance of proposals on how best to remediate environmental conditions, we have been asked by the engineering staff of the Regional Water Quality Control Board to include in our reports an advisory section outlining the general type of additional actions which may be required when contamination is found. This advisory is not intended to characterize conditions at this particular site or replace the services of a consulting firm specializing in the investigation, characterization and remediation of such conditions as may exist. Rather, it is intended to advise you that such additional actions may be required even though some time may elapse before you are contacted by one of the interested regulatory agencies.

In Region 2 (which is regulated by the San Francisco Regional Water Quality Control Board), the thresholds are readily defined in the Board's publication, Guidelines For Addressing Fuel Leaks. According to this document, soil which has less than 100 parts per million total petroleum fuel hydrocarbon (TPH) contamination does not generally require immediate additional action. Board engineers emphasize that this does not mean that some action might not be required in the future. Still, the site is assigned a low priority unless it is situated in an area of high hydrogeologic concern.

The detection of more than 100 ppm TPH in the native soil beneath a tank is generally considered grounds for requiring an additional investigation in the form of soil borings and installation of at least one groundwater monitoring well followed by periodic monitoring. The

detection of 1000 ppm TPH is usually viewed by the Board as an unacceptable level of fuel saturation which will mandate excavation of the effected ground down to the furthest practicable reach of conventional excavating machinery followed by soil borings and installation of groundwater monitoring wells.

Other regions use different standards for determining when a groundwater investigation will be required. For example benzene is often used in lieu of TPH. Even very low levels of benzene are often seen as grounds for requiring a subsurface investigation. This criteria may be relaxed or stiffened depending on the location of the site in relation to different groundwater systems, the depth to water, type of soil, and the concentrations of benzene involved.

The above standards apply only to fuels. When samples taken in connection with a waste oil tank or a solvent tank are found to contain even small amounts of any of the EPA priority pollutants (such as TCE, PCE, DCE etc. which are detected by EPA methods 8010, 8020, and 8240) more stringent standards are often applied. In these cases, soil borings and monitoring well installation may be required if there is any detectable amount of any of the EPA priority pollutant compounds.

When contaminants are found to have reached the water underlying a site, the Board customarily requires that additional work be undertaken in order to define the extent of the contamination.

## REPORTAGE

Submission to the Regional Water Quality Control Board and the local implementing agency should include copies of the sampling report, the chain of custody, and the certified analytical report issued by the Hazardous Materials Testing Laboratory. The property owner should attach a cover letter and submit all documents together in a package.


The following addresses have been listed here for your convenience:

Water Quality Control Board  
San Francisco Bay Region  
1111 Jackson Street  
Room 6040  
Oakland, CA 94607  
ATTN: Greg Zentner

Alameda County Health  
Hazardous Materials Management  
420 27th Street  
Oakland, CA 94612  
ATTN: Thomas F. Peacock

Eden Consolidated Fire Protection District  
427 Paseo Grande  
San Lorenzo, CA 94580  
ATTN: James Ferdinand, Battalion Chief

Please call if we can be of any further assistance.



Richard C. Blaine

RCB/dmp

attachments: supporting documents

**BLAINE  
TECH SERVICES INC.**

1370 TULLY ROAD SUITE 300  
SAN JOSE, CA 95122  
1707 555-1500

CHAIN OF CUSTODY # 891120A1

SITE SPECIFICATION R.L. STEVENS @  
K.D. CEDAR Co.  
22066 MECKLAND AVE.  
HAYWARD, CA

BILL BLAINE TECH SERVICES, Inc.  
 BILL

SPECIAL INSTRUCTIONS

SAMPLE I.D.	QUANTITY	TYPE	OK	ANALYSIS TO DETECT	STATUS	RESULTS	LAB NUMBER
#1	1	S		GAS, BTEX	ROUTINE		
#2	1	S		GAS, BTEX	ROUTINE		
#3	1	S		HOLD			
#4	1	S		HOLD			

Field sampling was performed by Bradley Sampling was completed at 11:00 AM/PM 11-20-1988

RELEASE OF SAMPLES FROM (name,time,date) ---->>>> INTO THE CUSTODY OF (name,time,date)  
 from Bradley @ 1:30 AM/PM 11-20-88 -> to Bradley @ 1:05 AM/PM 11-20-88  
 from \_\_\_\_\_ @ \_\_\_\_\_ : AM/PM \_\_\_\_\_ -88 -> to \_\_\_\_\_ @ \_\_\_\_\_ : AM/PM \_\_\_\_\_ -88  
 from \_\_\_\_\_ @ \_\_\_\_\_ : AM/PM \_\_\_\_\_ -88 -> to \_\_\_\_\_ @ \_\_\_\_\_ : AM/PM \_\_\_\_\_ -88

The laboratory designated to perform these analyses is: SERVO DHS HMTL # 145  
 NOTE: Procedures and detection limits must conform to RMOCB Region II specifications.  
 Please include chain of custody number and site specification on reports and invoices.



# SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063  
(415) 364-9600 • FAX (415) 364-9233

Blaine Tech Services	Client Project ID: R.L. Stevens @ K.D. Cedar Co.	Sampled: Nov 20, 1989
1370 Tully Rd., Suite 505	Matrix Descript: Soil	Received: Nov 20, 1989
San Jose, CA 95122	Analysis Method: EPA 5030/8015/8020	Analyzed: Dec 4, 1989
Attention: Richard Blaine	First Sample #: 911-2660	Reported: Dec 7, 1989

## TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
911-2660	#1	130	N.D.	N.D.	N.D.	0.40
911-2661	#2	1.0	N.D.	N.D.	N.D.	N.D.

**Detection Limits:**

1.0

0.05

0.1

0.1

0.1

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.  
Analytes reported as N.D. were not present above the stated limit of detection.

**SEQUOIA ANALYTICAL**

*Elizabeth W. Hackl*  
Elizabeth W. Hackl  
Project Manager

9112660.BLA &lt;1&gt;



# SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063  
(415) 364-9600 • FAX (415) 364-9233

Blaine Tech Services	Client Project ID: #891120A1, R.L. Steven	Sampled: Nov 20, 1989
1370 Tully Rd., Suite 505	Matrix Descript: Soil, #4	Relogged: Dec 7, 1989
San Jose, CA 95122	Analysis Method: EPA 5030/8015/8020	
Attention: Richard Blaine	First Sample #: 912-1111	Reported: Dec 12, 1989

## TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons	Benzene	Toluene	Ethyl Benzene	Xylenes
		mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)	mg/kg (ppm)
912-1111	#4	1,300	0.24	8.7	14	130

Detection Limits:

1.0	0.05	0.1	0.1	0.1
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Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard. Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

*Arthur G. Burton*  
 Arthur G. Burton  
 Laboratory Director



