

8-6-96

Eva,  
Attached is a copy of the report for the Dublin-Scarlett property. I have about \$100 left in budget + will request a check to be sent to you in this amount if this is sufficient. If not, I'll need to ask my client for additional money. Please let me know my number is 510-484-1700

Thanks  
Zita



**KLEINFELDER**

*An employee owned company*

June 26, 1996

File No. 10-3003-37/003

ENVIRONMENTAL  
PROTECTION  
96 AUG -9 AM 8:17

Mr. John Moore  
J Patrick Land Company  
5627 Stoneridge Drive, Suite 320  
Pleasanton, California 94588

**SUBJECT: Risk-Based Cleanup Levels Analysis Report  
Dublin Boulevard Property  
Dublin, California**

Dear Mr. Moore:

Kleinfelder, Inc. (Kleinfelder) is pleased to present this letter report comparing the concentrations of tetrachloroethene in groundwater with risk-based cleanup levels for the Dublin Boulevard property. The project site is located on the southwest corner of the intersection of Dublin Boulevard and Scarlett Drive in Dublin, California (see Site Location Map, Plate 1). As discussed in detail below, Alameda County Environmental Health Department (ACEHD) has stated that no further action would be required on this site if the site is developed as proposed. A copy of the closure letter is presented as Attachment A.

## INTRODUCTION

Tetrachloroethene (a.k.a., perchloroethene, "perc," or PCE) was detected in groundwater at the above-referenced property during due diligence studies completed as part of a real estate transaction of the property. The presence of PCE in the groundwater beneath the site generated concern on the part of the ACEHD. The analytical results for the groundwater samples collected from the site are summarized in Table 1 below.

**TABLE 1**  
**Summary of Groundwater Analytical Results**  
**Dublin Boulevard Property**  
**Dublin, California**

Boring Number	Date Collected	DCE <sup>1</sup> µg/L <sup>8</sup>	DCA <sup>2</sup> µg/L	TCE <sup>3</sup> µg/L	PCE <sup>4</sup> µg/L	TDS <sup>5</sup> mg/L <sup>9</sup>	Toluene µg/L	TPH-d <sup>6</sup> µg/L	TRPH <sup>7</sup> mg/L
B-1	3/5/96	<0.5	<0.5	<0.5	<0.5	NA	0.63	83	<1.0
B-2	3/5/96	<0.5	<0.5	<0.5	<0.5	NA	<0.5	170	3.2
B-4	3/5/96	2.6	<0.5	13	27	NA	<0.5	1,400	<1.0
B-5	5/1/96	4.4	<0.5	11	66	1,900	NA	NA	NA
B-6	5/1/96	4.1	<0.5	14	53	1,700	NA	NA	NA
KHP-7	6/4/96	4.3	2.0	9.3	93	NA	<0.5	<50	NA
KHP-8	6/4/96	5.1	<0.5	11	100	NA	<0.5	<50	NA
KHP-9	6/4/96	2.0	<0.5	7.7	41	NA	<0.5	<50	NA
KHP-10	6/4/96	<0.5	<0.5	1.1	3.5	NA	<0.5	<50	NA
KHP-11	6/4/96	1.9	<0.5	6.2	52	NA	<0.5	<50	NA
KHP-12	6/4/96	0.94	<0.5	4.9	19	NA	<0.5	<50	NA
KHP-13	6/4/96	3.3	<0.5	10	60	NA	<0.5	<50	NA
KHP-14	6/4/96	4.5	<0.5	11	80	NA	<0.5	<50	NA
MCL		6	0.5	5	5	NE	1,000	NE	NE

**Notes:**

1. DCE = Cis 1,2-Dichloroethene
  2. DCA = 1,2-Dichloroethane
  3. TCE = Trichloroethene
  4. PCE = Tetrachloroethene
  5. TDS = Total Dissolved Solids
  6. TPH-d = Total Petroleum Hydrocarbons quantified as diesel
  7. TRPH = Total Recoverable Petroleum Hydrocarbons
  8. µg/L = Micrograms per liter, approximately equivalent to parts per billion
  9. mg/L = Milligrams per liter, approximately equivalent to parts per million
- NA = Not Analyzed for noted compound  
 NE = Not Established

This risk review was completed at the request of the ACEHD to ascertain whether PCE vapors could migrate from the groundwater through the soil and into the air at sufficient concentrations to present an unacceptable health risk. Edward Leach of Kleinfelder used the American Society for Testing and Materials (ASTM) Guidance for Risk-Based Corrective Action (RBCA) Applied at Petroleum Release Sites (ASTM, 1995), modified for application to PCE to calculate risk-based concentrations for pre-specified risk management thresholds.

If measured concentrations of PCE in groundwater are below the RBCA risk-based screening levels (RBSLs), then risk is less than the risk management threshold, and potential exposure is not expected to produce significant adverse health effects.

## SCOPE OF WORK

The purpose of the analysis was to establish if PCE concentrations present at the site were present at sufficient concentrations to produce an unacceptable health risk.

The following tasks were performed for this investigation:

RBCA Tier 1 analysis;

Negotiations with Madulla Logan of the ACDEH; and

Preparation of a brief letter report presenting the results.

## APPLICATION OF THE RBCA TIER 1 MODEL

According to information provided to Kleinfelder by Richard L. Dart, the architect for the proposed site development, the subject property will be used as a commercial, classic car showroom and garage. The entire surface area of the property will be capped as a parking lot, a showroom, and a garage; there will be no exposed soil surface. Therefore, there are no exposure pathways for direct contact with groundwater, and the only potential exposure may occur from vapors migrating from groundwater through the soil to the surface, then through the paving material or concrete slabs into the air.

The RBCA Tier 1 equations for calculating groundwater concentrations associated with risk-based concentrations in indoor air and ambient air were applied in this analysis. The parameters and spreadsheets used to calculate the RBSLs are presented as Attachment B; the reader is referred to the ASTM standard guidance for equations and descriptions of the models.

## RESULTS

The RBSL for PCE in groundwater beneath the showroom and garage, where vapors could theoretically be present in indoor air, is 77 micrograms per liter ( $\mu\text{g/L}$ ). The RBSL for PCE in groundwater beneath the parking lot, where vapors could theoretically be present in ambient (outdoor) air, is 33,630  $\mu\text{g/L}$ . These values correspond to a risk management threshold of  $1 \times 10^{-5}$ , which is the ACDEH's risk management threshold for the commercial land use exposure scenario. This means that concentrations below the RBSLs are predicted to produce incremental cancer risks below 1-in-100,000.

Figures 1, 2, and 3 in Attachment B provide comparisons of the RBSLs with PCE concentrations measured in groundwater samples collected from borings located within the footprint of the planned showroom, garage, and parking lots, respectively. The columns represent the concentrations measured in the groundwater. The lower line is the

RBSL at the  $1 \times 10^{-3}$  risk management threshold; the upper line is the RBSL at the  $1 \times 10^{-4}$  risk management threshold (U.S. EPA's upper limit for risk management decision-making).

Measured concentrations below the lines indicate that cancer risks are below the given risk management threshold. In this case, all measured concentrations are less than the risk management thresholds. Therefore, potential exposure and incremental cancer risks do not warrant additional action or controls to prevent adverse health effects at the subject site.

The RBSLs calculated with the ASTM standard guidance are very conservative, and over estimate concentrations that would be more realistically associated with the risk management thresholds. Actual concentrations producing incremental cancer risks at the threshold are probably higher than those calculated in this analysis. Therefore, this analysis is conservative.

The results of this analysis were discussed with Ms. Logan on June 12, 1996. Ms. Logan concurred with Kleinfelder's conclusions advised Eva Chu of the ACDEH to prepared a letter stating that no further action would be required on this site if the site is developed as proposed. A copy of the letter prepared by Ms. Chu and dated June 13, 1996 is presented as Attachment A.

## LIMITATIONS

This report was prepared in general accordance with the accepted standard of practice that existed in Northern California at the time of the investigation. It should be recognized that definition and evaluation of environmental conditions is a difficult and inexact art. Judgements leading to conclusions and recommendations are generally made with an incomplete knowledge of the conditions present. More extensive studies, including additional environmental investigations, can tend to reduce the inherent uncertainties associated with such studies. If J Patrick Land wishes to reduce the uncertainty beyond the level associated with this study, Kleinfelder should be notified for additional consultation.

Our firm has prepared this report for J Patrick Land's exclusive use for this particular project and in accordance with generally accepted engineering practices within the area at the time of our investigation. No other representations, expressed or implied, and no warranty or guarantee is included or intended.

This document may be used only by J Patrick Land and only for the purpose stated, within a reasonable time from its issuance. Land use, site conditions (both on and offsite) or other factors may change over time, and additional work may be required with the passage of time.

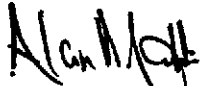
Any party other than J Patrick Land who wishes to use this document shall notify Kleinfelder of such intended use by executing the "Application of Authorization to Use" which follows as Attachment C. Based on the intended use of the report, Kleinfelder may require that additional work be performed and that an updated document be issued. Non-compliance with any of these requirements by the Client or anyone else will release Kleinfelder from any liability resulting from the use of this document by any unauthorized party.

Kleinfelder appreciates the opportunity to provide this analysis and report. If you have questions, please call Lita Freeman or Ed Leach at (510) 484-1700.

Sincerely,

**KLEINFELDER, INC.**

  
Lita D. Freeman, R.E.A.  
Project Manager

  
Alan D. Gibbs, R.G., C.H.G., R.E.A.  
Environmental Manager

LDF:ADG:ks

**Attachments:**

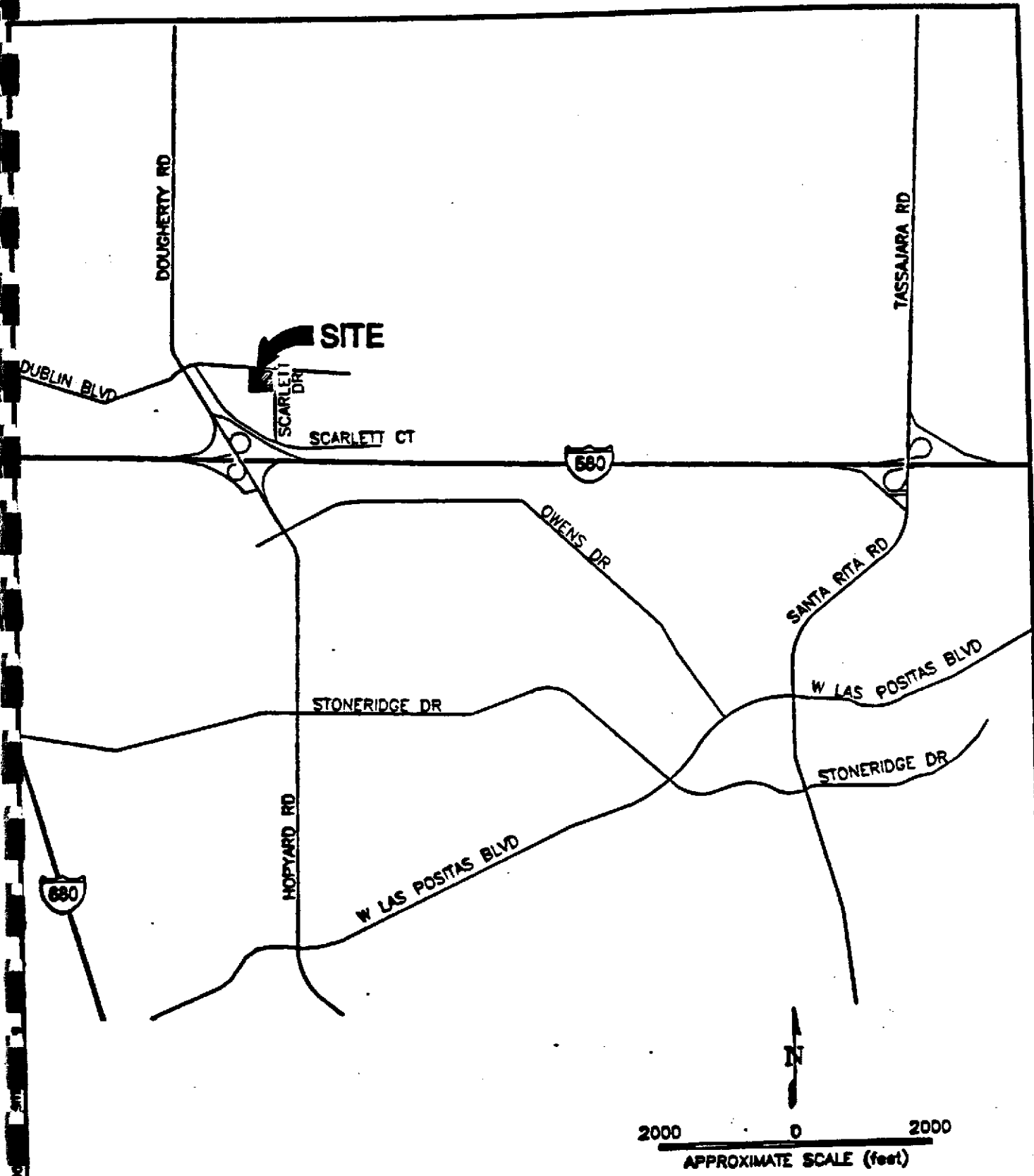
Plates: Plate 1 - Site Location Map

Plate 2 - Site Plan

Attachment A - ACDEH Letter

Attachment B - Risk Analysis Figures and Calculations

Attachment C - Application for Authorization to Use



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**KLEINFELDER**

**SITE LOCATION MAP**

PLATE

**1**

DRAFTED BY: L. Sue

DATE: 5-3-96

DUBLIN BOULEVARD PROPERTY  
DUBLIN, CALIFORNIA

CHECKED BY: L. Freeman

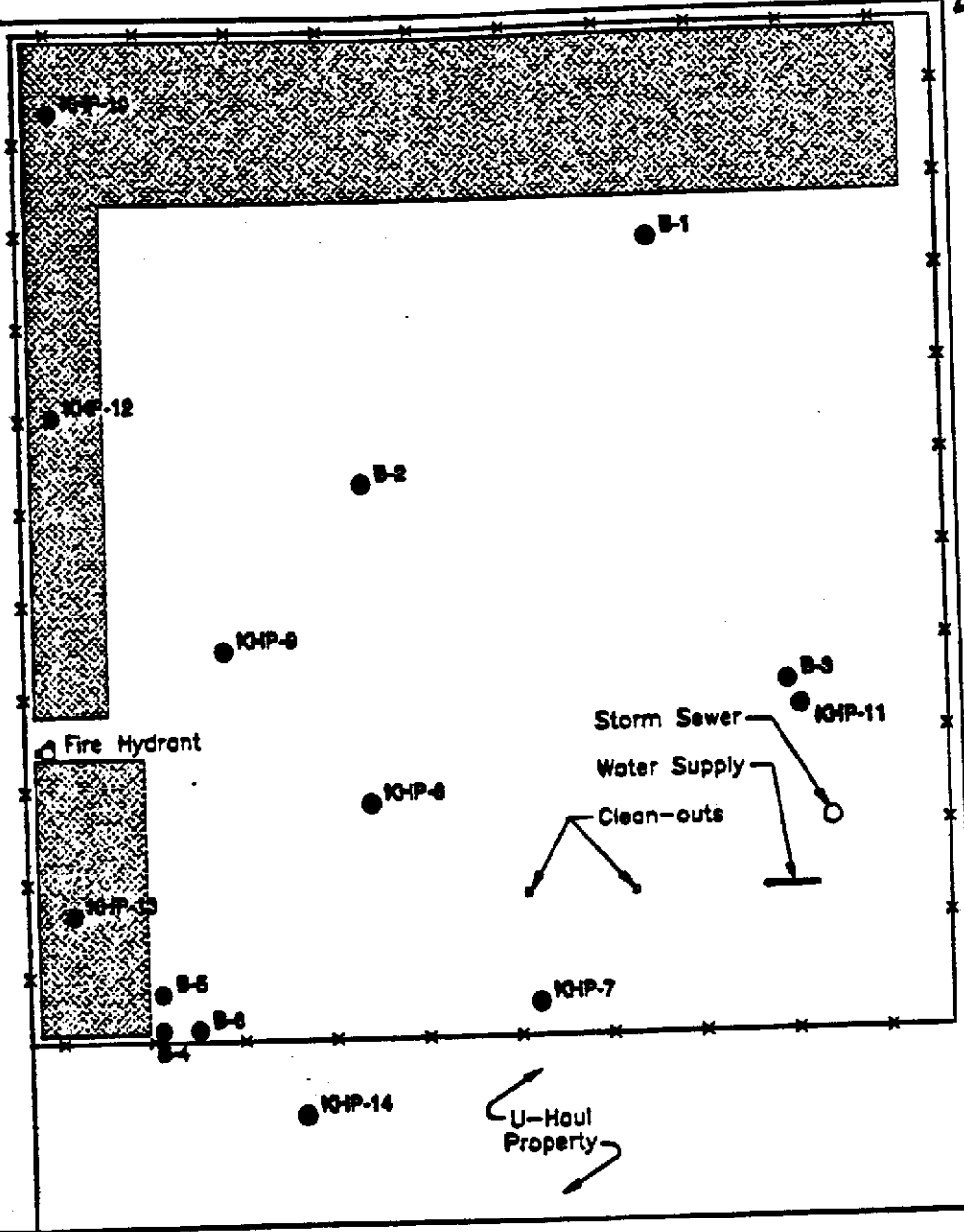
DATE: 5-4-96

PROJECT NO. 10-300337-002

DUBLIN BOULEVARD



Monte RV Property



SCARLETT DRIVE

Drainage Channel

U-Haul Property



50 0 50  
APPROXIMATE SCALE (feet)

LEGEND

- FENCE
- CONCRETE PAD
- SOIL BORING
- INFERRED GROUNDWATER FLOW DIRECTION

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SITE PLAN

PLATE

2

DUBLIN BOULEVARD PROPERTY  
DUBLIN, CALIFORNIA

DRAFTED BY: L. Sue

DATE: 5-3-96

CHECKED BY: L. Freeman

DATE: 6-11-96

PROJECT NO. 10-300337

SUS FILE: CA-101 PROJ: PLEAS 10300337 SITE PLAN.dwg



ALAMEDA COUNTY  
HEALTH CARE SERVICES



AGENCY

DAVID J. KEARS, Agency Director

StID 5831

June 13, 1996

Mr. John Moore  
J Patrick Land  
5627 Stoneridge Dr, Suite 320  
Pleasanton, CA 94588

ENVIRONMENTAL HEALTH SERVICES  
1131 Harbor Bay Parkway  
Alameda, CA 94502-6577  
(510)

RE: Parcel No. 550-39-3, Dublin CA

Dear Mr. Moore:

I have completed review of Kleinfelder's March 1996 Phase I Environmental Site Assessment Report, and May and June 1996 Environmental Investigation Reports for the above referenced site. The reports confirmed that a solvent and petroleum hydrocarbon plume exists in groundwater in the southern portion of the parcel. Up to 100 parts per billion tetrachloroethene (ppb PCE) and 1,400 ppb total petroleum hydrocarbons as diesel have been identified. The source of the plume could not be identified. No evidence of historical use of these chemicals of concern at the site has been documented.

A risk evaluation was performed using the American Society of Testing and Materials (ASTM) standard for Risk Based Corrective Action (RBCA), ASTM #-1739-95, methodologies. It was determined that potential exposure risks due to PCE did not exceed  $1.00E-05$ , provided the site was adequately capped.

Based on the data submitted, current land use, and that the site will be capped, the level of contaminants identified during the recent investigations does not appear to pose a risk to human health. And with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the solvents and petroleum hydrocarbons detected in groundwater is required. If a change in land use, structural configuration, or site activities are proposed such that more conservative exposure scenarios should be evaluated, the owner must promptly notify this agency.

If you have any questions, I can be reached at (510) 567-6762.

eva chu  
Hazardous Materials Specialist

c: Lita Freeman, Kleinfelder, 7133 Koll Center Pkway, Suite 100,  
Pleasanton, CA 94566  
Sumadhu Arigala, RWQCB  
files (550393.1)

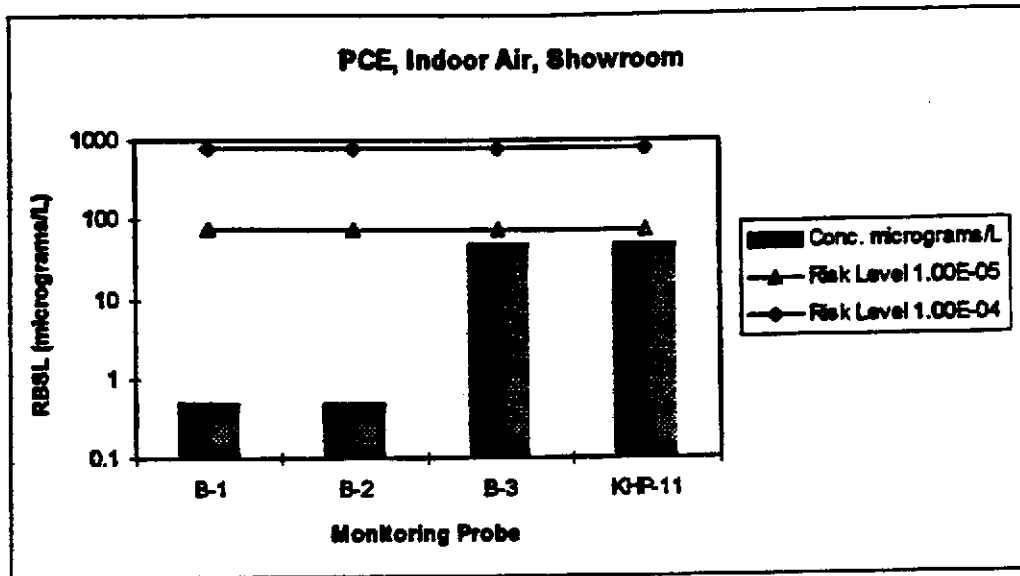


FIGURE 1

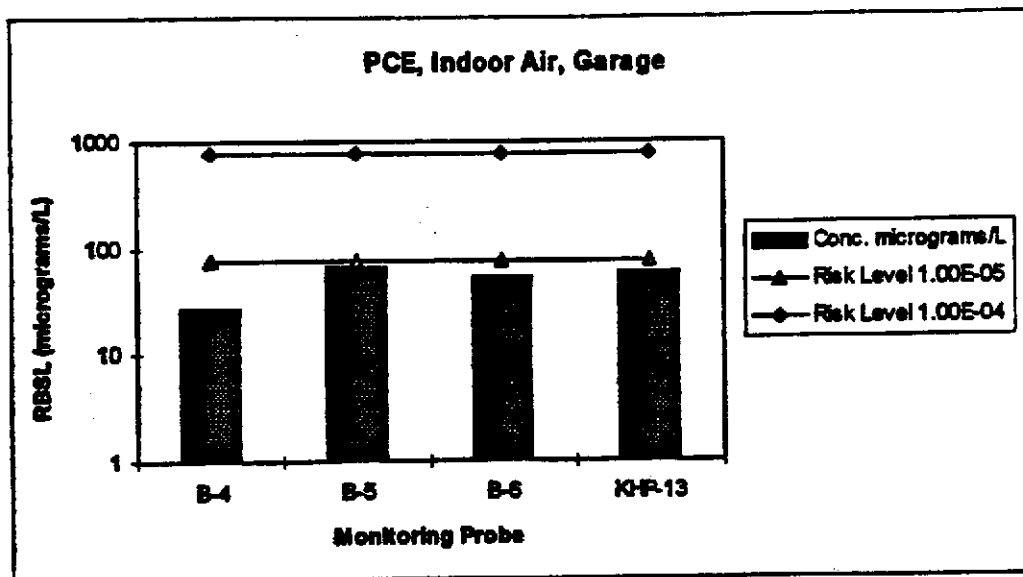


FIGURE 2

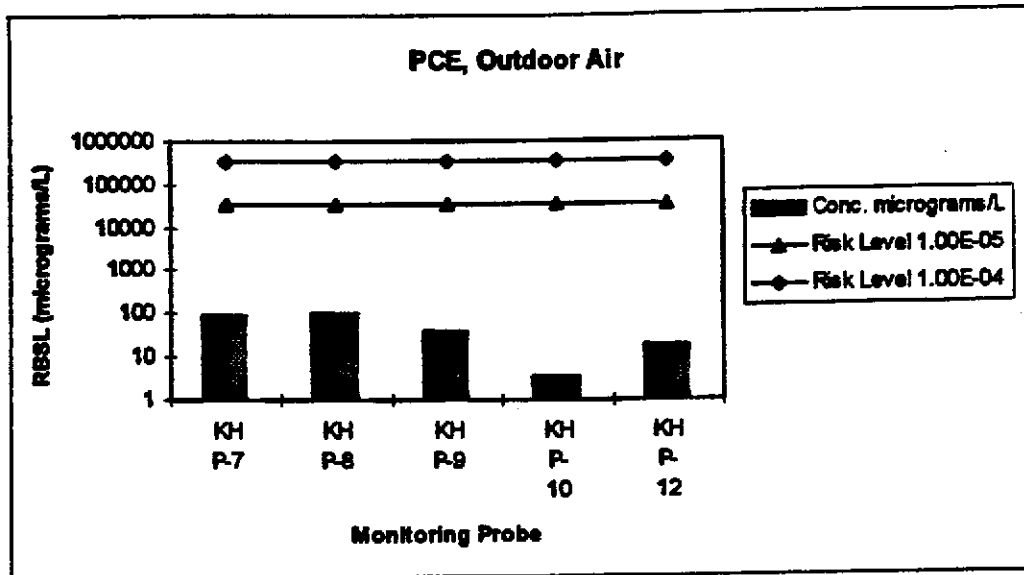


FIGURE 3

Commercial Land Use

Source

RBSL	1.70E+01	(calculated)
TR	1.00E-05	Alameda County Policy
BW	70	RBCA Default
AT <sub>e</sub>	70	RBCA Default
SF <sub>i</sub>	0.021	CalTOX Software (DTSC)
IR <sub>air</sub>	20	RBCA Default
EF	250	RBCA Default
ED	10	RBCA Default

SOURCE

Dair	0.66	CalTOX Software (DTSC)	Vwesp	2.20E-01
Dwat	8.80E-05	CalTOX Software (DTSC)	Ds	9.25E-02
ER	0.00023	RBCA Default	Dcrack	5.15E-02
H	0.76	Nyer (1993). Practical Techniques for Groundwater and Soil Remediation	Dcap	1.08E-04
hcap	5	RBCA Default	Dws	6.79E-03
hv	334	Site-specific measurement.	RBSLinh	1.70E+01
Lb	300	RBCA Default	RBSLgw-inh	7.74E-02 mg/L
Lcrack	15	RBCA Default		77 µg/L
Lgw	339	Site-specific hv plus RBCA default hcap		
h	0.005	1/2 RBCA default for new building		
qacap	0.038	RBCA Default		
qacrack	0.26	RBCA Default		
qas	0.31	Site-specific measurement.		
qT	0.38	RBCA Default		
qwcap	0.342	RBCA Default		
qwcrack	0.12	RBCA Default		
qws	0.067	Site-specific measurement.		

COMM			COMM		
$D_{air}$	0.66	CaITOX Software (DTSC)	$V_{womb}$	5.06E-04	
$D_{wat}$	8.80E-05	CaITOX Software (DTSC)	$D_s$	9.25E-02	
$H$	0.76	Nyer (1993). Practical Techniques for Groundwater and Soil Remediation	$D_{exp}$	1.08E-04	
$h_{cap}$	5	RBCA Default	$D_{ws}$	6.79E-03	
$h_r$	334	Site-specific measurement.	$RBSL_{inh}$	1.70E+01	
$L_{gw}$	339	Site-specific $h_r$ plus RBCA default $h_{cap}$	$RBSL_{gw-inh}$	3.36E+01	mg/L
$U_{air}$	225	RBCA Default		33630	$\mu$ g/L
$W$	1500	RBCA Default			
$d_{air}$	200	RBCA Default			
$q_{soil}$	0.038	RBCA Default			
$q_{at}$	0.31	Site-specific measurement.			
$q_r$	0.38	RBCA Default			
$q_{wsoil}$	0.342	RBCA Default			
$q_{ws}$	0.067	Site-specific measurement.			

**APPLICATION FOR AUTHORIZATION TO USE**

**Risk-Based Cleanup Levels Analysis  
Dublin Boulevard Property  
Dublin, California  
File Number: 10-3003-37  
June 26, 1996**

**TO: Kleinfelder, Inc.  
7133 Koll Center Parkway, Suite 100  
Pleasanton, California 94566  
(510) 484-1700**

**FROM:**

[Please clearly identify name and address of person/entity applying for permission to use of copy this document]

To Whom It Concerns:  
Applicant \_\_\_\_\_ hereby applies for permission to :  
[State here the use(s) contemplated]

for the purpose(s) of:  
[State here why you wish to do what is contemplated as set forth above]

Applicant understands and agrees that the Risk-Based Cleanup Analysis Report for the Dublin Boulevard Property in Dublin, California is a copyrighted document, that Kleinfelder, Inc. is the copyright owner, and that unauthorized use or copying of this document is strictly prohibited without the express written permission of Kleinfelder, Inc. Applicant understands that Kleinfelder, Inc., may withhold such permission at its sole discretion, or grant such permission upon such terms and conditions as it deems acceptable, such as the payment of a re-use fee.

Dated: \_\_\_\_\_ Applicant \_\_\_\_\_  
by: \_\_\_\_\_  
its \_\_\_\_\_