

BSK & ASSOCIATES  
GEOTECHNICAL CONSULTANTS, INC.  
BSK JOB No. P92225.3

REPORT  
PRELIMINARY SITE CHARACTERIZATION  
UNAUTHORIZED UNDERGROUND  
STORAGE TANK RELEASE  
CASTLEWOOD COUNTRY CLUB  
707 COUNTRY CLUB CIRCLE  
PLEASANTON, CALIFORNIA



1181 Quarry Lane  
Building 300  
Pleasanton, CA 94566  
(510) 462-4000  
(510) 462-6283 FAX

---

November 30, 1992

Job No. P92225.3

Mr. Charlie Phinney  
Castlewood Country Club  
707 Country Club Circle  
Pleasanton, CA 94566

Subject: Preliminary Site Characterization  
Unauthorized Underground Storage Tank Release  
Castlewood Country Club  
707 Country Club Circle  
Pleasanton, California

Dear Mr. Phinney:

As requested, and in general accordance with our Proposal PR92216.3 of August 18, 1992, and its Addendum of September 24, 1992, BSK & Associates has prepared this report describing our preliminary characterization of contamination, resulting from leakage of an underground storage tank (UST). The former UST site is located at the Castlewood Clubhouse, at the referenced address in Pleasanton, California. The site location is shown on Figure 1, Vicinity Map.

### 1.0 BACKGROUND

As determined from a previous site visit, meetings with yourself and Mr. John Bethe, and the information you provided to us, we understand that a release of gasoline was experienced from a 1,000 gallon underground storage tank (UST) located on the east side of your Clubhouse. According to tank removal documents, the UST was removed April 23, 1992 by Timmerman Engineering Construction. At that time, chemically analyzed soil samples indicated significant contamination of soil near the north end of the tank excavation, at 8 to 9 feet in depth. Analyses indicated the contamination to be gasoline in origin. Some lead was also encountered. Subsequent excavation to a maximum depth of 16 feet below present grade and sampling on May 27, 1992 revealed reduced levels of contaminants, with the greatest quantity occurring near the south end of the former tank excavation. The excavation was closed by backfilling with pea-gravel, and was paved over with concrete, as allowed by the Alameda County Environmental Health Department (ACEH) representative, Scott Seery.

The Clubhouse is located on the east flank of Pleasanton Ridge. The slope in the site area is approximately 2.5:1. The surrounding land use appears in aerial photographs and maps to have historically been residential, and as a golf and country club. The project site is located in a driveway accessing the lower floor of the Clubhouse building, at the entrance to a golf cart service area. The tank area is paved in concrete. The age of the tank is unknown, but is considered to have been installed over 15 years ago. The site area is depicted in Figure 2, Site Plan.

## 2.0 PURPOSE AND SCOPE

### 2.1 Purpose

This report has been prepared to address the request by ACEH for assessment of the results of gasoline contamination to soil, and potentially to groundwater, from the unauthorized UST release at the Castlewood Clubhouse.

### 2.2 Scope

Preliminary assessment of the subsurface in the immediate vicinity of the former UST comprised the following:

#### 2.2a Subsurface Exploration And Sampling

Two eight inch diameter borings were advanced at the site, under Alameda County Flood Control District (ACFCD) - Zone 7 permit number 92464. The Legend For Test Hole Logs is given in Figure 3, Unified Soil Classification Chart.

The initial boring was performed on September 29, 1992. This boring, EB-1, was located in the middle of the five inch thick concrete slab covering the former UST removal and cleanup excavation. The boring penetrated the pea-gravel excavation backfill, to a final depth of 32 feet, where groundwater was encountered. Soil samples were obtained at five foot intervals, starting at the first encounter of native soil, at 15 feet below the slab surface. No odor or visible contamination was observed during boring operation. A photo-ionization detector (PID) employed at the site detected photo-ionizable substances to a maximum of 7 ppm. The boring log for EB-1 is presented in Figure 4.

The second boring, MW-1, intended as a groundwater monitoring well, was made September 30, 1992, in the parking lot access road, approximately 30 feet east of the former UST location. The boring was extended to a depth of 50 feet below grade. Some wet fractures were encountered, so a PVC screen, casing and annular pack were installed to intercept groundwater, if present in sufficient quantity. Soil samples for chemical analysis were obtained every five feet or less, from 10 feet below grade to the final boring depth, as recommended by Tri-Regional Water Quality Control Board Guidelines. No groundwater was observed to enter MW-1 during a period of observation. Potable water was introduced to the well for surging, in order to facilitate water flow through boring smear. Introduction of water to the well resulted in immediate draining of the water to surrounding sediment, indicating an open system had been previously established. Therefore, due to the lack of groundwater, the well was closed. The boring log for boring

MW-1 is presented as Figure 5.

## **2.2b Chemical Testing**

Soil samples were tested for leaded gasoline constituents and indicators, in accordance with Tri-Regional Water Quality Control Board recommendations (10 August 1991). Tests were performed on the selected samples for Total Petroleum Hydrocarbons as Gasoline (TPH-G); Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), and Total Lead.

## **3.0 GENERAL DETAILS**

### **3.1 Drilling And Logging**

Drilling activities were performed using a truck-mounted Mobile B-53 auger rig, turning 8 inch outside diameter, continuous flight, hollow stem auger. Logging of the boring samples and cuttings, and direction of site activities were performed by a Staff Geologist, under the supervision of a Registered Geologist or Licensed Civil Engineer. Classification of subsurface materials was performed in accordance with the U.S.C.S. Soil Classification System (Figure 3).

### **3.2 Sampling**

Soil sampling was performed using a 2.0 I.D. modified California split-spoon sampler. The sampler holds three 2x6 inch stainless steel or brass sample liners. The sampler holding the liners is driven by slide hammer ahead of the auger into undisturbed soil, and then withdrawn. The soil filled liners are removed, and the chosen sample(s) sealed with Teflon® sheeting and a pressure-fitted plastic cap, labeled, and refrigerated to 4 degrees Centigrade, or less, for delivery to our State-certified analytical laboratory for analysis.

### **3.3 Decontamination**

Drilling and sampling equipment were thoroughly cleaned by hi-pressure and temperature wash prior to site entry, exit, and between borings and samples in order to reduce the chance of cross-contamination between samples and boring sites.

### **3.4 Waste Handling**

Soil and water waste generated by drilling, cleaning and sampling activities were stored in DOT-approved 55 gallon drums. Water and soil were stored separately. Each drum was labeled with the date of waste accumulation, source, owner, and other pertinent data. The drums were stored on-site. Chemical analyses indicate that the drum contents do not contain concentrations of the contaminants which we tested for. Disposal of drummed waste is the ultimate responsibility of the client.

### 3.5 Boring Closure

Soil borings were closed by backfilling with neat cement using the tremie method. In EB-1, tremied seal was emplaced to the bottom of the pea-gravel backfill. Excavated pea-gravel was then reintroduced to the boring to the bottom of the concrete slab, and tamped, using the drill rig hammer assembly. Both borings were patched at the surface to match the surrounding area. The borings were closed in accordance with ACFCO Zone 7 requirements, under Zone 7 Permit No. 92538.

### 4.0 SUBSURFACE CONDITIONS

As observed and recorded during field activities, subsurface conditions, as explored by our 32 and 50 foot borings, consisted principally of colluvium, comprised of mottled yellow, brown and gray silt, sand, and angular siltstone and sandstone fragments of various sizes. The colluvium is likely derived from slope wasting processes, and may also be related to the prehistoric landslide upon which the Castlewood development is situated.

The colluvium was generally damp to moist, and dense. Below approximately 40 feet below ground surface, the colluvium became gray to dark gray in color. Groundwater was encountered at approximately 31.5 feet in boring EB-1, with wet fractures beginning at 30.5 feet below surface. In Boring MW-1, wet fractures were encountered from 35 feet beneath the surface to the boring termination, but no free water entered the boring. Due to the nature of the sedimentary deposits, the depth from ground surface to groundwater surface may vary considerably throughout the area.

### 5.0 CHEMICAL ANALYSES

As described previously, soil samples were tested for leaded gasoline constituents and indicators, in accordance with Tri-Regional Water Quality Control Board recommendations (10 August 1991). Tests were performed on the selected samples for Total Petroleum Hydrocarbons as Gasoline (TPH-G); Benzene, Toluene, Ethylbenzene and Xylenes (BTEX), and Total Lead.

The results of the soil analyses are summarized in the following table. The Chemical Test Data Sheets are presented in Appendix A, with project Chain-Of-Custody documentation.

**TABLE 5.0-1**

**SUMMARY OF CHEMICAL TEST DATA - SOIL SAMPLES**

Units are in mg/kg (ppm), unless otherwise stated

**C O N S T I T U E N T S**

Sample Designation	Benzene	Toluene	Ethyl-benzene	Xylene	TPH-Gas	Total Lead
B-1, #1, 15'	ND	ND	ND	ND	ND	45
B-1, #2, 21'	ND	ND	ND	ND	ND	39
B-1, #3, 26'	ND	ND	ND	ND	ND	31
B-1, #4, 30.5'	ND	ND	ND	ND	ND	43
MW-1, #2, 20.5'	ND	ND	ND	ND	ND	42
MW-1, #7, 35'	ND	ND	ND	ND	ND	--
MW-1, #8, 40.5'	ND	ND	ND	ND	ND	37
MW-1, #9, 45.5'	ND	ND	ND	ND	ND	--

ND - None Detected

-- - Sample Not Tested for that parameter.

**6.0 CONCLUSIONS AND RECOMMENDATIONS**

**6.1 Conclusions**

The following conclusions are derived from information contained in this report, and are based on our experience in this field and pertinent regulatory information.

1. Shallow soil contamination by gasoline type motor fuel does not appear to have contaminated soil beneath that level which has been previously excavated at the site. No indication of motor fuel contamination was observed or detected directly beneath the former tank location, to a depth of 32 feet below the present grade.
2. Acquisition of a groundwater sample for analysis for contaminants was hampered by site geologic conditions. Water was encountered in boring EB-1 at 31.5 feet below surface. Water was not encountered to a depth of 50 feet below grade in MW-1, where the initial grade was approximately 20 feet lower than the surface at EB-1. Therefore, it is believed that either the groundwater encountered at EB-1 was perched, or groundwater surface does not directly mimic the ground surface slope (approximately 2.5:1 to the east), due to chaotic subsurface conditions.

3. Total lead concentrations detected in site soil are considered to be background, and do not approach concentrations considered to be harmful to groundwater, or humans (Water Quality Objectives, and Hazardous and Designated Levels for Chemical Constituents, Marshack, CRWQCB, Central Valley Region, 1985).

## 6.2 Recommendations

1. Based on the forgoing, no further action is considered to be warranted at this site.

## 7.0 REPORT DISTRIBUTION

Copies of this report should be submitted to the Alameda County Department of Environmental Health for their review. We are providing you with extra copies for this purpose. We understand that copies of the report may be forwarded by ACEH to the Regional Water Quality Control Board in Oakland for their review.

## 8.0 LIMITATIONS

The findings and conclusions presented in this report are based on field review and observations, and from the limited testing program described in this report. This report has been prepared in accordance with generally accepted methodologies and standards of practice in the area. No other warranties, expressed or implied, are made as to the findings, conclusions and recommendations included in the report.

*The findings of this report are valid as of the present. The passage of time, natural processes or human intervention on the property or adjacent property can cause changed conditions which can invalidate the findings and conclusions presented in this report.*

\* \* \* \*

BSK & Associates is pleased to have been of service to you in this project. If there are questions or concerns regarding this report, please contact the undersigned.

Respectfully submitted,  
BSK & Associates



Alex Y. Eskandari, P.E.  
Project Manager  
C.E. #038101, R.E.A. #01528



Tim W. Berger, R.G. #05225  
Project Geologist

AYE/TWB:kl(rpts\env\IP92225.3)

**Distribution:**

Castlewood Country Club (4 copies)

The following are attached and complete this report:

- FIGURE 1 Vicinity Map
- FIGURE 2 Site Plan
- FIGURE 3 Unified Soil Classification Chart
- FIGURE 4 EB-1 Boring Log
- FIGURE 5 MW-1 Boring Log

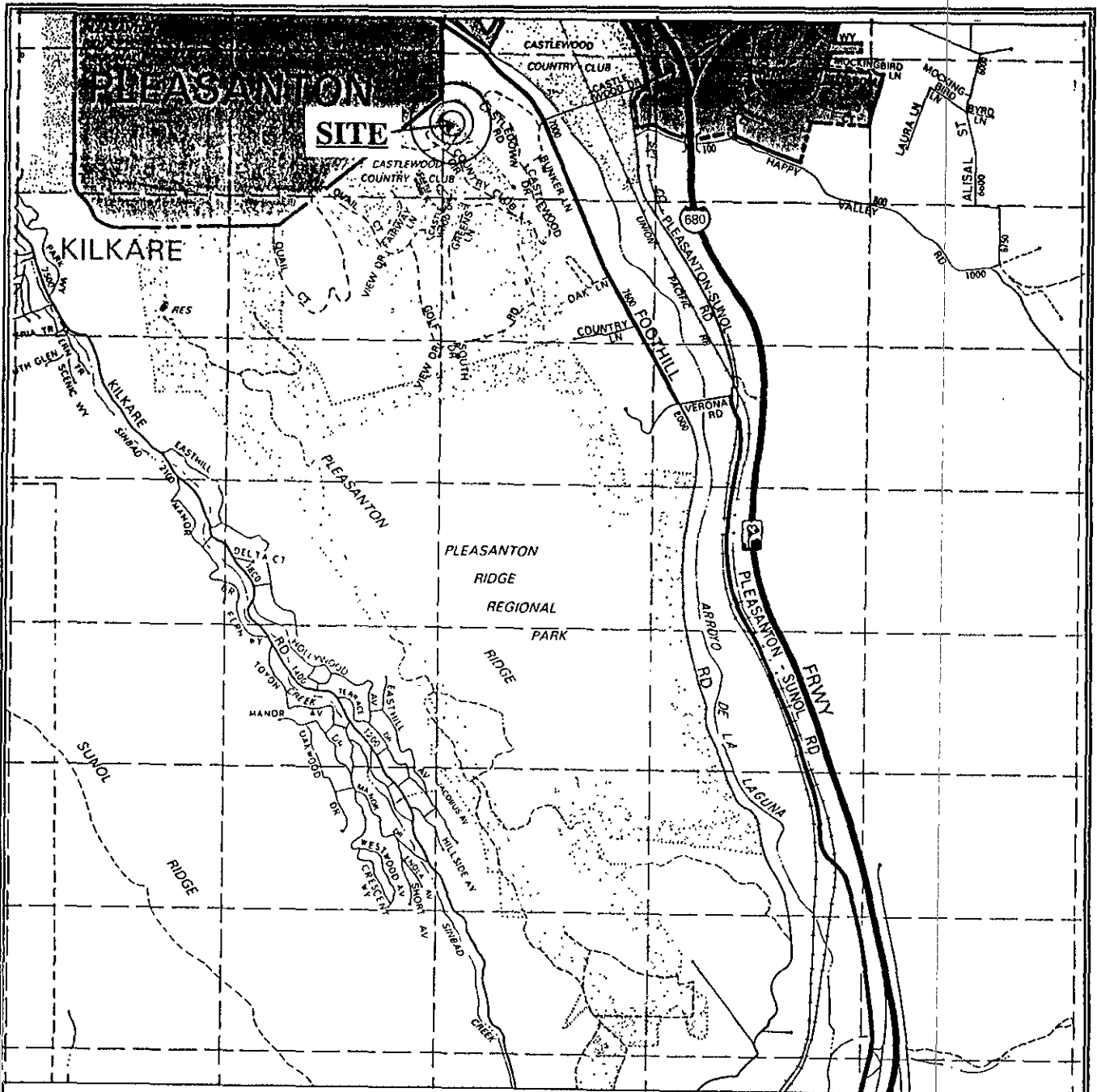
**APPENDIX "A"**

- FIGURES A-1 through A-14 Chemical Test Data Sheets
- FIGURE A-15 Project Chain-of-Custody Record

**APPENDIX "B"**

Alameda County Flood Control District - Zone 7  
Permit Documents and Conditions





Scale: 1" = 2200'

Source: Thomas Guide, 1992, Alameda and Contra Costa Counties

**PRELIMINARY SITE CHARACTERIZATION  
 UNAUTHORIZED UNDERGROUND  
 STORAGE TANK RELEASE  
 CASTLEWOOD COUNTRY CLUB  
 707 COUNTRY CLUB CIRCLE  
 PLEASANTON, CALIFORNIA**

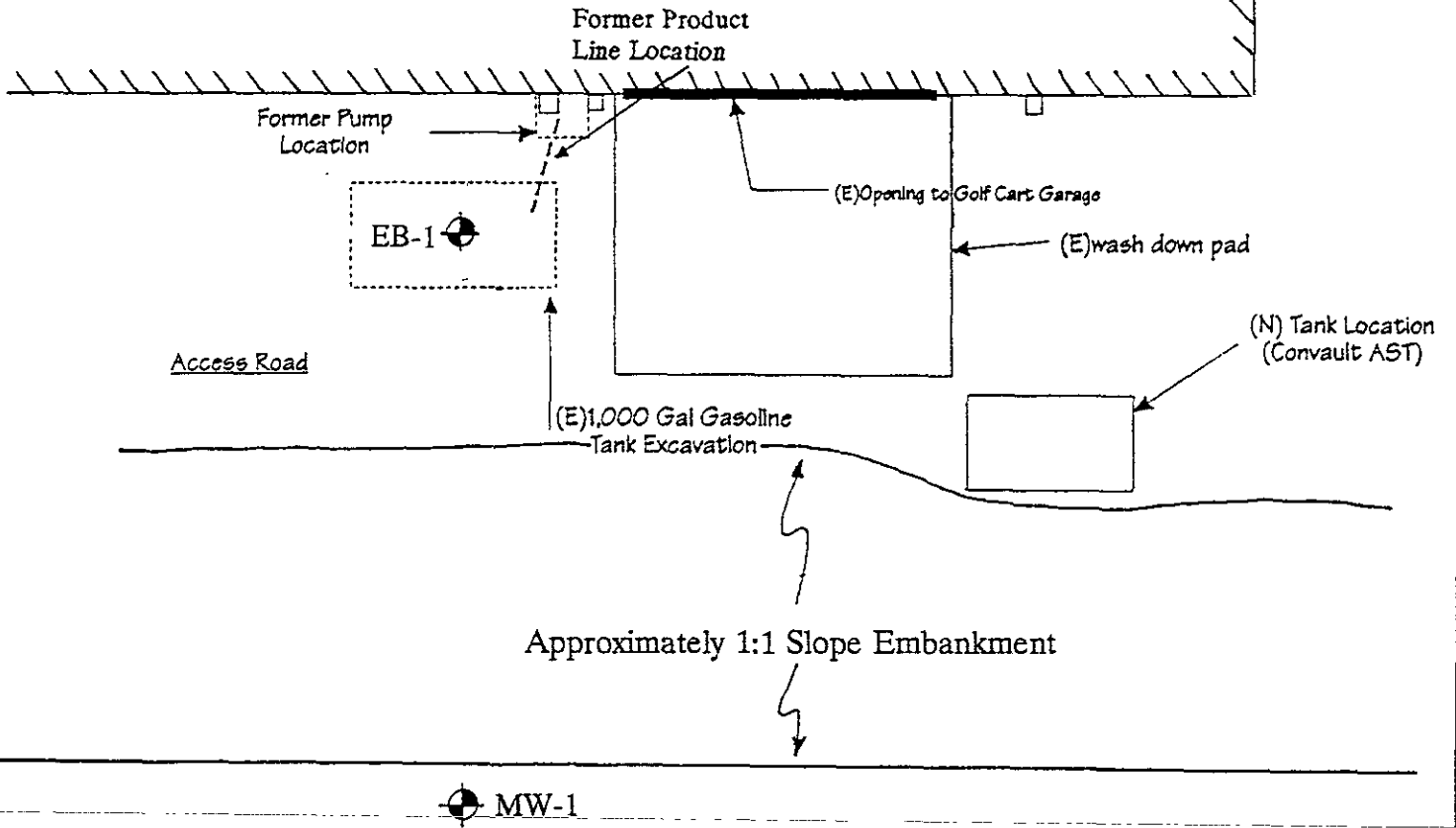
**VICINITY MAP**

**JOB NO. P92225.3  
 NOVEMBER 1992  
 FIGURE: 1**

**BSK  
 & ASSOCIATES**



Clubhouse



**LEGEND:**



- Denotes Approximate Boring Location, And Designation

MW-1

Scale: 1" = 15'



**SITE PLAN**

JOB NO. P92225.3  
NOVEMBER 1992  
FIGURE: 2

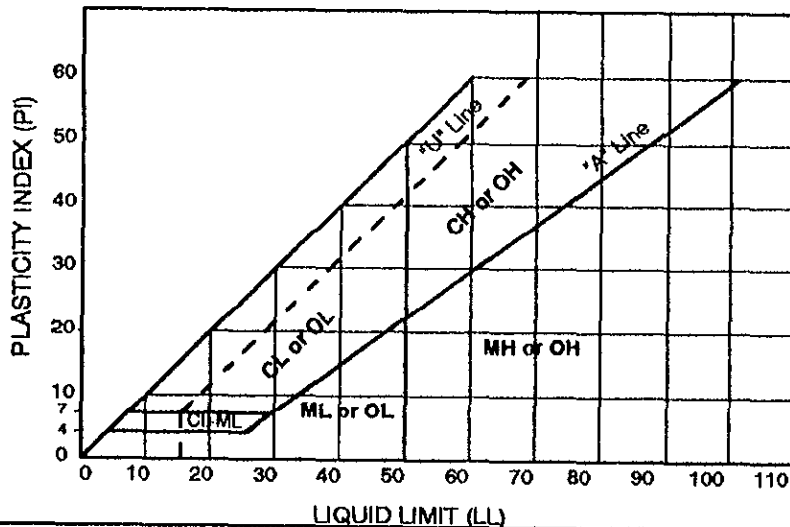
**BSK**  
& ASSOCIATES

Access Lane To Lower Parking Area (approximately 25' below tank pad grade)

# UNIFIED SOIL CLASSIFICATION CHART

SYMBOL	LETTER	DESCRIPTION	MAJOR DIVISIONS			
	GW	WELL-GRADED GRAVELS OR GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	<b>CLEAN GRAVELS</b> (LITTLE OR NO FINES)	<b>GRAVELS</b> MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO.4 SIEVE SIZE	<b>COARSE-GRAINED SOILS</b> MORE THAN HALF OF MATERIAL IS LARGER THAN NO.200 SIEVE SIZE	
	GP	POORLY-GRADED GRAVELS OR GRAVEL-SAND MIXTURES, LITTLE OR NO FINES				
	GM	SILTY GRAVELS, GRAVEL-SAND SILT MIXTURES	<b>GRAVELS WITH FINES</b> (APPRECIABLE AMOUNT OF FINES)	<b>SANDS</b> MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO.4 SIEVE SIZE		
	GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES				
	SW	WELL-GRADED SAND OR GRAVELLY SANDS, LITTLE OR NO FINES	<b>CLEAN SANDS</b> (LITTLE OR NO FINES)			<b>FOR VISUAL CLASSIFICATION, THE 1/4" SIZE MAY BE USED AS EQUIVALENT TO THE NO.4 SIEVE SIZE</b>
	SP	POORLY-GRADED SANDS OR GRAVELLY SANDS, LITTLE OR NO FINES				
	SM	SILTY SANDS, SAND-SILT MIXTURES	<b>SANDS WITH FINES</b> (APPRECIABLE AMOUNT OF FINES)		<b>COARSE-GRAINED SOILS</b> THE NO.200 U.S. STANDARD SIEVE IS ABOUT THE SMALLEST PARTICLE VISIBLE TO THE NAKED EYE	
	SC	CLAYEY SANDS, SAND-CLAY MIXTURES				
	ML	INORGANIC SILTS, VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY	<b>SILTS &amp; CLAYS</b> LIQUID LIMIT LESS THAN 50	<b>FINE-GRAINED SOILS</b> MORE THAN HALF OF MATERIAL IS SMALLER THAN NO.200 SIEVE SIZE		
	CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS				
	OL	ORGANIC SILTS AND ORGANIC SILT-CLAYS OF LOW PLASTICITY				
	MH	ORGANIC SILTS AND ORGANIC SILT-CLAYS OF LOW PLASTICITY	<b>SILTS &amp; CLAYS</b> LIQUID LIMIT GREATER THAN 50			
	CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS				
	OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS				
	PT	PEAT AND OTHER HIGHLY ORGANIC SOILS	<b>HIGHLY ORGANIC SOILS</b>			

**SOIL PLASTICITY CHART**



**TYPES OF SAMPLERS**

- SPT—Standard Penetration 1.4" ID Split Spoon Sampler
- CS—2" ID Split Spoon Sampler
- MC—2.4" ID California Sampler
- SH—3.0" ID Thin-Wall (Shelby Tube)
- CC—2.7" ID Double Tube Continuous Coring Sampler

**NOTES**

- ND Denotes concentration below the test detection limits
- Denotes not analysed
- PID-Photoionization Detector Reading in ppm

Castlewood Country Club  
707 Country Club Circle  
Pleasanton, California

BSK Job No. P92225.3  
November 1992  
FIGURE: 3

BSK

& ASSOCIATES

**BORING LOG: EB-1**

DATE: 9/29/92

LOGGED BY: M. Cline

WATER LEVEL: 31 Feet Below Ground Surface

ELEVATION: -- APPROX. 480' MSL

EQUIPMENT: Mobile Drill B-53, 8" Hollow Stem Auger

PID READING (ppm)	SAMPLE INTERVAL	BLOWS/FOOT	TYPE OF SAMPLER	SYMBOLS	DESCRIPTION
					0 5" Concrete
				GP	GRAVEL: Gray, moist, rounded (pea gravel fill)
					grades damp
0.6		29	CS	GP/GC	CLAYEY SANDY GRAVEL: Brown, very moist, medium dense
		>100	CS		gravel to 2" diameter
1.5		49	CS		
		>100	CS	SM	GRAVELY SAND with SILT: Yellow brown, damp, gravel to 1.5" diameter, clasts are highly fractured and angular
0.4		49	CS		
		39	CS		grades wet
7.0					grades saturated at 31.5 feet
					35

Castlewood Country Club  
707 Country Club Circle  
Pleasanton, California

BSK Job No. P92225.3  
NOVEMBER 1992  
FIGURE: 4



# BORING LOG MW-1

DATE: 9/30/92

LOGGED BY: T. Berger

WATER LEVEL: -- 31.5' BELOW PRESENT GRADE

ELEVATION: -- APPROX. 460' MSL

EQUIPMENT: Mobile Drill B-53, 8" Hollow Stem Auger

OVM READING (ppm)	SAMPLE INTERVAL	BLOWS/FOOT	TYPE OF SAMPLER	SYMBOLS	DESCRIPTION
0				FILL	Asphalt Concrete over 8" Aggregate Baserock
			CS	ML	SILT: Yellow brown, dry, trace gravels, weak cementation
5		31	SPT	GM/GC	SILT/SILTSTONE : Yellow brownish gray (10 YR 5/4), dry, dense laminated (Colluvium)
10		36	SPT		grades to contain some gray, fine to medium grained sandstone fragments
15		72	CS		grades to contain mostly siltstone fragments
20		37	CS		grades to mottled gray and yellow, clayey, firm, with gray siltstone fragments
		33	CS		grades to moist
25		35	CS		grades to weathered siltstone fragments, iron stained, moist, dense
		51	CS		grades moist, gray
30					

CONTINUED ON THE NEXT PAGE

Castlewood Country Club  
707 Country Club Circle  
Pleasanton, California

BSK Job No. P92225.3  
November 1992  
FIGURE: 5

**BSK**  
& ASSOCIATES

# BORING LOG MW-1 (Continued)

DATE: 9/30/92  
 LOGGED BY: T. Berger  
 WATER LEVEL: -- NOT ENCOUNTERED  
 ELEVATION: -- APPROX. 480' MSL  
 EQUIPMENT: Mobile Drill B-53, 8" Hollow Stem Auger

OVM READING (ppm)	SAMPLE INTERVAL	BLOWS/FOOT	TYPE OF SAMPLER	SYMBOLS	DESCRIPTION
30		45	CS		grades damp to moist, olive gray (2.5 Y 4/2) to brown (10 YR 4/3)
35		49	CS		grades dark gray and orange, clayey, many angular siltstone fragments, wet fragments noted, dense, generally moist, dark yellow- gray (10 YR 3/3)
40		42	CS		grades dark gray (10 YR 3/1), free water on sampler but not in sample, moist, firm, siltstone fragment with wet fracture noted
45		62	CS		
50		37	CS		

Castlewood Country Club  
 707 Country Club Circle  
 Pleasanton, California

BSK Job No. P92225.3  
 November 1992  
 FIGURE: 5 cont'd.

**BSK**  
 & ASSOCIATES

APPENDIX "A"  
CHEMICAL TEST DATA SHEETS  
PROJECT CHAIN-OF-CUSTODY RECORD



1414 Stanislaus Street  
 Fresno, California 93706  
 Telephone (209) 485-8310  
 FAX (209) 485-6935  
 1-800-877-8310

*Environmental Services*

BSK-Pleasanton  
 Castlewood Country Club

Date Sampled : 09/29/92  
 Time Sampled : 1045  
 Date Received : 10/01/92  
 Date of Analysis : 10/01/92  
 Report Issue Date: 10/15/92

Case Number : Ch922610  
 Lab ID Number : 2610-1  
 Project Number : P92225  
 Sample Description: B-1 #1 @ 15'

Sample Type : SOLID

Analyses for BTEX by EPA Method 8020  
and TPH (G) by EPA Method 8015

Results Reported in Milligrams per Kilogram (mg/kg)

Compound	Results	DLR
Benzene .....	ND	0.02
Toluene .....	ND	0.02
Ethylbenzene .....	ND	0.02
Total Xylene Isomers .....	ND	0.02
Total Petroleum Hydrocarbons (G)	ND	1.

Sample DLR = DLR x DLR Multiplier,                      DLR Multiplier = 1

DLR: Detection Limit for the Purposes of Reporting.  
 Exceptional sample conditions or matrix interferences  
 may result in higher detection limits.  
 ND: None Detected

Cynthia Pigman, QA/QC Supervisor

Jeffrey Creager, Organics Manager





1414 Stanislaus Street  
Fresno, California 93706  
Telephone (209) 485-8310  
FAX (209) 485-6935  
1-800-877-8310

Environmental Services

BSK-Pleasanton  
Castlewood Country Club

Date Sampled : 09/29/92  
Time Sampled : 1045  
Date Received : 10/01/92  
Report Issue Date: 10/15/92

Case Number : Ch922610  
Lab ID Number : 2610-1  
Project Number : P92225  
Sample Description: B-1 #1 @ 15'

Sample Type : SOLID

General Chemical Analyses

Analyte	Units	Results	DLR
Lead (Pb).....	mg/kg	45	2
Percent Solids.....	%	91	-

ND: None Detected                    mg/L: Milligrams per Liter  
--: Not analyzed                    µg/L: Micrograms per Liter  
%: Percent by Weight  
mg/kg: Milligrams per Kilograms as Received

DLR: Detection Limit for the Purposes of Reporting.  
Exceptional sample conditions or matrix interferences  
may result in higher detection limits.

Cynthia Pigman, QA/QC Supervisor

Doug Deasy, Inorganics Supervisor



Environmental Services

1414 Stanislaus Street  
 Fresno, California 93706  
 Telephone (209) 485-8310  
 FAX (209) 485-6935  
 1-800-877-8310

BSK-Pleasanton  
 Castlewood Country Club

Date Sampled : 09/29/92  
 Time Sampled : 1119  
 Date Received : 10/01/92  
 Date of Analysis : 10/01/92  
 Report Issue Date: 10/15/92

Case Number : Ch922610  
 Lab ID Number : 2610-2  
 Project Number : P92225  
 Sample Description: B-1 #2 @ 21'

Sample Type : SOLID

Analyses for BTEX by EPA Method 8020  
and TPH (G) by EPA Method 8015

Results Reported in Milligrams per Kilogram (mg/kg)

Compound	Results	DLR
Benzene .....	ND	0.02
Toluene .....	ND	0.02
Ethylbenzene .....	ND	0.02
Total Xylene Isomers .....	ND	0.02
Total Petroleum Hydrocarbons (G)	ND	1.

Sample DLR = DLR x DLR Multiplier,                      DLR Multiplier = 1

DLR: Detection Limit for the Purposes of Reporting.  
 Exceptional sample conditions or matrix interferences  
 may result in higher detection limits.  
 ND: None Detected

Cynthia Pigman, QA/QC Supervisor

Jeffrey Creager, Organics Manager



1414 Stanislaus Street  
 Fresno, California 93706  
 Telephone (209) 485-8310  
 FAX (209) 485-6935  
 1-800-877-8310

*Environmental Services*

BSK-Pleasanton  
 Castlewood Country Club

Date Sampled : 09/29/92  
 Time Sampled : 1119  
 Date Received : 10/01/92  
 Report Issue Date: 10/15/92

Case Number : Ch922610  
 Lab ID Number : 2610-2  
 Project Number : P92225  
 Sample Description: B-1 #2 @ 21'

Sample Type : SOLID

General Chemical Analyses

Analyte	Units	Results	DLR
Lead (Pb).....	mg/kg	39	2
Percent Solids.....	%	90	-

ND: None Detected                   mg/L: Milligrams per Liter  
 --: Not analyzed                   µg/L: Micrograms per Liter  
 %: Percent by Weight  
 mg/kg: Milligrams per Kilograms as Received

DLR: Detection Limit for the Purposes of Reporting.  
 Exceptional sample conditions or matrix interferences  
 may result in higher detection limits.

Cynthia Pigman, QA/QC Supervisor

Doug Deasy, Inorganics Supervisor



1414 Stanislaus Street  
Fresno, California 93706  
Telephone (209) 485-8310  
FAX (209) 485-6935  
1-800-877-8310

BSK-Pleasanton  
Castlewood Country Club

Date Sampled : 09/29/92  
Time Sampled : 1159  
Date Received : 10/01/92  
Date of Analysis : 10/01/92  
Report Issue Date: 10/15/92

Case Number : Ch922610  
Lab ID Number : 2610-3  
Project Number : P92225  
Sample Description: B-1 #3 @ 26'

Sample Type : SOLID

Analyses for BTEX by EPA Method 8020  
and TPH (G) by EPA Method 8015

Results Reported in Milligrams per Kilogram (mg/kg)

Compound	Results	DLR
Benzene .....	ND	0.02
Toluene .....	ND	0.02
Ethylbenzene .....	ND	0.02
Total Xylene Isomers .....	ND	0.02
Total Petroleum Hydrocarbons (G)	ND	1.

Sample DLR = DLR x DLR Multiplier,                      DLR Multiplier = 1

DLR: Detection Limit for the Purposes of Reporting.  
Exceptional sample conditions or matrix interferences  
may result in higher detection limits.  
ND: None Detected

Cynthia Pigman, QA/QC Supervisor

Jeffrey Creager, Organics Manager



1414 Stanislaus Street  
Fresno, California 93706  
Telephone (209) 485-8310  
FAX (209) 485-6935  
1-800-877-8310

Environmental Services

BSK-Pleasanton  
Castlewood Country Club

Date Sampled : 09/29/92  
Time Sampled : 1159  
Date Received : 10/01/92  
Report Issue Date: 10/15/92

Case Number : Ch922610  
Lab ID Number : 2610-3  
Project Number : P92225  
Sample Description: B-1 #3 @ 26'

Sample Type : SOLID

General Chemical Analyses

Analyte	Units	Results	DLR
Lead (Pb).....	mg/kg	31	2
Percent Solids.....	%	92	-

ND: None Detected

mg/L: Milligrams per Liter

--: Not analyzed

µg/L: Micrograms per Liter

%: Percent by Weight

mg/kg: Milligrams per Kilograms as Received

DLR: Detection Limit for the Purposes of Reporting.

Exceptional sample conditions or matrix interferences  
may result in higher detection limits.

Cynthia Rigman, QA/QC Supervisor

Doug Deasy, Inorganics Supervisor



1414 Stanislaus Street  
 Fresno, California 93706  
 Telephone (209) 485-8310  
 FAX (209) 485-6935  
 1-800-877-8310

Environmental Services

BSK-Pleasanton  
 Castlewood Country Club

Date Sampled : 09/29/92  
 Time Sampled : 1217  
 Date Received : 10/01/92  
 Date of Analysis : 10/01/92  
 Report Issue Date: 10/15/92

Case Number : Ch922610  
 Lab ID Number : 2610-4  
 Project Number : P92225  
 Sample Description: B-1 #4 @ 30.5'

Sample Type : SOLID

Analyses for BTEX by EPA Method 8020  
and TPH (G) by EPA Method 8015

Results Reported in Milligrams per Kilogram (mg/kg)

Compound	Results	DLR
Benzene .....	ND	0.02
Toluene .....	ND	0.02
Ethylbenzene .....	ND	0.02
Total Xylene Isomers .....	ND	0.02
Total Petroleum Hydrocarbons (G)	ND	1.

Sample DLR = DLR x DLR Multiplier, DLR Multiplier = 1

DLR: Detection Limit for the Purposes of Reporting.  
 Exceptional sample conditions or matrix interferences  
 may result in higher detection limits.  
 ND: None Detected

Cynthia Pigman, QA/QC Supervisor

Jeffrey Creager, Organics Manager



1414 Stanislaus Street  
Fresno, California 93706  
Telephone (209) 485-8310  
FAX (209) 485-6935  
1-800-877-8310

Environmental Services

BSK-Pleasanton  
Castlewood Country Club

Date Sampled : 09/29/92  
Time Sampled : 1217  
Date Received : 10/01/92  
Report Issue Date: 10/15/92

Case Number : Ch922610  
Lab ID Number : 2610-4  
Project Number : P92225  
Sample Description: B-1 #4 @ 30.5'

Sample Type : SOLID

General Chemical Analyses

Analyte	Units	Results	DLR
Lead (Pb).....	mg/kg	43	2
Percent Solids.....	%	90	-

ND: None Detected

mg/L: Milligrams per Liter

DLR: Detection Limit for the Purposes of Reporting.

--: Not analyzed

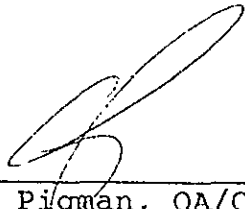
µg/L: Micrograms per Liter

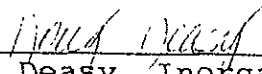
Exceptional sample conditions or matrix interferences

%: Percent by Weight

may result in higher detection limits.

mg/kg: Milligrams per Kilograms as Received

  
Cynthia Pigman, QA/QC Supervisor

  
Doug Deasy, Inorganics Supervisor



1414 Stanislaus Street  
 Fresno, California 93706  
 Telephone (209) 485-8310  
 FAX (209) 485-6935  
 1-800-877-8310

Environmental Services

BSK-Pleasanton  
 Castlewood Country Club

Date Sampled : 09/30/92  
 Time Sampled : 0958  
 Date Received : 10/01/92  
 Date of Analysis : 10/01/92  
 Report Issue Date: 10/15/92

Case Number : Ch922610  
 Lab ID Number : 2610-5  
 Project Number : P92225  
 Sample Description: MW-1 #2 @ 20.5'

Sample Type : SOLID

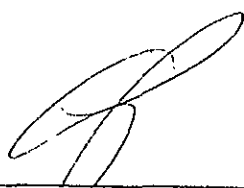
Analyses for BTEX by EPA Method 8020  
and TPH (G) by EPA Method 8015

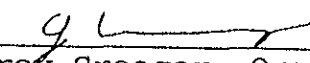
Results Reported in Milligrams per Kilogram (mg/kg)

Compound	Results	DLR
Benzene .....	ND	0.02
Toluene .....	ND	0.02
Ethylbenzene .....	ND	0.02
Total Xylene Isomers .....	ND	0.02
Total Petroleum Hydrocarbons (G)	ND	1.

Sample DLR = DLR x DLR Multiplier, DLR Multiplier = 1

DLR: Detection Limit for the Purposes of Reporting.  
 Exceptional sample conditions or matrix interferences  
 may result in higher detection limits.  
 ND: None Detected

  
 Cynthia Pigman, QA/QC Supervisor

  
 Jeffrey Creager, Organics Manager





1414 Stanislaus Street  
 Fresno, California 93706  
 Telephone (209) 485-8310  
 FAX (209) 485-6935  
 1-800-877-8310

*Environmental Services*

BSK-Pleasanton  
 Castlewood Country Club

Date Sampled : 09/30/92  
 Time Sampled : 0958  
 Date Received : 10/01/92  
 Report Issue Date: 10/15/92

Case Number : Ch922610  
 Lab ID Number : 2610-5  
 Project Number : P92225  
 Sample Description: MW-1 #2 @ 20.5'

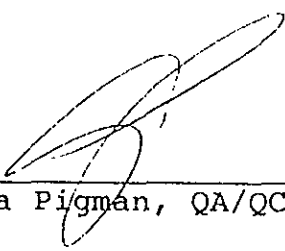
Sample Type : SOLID

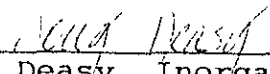
General Chemical Analyses

Analyte	Units	Results	DLR
Lead (Pb).....	mg/kg	42	2
Percent Solids.....	%	94	-

ND: None Detected                      mg/L: Milligrams per Liter  
 --: Not analyzed                      µg/L: Micrograms per Liter  
 %: Percent by Weight  
 mg/kg: Milligrams per Kilograms as Received

DLR: Detection Limit for the Purposes of Reporting.  
 Exceptional sample conditions or matrix interferences  
 may result in higher detection limits.

  
 Cynthia Pigman, QA/QC Supervisor

  
 Doug Deasy, Inorganics Supervisor



1414 Stanislaus Street  
 Fresno, California 93706  
 Telephone (209) 485-8310  
 FAX (209) 485-6935  
 1-800-877-8310

*Environmental Services*

BSK-Pleasanton  
 Castlewood Country Club

Date Sampled : 09/30/92  
 Time Sampled : 1252  
 Date Received : 10/01/92  
 Date of Analysis : 10/01/92  
 Report Issue Date: 10/15/92

Case Number : Ch922610  
 Lab ID Number : 2610-6  
 Project Number : P92225  
 Sample Description: MW-1 #7 @ 35'

Sample Type : SOLID

Analyses for BTEX by EPA Method 8020  
and TPH (G) by EPA Method 8015

Results Reported in Milligrams per Kilogram (mg/kg)

Compound	Results	DLR
Benzene .....	ND	0.02
Toluene .....	ND	0.02
Ethylbenzene .....	ND	0.02
Total Xylene Isomers .....	ND	0.02
Total Petroleum Hydrocarbons (G)	ND	1.

Sample DLR = DLR x DLR Multiplier, DLR Multiplier = 1

DLR: Detection Limit for the Purposes of Reporting.  
 Exceptional sample conditions or matrix interferences  
 may result in higher detection limits.  
 ND: None Detected

Cynthia Pigman, QA/QC Supervisor

R920520 BTPS.t

Jeffrey Creager, Organics Manager



1414 Stanislaus Street  
 Fresno, California 93706  
 Telephone (209) 485-8310  
 FAX (209) 485-6935  
 1-800-877-8310

BSK-Pleasanton  
 Castlewood Country Club

Date Sampled : 09/30/92  
 Time Sampled : 1306  
 Date Received : 10/01/92  
 Date of Analysis : 10/02/92  
 Report Issue Date: 10/15/92

Case Number : Ch922610  
 Lab ID Number : 2610-7  
 Project Number : P92225  
 Sample Description: MW-1 #8 @ 40.5'

Sample Type : SOLID

Analyses for BTEX by EPA Method 8020  
and TPH (G) by EPA Method 8015

Results Reported in Milligrams per Kilogram (mg/kg)

Compound	Results	DLR
Benzene .....	ND	0.02
Toluene .....	ND	0.02
Ethylbenzene .....	ND	0.02
Total Xylene Isomers .....	ND	0.02
Total Petroleum Hydrocarbons (G)	ND	1.

Sample DLR = DLR x DLR Multiplier,                      DLR Multiplier = 1

DLR: Detection Limit for the Purposes of Reporting.  
 Exceptional sample conditions or matrix interferences  
 may result in higher detection limits.  
 ND: None Detected

Cynthia Pigman, QA/QC Supervisor

Jeffrey Creager, Organics Manager



1414 Stanislaus Street  
 Fresno, California 93706  
 Telephone (209) 485-8310  
 FAX (209) 485-6935  
 1-800-877-8310

Environmental Services

BSK-Pleasanton  
 Castlewood Country Club

Date Sampled : 09/30/92  
 Time Sampled : 1306  
 Date Received : 10/01/92  
 Report Issue Date: 10/15/92

Case Number : Ch922610  
 Lab ID Number : 2610-7  
 Project Number : P92225  
 Sample Description: MW-1 #8 @ 40.5'

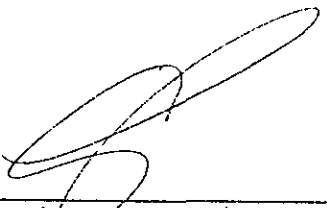
Sample Type : SOLID

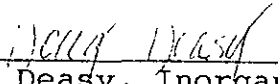
General Chemical Analyses

Analyte	Units	Results	DLR
Lead (Pb).....	mg/kg	37	2
Percent Solids.....	%	90	-

ND: None Detected                   mg/L: Milligrams per Liter  
 --: Not analyzed                   µg/L: Micrograms per Liter  
 %: Percent by Weight  
 mg/kg: Milligrams per Kilograms as Received

DLR: Detection Limit for the Purposes of Reporting.  
 Exceptional sample conditions or matrix interferences  
 may result in higher detection limits.

  
 Cynthia Pigman, QA/QC Supervisor

  
 Doug Deasy, Inorganics Supervisor



1414 Stanislaus Street  
 Fresno, California 93706  
 Telephone (209) 485-8310  
 FAX (209) 485-6935  
 1-800-877-8310

*Environmental Services*

BSK-Pleasanton  
 Castlewood Country Club

Date Sampled : 09/30/92  
 Time Sampled : 1345  
 Date Received : 10/01/92  
 Date of Analysis : 10/01/92  
 Report Issue Date: 10/15/92

Case Number : Ch922610  
 Lab ID Number : 2610-8  
 Project Number : P92225  
 Sample Description: MW-1 #9 @ 45.5'

Sample Type : SOLID

Analyses for BTEX by EPA Method 8020  
and TPH (G) by EPA Method 8015

Results Reported in Milligrams per Kilogram (mg/kg)

Compound	Results	DLR
Benzene .....	ND	0.02
Toluene .....	ND	0.02
Ethylbenzene .....	ND	0.02
Total Xylene Isomers .....	ND	0.02
Total Petroleum Hydrocarbons (G)	ND	1.

Sample DLR = DLR x DLR Multiplier,                      DLR Multiplier = 1

DLR: Detection Limit for the Purposes of Reporting.  
 Exceptional sample conditions or matrix interferences  
 may result in higher detection limits.  
 ND: None Detected

Cynthia Pigman, QA/QC Supervisor

Jeffrey Creager, Organics Manager

Client Name <i>Castlewood Country Club</i>			Project or P.O.# <i>P92225</i>			Lab Use Only in this section <i>BRX (8020)</i> <i>TPH G (5030)</i> <i>Total Lead</i>						Analysis required		
Address <i>1181 Quarry Lane Bldg 300</i>			Phone # <i>510/462 4000</i>									City, State, Zip <i>Pleasanton, CA 94566</i>		
Date sampled	Time sampled	Type (See key below)	Sampled by	Sample description	Number of containers	Lab Sample number	Sample Seals (See key below)				Hazardous sample Special handling required			
			<i>Tim Berger</i>											
<i>9/29</i>	<i>10:45</i>	<i>SO</i>		<i>B-1 #1 @ 15'</i>	<i>1</i>	<i>1</i>	<i>P</i>	<i>X</i>	<i>X</i>	<i>X</i>			<i>1x soil tube</i>	<i>Samples are stony</i>
<i>)</i>	<i>11:19</i>	<i>)</i>		<i>" #2 @ 21'</i>	<i>1</i>	<i>2</i>	<i>P</i>	<i>X</i>	<i>X</i>	<i>X</i>				
<i>)</i>	<i>11:59</i>	<i>)</i>		<i>" #3 @ 26'</i>	<i>1</i>	<i>3</i>	<i>P</i>	<i>X</i>	<i>X</i>	<i>X</i>				
<i>)</i>	<i>12:17</i>	<i>)</i>		<i>" #4 @ 30.5'</i>	<i>1</i>	<i>4</i>	<i>P</i>	<i>X</i>	<i>X</i>	<i>X</i>				
<i>9/30</i>	<i>09:58</i>	<i>SO</i>		<i>MW-1 #2 @ 20.5'</i>	<i>1</i>	<i>5</i>	<i>P</i>	<i>X</i>	<i>X</i>	<i>X</i>				
<i>)</i>	<i>12:52</i>	<i>)</i>		<i>" #7 @ 35'</i>	<i>1</i>	<i>6</i>	<i>P</i>	<i>X</i>	<i>X</i>					
<i>)</i>	<i>13:06</i>	<i>)</i>		<i>" #8 @ 40.5'</i>	<i>1</i>	<i>7</i>	<i>P</i>	<i>X</i>	<i>X</i>	<i>X</i>				
<i>)</i>	<i>13:45</i>	<i>)</i>		<i>" #9 @ 45.5'</i>	<i>1</i>	<i>8</i>	<i>P</i>	<i>X</i>	<i>X</i>					

IMPORTANT NOTICE: No samples will be analyzed without an authorized signature in this section.

I am hereby requesting BSK's Normal Chain-of-Custody Procedures for the above samples. I understand that these procedures are generally consistent with those outlined in the U.S. E.P.A. SW 846 and that there is no extra charge for this service.

By: *Tim Berger*  
Authorized Signature

I am hereby requesting BSK's Formal Chain-of-Custody Procedures for the above samples. I understand that these procedures are generally consistent with those outlined in U.S. EPA Contract Laboratory Program Statement of Work, Section F, and that there is a charge of \$50.00 per work order or \$5.00 a bottle, whichever is greater.

By: \_\_\_\_\_  
Authorized Signature

Signature	Print Name	Company	Date	Time
<i>Tim Berger</i>	<i>Tim Berger</i>	<i>BSK - Associates</i>	<del><i>9/29/92</i></del>	<i>08:30</i>
<i>Men-A-illeo</i>	<i>S. Ailleo</i>	<i>BSK</i>	<i>10/01/92</i>	<i>1440</i>
			<i>10-1-92</i>	

**BSK** & Associates Chemical Laboratories

1414 Stanislaus Street Fresno, California 93706  
Telephone (209) 485-8310 • Fax (209) 485-7427

**KEY:** Type: AQ-Aqueous SL-Sludge SO-Soil PE-Petroleum OT-Other  
Seals: P-Present A-Absent B-Broken  
DISTRIBUTION: WHITE, CANARY - LABORATORY PINK - ORIGINATOR  
Note:  
Samples are discarded 14 days after results are reported unless other arrangements are made.  
Hazardous samples will be returned to client or disposed of at client expense.

APPENDIX "B"

ALAMEDA COUNTY FLOOD CONTROL DISTRICT - ZONE 7  
PERMIT DOCUMENTS AND CONDITIONS



# ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588

VOICE (510) 484-2800  
FAX (510) 482-3914

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT Castwood Country Club  
707 Country Club Circle  
Pleasanton, CA

PERMIT NUMBER 92464  
LOCATION NUMBER \_\_\_\_\_

CLIENT  
Name John Bethe  
Address 707 Country Club Circle Phone 510/846-2871  
City Pleasanton Zip 94566

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT  
Name BSK Associates  
Address 181 Quarry Ln. Phone 510/462-4000  
City Pleasanton, CA Zip 94566

### TYPE OF PROJECT

Well Construction	Geotechnical Investigation
Cathodic Protection	General
Water Supply	Contamination
Monitoring	Well Destruction

### PROPOSED WATER SUPPLY WELL USE

Domestic	Industrial	Other
Municipal	Irrigation	

### DRILLING METHOD:

Mud Rotary	Air Rotary	Auger
Cable	Other	

DRILLER'S LICENSE NO. C-57 490942

### WELL PROJECTS

Drill Hole Diameter	<u>8</u> in.	Maximum	
Casing Diameter	<u>2</u> in.	Depth	<u>55</u> ft.
Surface Seal Depth	<u>101</u> ft.	Number	<u>1</u>

### GEOTECHNICAL PROJECTS

Number of Borings	<u>3</u>	Maximum	
Hole Diameter	<u>8</u> in.	Depth	<u>55</u> ft.

ESTIMATED STARTING DATE 9/23/92  
ESTIMATED COMPLETION DATE 9/30/92

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE John Bethe Date 9/16/92

### A. GENERAL

1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

### B. WATER WELLS, INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

E. WELL DESTRUCTION. See attached.

Approved Wyman Hong  
Wyman Hong

Date 17 Sep 92

92538





ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT  
 5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94566 (415) 484-2600

**GROUNDWATER PROTECTION ORDINANCE PERMIT APPLICATION**

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

(1) LOCATION OF PROJECT Castlewood Country Club  
707 Country Club Circle  
Pleasanton, CA

PERMIT NUMBER 92538  
 LOCATION NUMBER 3S/1E 29N2

(2) CLIENT  
 Name Castlewood Country Club  
 Address 707 Country Club Circle Phone 510/846 2871  
 City Pleasanton, CA Zip 94566

PERMIT CONDITIONS

Circled Permit Requirements Apply

(3) APPLICANT  
 Name BSK + Associates  
 Address 1181 Quarry Lane Phone \_\_\_\_\_  
 City Pleasanton Zip 94566

- A. GENERAL
  1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
  2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
  3. Permit is void if project not begun within 90 days of approval date.
- B. WATER WELLS, INCLUDING PIEZOMETERS
  1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
  2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic, irrigation, and monitoring wells unless a lesser depth is specially approved.
- C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.
- D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.
- E. WELL DESTRUCTION. See attached.

(4) DESCRIPTION OF PROJECT  
 Water Well Construction  Geotechnical Investigation   
 Cathodic Protection  General   
 Well Destruction  Contamination

(5) PROPOSED WATER WELL USE  
 Domestic  Industrial  Irrigation   
 Municipal  Monitoring  Other

(6) PROPOSED CONSTRUCTION  
 Drilling Method:  
 Mud Rotary  Air Rotary  Auger   
 Cable  Other

DRILLER'S LICENSE NO. 490942

WELL PROJECTS  
 Drill Hole Diameter  in. Maximum \_\_\_\_\_  
 Casing Diameter  in. Depth  ft.  
 Surface Seal Depth  ft. Number

GEOTECHNICAL PROJECTS  
 Number of Borings  Maximum \_\_\_\_\_  
 Hole Diameter  in. Depth  ft.

(7) ESTIMATED STARTING DATE 10/29/92  
 ESTIMATED COMPLETION DATE 10/29/92

(8) I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

Approved Wyman Hong Date 27 Oct 92  
 Wyman Hong

APPLICANT'S SIGNATURE Jim Berger Date 10/23/92



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT  
5997 PARKSIDE DRIVE      PLEASANTON, CALIFORNIA 94588      (510) 484-2600

28 October 1992

BSK & Associates  
1181 Quarry Lane, Building 300  
Pleasanton, CA 94566

Gentlemen:

Enclosed is drilling permit 92538 for the destruction of well 3S/1E 29N2 at 707 Country Club Circle near Pleasanton for Castlewood Country Club.

Please note that permit condition A-2 requires that a well destruction report be submitted after completion of the work. The report should include a description of methods and materials used to destroy the well, location sketch, date of destruction, and permit number.

If you have any questions, please contact Wyman Hong or me at 484-2600.

Very truly yours,

*Craig A. Mayfield*

Craig A. Mayfield  
Water Resources Engineer III

WH:mm  
Enc.

**received**  
10/29/92

27 October 1992

ZONE 7  
WATER RESOURCES ENGINEERING  
DRILLING ORDINANCE

CASTLEWOOD COUNTRY CLUB  
707 COUNTRY CLUB CIRCLE  
PLEASANTON  
WELL 3S/1E 29N2  
PERMIT 92538

Destruction Requirements:

- 1 Drill out the well so that the casing, seal, and gravel pack are removed to the bottom of the well.
2. Using a tremie pipe, fill the hole to 2 feet below the lower of finished grade or original ground with neat cement.
3. After seal has set, backfill the remaining hole with compacted material.

These destruction requirements as proposed by Tim Berger of BSK & Associates meet or exceed the Zone 7 minimum requirements.