10:25 - 11:05 = 0.7

enviros

95 OCT 17 PM 1:

October 10, 1995

Analyze for PNA's in U-1
Quantify MTBE
DO QA/QC
Read up on ORC, when is best time to install (or watch [ ] in U1, U2. Before deciding on ORC.

Mr. Ed Ralston
Unocal Corporation-CERT
P.O. Box 5155
San Ramon, California 94583

RE: Preliminary Soil And Groundwater Investigation Report
Unocal Service Station No. 7176
7850 Amador Valley Road
Dublin, California

Dear Mr. Ralston:

Enviros, Inc. is pleased to transmit a copy of the Preliminary Soil And Groundwater report dated October 10, 1995. This report documents field activities and analytical results from the subsurface investigation performed in accordance with the Enviros Inc. Work Plan dated May 18, 1995.

If you have any questions or comments regarding the contents of this document, please call me at 707-935-4856.

Sincerely,
Enviros, Inc.

David J. Vossler
Project Manager

cc: Ms. Eva Chu, Alameda County Health Care Services Agency
95132.02 files

Enviros, Inc. 270 Perkins Street P.O. Box 259 Sonoma, California 95476-0259 Tel 707 / 935-4850 Fax 707 / 935-6649

Prepared for:

Unocal Corporation
P.O. Box 5155
San Ramon, California

Prepared by:

Enviros, Inc.

PRELIMINARY SOIL AND GROUNDWATER INVESTIGATION

Unocal Service Station No. 7176
7850 Amador Valley Road
Dublin, California

October 10, 1995 ***95132.02***

enviros®

October 10, 1995

Mr. Ed Ralston
Unocal Corporation-CERT
P.O. Box 5155
San Ramon, California 94583

RE: Preliminary Soil And Groundwater Investigation
Unocal Service Station No. 7176
7850 Amador Valley Road
Dublin, California

Dear Mr. Ralston:

This report was prepared by Enviros, Inc. (Enviros) on behalf of Unocal Corporation-CERT (Unocal) and presents the results of a soil and groundwater investigation performed at the above referenced site (Plates 1 and 2). The purpose of this investigation was to evaluate the lateral extent of petroleum hydrocarbons in the soil and/or groundwater beneath the subject property as described in the Enviros Work Plan, dated May 18, 1995. The investigation was required by Alameda County Health Care Services Agency (ACHCSA) based on their April 7, 1995 letter to Unocal. This report includes a discussion of site background, scope of work, findings, and soil and groundwater remediation activities. Support documentation is found in Appendix A, B, and C.

SITE BACKGROUND

Site Description

The subject property is located at the southwest corner of Amador Valley Boulevard and Regional Street in Dublin, California (Plate 1) and is currently occupied by Unocal Service Station No. 7176. On-site structures include a service station building, two product dispenser islands covered by one canopy, two 12,000-gallon underground storage tanks containing gasoline, and one 12,000-gallon underground storage tank containing diesel.

The former USTs were replaced in November 1994 and included a 10,000-gallon diesel tank and three 10,000 gallon gasoline USTs. Each of the USTs were constructed of single-wall steel. A 280 gallon waste oil tank and sand/water separator was also decommissioned during this time. Tank removal and related overexcavations and soil sampling were witnessed or approved by representatives from ACHCSA (Enviros, *Storage Tank Replacement Observation Report,* dated March 23, 1995).

Enviros, Inc. 270 Perkins Street P.O. Box 259 Sonoma, California 95476-0259 Tel 707 / 935-4850 Fax 707 / 935-6649

Regional Setting

The site is located within the Dublin subbasin, which is the west part of the Livermore Valley Basin at the foot of the Dublin Hills. The sediments underlying the Livermore Valley Basin consist of recent alluvium of Pleistocene to Pliocene age, comprised of thick gravel deposits, interbedded with sand and clay. The Calaveras Fault is located approximately 1/2-mile west of the site which may have a regional effect of groundwater (Engineering Associates, *Exxon Service Station,* dated February 1992).

Previous Investigations

Previous environmental work performed at the subject site included soil sampling activities during UST replacement. A total of 27 soil samples were collected and analyzed for petroleum hydrocarbons below the former USTs, product piping, and sand/water separator. The sampling results indicate that soils in the vicinity of the waste oil tank and sand/water separator were not impacted by petroleum hydrocarbons. Detectable concentrations of total petroleum hydrocarbons calculated as gasoline (TPH-Gasoline) and as diesel (TPH-Diesel) remain in soils in the vicinity of the fuel tanks and the eastern end of the south product dispenser.

SCOPE OF WORK

The following scope of work was performed to further delineate the extent of petroleum hydrocarbons in soils and groundwater beneath the subject site: (1) acquisition of required permits; (2) drilling and lithologic logging of six on-site soil borings (B-1 through B-6); (3) drilling and installation of three on-site groundwater monitoring wells (U-1 through U-3); (4) collection of soil and groundwater samples for laboratory analyses; (5) development and well elevation survey of the newly installed monitoring wells and; (6) data evaluation and report preparation.

Soil samples were collected at a maximum depth interval of 5 feet, at significant changes in lithology, or at the capillary fringe for Unified Soil Classification System (USCS) description and retention for field head-space and chemical analyses. A photo-ionization detector (PID) was used for field head-space analysis. The locations of the exploratory borings are presented on Plate 2.

Soil and groundwater samples were analyzed by a state-certified laboratory for TPH-Gasoline, and TPH-Diesel according to EPA Method 8015 (Modified) and benzene, toluene, ethylbenzene and xylenes (BTEX) according to EPA Method 8020.

FINDINGS

Subsurface Conditions

Native soils encountered beneath the site in the unsaturated zone are alluvial sediments consisting of silty clays (CL), clayey and sandy silts (ML), and silty sands (SM). A thin layer of gravel with silt and sand/clay (GW-GM, GW-GC) was encountered below the unsaturated zone at first encountered groundwater. Soils encountered below the gravel layer consisted of silty to sandy clays (CL) to the total explored depth of 30 feet below grade (fbg). Contacts between lithologies appear to be gradational. Horizontal and vertical distribution appears to be heterogeneous beneath the subject property. Detailed lithologic descriptions are presented on the exploratory boring logs contained in Appendix A.

The shallow water bearing zone appears to primarily consist of silty clay (CL) with a thin layer of gravel with silt and sand/clay (GW-GM, GW-GC). Groundwater rose from the first encountered water of 17.5 to 19.5 fbg to the equilibrated static water level of approximately 12.5 to 15 fbg as measured during groundwater monitoring well sampling on July 8, 1995. The groundwater appears to be confined by the relatively impervious clays above the gravels. These indications suggest a semiconfined or confined water table condition. Monitoring well groundwater elevations and well construction details are summarized in Table 1. Groundwater elevation data collected during the investigation indicate that groundwater flow beneath the site is toward the southeast at an approximate gradient of 0.013 ft./ft. (Plate 3).

Soil and Groundwater Analytical Results

A total of 16 soil samples were collected from the borings at depths between 10.5 and 19.5 fbg and submitted for chemical analyses. Soil analytical data are summarized in Table 2, with the sample analytical results shown on Plate 4.

Groundwater samples from borings UB-2 and UB-4, monitoring wells U-1 through U-3, and from a conductor casing within the UST backfill (UST-1) were collected on July 8, 1995. Samples from UB-2 and UB-4 were collected using the PowerPunch system. All of the samples were collected using a clean disposable plastic bailer. Groundwater analytical data are summarized in Table 3. The TPH-Diesel/TPH-Gasoline/benzene concentrations for the soil borings, monitoring wells, and UST complex backfill are shown on Plate 5.

SOIL AND GROUNDWATER REMEDIAL ACTIVITIES

A total of 1,863.26 tons of hydrocarbon-impacted soils were excavated at the site in an effort to remediate by the removal of all impacted soils. The soils were transported by Gettler-Ryan to BFI Vasco Road Landfill, an approved disposal facility, located in Livermore, California. A total of 1,048.26 tons of soil were accepted as Class III material and 814.93 tons were accepted as Class II material.

Two 6-inch diameter, 0.020-inch slotted conductor casings were installed in the pea gravel of the fuel tank excavation. These casings are used to remediate groundwater by periodically purging the excavation. Approximately 15,430 gallons of hydrocarbon-impacted groundwater have been purged from the UST excavation. The impacted groundwater was transported to the Unocal Refinery, an approved treatment facility, located in Rodeo, California.

DISCUSSION AND RECOMMENDATIONS

Petroleum-impacted soils were identified primarily at first encountered groundwater in borings B-1, B-4, B-5, B-6 and well borings U-1 and U-2 (Plate 4). The extent of petroleum impacted soil is located immediately around the UST complex and the eastern end of the southern product dispenser. Petroleum impacted groundwater was identified in U-1, U-2, U-3, and B-4 (Plate 5). Groundwater analytical results from U-3 may be suspect because of its upgradient location of the known on-site hydrocarbon sources.

Groundwater flow in the immediate area has been historically to the southeast (personal communication with ACHCSA). Enviros recommends the installation of an Oxygen Releasing Compound (ORC) in the three groundwater monitoring wells and one conductor casing located within the UST excavation. Enviros further recommends that chemical analytical data and groundwater flow direction be reviewed for one hydrologic cycle, to better evaluate site conditions. At the conclusion of this evaluation, additional recommendations will be presented.

If you have any questions regarding the contents of this document, please call.

Sincerely,

Enviros, Inc.

Clyde J. Galantine
Project Geologist

Diane M. Lundquist, P.E.
Senior Engineer
C46725

Attachments:

Table 1.	Field Monitoring Data
Table 2.	Soil Analytical Data
Table 3.	Groundwater Analytical Data
Plate 1.	Vicinity Map
Plate 2.	Site Plan
Plate 3.	Groundwater Elevation Map
Plate 4.	Soil Analytical Map
Plate 5.	TPH-Diesel/TPH-Gasoline/Benzene Concentration Map
Appendix A.	Exploratory Boring Logs and Well Elevation Data
Appendix B.	Field and Laboratory Procedures
Appendix C.	Laboratory Analytical Reports, Chain-of-Custody Records, and Field Data Sheets

TABLE 1
FIELD MONITORING DATA
7850 Amador Valley Boulevard
Dublin, California

WELL NO.	MONT. DATE	CASING DIA. (IN.)	SCREENED INTERVAL (FBG)	WELL DEPTH (FT.)	WELL ELEV. (FT.)*	NORTHING	EASTING	IMMISCIBLES THICKNESS (FT.)	DEPTH TO WATER (FT.)	WATER ELEV. (FT.)**
U-1	8-Jul-95	2	10 - 30	30.00	355.62	4,952.716	3,991.469	0.00	12.59	343.03
U-2	8-Jul-95	2	10 - 30	30.00	356.59	4,949.906	3,907.966	0.00	12.68	343.91
U-3	8-Jul-95	2	10 - 30	30.00	358.13	4,838.422	3,890.009	0.00	14.58	343.55

NOTES:

FBG = Feet Below Grade

* Well elevation calculated from top of casing (TOC) measurements.

** Static water elevations referenced to Mean Sea Level.

Survey benchmark was a brass disk in the top of the curb at the easterly return at the most easterly corner of the intersection of Amador Valley Boulevard and Starward Street, stamped "AM-STW 1977" (Elevation = 344.17').

TABLE 2
SOIL ANALYTICAL DATA
7850 Amador Valley Boulevard
Dublin, California

SAMPLE NO.	DEPTH (FT.)	SAMPLE DATE	ANALYSIS DATE	TPH-D (PPM)	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYL BENZENE (PPM)	XYLENES (PPM)	TOTAL LEAD (PPM)
U-1-10.5	10.5	7/7/95	7/12/95	ND	ND	ND	ND	ND	ND	---
U-1-18.5	18.5	7/7/95	7/12/95	25*	26**	0.041	0.053	0.56	2.2	---
U-2-13	13	7/7/95	7/12/95	1.3*	ND	0.017	ND	0.071	ND	---
U-2-17.5	17.5	7/7/95	7/12/95	12*	97**	ND	0.21	1.7	1.5	---
U-3-17.5	17.5	7/7/95	7/12/95	ND	ND	ND	ND	ND	ND	---
B-1-13	13	7/8/95	7/12/95	1.5*	ND	ND	ND	ND	ND	---
B-1-18	18	7/8/95	7/12/95	1.0*	2.1	ND	ND	0.028	0.0088	---
B-2-16	16	7/8/95	7/12/95	ND	ND	ND	ND	ND	ND	---
B-3-11	11	7/8/95	7/12/95	ND	ND	ND	ND	ND	ND	---
B-3-17	17	7/8/95	7/12/95	ND	ND	ND	ND	ND	ND	---
B-4-11.5	11.5	7/8/95	7/12/95	ND	ND	ND	ND	ND	ND	---
B-4-16	16	7/8/95	7/12/95	1.7*	ND	ND	ND	ND	ND	---
B-5-14.5	14.5	7/8/95	7/12/95	ND	5.1**	0.13	0.020	0.29	0.12	---
B-5-18	18	7/8/95	7/12/95	4.8*	59**	0.068	ND	0.84	0.98	---
B-6-14.5	14.5	7/8/95	7/11/95	ND	4.9**	0.088	ND	0.099	0.22	---
B-6-19.5	19.5	7/8/95	7/12/95	10*	150**	0.21	3.0	3.2	19	---
US-1A-D	--	7/8/95	7/12/95	3.3*	ND	ND	ND	ND	0.0060	8.3

TPH-D = Total Petroleum Hydrocarbons calculated as Diesel.
TPH-G = Total Petroleum Hydrocarbons calculated as Gasoline.
PPM = Parts Per Million.
U, B = Soil Boring Designation
US = Soil Stockpile Designation
* = Unidentified Hydrocarbon C9-C24
** = Weathered Gas C6-C12
Notes: All data reported as <x are shown as ND (non detected). See laboratory analytical reports for detection limits.

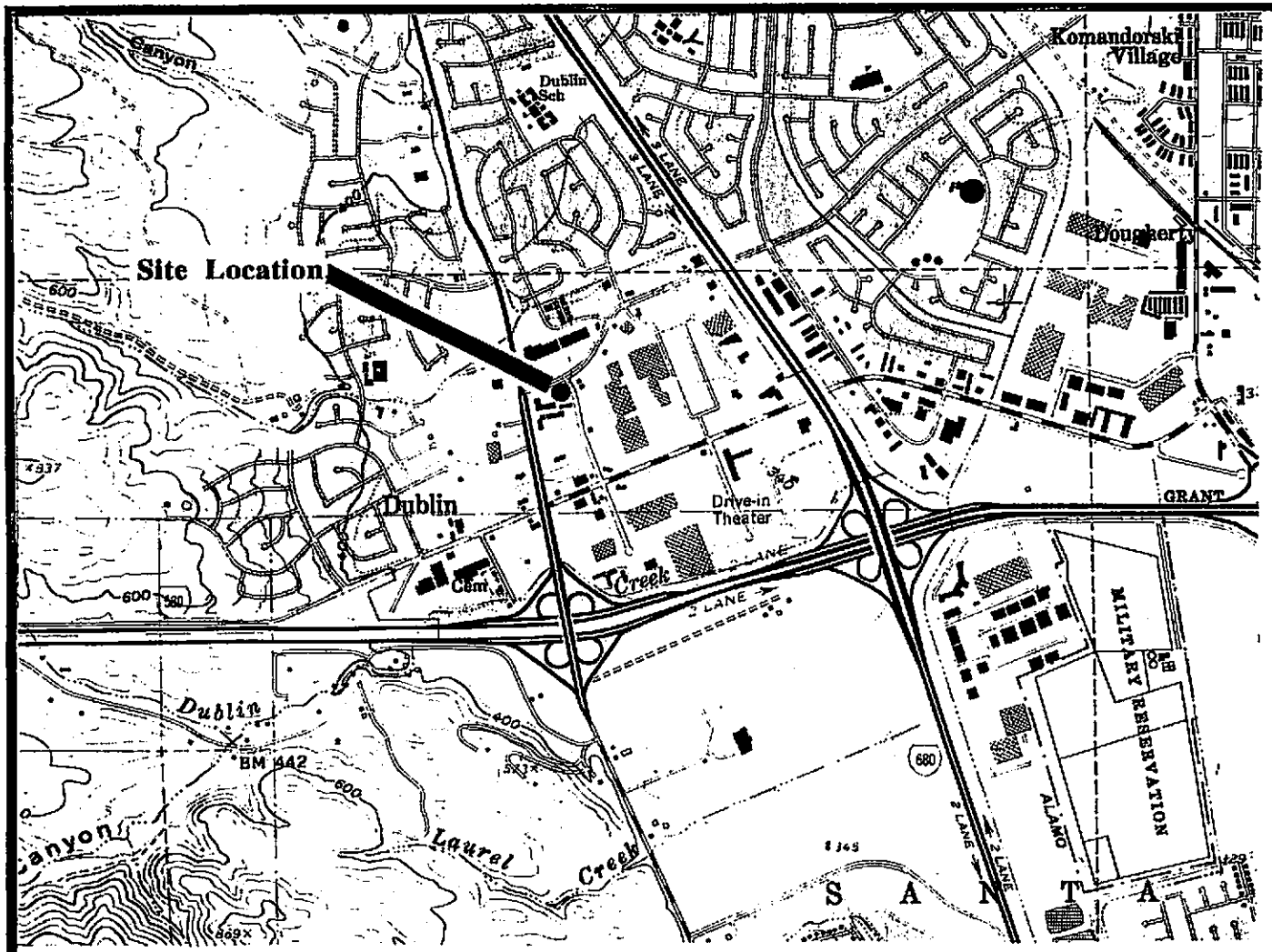
TABLE 3
GROUNDWATER ANALYTICAL DATA
7850 Amador Valley Boulevard
Dublin, California

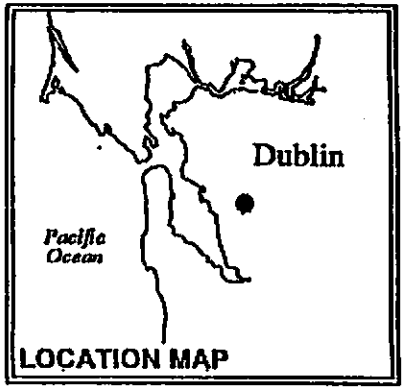
SAMPLE NO.	SAMPLE DATE	ANALYSIS DATE	TPH-D (PPB)	TPH-G (PPB)	BENZENE (PPB)	TOLUENE (PPB)	ETHYL BENZENE (PPB)	XYLENES (PPB)
U-1	7/8/95	7/11/95	9,400*	39,000	1,500	19	1,600	5,200
U-2	7/8/95	7/12/95	4,700*	17,000	430	ND	2,200	590
U-3	7/8/95	7/11/95	710*	1,100***	0.57	2.1	1.7	2.4
B-2	7/8/95	7/12/95	ND	ND	ND	ND	ND	ND
B-4	7/8/95	7/12/95	390*	ND	ND	ND	ND	ND
UST-1	7/8/95	7/12/95	970*	3,000**	280	ND	ND	ND

TPH-D = Total Petroleum Hydrocarbons calculated as Diesel.
TPH-G = Total Petroleum Hydrocarbons calculated as Gasoline.
PPB = Parts Per Billion
U = Monitoring Well
B = Soil Boring/PowerPunch
UST = Underground Storage Tank Backfill Groundwater Sample

* = Unidentified Hydrocarbon C9-C24
** = Weathered Gas C6-C12
*** = Gas and Unidentified Hydrocarbons >C12

Note: All data reported as <x are shown as ND (non detected).
See laboratory analytical reports for detection limits.





N

0 2,000

Scale in Feet

Base Map: USGS 7.5 Minute Topographic Map

PLATE

1

VICINITY MAP
Unocal Service Station No. 7176
7850 Amador Valley Road
Dublin, California

enviros®
E4/94132

Drawn By: CJG Date: 12-22-94

Approved By: CJG Date: 12/22/94

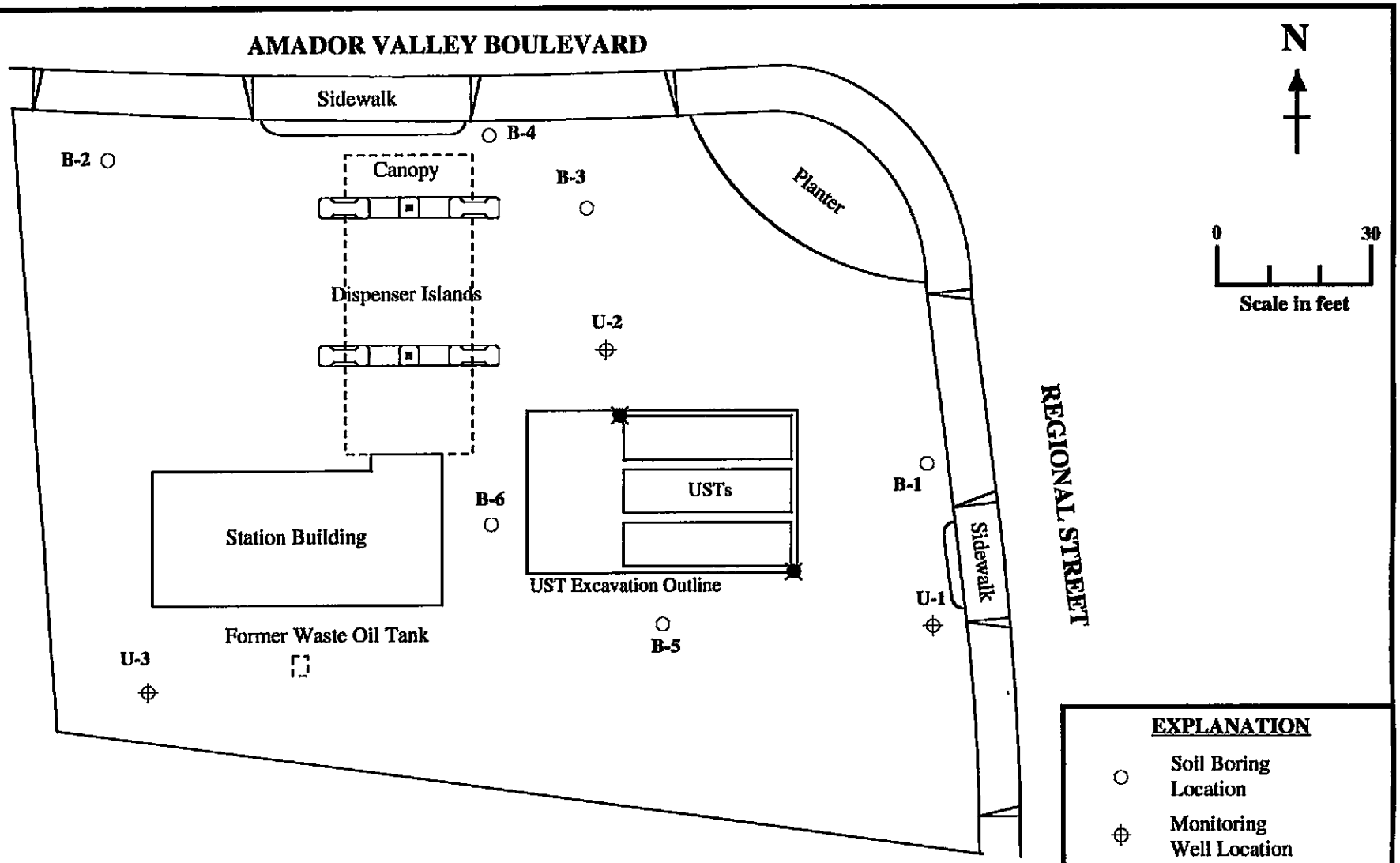
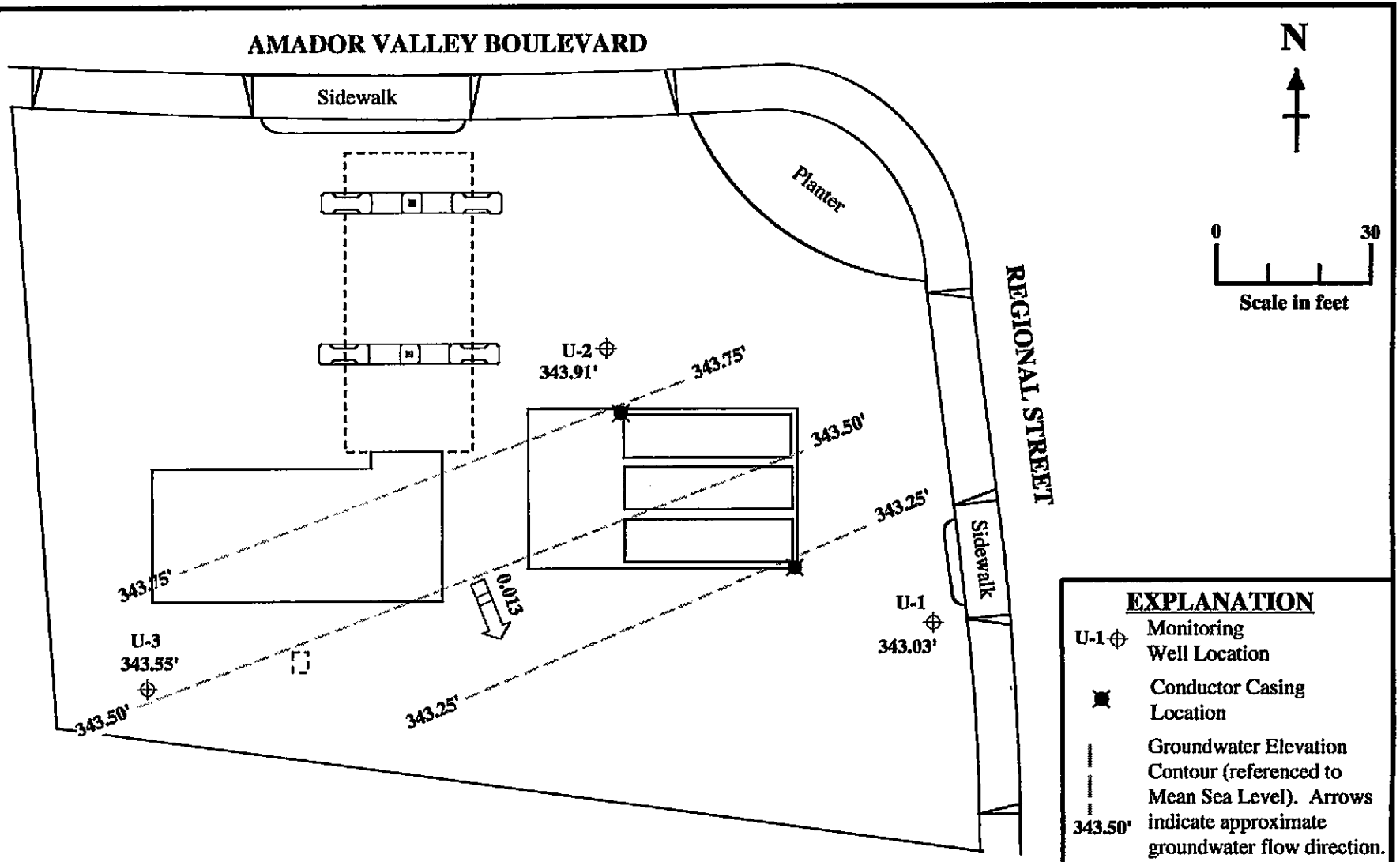


PLATE **2**

SITE PLAN
Unocal SS No. 7176
7850 Amador Valley Boulevard
Dublin, California

enviros®
95132.02

Drawn By: CJG | Date: 9-7-95 | Approved By: DJV | Date: 10/10/95



EXPLANATION

U-1 ⊕ Monitoring Well Location

Conductor Casing Location

343.50' Groundwater Elevation Contour (referenced to Mean Sea Level). Arrows indicate approximate groundwater flow direction.

Notes: Hydraulic Gradient = 0.013 ft./ft.
Water levels measured on 7/8/95

PLATE
3

GROUNDWATER ELEVATION MAP
Unocal SS No. 7176
7850 Amador Valley Boulevard
Dublin, California

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95132.02

Drawn By: CJG | Date: 9-7-95 | Approved By: DJV | Date: 10/10/95

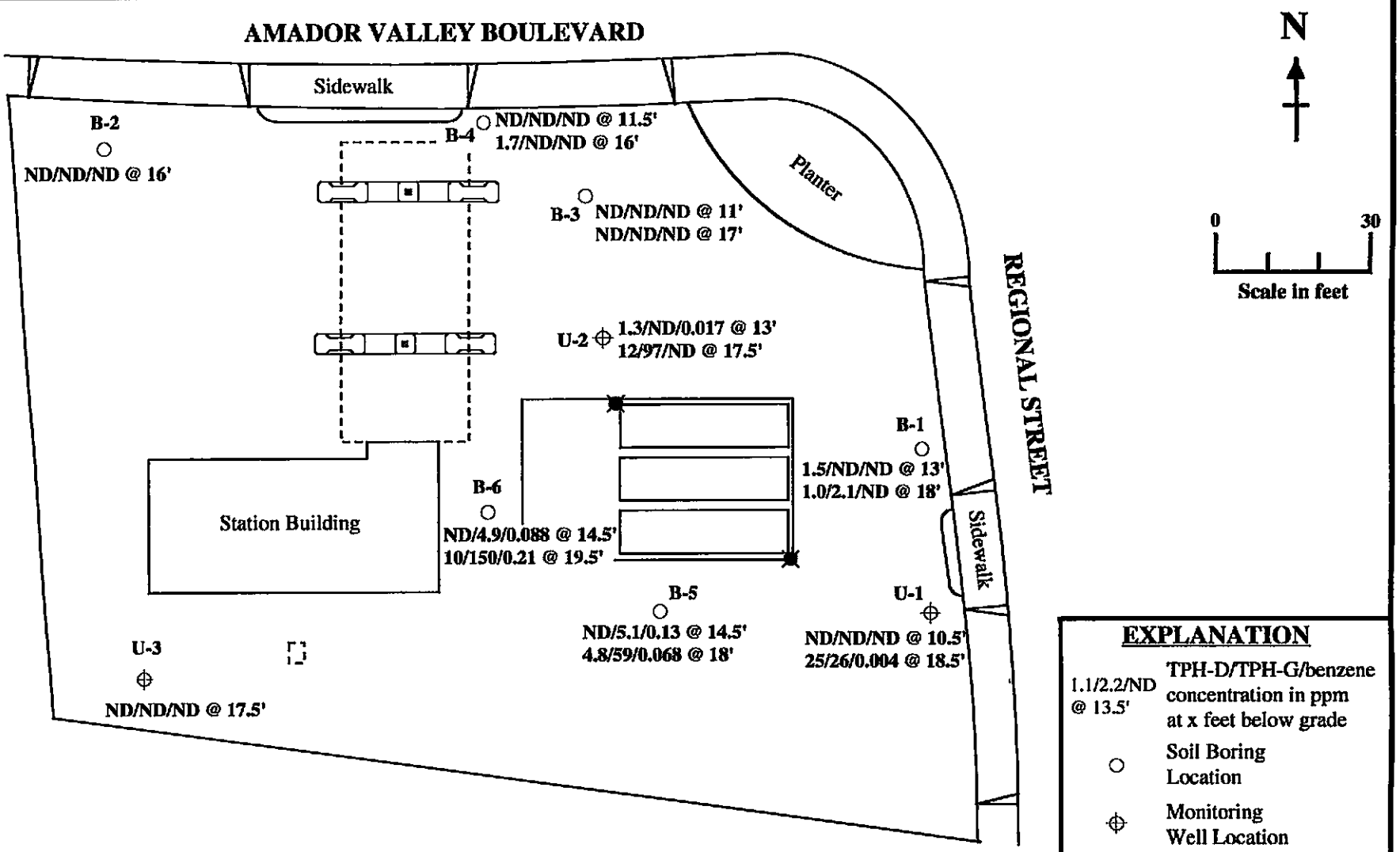

PLATE
4

SOIL ANALYTICAL MAP
Unocal SS No. 7176
7850 Amador Valley Boulevard
Dublin, California

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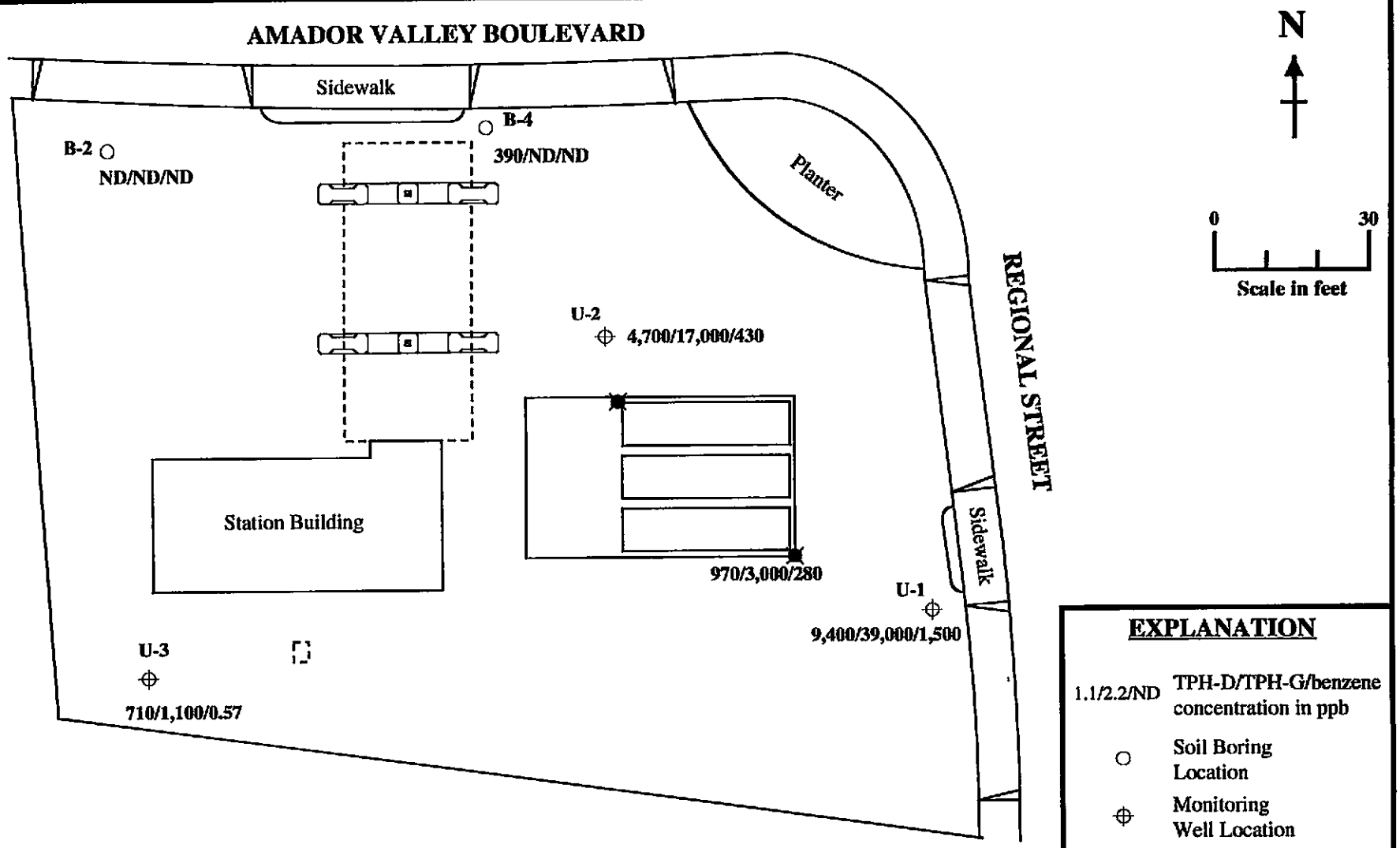
95132.02

Drawn By: CJG | Date: 9-7-95 | Approved By: DJV | Date: 10/10/95



EXPLANATION

1.1/2.2/ND	TPH-D/TPH-G/benzene concentration in ppb
○	Soil Boring Location
⊕	Monitoring Well Location
■	Conductor Casing Location

PLATE **5**

TPH-DIESEL/TPH-GASOLINE/BENZENE CONCENTRATION IN GROUNDWATER MAP
Unocal SS No. 7176
7850 Amador Valley Boulevard
Dublin, California

enviros®
95132.02

Drawn By: CJG | Date: 9-7-95 | Approved By: DJV | Date: 10/10/95

APPENDIX A

Exploratory Boring Logs and Well Elevation Data

	MAJOR DIVISIONS		USCS SYMBOL		TYPICAL NAMES
COARSE-GRAINED SOILS MORE THAN HALF IS LARGER THAN 200 SIEVE	GRAVELS More than half coarse fraction larger than No. 4 sieve size	Clean gravels with little or no fines	GW		Well-graded gravels, gravel-sand mixtures
			GP		Poorly graded gravels, gravel-sand mixtures
		Gravels with appreciable amounts of fines	GM		Silty gravels, poorly graded gravel-sand-clay mixtures
			GC		Clayey gravels, poorly graded gravel-sand-clay mixtures
	SANDS More than half coarse fractions smaller than No. 4 sieve size	Clean sands with little or no fines	SW		Well graded sands, gravelly sands
			SP		Poorly graded sands, gravelly sands
		Sands with appreciable amounts of fines	SM		Silty sands, poorly graded sand-silt mixtures
			SC		Clayey sands, poorly graded sand-silt mixtures
FINE-GRAINED SOILS MORE THAN HALF IS SMALLER THAN NO. 200 SIEVE	Silts and clays Liquid limit 50% or less		ML		Inorganic silts and very fine sands. Rock flour, silty or clayey fine sands or clayey silts with slight plasticity
			CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
			OL		Organic clays and organic silty clays of low plasticity
	Silts and clays. Liquid limit greater than 50%		MH		Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
			CH		Inorganic clays of high plasticity, fat clays
			OH		Organic clays of medium to high plasticity, organic silts
Highly organic soils			PT		Peat and other highly organic soils
Debris created or generated by man					Building debris or rubble

KEY TO FIELD DATA

Blows/6" - 140 lb. hammer dropped 30 inches.

PPM - Parts per million

OVM - Organic Vapor Meter

Soil Color - Munsell Color Chart (1988 Edition)

First encountered groundwater

Equilibrated groundwater level

Soil sample interval

No soil sample recovery

PLATE	UNIFIED SOIL CLASSIFICATION SYSTEM ASTM D2487-85	enviros® 94000.00
	Drawn By: JLP Date: 11-28-94	

Field Exploratory Boring Log B-1

OVM (ppm)	Blows/6"	Sample Number	Depth (ft)	Soil Group (USCS)	Materials Description
					Asphalt
					Silty Clay (CL) Black (10YR 2/1); very stiff, moist, 80% clay, 15% silt, 5% very fine sand.
			5		
0	6 6 7				Color change to Gray (5Y 5/1); stiff, wet.
			10		
0	5 10 13	B-1-13'			Change to very stiff, moist.
			15		
0	12 12 15	B-1-18'	18 ▽		Color change to Dark Grayish Brown (10YR 4/2), very stiff, moist to wet, increase in very fine sand content. Saturated at 18 ft.
					Total Depth of Boring = 18.0 feet.

BORING
B-1

UNOCAL CORPORATION - CERT
Unocal SS No. 7176
7850 Amador Valley Boulevard
Dublin, California

Borehole Diameter:	8 inches
Logged by:	C. Galantine
Driller:	Mitchell
Date Started:	7-7-95
Date Completed:	7-7-95

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Field Exploratory Boring Log B-2

OVM (ppm)	Blows/6"	Sample Number	Depth (ft)	Soil Group (USCS)	Materials Description
					Asphalt
					Silty Clay (CL) Black (10YR 2/1); very stiff, moist, 80% clay, 15% silt, 5% very fine sand.
					Gravel with Clay (GW-GC) Dark Grayish Brown (10YR 4/2), medium dense, moist, 75% fine gravel, 10% clay, 15% fine to coarse sand.
	7		5		
	7				
0	8				Clayey Silt (ML) Dark Grayish Brown (10YR 4/2), stiff, moist, 65% silt, 30% clay, 5% very fine sand.
			10		Silty Clay (CL) Dark Grayish Brown (10YR 4/2); very stiff, moist, 65% clay, 30% silt, 5% very fine sand.
	9				
	11				
0	13				
					Change to damp, increase in clay content, trace fine gravel.
	9				
	13				
0	17	B-2-16'	16		
					Total Depth of Boring = 16.0 feet.

BORING
B-2

UNOCAL CORPORATION - CERT
Unocal SS No. 7176
7850 Amador Valley Boulevard
Dublin, California

Borehole Diameter:	8 inches
Logged by:	C. Galantine
Driller:	Mitchell
Date Started:	7-7-95
Date Completed:	7-7-95

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Field Exploratory Boring Log B-3

OVM (ppm)	Blows/6"	Sample Number	Depth (ft)	Soil Group (USCS)	Materials Description
					Asphalt
					Silty Clay (CL) Black (10YR 2/1); very stiff, moist, 85% clay, 10% silt, 5% very fine sand.
	4 7		5		
0	7				Color change to Dark Gray (5Y 4/1).
					Change to very stiff, increase in silt content.
	7 9		10		
0	12	B-3-11'			
	8				Change to 75% clay, 20% silt, 5% very fine sand.
0	10 13				
			15		Color change to Olive Gray (10YR 4/2), 70% clay, 20-25% silt, 5-10% very fine sand.
0	9	B-3-17'			
	9 15				Change to 60% clay, 20% silt, 20% fine to coarse sand.
	8				
0	11 13		19.5		
					Gravel with Clay (GW-GC) Olive Gray (5Y 4/2), medium dense, wet, 75% fine gravel, 10% clay, 15% fine to coarse sand.
					Total Depth of Boring = 19.5 feet.

BORING
B-3

UNOCAL CORPORATION - CERT
Unocal SS No. 7176
7850 Amador Valley Boulevard
Dublin, California

Borehole Diameter:	8 inches
Logged by:	C. Galantine
Driller:	Mitchell
Date Started:	7-7-95
Date Completed:	7-7-95

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95132.02

Field Exploratory Boring Log B-4

OVM (ppm)	Blows/6"	Sample Number	Depth (ft)	Soil Group (USCS)	Materials Description
					Concrete
					Silty Clay (CL) Black (10YR 2/1); very stiff, moist, 85% clay, 10% silt, 5% very fine sand.
	4 5		5		Clayey Silt (ML) Dark Brown (10YR 3/3); stiff, moist, 60% silt, 35% clay, 5% very fine sand.
0	8				
	6 9		10		Change to very stiff.
0	10	B-4-11.5'			
	7 10				Color change to Olive Gray (10YR 4/2).
0	14	B-4-16'	16		
					Total Depth of Boring = 16 feet.

BORING
B-4

UNOCAL CORPORATION - CERT
Unocal SS No. 7176
7850 Amador Valley Boulevard
Dublin, California

Borehole Diameter:	8 inches
Logged by:	C. Galantine
Driller:	Mitchell
Date Started:	7-7-95
Date Completed:	7-7-95

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95132.02

Field Exploratory Boring Log B-5

OVM (ppm)	Blows/6"	Sample Number	Depth (ft)	Soil Group (USCS)	Materials Description
					Asphalt
					Silty Clay (CL) Black (10YR 2/1); stiff, moist, 75% clay, 20% silt, 5% very fine sand.
	5		5		Clayey Silt (ML) Very Dark Grayish Brown (10YR 3/2); stiff, moist, 70% silt, 25% clay, 5% very fine to coarse sand, sand stringers and pockets.
0	6 9				Sandy Silt (ML) Black (5Y 2.5/2); stiff, moist, 80% silt, 20% very fine to medium sand.
	7		10		Silty Clay (CL) Dark Olive Gray (5Y 3/2); very stiff, moist, 55% clay, 40% silt, 5% very fine sand.
0	9 14				
	5				Silty Sand (SM) Dark Olive Gray (5Y 3/2); medium dense, moist, 75% fine to medium sand, 25% silt.
	10				
0	16	B-5-14.5'	15		Sandy Clay (CL) Dark Olive Gray (5Y 3/2); very stiff, moist, 65% clay, 20% very fine sand, 15% silt.
	12				Silty Clay (CL) Dark Gray (5Y 4/1); hard, moist to wet, 70% clay, 20% silt, 10% very fine sand.
11	15				
	18	B-5-18'			
0	10			▽	Saturated at 19 ft.
	13				
	19		19.5		Gravel with Clay (GW-GC) Olive Gray (5Y 4/2), dense, saturated, 75% fine gravel, 15% fine to coarse sand, 10% clay.
					Total Depth of Boring = 19.5 feet.

BORING
B-5

UNOCAL CORPORATION - CERT
Unocal SS No. 7176
7850 Amador Valley Boulevard
Dublin, California

Borehole Diameter:	8 inches
Logged by:	C. Galantine
Driller:	Mitchell
Date Started:	7-7-95
Date Completed:	7-7-95

enviros ®

95132.02

Field Exploratory Boring Log B-6

OVM (ppm)	Blows/6"	Sample Number	Depth (ft)	Soil Group (USCS)	Materials Description
					Concrete
					Silty Clay (CL) Black (10YR 2/1); stiff, moist, 80% clay, 15% silt, 5% very fine sand.
	14		5		
	20				Color change to Dark Gray (5Y 4/1); stiff, moist, 70% clay, 20% silt, 10% very fine sand.
0	23				
			10		
	20				
	21				
0	26				Change to 80% clay, 15% silt, 5% very fine sand.
	20				
	23				
0	30	B-6-14.5'			
			15		Color change to Dark Olive Gray (5Y 3/2).
	19				
	23				Color change to Dark Gray (5Y 4/1) 60% clay, 30-35% silt, 5-10% very fine to medium sand.
0	29				
6	16				
	24				
	31	B-6-19.5'	19.5		Gravel with Clay (GW-GC) Dark Gray (10YR 4/1), very dense, wet, 75% fine gravel, 10% clay, 15% fine to coarse sand.
					Total Depth of Boring = 19.5 feet.

BORING
B-6

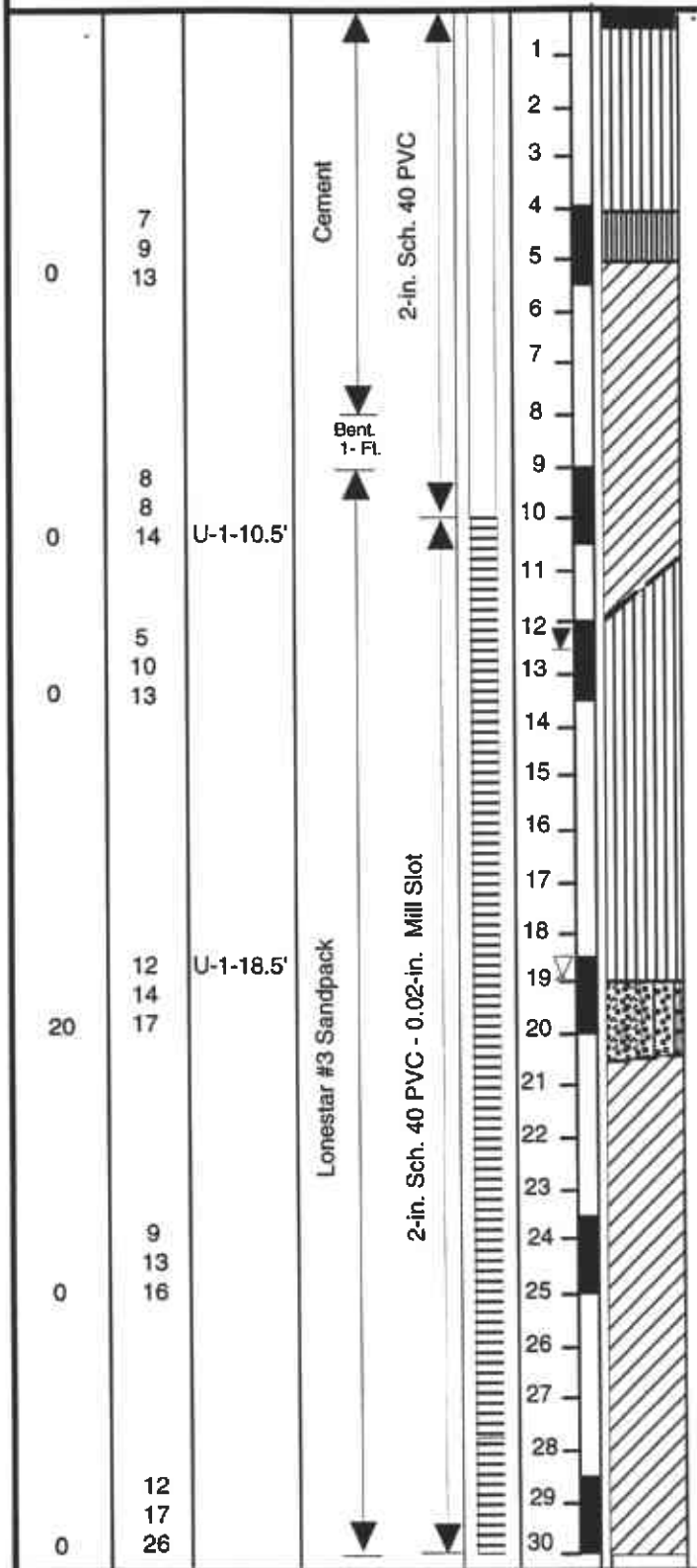
UNOCAL CORPORATION - CERT
Unocal SS No. 7176
7850 Amador Valley Boulevard
Dublin, California

Borehole Diameter:	8 inches
Logged by:	C. Galantine
Driller:	Mitchell
Date Started:	7-7-95
Date Completed:	7-7-95

enviros ®

95132.02

Field Exploratory Boring Log of Well U-1



Asphalt

Silt with Sand (ML) Fill Material
Very Dark Grayish Brown (10YR 3/2); stiff, moist, 75% silt, 15% fine to coarse sand, 10% fine gravel.

Silty Sand (SM)
Dark Grayish Brown (10YR 4/2); medium dense, moist, 75% very fine sand, 20% silt, 5% fine gravel.

Silty Clay (CL)
Dark Grayish Brown (10YR 4/2); very stiff, moist, 70% clay, 25% silt, 5% very fine sand, plastic, rootlets.

Silt (ML)
Dark Olive Gray (5Y 3/2); very stiff, moist, 80% silt, 10 % clay, 10% fine sand.

Saturated at 19 ft.

Gravel with Silt and Sand (GW-GM)
Olive Gray (5Y 4/2); dense, saturated, 75% fine to coarse gravel, 15% fine to coarse sand, 10% silt.

Silty Clay (CL)
Dark Olive Gray (5Y 3/2); stiff, wet, 70% clay, 25% silt, 5% very fine sand.

Color change to Dark Grayish Brown (10YR 4/2); very stiff, wet, increase in clay content.

Total Depth of Boring = 30 ft.

WELL			
U-1	**UNOCAL CORPORATION - CERT** Unocal SS No. 7176 7850 Amador Valley Road Dublin, California	Borehole Diameter: 8 inches Logged by: C. Galantine Driller: Mitchell Date Started: 7-6-95 Date Completed: 7-6-95	***enviros*** ® **95132.02**

Field Exploratory Boring Log of Well U-2

OVM PPM	Blows/ 6"	Sample Number	Depth (ft)	Materials Description
				Asphalt
				Silt with Sand (ML) Fill Material
				Very Dark Grayish Brown (10YR 3/2); stiff, moist, 75% silt, 15% fine to coarse sand, 10% fine gravel.
				Silty Clay (CL)
	6			Black (10YR 2/1); very stiff, moist, 80% clay,
0	8			15% silt, 5% very fine sand.
	9			
				Color change to Very Dark Grayish Brown (10YR 3/2); very stiff, moist, 60% clay, 30% silt, 10% very fine sand.
				Color change to Dark Olive Gray (5Y 3/2).
	9			
	11			
0	15			
				Color change to Very Dark Gray (10YR 3/1).
	10			
	15			
0	15	U-2-13'		
				Color change to Dark Olive Gray (5Y 3/2).
	12			
	12			
2	18			
	9			
	14	U-2-17.5'		Saturated at 17.5 ft.
34	17			
				Sandy Silt (ML)
				Olive Gray (5Y 4/2); very hard, wet to saturated, 60% silt, 35% very fine sand, 5% clay.
				Sandy Clay (CL)
				Dark Gray (5Y 4/1); very stiff, wet, 60% clay, 20% silt, 20% very fine sand.
	5			
	12			
0	16			
				Silty Clay (CL)
				Dark Brown (10YR 3/3); hard, wet, 85% clay, 10% silt, 5% very fine sand.
	13			
	15			
6.3	20			Total Depth of Boring = 30 ft.

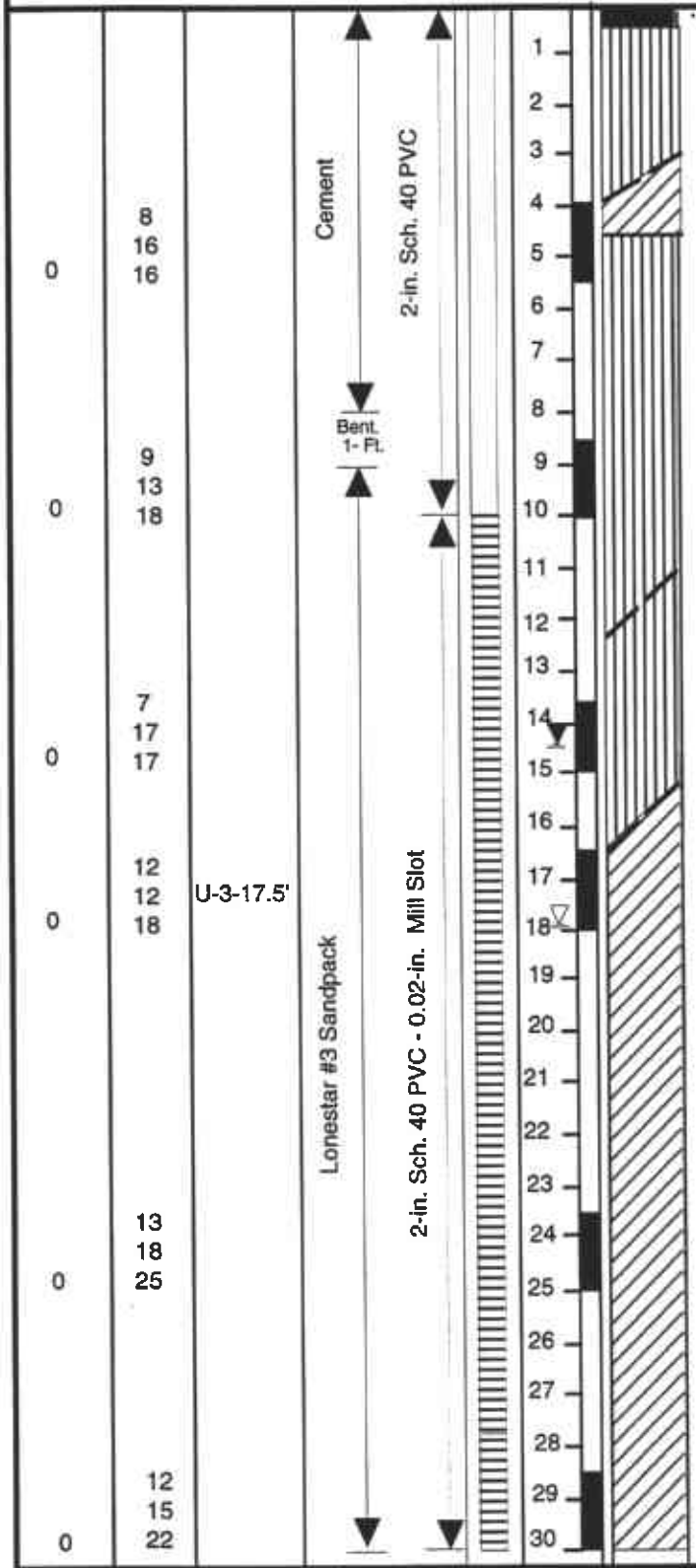
Well construction: Cement; 2-in. Sch. 40 PVC; Bent. 1- Ft.; Lonestar #3 Sandpack; 2-in. Sch. 40 PVC - 0.02-in. Mill Slot

Depth (ft): 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30

Soil Group (USCS)

WELL			
U-2	**UNOCAL CORPORATION - CERT** Unocal SS No. 7176 7850 Amador Valley Road Dublin, California	Borehole Diameter: 8 inches Logged by: C. Galantine Driller: Mitchell Date Started: 7-6-95 Date Completed: 7-6-95	***enviros*** ® 95132.02

Field Exploratory Boring Log of Well U-3



WELL			
U-3	**UNOCAL CORPORATION - CERT** Unocal SS No. 7176 7850 Amador Valley Road Dublin, California	Borehole Diameter: 8 inches Logged by: C. Galantine Driller: Mitchell Date Started: 7-6-95 Date Completed: 7-6-95	***enviros*** ® **95132.02**

Virgil Chavez Land Surveying
1418 Lassen Street
Vallejo, California 94591
707.553.2476

August 2, 1995
Project No. 1233-11

Clyde Galentine
Enviros, Inc.
P.O. Box 259
Sonoma, Ca. 95476

Project No. 95132
RPT ____ PF X BF ____
1 Y 2 ___ 3 ___ 4 ___ 5 ___ 6 ___

Subject: Monitoring Well Survey
7850 Amador Valley Blvd.
Dublin, Ca.

Dear Clyde:

This is to confirm that we have proceeded at your request to survey the ground water monitoring wells located at the above referenced location. The survey was performed July 27, 1995. My findings are shown in the table below, and are based on U.S.G.S. Datum. The benchmark for the survey was a brass disk in the top of curb at the easterly return at the most easterly corner of the intersection of Amador Valley Blvd. and Starward Street, stamped "AM-STW 1977". (Elev.=344.17').

Monitoring Well No.	Rim Elevation	Top of Casing Elevation
U-1	355.94'	355.62'
U-2	357.01'	356.59'
U-3	358.41'	358.13'
B-1	355.55' (ground)	
EXTRA	355.73' "	
B-2	357.78' "	
B-3	356.92' "	
B-4	356.79' "	
B-6	357.64' "	

Measurements taken at approximate north side of top of box, top of casings were marked at location of measurements. B-5 was missed. It will be surveyed in a couple days.

Sincerely,

LICENSED LAND SURVEYOR VIRGIL D. CHAVEZ No. 6323 Exp 12-31-96 STATE OF CALIFORNIA

Virgil D. Chavez, P.L.S. 6323

Project No. 95132
RPT ____ PF X BF ____
1 ___ 2 ___ 3 ___ 4 ___ 5 X 6 ___

COORDINATE FILE NAME: C:\SURVEY\AMADOR.CRD
Job Number: 1233-11
Job Description: AMADOR/REGIONAL
First Point Number: 1 Last Point Number: 39
Number of characters in description: 17

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	5000.000	5000.000	344.171	ALA.CO.BM/AM-STW
2	5000.000	4050.200	355.594	RANDOM
3	4952.952	3991.228	355.939	U-1 RIM
4	4952.716	3991.469	355.620	U-1 TOC
5	4927.531	4030.496	355.705	AC/COR PLNTR
6	4925.224	4032.683	355.703	AC/COR PLNTR
7	4817.713	3882.463	358.955	AC/COR PLNTR
8	4822.047	3882.792	358.781	AC/COR PLNTR
9	4838.629	3889.749	358.415	U-3 RIM
10	4838.422	3890.009	358.131	U-3 TOC
11	4851.696	3879.101	358.143	BLDG COR
12	4902.149	3787.734	357.738	BW/COR PLNTR
13	4904.703	3790.373	357.822	BW/COR PLNTR
14	4908.934	3811.040	357.780	B-2
15	4943.925	3860.133	357.815	CL COL
16	4923.030	3879.843	358.211	CL COL
17	4938.871	3827.709	357.108	BW/COR PLNTR
18	4966.413	3855.579	356.690	BW/COR PLNTR
19	4964.005	3861.241	356.794	B-4
20	4967.181	3884.891	356.925	B-3
21	4950.141	3907.760	357.012	U-2 RIM
22	4949.906	3907.966	356.590	U-2 TOC
23	4911.213	3916.293	357.644	B-6
24	4912.271	3899.426	358.347	BLDG COR
25	4890.277	3919.821	357.988	BLDG COR
26	4975.475	3968.940	355.648	B-1
27	4967.024	3968.957	355.732	EXTRA
28	4971.012	3981.332	355.523	BW/COR PLNTR
29	4960.470	3994.428	355.361	BW/COR PLNTR
30	4985.895	3961.819	355.396	BSW/CL/DW
31	5000.034	3943.421	355.300	BW/COR PLNTR
32	5004.383	3937.806	355.282	BW/PLNTR/RET
33	5011.575	3914.874	355.689	BW/PLNTR/POC
34	5000.082	3886.968	356.310	BW/COR PLNNTR
35	5949.807	4050.140	344.127	BENCH/CHECK
36	5188.982	3920.770	[illegible].000	BLDG COR
37	5158.674	3949.485	[illegible].000	BLDG COR
38	5161.425	3952.388	[illegible].000	BLDG COR
39	5151.081	3962.189	[illegible].000	BLDG COR

CALC'D.

Unused points are:
No Unused Points

Exited COGO Thu Aug 10 12:30:31 pm 1995

APPENDIX B

Field and Laboratory Procedures

FIELD AND LABORATORY PROCEDURES

Drilling and Soil Sampling Procedures

All borings were drilled using a truck-mounted hollow-stem auger drill rig to total depths ranging from 16 to 30 fbg. An Enviros geologist supervised the drilling and described subsurface lithology using the Unified Soil Classification System (USCS) and Munsell Soil Color Chart. Soil samples were collected at a maximum depth interval of 5 feet, at significant changes in lithology, or at the capillary fringe. The samples were collected using a split-spoon sampler. The sampler was driven a maximum of 18 inches using a 140-pound hammer with a 30-inch drop.

A photo-ionization detector (PID) was used for field head-space analysis to check for the presence of volatile organic compounds. Organic vapor concentrations in parts per million were recorded on the soil boring logs. Retrieved soil sample tubes selected for chemical analyses were retained in brass liners and covered with teflon tape and capped. The samples were labeled, entered onto a Chain-of-Custody record and stored in a cooler with ice. The samples were transported to Sequoia Analytical (Sequoia) of Concord, California, a California certified environmental laboratory.

Soil borings not converted to monitoring wells were backfilled to ground surface using a neat cement grout mixture. The grout mixture was pumped from the bottom of the boring to ground surface.

A water line was encountered during drilling of boring B-5. This line was not identified on the Unocal General Arrangement Plan or by the underground utility location activities. The line was repaired by Gettler-Ryan Inc. and B-5 was relocated two feet north of the original placement.

Monitoring Well And PowerPunch Installation

The three monitoring wells (U-1 through U-3) were constructed with 2-inch diameter Schedule 40 PVC well casing to a depth of 30 fbg. The 0.02-inch slot screened interval for each well was placed from 10 to 30 fbg. Lonestar #3 sand was used as a filter pack and was placed in the annular space opposite the entire screen length of the well screen, extending approximately 1-foot above the top of the slots, followed by a 1-foot hydrated bentonite seal placed above the filter pack. The remainder of the annular space was filled with neat cement.

The PowerPunch System was used for collecting groundwater samples from borings UB-2 and UB-4. The PowerPunch utilized a hydraulically powered system which drove a 2-inch diameter stainless-steel drive cone assembly to the desired sampling depth. After reaching the desired depth, the drive rod assembly was retracted to the capillary fringe, exposing the 1-inch diameter PVC casing attached to a 5-foot screened section. The groundwater sample was collected using a 3/4-inch disposable plastic bailer. After sampling, the system was removedand the borehole was backfilled with neat cement grout.

The well heads consist of a locking water-tight cap and padlock. Each well is protected by a traffic-rated well box that is set in concrete. Following the completion of the wells, the top of casing (TOC) elevations were surveyed in to Mean Sea Level (MSL) datum using a state-licensed surveyor. All survey data are reported to an accuracy of ± 0.01 feet.

Well Development And Groundwater Sampling

Monitoring wells U-1 through U-3 were developed using a submersible pump. Water levels were measured prior to developing and sampling. A minimum of 10 well casing volumes of water were purged from each well until the water was relatively clear and free of suspended particles. Each groundwater sample was collected using a clean disposable plastic bailer and analyzed for TPH-Gasoline, TPH-Diesel, and BTEX.

Sample bottles were labeled, and samples were logged onto a Chain-of-Custody record. The samples were placed in a cooler with ice for preservation and transported to Sequoia.

The PowerPunch samples from UB-2 and UB-4 and one additional groundwater sample (UST-1) collected from a conductor casing in the UST complex backfill were analyzed for TPH-Gasoline, TPH-Diesel, and BTEX and handled as mentioned above.

Decontamination Procedures

Drilling and sampling equipment were decontaminated prior to beginning work and between activities performed at each boring and well. Decontamination procedures included steam cleaning and/or Alconox wash followed by a clean water rinse. Drilling equipment was inspected prior to drilling each boring.

During groundwater sampling procedures, wells were purged and sampled using clean disposable bailers. All sampling equipment was decontaminated between wells, and a new disposable bailer was utilized for each boring, well, and conductor casing.

Soils/Purge Water Disposal

Soils generated during drilling were placed in a stockpile on-site and sampled. Upon receipt of the analytical data, approximately 6 cubic yards of soils will be transported to BFI's Vasco Road Landfill located in Livermore, California.

Purge water from initial well development and sampling activities was stored on-site in 55-gallon drums. Approximately 230 gallons of purge water is scheduled to be transported to the Unocal Refinery located in Rodeo, California.

APPENDIX C

**Laboratory Analytical Reports,
Chain-of-Custody Records, and
Field Data Sheets**

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: U-1-10.5
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9507347-01

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/12/95
Analyzed: 07/13/95
Reported: 07/17/95

QC Batch Number: GC0712950HBPEXB
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	87

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: U-1-10.5
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9507347-01

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/11/95
Analyzed: 07/12/95
Reported: 07/17/95

QC Batch Number: GC071195BTEXEXC
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	106

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: U-1-18.5
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9507347-02

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/12/95
Analyzed: 07/14/95
Reported: 07/17/95

QC Batch Number: GC0712950HBPEXB
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	10	25
Chromatogram Pattern: **Unidentified HC**		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	Q

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Enviros	Client Proj. ID: Unocal #7176 Dublin	Sampled: 07/07/95
270 Perkins Ave.	Sample Descript: U-1-18.5	Received: 07/10/95
Sonoma, CA 95476	Matrix: SOLID	Extracted: 07/11/95
	Analysis Method: 8015Mod/8020	Analyzed: 07/12/95
Attention: CGalantine/DVossler	Lab Number: 9507347-02	Reported: 07/17/95

QC Batch Number: GC071195BTEXEXC
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	2.5	26
Benzene	0.012	0.041
Toluene	0.012	0.053
Ethyl Benzene	0.012	0.56
Xylenes (Total)	0.012	2.2
Chromatogram Pattern:		
Weathered Gas		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	120

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Enviros	Client Proj. ID: Unocal #7176 Dublin	Sampled: 07/07/95
270 Perkins Ave.	Sample Descript: U-2-13	Received: 07/10/95
Sonoma, CA 95476	Matrix: SOLID	Extracted: 07/12/95
	Analysis Method: EPA 8015 Mod	Analyzed: 07/13/95
Attention: CGalantine/DVossler	Lab Number: 9507347-03	Reported: 07/17/95

QC Batch Number: GC0712950HBPEXB
Instrument ID: GCHP5B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	1.3
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	91

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Enviros	Client Proj. ID: Unocal #7176 Dublin	Sampled: 07/07/95
270 Perkins Ave.	Sample Descript: U-2-13	Received: 07/10/95
Sonoma, CA 95476	Matrix: SOLID	Extracted: 07/11/95
	Analysis Method: 8015Mod/8020	Analyzed: 07/12/95
Attention: CGalantine/DVossler	Lab Number: 9507347-03	Reported: 07/17/95

QC Batch Number: GC071195BTEXEXC
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	**0.0050**	**0.017**
Toluene	0.0050	N.D.
Ethyl Benzene	**0.0050**	**0.071**
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	95

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: U-2-17.5
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9507347-04

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/12/95
Analyzed: 07/13/95
Reported: 07/17/95

QC Batch Number: GC0712950HBPEXB
Instrument ID: GCHP5B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	12
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	95

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: U-2-17.5
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9507347-04

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/11/95
Analyzed: 07/12/95
Reported: 07/17/95

QC Batch Number: GC071195BTEXEXC
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**20**	**97**
Benzene	0.10	N.D.
Toluene	**0.10**	**0.21**
Ethyl Benzene	**0.10**	**1.7**
Xylenes (Total)	**0.10**	**1.5**
Chromatogram Pattern:		
Weathered Gas		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	100

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: U-3-17.5
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9507347-05

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/12/95
Analyzed: 07/13/95
Reported: 07/17/95

QC Batch Number: GC0712950HBPEXB
Instrument ID: GCHP5B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	94

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Enviros	Client Proj. ID: Unocal #7176 Dublin	Sampled: 07/07/95
270 Perkins Ave.	Sample Descript: U-3-17.5	Received: 07/10/95
Sonoma, CA 95476	Matrix: SOLID	Extracted: 07/11/95
	Analysis Method: 8015Mod/8020	Analyzed: 07/12/95
Attention: CGalantine/DVossler	Lab Number: 9507347-05	Reported: 07/17/95

QC Batch Number: GC071195BTEXEXC
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	101

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: US-1-A (comp A-D)
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9507347-06

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/12/95
Analyzed: 07/14/95
Reported: 07/17/95

C Batch Number: GC0712950HBPEXB
strument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	3.3
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	97

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Client ~~Proj. ID: ---Unocal #7178~~ Dublin

Lab Proj. ID: 9507347

Sampled: 07/07/95
Received: 07/10/95
Analyzed: see below

Attention: CGalantine/DVossler

Reported: 07/17/95

LABORATORY ANALYSIS

Analyte	Units	Date Analyzed	Detection Limit	Sample Results
Lab No: 9507347-06				
Sample Desc : **SOLID,US-1-A (comp A-D)**				
Lead	**mg/Kg**	**07/12/95**	**5.0**	**8.3**

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: US-1-A (comp A-D)
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9507347-06

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/11/95
Analyzed: 07/12/95
Reported: 07/17/95

QC Batch Number: GC071195BTEXEXC
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	**0.0050**	**0.0060**
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	111

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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Enviros
270 Perkins Ave.
Sonoma, CA 95476
Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Lab Proj. ID: 9507347

Received: 07/10/95
Reported: 07/17/95

LABORATORY NARRATIVE

Q - Surrogate diluted out.

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Enviros
270 Perkins Ave.
Sonoma, CA 95476
Attention: C.Galantine/D.Vossler

Client Project ID: Unocal #7176, Dublin
Matrix: Solid
Work Order #: 9507347 -01 -06
Reported: Jul 17, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
QC Batch#:	GC071195BTEXEXC	GC071195BTEXEXC	GC071195BTEXEXC	GC071195BTEXEXC	GC07129OHPEXB
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015 Mod.
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 3550
Analyst:	E. Cunanan	E. Cunanan	E. Cunanan	E. Cunanan	T. Olive
MS/MSD #:	G9507094-09	G9507094-09	G9507094-09	G9507094-09	9507347-01
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/11/95	7/11/95	7/11/95	7/11/95	7/12/95
Analyzed Date:	7/11/95	7/11/95	7/11/95	7/11/95	7/13/95
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18	GCHP5A
Conc. Spiked:	0.20 mg/kg	0.20 mg/kg	0.20 mg/kg	0.60 mg/kg	25 mg/kg
Result:	0.19	0.19	0.20	0.57	19
MS % Recovery:	95	95	100	95	76
Dup. Result:	0.19	0.19	0.19	0.57	18
MSD % Recov.:	95	95	95	95	72
RPD:	0.0	0.0	5.1	0.0	5.4
RPD Limit:	0-50	0-50	0-50	0-50	0-50
LCS #:					BLK071295BS
Prepared Date:					7/12/95
Analyzed Date:					7/13/95
Instrument I.D.#:					GCHP5A
Conc. Spiked:					25 mg/kg
LCS Result:					21
LCS % Recov.:					84
MS/MSD LCS Control Limits	55-145	47-149	47-155	56-140	38-122

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

Sequoia Analytical

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Enviros
270 Perkins Ave.
Sonoma, CA 95476
Attention: C.Galantine/D.Vossler

Client Project ID: Unocal #7176, Dublin
Matrix: Solid
Work Order #: 9507347 --06
Reported: Jul 17, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Beryllium	Cadmium	Chromium	Nickel
QC Batch#:	ME0711956010MDE	ME0711956010MDE	ME0711956010MDE	ME0711956010MDE
Analy. Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050	EPA 3050	EPA 3050
Analyst:	S. O'Donnell	S. O'Donnell	S. O'Donnell	S. O'Donnell
MS/MSD #:	9507358-03	9507358-03	9507358-03	9507358-03
Sample Conc.:	0.66	N.D.	360	150
Prepared Date:	7/11/95	7/11/95	7/11/95	7/11/95
Analyzed Date:	7/12/95	7/12/95	7/12/95	7/12/95
Instrument I.D.#:	MTJA2	MTJA2	MTJA2	MTJA2
Conc. Spiked:	100 mg/kg	100 mg/kg	100 mg/kg	100 mg/kg
Result:	94	89	400	210
MS % Recovery:	93	89	40	60
Dup. Result:	95	91	420	230
MSD % Recov.:	94	91	60	80
RPD:	1.1	2.2	4.9	9.1
RPD Limit:	0-30	0-30	0-30	0-30
LCS #:				
Prepared Date:				
Analyzed Date:				
Instrument I.D.#:				
Conc. Spiked:				
LCS Result:				
LCS % Recov.:				
MS/MSD LCS Control Limits	75-125	75-125	75-125	75-125

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

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Enviros
270 Perkins Ave.
Sonoma, CA 95476
Attention: C.Galantine/D.Vossler

Client Project ID: Unocal #7176, Dublin
Matrix: Solid
Work Order #: 9507347 --06

Reported: Jul 17, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Silver	Barium
QC Batch#:	ME0711956010MDE	ME0711956010MDE
Analy. Method:	EPA 6010	EPA 6010
Prep. Method:	EPA 3050	EPA 3050
Analyst:	S. O'Donnell	S. O'Donnell
MS/MSD #:	9507358-03	9507358-03
Sample Conc.:	N.D.	30
Prepared Date:	7/11/95	7/11/95
Analyzed Date:	7/12/95	7/12/95
Instrument I.D.#:	MTJA2	MTJA2
Conc. Spiked:	100 mg/kg	100 mg/kg
Result:	85	130
MS % Recovery:	85	100
Dup. Result:	88	140
MSD % Recov.:	88	110
RPD:	3.5	7.4
RPD Limit:	0-30	0-30

LCS #:		
Prepared Date:		
Analyzed Date:		
Instrument I.D.#:		
Conc. Spiked:		
LCS Result:		
LCS % Recov.:		

MS/MSD LCS Control Limits	75-125	75-125

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS=Matrix Spike, MSD=MS Duplicate, RPD=Relative % Difference

UNOCAL 76

❑ 680 Chesapeake Drive • Redwood City, CA 94063 • (415) 364-9600 ❑ 18939 120th Ave. N.E., Suite 101 • Bothell, WA 98011 • (206) 485-5200
❑ 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 ❑ East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
❑ 1900 Bates Ave., Suite LM • Concord, CA 94520 • (510) 686-9600 ❑ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Company Name: Enviros	Project Name: Unocal #7176
Address: P.O. Box 259	UNOCAL Project Manager: Ed Ralston
City: Sonoma State: CA Zip Code: 95476	Release #:
Telephone: 707-935-4858 FAX #: 707-935-6649	Site #: 7850 Amador Valley Blvd Dublin
Report To: C Galantine / D Vossler Sampler: Clyde Galantine	QC Data: ❑ Level D (Standard) ❑ Level C ❑ Level B ❑ Level A

Turnaround Time: ❑ 10 Work Days ☒ 5 Work Days ❑ 3 Work Days ❑ 2 Work Days ❑ 1 Work Day ❑ 2-8 Hours

CODE: ❑ Misc. ❑ Detect. ❑ Eval. ❑ Remed. ❑ Demol. ❑ Closure

❑ Drinking Water ❑ Waste Water ❑ Other

Analyses Requested: TPH-G/BTEX / TPH-D / TTLC Pb / 9507347

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-G/BTEX	TPH-D	TTLC Pb	9507347	Comments
1. U-1-10.5	7/7/95 9:55	Soil	1	tubes	1	X	X			5 Day TAT
2. U-1-18.5	7/7/95 10:25		1		2	X	X			
3.										
4. U-2-13	7/7/95 12:20		1		3	X	X			
5. U-2-17.5	7/7/95 12:35		1		4	X	X			
6.										
7. U-3-17.5	7/7/95 3:15		1		5	X	X			
8.										
9. US-1A-D	7/7/95 6:00	↓	4→1	↓	6 & D	X	X	X		↓
10.										

Relinquished By: Clyde Galantine	Date: 7/8/95	Time: 13:00	Received By: Refrigerator 1	Date: 7/8/95	Time: 13:00
Relinquished By: Refrigerator 1	Date: 11:00	Time: 7/10/95	Received By: Ralph Bonilla	Date: 7/10/95	Time: 11:00
Relinquished By: Ralph Bonilla	Date: 7/10/95	Time: 13:1	Received By Lab: Tina Hitt	Date: 07/10/95	Time: 1334

Were Samples Received in Good Condition? ☒ Yes ❑ No Samples on Ice? ☒ Yes ❑ No Method of Shipment _____ Page __ of __

To be completed upon receipt of report:
1) Were the analyses requested on the Chain of Custody reported? ❑ Yes ❑ No If no, what analyses are still needed? _____
2) Was the report issued within the requested turnaround time? ❑ Yes ❑ No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client
Yellow - Laboratory
White - Laboratory

Sequoia Analytical

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RECEIVED JUL 1995

Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-1-13
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9507350-01

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/12/95
Analyzed: 07/14/95
Reported: 07/17/95

QC Batch Number: GC0712950HBPEXB
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	1.5
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	81

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-1-13
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9507350-01

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/11/95
Analyzed: 07/12/95
Reported: 07/17/95

QC Batch Number: GC071195BTEXEXB
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	97

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Enviros	Client Proj. ID: Unocal #7176 Dublin	Sampled: 07/07/95
270 Perkins Ave.	Sample Descript: B-1-18	Received: 07/10/95
Sonoma, CA 95476	Matrix: SOLID	Extracted: 07/12/95
	Analysis Method: EPA 8015 Mod	Analyzed: 07/14/95
Attention: CGalantine/DVossler	Lab Number: 9507350-02	Reported: 07/17/95

QC Batch Number: GC0712950HBPEXB
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	1.0
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	82

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-1-18
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9507350-02

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/11/95
Analyzed: 07/12/95
Reported: 07/17/95

QC Batch Number: GC071195BTEXEXB
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**1.0**	**2.1**
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	**0.0050**	**0.028**
Xylenes (Total)	**0.0050**	**0.0088**
Chromatogram Pattern:		
Weathered Gas		**C6-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	99

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-2-16
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9507350-03

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/12/95
Analyzed: 07/14/95
Reported: 07/17/95

QC Batch Number: GC0712950HBPEXB
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	81

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

SEQUOIA ANALYTICAL - ELAP #1210

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-2-16
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9507350-03

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/11/95
Analyzed: 07/12/95
Reported: 07/17/95

QC Batch Number: GC071195BTEXEXB
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	94

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

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-3-11
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9507350-04

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/12/95
Analyzed: 07/14/95
Reported: 07/17/95

QC Batch Number: GC0712950HBPEXB
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	73

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

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-3-11
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9507350-04

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/11/95
Analyzed: 07/12/95
Reported: 07/17/95

QC Batch Number: GC071195BTEXEXB
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	92

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

SEQUOIA ANALYTICAL - ELAP #1210

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-3-17
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9507350-05

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/12/95
Analyzed: 07/14/95
Reported: 07/17/95

QC Batch Number: GC0712950HBPEXB
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	68

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

SEQUOIA ANALYTICAL - ELAP #1210

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-3-17
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9507350-05

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/11/95
Analyzed: 07/12/95
Reported: 07/17/95

QC Batch Number: GC071195BTEXEXB
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	89

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

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-4-11.5
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9507350-06

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/12/95
Analyzed: 07/14/95
Reported: 07/17/95

QC Batch Number: GC0712950HBPEXB
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	83

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

SEQUOIA ANALYTICAL - ELAP #1210

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-4-11.5
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9507350-06

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/11/95
Analyzed: 07/12/95
Reported: 07/17/95

QC Batch Number: GC071195BTEXEXB
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	89

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

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-4-16
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9507350-07

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/12/95
Analyzed: 07/14/95
Reported: 07/17/95

QC Batch Number: GC0712950HBPEXB
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	1.7
Chromatogram Pattern: **Unidentified HC**		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	84

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

SEQUOIA ANALYTICAL - ELAP #1210

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Enviros	Client Proj. ID: Unocal #7176 Dublin	Sampled: 07/07/95
270 Perkins Ave.	Sample Descript: B-4-16	Received: 07/10/95
Sonoma, CA 95476	Matrix: SOLID	Extracted: 07/11/95
	Analysis Method: 8015Mod/8020	Analyzed: 07/12/95
Attention: CGalantine/DVossler	Lab Number: 9507350-07	Reported: 07/17/95

QC Batch Number: GC071195BTEXEXA
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	103

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

SEQUOIA ANALYTICAL - ELAP #1210

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-5-14.5
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9507350-08

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/12/95
Analyzed: 07/14/95
Reported: 07/17/95

QC Batch Number: GC0712950HBPEXB
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	59

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

SEQUOIA ANALYTICAL - ELAP #1210

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-5-14.5
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9507350-08

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/11/95
Analyzed: 07/12/95
Reported: 07/17/95

QC Batch Number: GC071195BTEXEXB
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	5.1
Benzene	0.0050	0.13
Toluene	0.0050	0.020
Ethyl Benzene	0.0050	0.29
Xylenes (Total)	0.0050	0.12
Chromatogram Pattern:		
Weathered Gas		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	102

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

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-5-18
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9507350-09

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/12/95
Analyzed: 07/14/95
Reported: 07/17/95

QC Batch Number: GC0712950HBPEXB
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	4.8
Chromatogram Pattern: **Unidentified HC**		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	75

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

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-5-18
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9507350-09

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/11/95
Analyzed: 07/12/95
Reported: 07/17/95

QC Batch Number: GC071195BTEXEXB
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**10**	**59**
Benzene	**0.050**	**0.068**
Toluene	0.050	N.D.
Ethyl Benzene	**0.050**	**0.84**
Xylenes (Total)	**0.050**	**0.98**
Chromatogram Pattern:		
Weathered Gas		**C7-C12**

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	112

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

SEQUOIA ANALYTICAL - ELAP #1210

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-6-14.5
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9507350-10

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/12/95
Analyzed: 07/14/95
Reported: 07/17/95

QC Batch Number: GC0712950HBPEXB
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	70

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

SEQUOIA ANALYTICAL - ELAP #1210

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-6-14.5
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9507350-10

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/11/95
Analyzed: 07/11/95
Reported: 07/17/95

QC Batch Number: GC071195BTEXEXB
Instrument ID: GCHP18

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	**1.0**	**4.9**
Benzene	**0.0050**	**0.088**
Toluene	0.0050	N.D.
Ethyl Benzene	**0.0050**	**0.099**
Xylenes (Total)	**0.0050**	**0.22**
Chromatogram Pattern:		
Weathered Gas		C6-C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	95

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

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-6-19.5
Matrix: SOLID
Analysis Method: EPA 8015 Mod
Lab Number: 9507350-11

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/12/95
Analyzed: 07/14/95
Reported: 07/17/95

QC Batch Number: GC0712950HBPEXB
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	10
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	79

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

SEQUOIA ANALYTICAL - ELAP #1210

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-6-19.5
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9507350-11

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/11/95
Analyzed: 07/12/95
Reported: 07/17/95

QC Batch Number: GC071195BTEXEXA
Instrument ID: GCHP22

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	20	150
Benzene	0.10	0.21
Toluene	0.10	3.0
Ethyl Benzene	0.10	3.2
Xylenes (Total)	0.10	19
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	86

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

SEQUOIA ANALYTICAL - ELAP #1210

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Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Enviros
270 Perkins Ave.
Sonoma, CA 95476
Attention: C.Galantine/D.Vossler

Client Project ID: Unocal #7176, Dublin
Matrix: Solid
Work Order #: 9507350 -01 -11

Reported: Jul 17, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes	Diesel
QC Batch#:	GC071195BTEXEXB	GC071195BTEXEXB	GC071195BTEXEXB	GC071195BTEXEXB	GC07129OHPEXB
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020	EPA 8015 Mod.
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030	EPA 3550
Analyst:	E. Cunanan	E. Cunanan	E. Cunanan	E. Cunanan	T. Olive
MS/MSD #:	G9507094-08	G9507094-08	G9507094-08	G9507094-08	9507347-01
Sample Conc.:	N.D.	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/11/95	7/11/95	7/11/95	7/11/95	7/12/95
Analyzed Date:	7/11/95	7/11/95	7/11/95	7/11/95	7/13/95
Instrument I.D.#:	GCHP18	GCHP18	GCHP18	GCHP18	GCHP5A
Conc. Spiked:	0.20 mg/kg	0.20 mg/kg	0.20 mg/kg	0.60 mg/kg	25 mg/kg
Result:	0.18	0.19	0.19	0.56	19
MS % Recovery:	90	95	95	93	76
Dup. Result:	0.19	0.19	0.19	0.57	18
MSD % Recov.:	95	95	95	95	72
RPD:	5.4	0.0	0.0	1.8	5.4
RPD Limit:	0-50	0-50	0-50	0-50	0-50

LCS #:	BLK071295BS
Prepared Date:	7/12/95
Analyzed Date:	7/13/95
Instrument I.D.#:	GCHP5A
Conc. Spiked:	25 mg/kg
LCS Result:	21
LCS % Recov.:	84

MS/MSD Control Limits	55-145	47-149	47-155	56-140	
LCS Control Limits					38-122

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Mike Gregory
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

UNOCAL 76

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❑ 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 ❑ East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200
❑ 1900 Bates Ave., Suite LM • Concord, CA 94520 • (510) 686-9600 ❑ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Company Name: Enviros	Project Name: Unocal # 7176
Address: P.O. Box 259	UNOCAL Project Manager: Ed Ralston
City: Sonoma State: CA Zip Code: 95476	Release #:
Telephone: 707-935-4858 FAX #: 707-935-6649	Site #: 7850 Amador Valley Blvd !
Report To: CGalantine / DVossler Sampler: Clyde Galantine	QC Data: ❑ Level D (Standard) ❑ Level C ❑ Level B ❑ Level A

Turnaround Time: ❑ 10 Work Days ☒ 5 Work Days ❑ 3 Work Days ❑ 2 Work Days ❑ 1 Work Day ❑ 2-8 Hours

CODE: ❑ Misc. ☒ Detect. ❑ Eval. ❑ Remed. ❑ Demol. ❑ Closure

❑ Drinking Water ❑ Waste Water ❑ Other

Analyses Requested

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-G, BTEX	TPH-D	9507350	Comments
1. B-1-13	7/7/95 8:50	Soil	1	tube	1	X	X		5 Day TAT
2. B-1-18	9:00				2	X	X		
3. B-2-16	10:05				3	X	X		
4. B-3-11	11:00				4	X	X		
5. B-3-17	11:05				5	X	X		
6. B-4-11.5	12:15				6	X	X		
7. B-4-16	12:20				7	X	X		
8. B-5-14.5	2:00				8	X	X		
9. B-5-18	2:05				9	X	X		
10.					10				

Relinquished By: Clyde Galantine	Date: 7/8/95	Time: 13:00	Received By: Refrigerator 1	Date: 7/8/95	Time: 13:00
Relinquished By: Refrigerator 1	Date: 7/10/95	Time: 11:00	Received By: Ralph Burnett	Date: 7/10/95	Time: 11:00
Relinquished By: Ralph Burnett	Date: 7/10/95	Time: 1:31	Received By Lab:	Date:	Time:

Were Samples Received in Good Condition? ❑ Yes ❑ No Samples on Ice? ❑ Yes ❑ No Method of Shipment _____ Page __ of __

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? ❑ Yes ❑ No If no, what analyses are still needed? _____

2) Was the report issued within the requested turnaround time? ❑ Yes ❑ No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client

Yellow - Laboratory

White - Laboratory

UNOCAL 76

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❑ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Company Name: Enviros	Project Name: Unocal #7176
Address: P.O. Box 259	UNOCAL Project Manager: Ed Ralston
City: Sonoma State: CA Zip Code: 95476	Release #:
Telephone: 707-935-4858 FAX #: 707-935-6649	Site #: 7850 Amador Valley Blvd Dublin
Report To: CGalantine/DVossler Sampler: Clyde Galantine	QC Data: ❑ Level D (Standard) ❑ Level C ❑ Level B ❑ Level A

Turnaround Time: ❑ 10 Work Days ☒ 5 Work Days ❑ 3 Work Days ❑ 2 Work Days ❑ 1 Work Day ❑ 2-8 Hours

CODE: ❑ Misc. ☒ Detect. ❑ Eval. ❑ Remed. ❑ Demol. ❑ Closure

❑ Drinking Water ❑ Waste Water ❑ Other

Analyses Requested

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-G, BTEX	TPH-D	Oxygenates	9507350	Comments
1.	B-6-14.5	7/7/95 3:20	Soil	1	Tube	10A	X	X			5 Day TAT
2.	B-6-19.5	7/7/95 3:30	Soil	1	Tube	11A	X	X			↓ ↓
3.											
4.											
5.	~~B-6-15.5~~	~~7/7/95 3:20~~									
6.											
7.											
8.											
9.											
10.											

Pink - Client

Yellow - Laboratory

White - Laboratory

Relinquished By: Clyde Galantine	Date: 7/8/95	Time: 13:00	Received By: Refrigerator 1	Date: 7/8/95	Time: 13:00
Relinquished By: Refrigerator 1	Date: 7/10/95	Time: 11:00	Received By: Ralph Burrell	Date: 7/10/95	Time: 11:00
Relinquished By: Ralph Burrell	Date: 7/10/95	Time: [illegible]	Received By Lab:	Date:	Time:

Were Samples Received in Good Condition? ❑ Yes ❑ No Samples on Ice? ❑ Yes ❑ No Method of Shipment_____ Page __ of __

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? ❑ Yes ❑ No If no, what analyses are still needed? _____

2) Was the report issued within the requested turnaround time? ❑ Yes ❑ No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

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Enviros
70 Perkins Ave.
onoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-2
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9507346-01

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/13/95
Analyzed: 07/14/95
Reported: 07/17/95

C Batch Number: GC0712950HBPEXA
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
EPH as Diesel	62	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	105

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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Enviros
770 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-2
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9507346-01

Sampled: 07/07/95
Received: 07/10/95

Analyzed: 07/11/95
Reported: 07/17/95

QC Batch Number: GC071195BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	89

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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Enviros	Client Proj. ID: Unocal #7176 Dublin	Sampled: 07/07/95
270 Perkins Ave.	Sample Descript: B-4	Received: 07/10/95
Sonoma, CA 95476	Matrix: LIQUID	Extracted: 07/11/95
	Analysis Method: EPA 8015 Mod	Analyzed: 07/12/95
Attention: CGalantine/DVossler	Lab Number: 9507346-02	Reported: 07/17/95

QC Batch Number: GC0711950HBPEXY
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	**250**	**390**
Chromatogram Pattern:		
Unidentified HC		**C9-C24**

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	129

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

SEQUOIA ANALYTICAL - ELAP #1210

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Enviros
270 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: B-4
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9507346-02

Sampled: 07/07/95
Received: 07/10/95

Analyzed: 07/11/95
Reported: 07/17/95

QC Batch Number: GC071195BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	86

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

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Enviros	Client Proj. ID: Unocal #7176 Dublin	Sampled: 07/07/95
0 Perkins Ave.	Sample Descript: UST-1	Received: 07/10/95
noma, CA 95476	Matrix: LIQUID	Extracted: 07/11/95
	Analysis Method: EPA 8015 Mod	Analyzed: 07/12/95
Attention: CGalantine/DVossler	Lab Number: 9507346-03	Reported: 07/17/95

Batch Number: GC0711950HBPEXY
Instrument ID: GCHP4A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
EPH as Diesel	**50**	**970**
Chromatogram Pattern:		
Unidentified HC		**C9-C24**

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	120

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

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Enviros	Client Proj. ID: Unocal #7176 Dublin	Sampled: 07/07/95
0 Perkins Ave.	Sample Descript: UST-1	Received: 07/10/95
noma, CA 95476	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 07/11/95
Attention: CGalantine/DVossler	Lab Number: 9507346-03	Reported: 07/17/95

Batch Number: GC071195BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
PH as Gas	**1000**	**3000**
enzene	**10**	**280**
Toluene	10	N.D.
Ethyl Benzene	10	N.D.
lenes (Total)	10	N.D.
romatogram Pattern:		
Weathered Gas		**C6-C12**

Surrogates	Control Limits %		% Recovery
fluorotoluene	70	130	104

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

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Enviros
[redacted]0 Perkins Ave.
[redacted]onoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: U-1
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9507346-04

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/11/95
Analyzed: 07/13/95
Reported: 07/17/95

[redacted] Batch Number: GC0711950HBPEXY
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
[redacted]EPH as Diesel	**250**	**9400**
[redacted]hromatogram Pattern:		
Unidentified HC		**C9-C24**

Surrogates	Control Limits %		% Recovery
[redacted]-Pentacosane (C25)	50	150	105

An[redacted]tes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Mi[redacted] Gregory
Project Manager

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Enviros
70 Perkins Ave.
Sonoma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: U-1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9507346-04

Sampled: 07/07/95
Received: 07/10/95

Analyzed: 07/12/95
Reported: 07/17/95

QC Batch Number: GC071295BTEX07A
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	5000	39000
Benzene	50	1500
Toluene	50	19
Ethyl Benzene	50	1600
Xylenes (Total)	50	5200
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	128

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

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Mike Gregory
Project Manager

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Enviros	Client Proj. ID: Unocal #7176 Dublin	Sampled: 07/07/95
70 Perkins Ave.	Sample Descript: U-2	Received: 07/10/95
Sonoma, CA 95476	Matrix: LIQUID	Extracted: 07/11/95
	Analysis Method: EPA 8015 Mod	Analyzed: 07/13/95
Attention: CGalantine/DVossler	Lab Number: 9507346-05	Reported: 07/17/95

QC Batch Number: GC0711950HBPEXY
Instrument ID: GCHP5A

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	250	4700
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	103

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

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Enviros
0 Perkins Ave.
noma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: U-2
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9507346-05

Sampled: 07/07/95
Received: 07/10/95

Analyzed: 07/11/95
Reported: 07/17/95

Batch Number: GC071195BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
PPH as Gas	5000	17000
enzene	50	430
Toluene	50	N.D.
Ethyl Benzene	50	2200
lenes (Total)	50	590
hromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
fluorotoluene	70	130	87

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

SEQUOIA ANALYTICAL - ELAP #1210

Mi Gregory
Project Manager

Sequoia Analytical

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Enviros
[illegible]0 Perkins Ave.
[illegible]noma, CA 95476

Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin
Sample Descript: U-3
Matrix: LIQUID
Analysis Method: EPA 8015 Mod
Lab Number: 9507346-06

Sampled: 07/07/95
Received: 07/10/95
Extracted: 07/12/95
Analyzed: 07/14/95
Reported: 07/17/95

Q[illegible] Batch Number: GC0712950HBPEXA
Instrument ID: GCHP4B

Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit ug/L	Sample Results ug/L
TEPH as Diesel	50	710
Chromatogram Pattern:		
Unidentified HC		C9-C24

Surrogates	Control Limits %		% Recovery
n-Pentacosane (C25)	50	150	96

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

SEQUOIA ANALYTICAL - ELAP #1210

Mik[illegible] Gregory
Proj[illegible]ct Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Enviros	Client Proj. ID: Unocal #7176 Dublin	Sampled: 07/07/95
70 Perkins Ave.	Sample Descript: U-3	Received: 07/10/95
Sonoma, CA 95476	Matrix: LIQUID	
	Analysis Method: 8015Mod/8020	Analyzed: 07/12/95
Attention: CGalantine/DVossler	Lab Number: 9507346-06	Reported: 07/17/95

QC Batch Number: GC071195BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	1100
Benzene	0.50	0.57
Toluene	0.50	2.1
Ethyl Benzene	0.50	1.7
Xylenes (Total)	0.50	2.4
Chromatogram Pattern:		Gas
Gas & Unidentified HC		>C12

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	81

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

SEQUOIA ANALYTICAL - ELAP #1210

Mike Gregory
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Enviros
70 Perkins Ave.
onoma, CA 95476
Attention: CGalantine/DVossler

Client Proj. ID: Unocal #7176 Dublin

Lab Proj. ID: 9507346

Received: 07/10/95

Reported: 07/17/95

LABORATORY NARRATIVE

On the Quality Control Report for diesel samples 02-05, the MS/MSD were diluted out. Okay to use the LCS.

SEQUOIA ANALYTICAL

M e Gregory
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Enviros	Client Project ID:	Unocal #7176 Dublin	
270 Perkins Ave.	Matrix:	Liquid	
Sonoma, CA 95476			
Attention: C.Galantine/D.Vossler	Work Order #:	9507346 -01, 06	Reported: Jul 17, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Diesel
QC Batch#:	GC071295OHBPEXA
Analy. Method:	EPA 8015 Mod
Prep. Method:	EPA 3510
Analyst:	T. Olive
MS/MSD #:	BLK071295BS
Sample Conc.:	N.D.
Prepared Date:	7/12/95
Analyzed Date:	7/12/95
Instrument I.D.#:	GCHP5B
Conc. Spiked:	1000 ug/L
Result:	770
MS % Recovery:	77
Dup. Result:	810
MSD % Recov.:	81
RPD:	5.1
RPD Limit:	0-50

LCS #:	
Prepared Date:	
Analyzed Date:	
Instrument I.D.#:	
Conc. Spiked:	
LCS Result:	
LCS % Recov.:	

MS/MSD LCS Control Limits	38-122

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

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Enviros
270 Perkins Ave.
Sonoma, CA 95476
Attention: C.Galantine/D.Vossler

Client Project ID: Unocal #7176 Dublin
Matrix: Liquid
Work Order #: 9507346 -02 - 05
Reported: Jul 17, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Diesel
QC Batch#:	GC071195OHBPEXY
Analy. Method:	EPA 8015 Mod
Prep. Method:	EPA 3520
Analyst:	T. Olive
MS/MSD #:	9507182-06
Sample Conc.:	43,000
Prepared Date:	7/11/95
Analyzed Date:	7/13/95
Instrument I.D.#:	GCHP4B
Conc. Spiked:	1000 ug/L
Result:	0 *
MS % Recovery:	0.0
Dup. Result:	0 *
MSD % Recov.:	0.0
RPD:	0.0
RPD Limit:	0-50

LCS #:	BLK071195BSB
Prepared Date:	7/11/95
Analyzed Date:	7/12/95
Instrument I.D.#:	GCHP4A
Conc. Spiked:	1000 ug/L
LCS Result:	720
LCS % Recov.:	72

MS/MSD LCS Control Limits	38-122

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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Enviros
270 Perkins Ave.
Sonoma, CA 95476
Attention: C.Galantine/D.Vossler

Client Project ID: Unocal #7176 Dublin
Matrix: Liquid
Work Order #: 9507346 -01 - 03, 05, 06
Reported: Jul 17, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC071195BTEX03A	GC071195BTEX03A	GC071195BTEX03A	GC071195BTEX03A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Minkel	J. Minkel	J. Minkel	J. Minkel
MS/MSD #:	G9507139-05C	G9507139-05C	G9507139-05C	G9507139-05C
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/11/95	7/11/95	7/11/95	7/11/95
Analyzed Date:	7/11/95	7/11/95	7/11/95	7/11/95
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
Result:	10	11	11	33
MS % Recovery:	100	110	110	110
Dup. Result:	11	11	12	36
MSD % Recov.:	110	110	120	120
RPD:	9.5	0.0	8.7	8.7
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:				
Prepared Date:				
Analyzed Date:				
Instrument I.D.#:				
Conc. Spiked:				
LCS Result:				
LCS % Recov.:				
MS/MSD LCS Control Limits	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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Sequoia Analytical

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Enviros	Client Project ID:	Unocal #7176 Dublin	
270 Perkins Ave.	Matrix:	Liquid	
Sonoma, CA 95476			
Attention: C.Galantine/D.Vossler	Work Order #:	9507346 -04	Reported: Jul 17, 1995

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC071295BTEX07A	GC071295BTEX07A	GC071295BTEX07A	GC071295BTEX07A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	R. Geckler	R. Geckler	R. Geckler	R. Geckler
MS/MSD #:	G9507334-01	G9507334-01	G9507334-01	G9507334-01
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	7/12/95	7/12/95	7/12/95	7/12/95
Analyzed Date:	7/12/95	7/12/95	7/12/95	7/12/95
Instrument I.D.#:	GCHP7	GCHP7	GCHP7	GCHP7
Conc. Spiked:	10 ug/L	10 ug/L	10 ug/L	30 ug/L
Result:	8.5	8.4	8.6	26
MS % Recovery:	85	84	86	87
Dup. Result:	8.0	8.0	8.1	24
MSD % Recov.:	80	80	81	80
RPD:	6.1	4.9	6.0	8.0
RPD Limit:	0-50	0-50	0-50	0-50
LCS #:				
Prepared Date:				
Analyzed Date:				
Instrument I.D.#:				
Conc. Spiked:				
LCS Result:				
LCS % Recov.:				
MS/MSD LCS Control Limits	71-133	72-128	72-130	71-120

SEQUOIA ANALYTICAL

Mike Gregory
Project Manager

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** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

UNOCAL 76

[redacted] ❑ 680 Chesapeake Drive • [redacted] ❑ 819 Striker Ave., Suite 8 • Sacramento, CA 95834 • (916) 921-9600 ❑ 1900 Bates Ave., Suite LM • Concord, CA 94520 • (510) 686-9600 ❑ East 11115 Montgomery, Suite B • Spokane, WA 99206 • (509) 924-9200 ❑ 15055 S.W. Sequoia Pkwy, Suite 110 • Portland, OR 97222 • (503) 624-9800

Company Name: Enviros	Project Name: Unocal #7176
Address: P.O. Box 259	UNOCAL Project Manager: Ed Ralston
City: Sonoma State: CA Zip Code: 95476	Release #:
Telephone: 707-935-4858 FAX #: 707-935-6649	Site #: 7850 Amador Valley Blvd Dublin
Report To: C Galantine / D Vossler Sampler: Clyde Galantine	QC Data: ❑ Level D (Standard) ❑ Level C ❑ Level B ❑ Level A

Turnaround Time: ❑ 10 Work Days ☒ 5 Work Days ❑ 3 Work Days ❑ 2 Work Days ❑ 1 Work Day ❑ 2-8 Hours

CODE: ❑ Misc. ☒ Detect. ❑ Eval. ❑ Remed. ❑ Demol. ❑ Closure

❑ Drinking Water ❑ Waste Water ❑ Other

Analyses Requested

	Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	TPH-G/BTEX	TPH-D	9507341	Comments
1.	B-2	7/7/95 1:20 pm	H_2O	5	VOAs ambers	1 AD	X	X		5 Day TAT
2.	B-4	7/7/95 4:50 pm		5		2	X	X		
3.	UST-1	7/7/95 6:30 pm		5		3	X	X		
4.										
5.	U-1	7/7/95 10:10 pm		5		4	X	X		
6.	U-2	7/7/95 9:20 pm		5		5	X	X		
7.	U-3	7/7/95 8:30 pm		5		6	X	X		
8.										
9.										
10.										

Relinquished By: Clyde Galantine	Date: 7/8/95	Time: 13:00	Received By: Refrigerator 1	Date: 7/8/95	Time: 13:00
Relinquished By: Refrigerator 1	Date: 7/10/95	Time: 11:00	Received By: Ralph Bonilla	Date: 7/10/95	Time: 11:00
Relinquished By: Ralph Bonilla	Date: 7/10/95	Time: 1334	Received By Lab: [signature]	Date: 071095	Time: 1334

Were Samples Received in Good Condition? ❑ Yes ❑ No Samples on Ice? ❑ Yes ❑ No Method of Shipment_____ Page __ of __

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? ❑ Yes ❑ No If no, what analyses are still needed? _____

2) Was the report issued within the requested turnaround time? ❑ Yes ❑ No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Pink - Client

Yellow - Laboratory

White - Laboratory

GROUNDWATER MONITORING DATA

Client: Unocal # 7176 Project No.: 95132.02 Date: 7/7/95

Site Address: 7850 Amador Valley Blvd, Dublin

Field Representative: Clyde Calantine Well Survey Datum: _____

Well No.	Well Dia. (In.)	Well Depth (feet)	Depth to Water (feet)	Water Column (feet)	Well Datum Elev. (feet)	GW Elev. (feet)	F.P. (ft.)	Well Secured (Y/N)
U-1	2	30	12.59	17.41				Y
U-2	2	30	12.68	17.32				Y
U-3	2	30	14.58	15.42				Y

Comments: _____

SAMPLING DATA SHEET

Client: Unocal #7176 Project No.: 95132.02

Site: 7850 Amador Valley Blvd Dublin Date Sampled: 7/7/95

Sampler: C Galantine Well ID: U-1

Well Diameter: 2 inches Well Depth: 30 feet Casing Type: PVC

DTW: 12.59 feet FP Present? No FP Thickness: — feet

Survey Datum: X TOC ____ Well Box ____ Other

WELL INTEGRITY

1.	Surface Seal:	X Good	____ Fair	____ Poor
2.	Traffic Box:	X Good	____ Fair	____ Poor
3.	Well Cap:	X Good	____ Fair	____ Poor
4.	Well Locked:	X Yes	____ No	

PURGE VOLUME CALCULATION

Well Diameter:	17.4# 2"	3"	4"	6"	8"	"Specify
Water Vol. (gal/ft):	0.163	0.367	0.653	1.47	2.61	

2.84 (1 Casing Volume) x 10 (Purged Volumes) = 28.4 (Total Gallons)

Purge Equipment: Submersible pump Sampling Equipment: disposable plastic bailer

TIME	TEMP (F)	pH	E.C.	TURBIDITY	VOLUME
9:45	67.9	6.72	1,230		10
9:50	67.6	6.75	1190		20
9:55	67.7	6.79	1,210		30

9:40

Did Well Dewater? ____ Yes X No Actual Gallons Purged: 30

Sampling Time: 10:10 Analytical Laboratory: Sequoia

Sample ID: U-1 Chemical Analyses: TPH-G, D, BTEX

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SAMPLING DATA SHEET

Client: Unocal #7176 Project No.: 95132.02

Site: 7850 Amador Valley Blvd Dublin Date Sampled: 7/7/95

Sampler: C Galantine Well ID: U-2

Well Diameter: 2 inches Well Depth: 30 feet Casing Type: PVC

DTW: 12.68 feet FP Present? No FP Thickness: — feet

Survey Datum: X TOC ____ Well Box ____ Other

WELL INTEGRITY

1. Surface Seal:	X Good	____ Fair	____ Poor	
2. Traffic Box:	X Good	____ Fair	____ Poor	
3. Well Cap:	X Good	____ Fair	____ Poor	
4. Well Locked:	X Yes	____ No		

PURGE VOLUME CALCULATION

Well Diameter:	17.32 2"	____ 3"	____ 4"	____ 6"	____ 8"	____ "Specify
Water Vol. (gal/ft):	0.163	0.367	0.653	1.47	2.61	

2.83 (1 Casing Volume) x 10 (Purged Volumes) = 28.3 (Total Gallons)

Purge Equipment: Submersible pump Sampling Equipment: disposable plastic bailer

TIME	TEMP (F)	pH	E.C.	TURBIDITY	VOLUME
8:45					
9:00					
9:10					
8:50	69.3	6.78	1,140		9
9:00	69.1	6.76	1,230		20
9:10	69.0	6.79	1,340		30

Did Well Dewater? ____ Yes X No Actual Gallons Purged: 30

Sampling Time: 9:20 Analytical Laboratory: Severn

Sample ID: U-2 Chemical Analyses: TPH-G, & BTEX

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SAMPLING DATA SHEET

Client: Unocal #7176 Project No.: AP 95132.02

Site: 7850 Amador Valley Blvd Date Sampled: 7/7/95

Sampler: C Galantine Well ID: U-3

Well Diameter: 2 inches Well Depth: 30 feet Casing Type: PVC

DTW: 14.56 feet FP Present? No FP Thickness: — feet

Survey Datum: X TOC ____ Well Box ____ Other

WELL INTEGRITY

1.	Surface Seal:	X Good	____ Fair	____ Poor
2.	Traffic Box:	X Good	____ Fair	____ Poor
3.	Well Cap:	X Good	____ Fair	____ Poor
4.	Well Locked:	X Yes	____ No	

PURGE VOLUME CALCULATION

15.42

Well Diameter:	____2"	____3"	____4"	____6"	____8"	____"Specify
Water Vol. (gal/ft):	0.163	0.367	0.653	1.47	2.61	

2.5 (1 Casing Volume) X 10 (Purged Volumes) = 25 (Total Gallons)

Purge Equipment: Submersible pump Sampling Equipment: disposable plastic bailer

TIME	TEMP (F)	pH	E.C.	TURBIDITY	VOLUME
8:00					
8:05	69.6	6.81	1400		10
8:10	69.1	6.83	1440		18
8:15	69.1	6.82	1,450		30

Did Well Dewater? ____ Yes X No Actual Gallons Purged: 30

Sampling Time: 8:30 Analytical Laboratory: Sequoia

Sample ID: U-3 Chemical Analyses: TPH-G,D BTEX

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