



Epigene International
CONSULTING GEOLOGISTS

September 19, 1996

Mr. Gary King
Project Coordinator
5157 Brophy Drive
Fremont, CA 94536

RECEIVED
OCT 02 1996
ENVIRONMENTAL HEALTH
NORTH COUNTY

Subject: Site Closure Report, 16525 Worthley Drive, San Lorenzo Area, Alameda County

Dear Mr. King,

The site is located at the southwest end of Worthley Drive in San Lorenzo. The location is shown on the Site Location Map, Figure 1. A Site Plan is Presented on Figure .

The most recent quarterly monitoring of the site was carried out in April of 1996. A copy of that report is included in Appendix A. Based on the results of the monitoring, a request was made to the Alameda County Department of Environmental Health for consideration of site closure. The County required additional site characterization in the down-gradient direction of the former underground storage tank (see Figure 2).

A workplan was prepared to install 2 hydropunches, one on the southern edge of the site and one on the Alameda County Flood Control right-of-way south of the site. The workplan was approved by the County and the soil and groundwater sampling was carried out on June 14, 1996. Drilling permits for the hydropunches were obtained from Zone 7 and an encroachment permit was obtained from the County Flood Control and Water Conservation District for the hydropunch located on their right-of-way. Copies of the permits are included in Appendix B. The locations of the hydropunches are shown on Figure 2.

Mr. Gary King
Site Closure Report
16525 Worthley Drive, San Lorenzo
September 19, 1996
Page 2

Two soil samples were collected from each hydropunch at depths of 5 feet and 7.5 feet (just above groundwater). The results of the analysis indicated the presence of gasoline-contaminated soil in the hydropunch located on the south edge of the site (HP-1 as shown on Figure 2). The soil and groundwater samples from HP-2 located south of the site were ND for TPH as gasoline and BTEX. The laboratory report for the analysis of soil and groundwater samples from the hydropunches is presented in Appendix C.

Based on the presence of contaminated soil along the south edge of the site that could continue to be a source of groundwater contamination, it was decided to extend the over excavation of the soil to this area. The excavation was carried out in July of 1996. Sidewall and bottom soil samples were collected on July 10. The extent of the excavation and location of samples are shown on Figure 3. The results of the soil analysis indicated that relatively high levels of gasoline-contaminated soil still remained on the east and south edge of the excavation. The laboratory report for the soil sample analysis is presented in Appendix D.

Additional over excavation in the area of the remaining soil contamination was carried out in late July and soil samples were collected from the excavation on July 24, 1996. Samples were also collected from the spoil pile at that time. The extent of the additional over excavation and the location of the samples are shown on Figure 3.

The spoil from both excavations carried out in July were separated into two piles. One pile was from the upper 4 to 5 feet of soil that had no evidence of contamination. The second soil pile was taken from a depth of below 5 to 6 feet where evidence of hydrocarbon contamination was noted. Composite samples collected from the two piles were analyzed for gasoline/BTEX along with the July 24 samples from the additional over excavation. The laboratory report for all the July 24 sampling is presented in Appendix E.

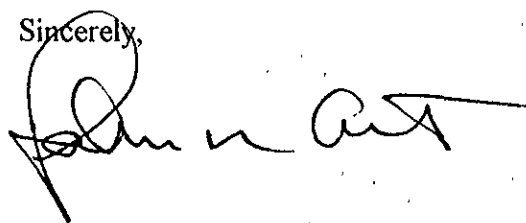
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The analysis from the spoil pile of shallow soil was non-detect and this soil was recommended for use as backfill for the excavations. The contaminated spoil was removed from the site and transported to the Altamont landfill after a composite analysis for TTLC lead. The manifests for the disposal of the contaminated soil are included in Appendix F.

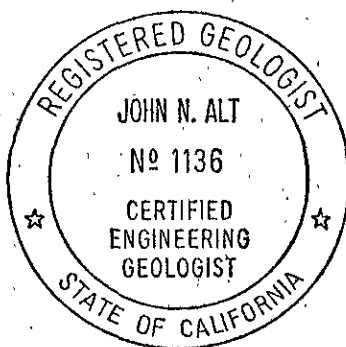
It is our understanding that the results of the additional site characterization and over excavation were discussed with Mr. Thomas Peacock of the Alameda County Department of Environmental Health. He provided a verbal agreement for site closure pending review of this report.

It is recommended that if the County Department of Environmental Health recommends closure of the site and the Regional Water Quality control Board concurs, the County provides a statement requiring destruction of all existing wells located on the site. Existing well locations are shown on Figure 2. Upon receipt of a statement from the County, a workplan will be prepared for Zone 7 requesting permits for the well destructions.

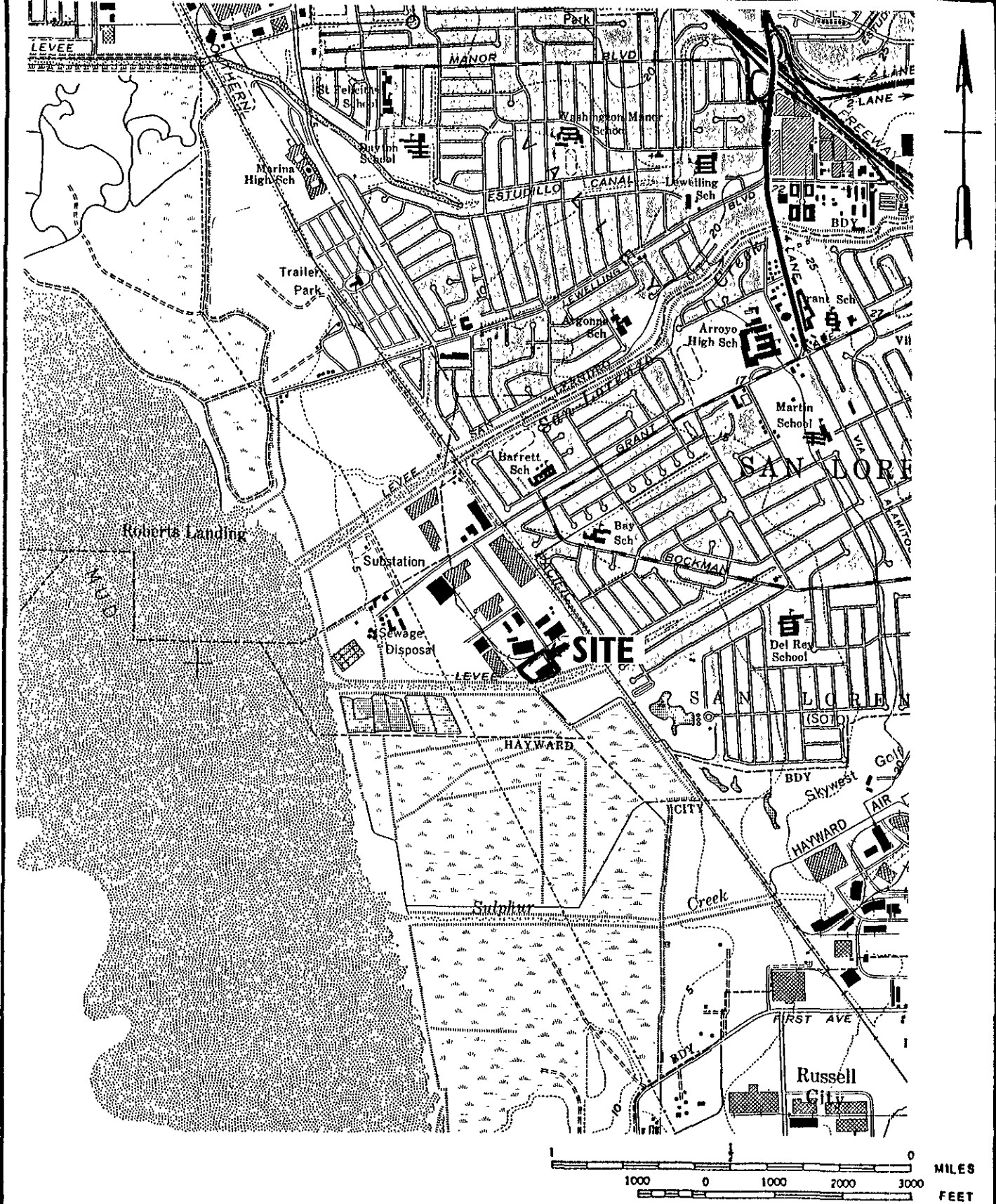
Sincerely,



John N. Alt, CEG No. 1136
Epigene International



Attachments



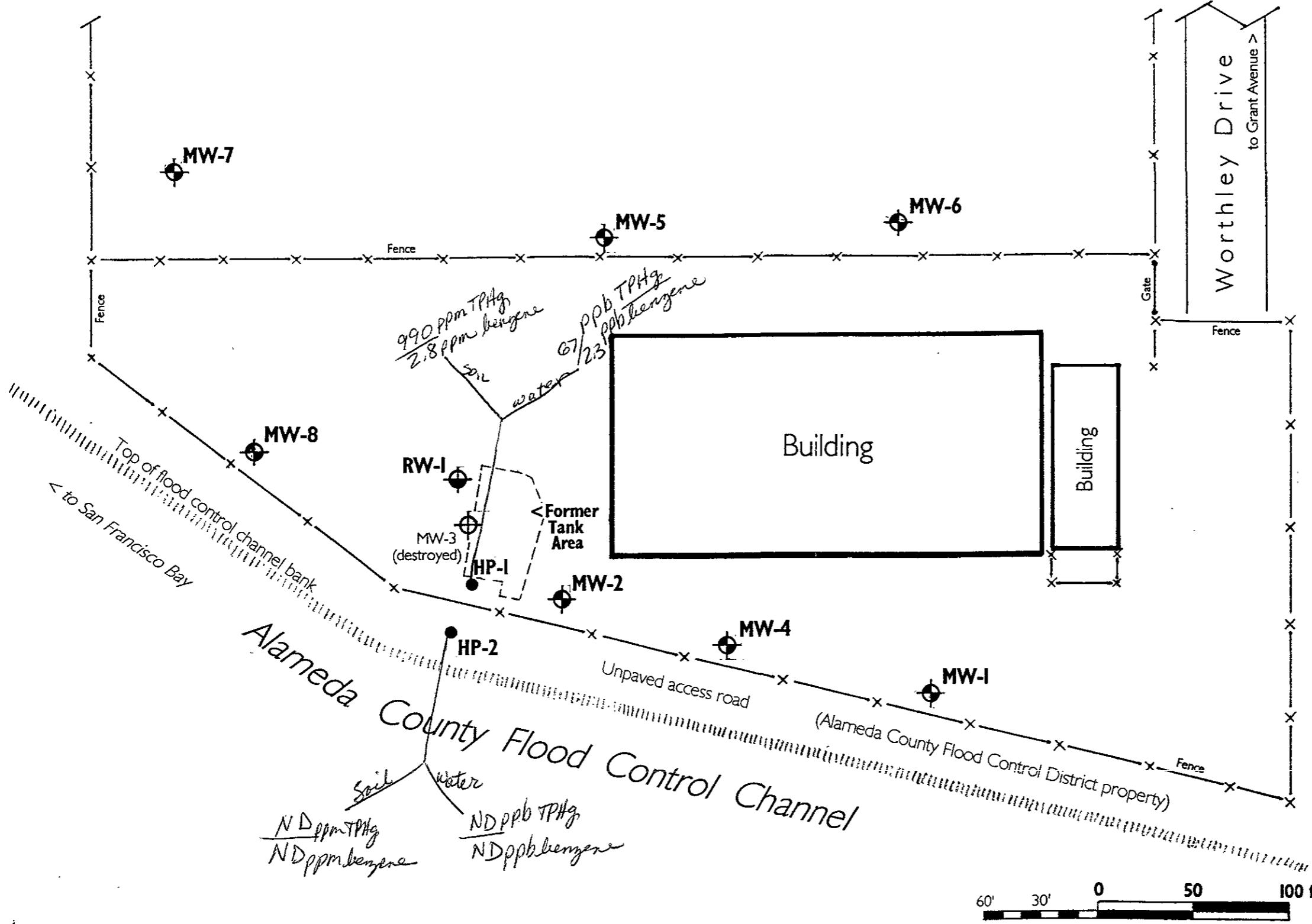
Base map from USGS 7½ minute series
San Leandro quadrangle, 1980.

**EPIGENE
INTERNATIONAL**




Project #96-150
16525 WORTHLEY DRIVE,
San Lorenzo, Alameda Co., CA

Fig. 1

SITE LOCATION MAP



Legend

-  MW- Monitoring well.
-  RW-I Remediation (extraction) well.
-  HP- Hydropunch location.

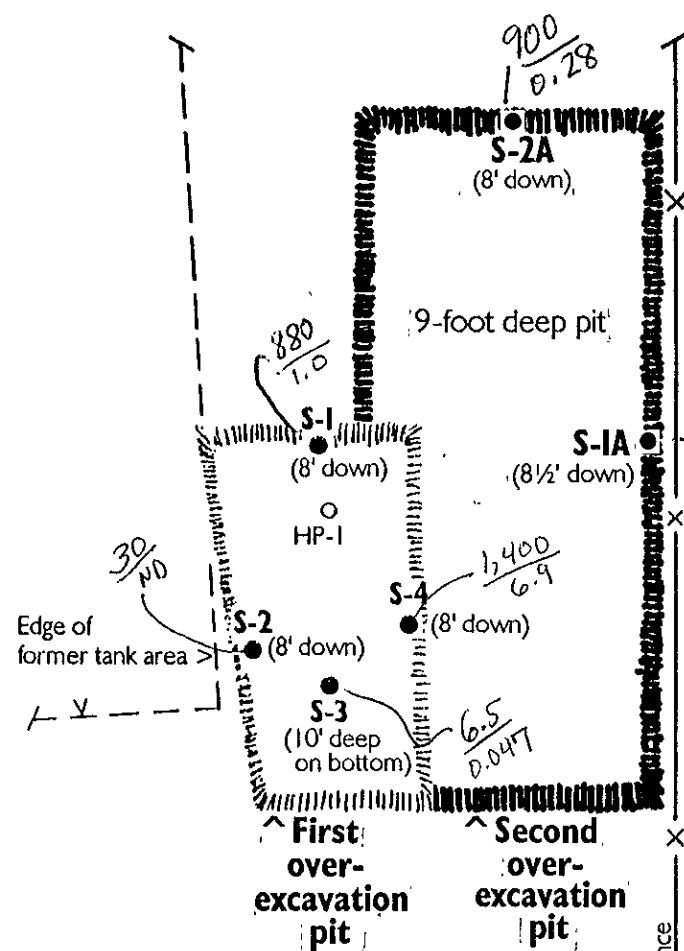
Plan derived from drawing by Resna, August 1993,
 as used by Lowney Associates, Mountain View, California, August 1994
 Hydropunch locations by Ep gene International, June 1996.

EPIGENE INTERNATIONAL	Project # 16525 WORTHLEY DRIVE, San Lorenzo, Alameda Co., Calif.
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Fig. 2

SITE PLAN

TPH-B (ppm)
benzene



< Fence to channel bank ~32 feet >

to entrance on Worthley Drive



- S- ● Soil sample location (samples taken July 10, 1996).
- Former hydropunch location.
- Soil samples taken July 24, 1996.
- S-IA S-2A: ●

Unpaved access road
(Alameda County Flood Control District property)

EPIGENE INTERNATIONAL	Project #96-150
	16525 WORTHLEY DRIVE, San Lorenzo, Alameda Co., CA

SOIL SAMPLE LOCATIONS

Property Line

APPENDIX A

QUARTERLY MONITORING REPORT

APRIL 1996



Epigene International
CONSULTING GEOLOGISTS

April 29, 1996

Mr. Anthony Varni
P. O. Box 778
Hayward, CA 94543

Subject: First Quarter 1996 Monitoring Report for Property Located at the Southwest
End of Worthley Drive, San Lorenzo area of Alameda County

Dear Mr. Varni,

At the request of the Alameda County Dept. Of Environmental Health, quarterly monitoring of the site was initiated in the first quarter of 1996. To our knowledge, there were no site activities carried out in the fourth quarter of 1995 and a quarterly report was not prepared.

The site is located at the southwest end of Worthley Drive in San Lorenzo. The site location is shown on the attached location map (Figure 1). The southern edge of the site is bounded by an Alameda County flood control channel. The site plan is shown on Figure 2.

The scope of work for the quarterly monitoring was based on the most recent quarterly monitoring report for the site prepared by Lowney Associates dated September 12, 1995. The scope of work for the first quarter monitoring included the following: 1) gauging of seven onsite monitoring wells; 2) purging and sampling of monitoring wells MW-2 and MW-8; 3) purging and sampling of extraction well RW-1; 4) analysis of the water samples for TPH as gasoline and BTEX; 5) contouring of groundwater elevations and calculating direction and slope of the gradient using a three point problem solution; and 6) preparation of this letter report. The field work was carried out on April 17, 1996.

The depth to water measurements and calculated groundwater elevations are summarized below.

WELL NUMBER	TOP OF CASING ELEVATION	DEPTH TO WATER	GROUNDWATER ELEVATION
MW-1	8.86	6.44	2.42
MW-2	9.17	6.66	2.51
MW-4	NA	5.57	
MW-5	9.11	5.62	3.49
MW-6	9.19	6.00	3.19
MW-7	8.41	5.62	2.79
MW-8	8.52	5.99	2.47

The groundwater contours are shown on Figure 2. The direction of the gradient was calculated using wells MW-1, MW-5 and MW-7. The direction is S5E and the slope is 0.009 ft/ft. These data are also shown on Figure 2 and are consistent with the hydrogeologic setting of the site.

Monitoring wells MW-2 and MW-8 (see Figure 2) were purged of approximately 18 gallons of water using an electric (12 volt D.C.) purge pump. Samples were then collected by bailer and placed in 40 ml VOAS that were supplied by the laboratory and preserved with HCl. The electric pump present in RW-1 was used to purge the extraction well. The flow meter at the well head was not operating correctly so the system was run for approximately one hour with an estimated purging of at least 80 gallons. The water sample from RW-1 was collected from a sampling port located at the well head.

The water samples were maintained in a cooled ice chest and transported to a State-certified Laboratory for analysis under chain-of-custody control. The certified laboratory report and chain-of-custody documentation is included in Appendix A. The results of the analysis are summarized below.

4-17-96 unppd

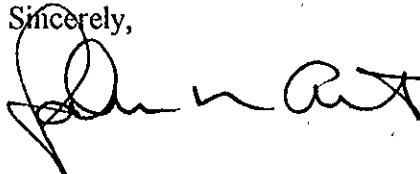
WELL NUMBER	TPH AS GASOLINE	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES
MW-2	56	0.84	3.0	0.61	2.9
MW-8	<50	0.65	2.6	<0.5	2.7
RW-1	<50	4.2	<0.5	0.73	<0.5

The results from previous analysis of the three wells as taken from Lowney Associates (1995) are included in Appendix B to serve as a comparison.

The results of the analysis indicated that only a very minor level of contamination remains in the groundwater at the site. It is appropriate to discuss possible site closure with representatives of Alameda County prior to any additional site investigations. Destruction of wells that are no longer required for site monitoring should be considered.

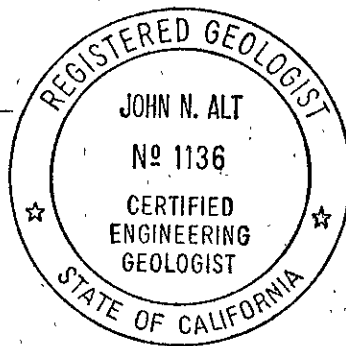
Should you have any questions, please contact the undersigned or Mr. Gary King who is serving as a coordinator for this phase of the investigations.

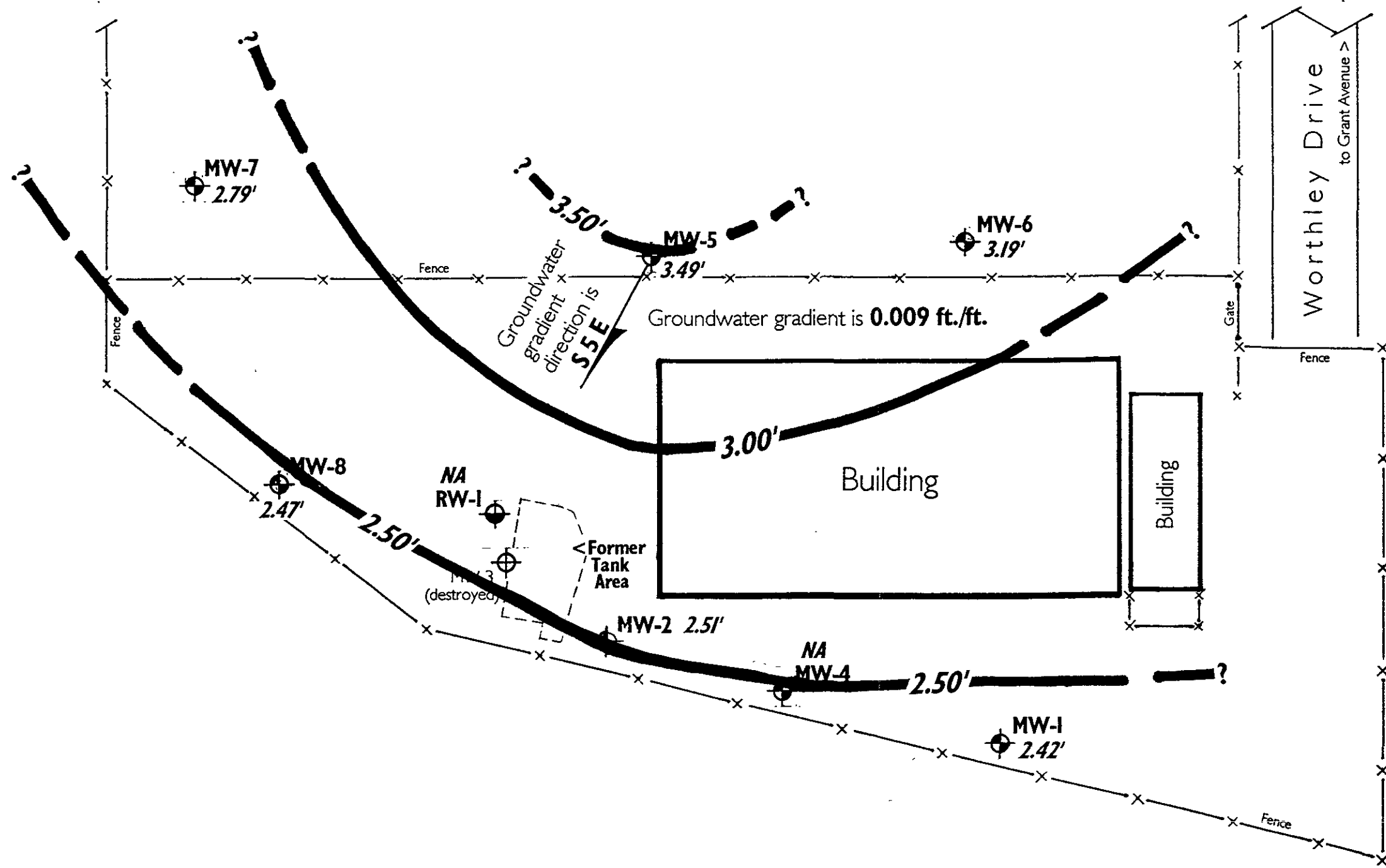
Sincerely,



John N. Alt, CEG No. 1136

Epigene International





- Legend*
- MW- Monitoring well.
 - RW-I Remediation (extraction) well.
 - X.XX'** Groundwater elevation (feet above mean sea level).

Groundwater gradient value and direction is calculated from groundwater elevations in MW's 1, 5, and 7.

Depths to groundwater measured on
April 17, 1996

Plan derived from drawing by Resna, August 1993,
 as used by Lowney Associates, Mountain View, California, August 1994

EPIGENE INTERNATIONAL	Project #
	16525 WORTHLEY DRIVE, San Lorenzo, Alameda Co., Calif
GROUNDWATER GRADIENT AND CONTOURS	

Epigene International 38750 Paseo Padre Pkwy, # A11 Fremont, CA 94536	Client Project ID: Worthley Dr., San Lorenzo	Date Sampled: 04/17/96
	Client Contact: John Alt	Date Received: 04/19/96
	Client P.O:	Date Extracted: 04/19/96
		Date Analyzed: 04/19/96

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with BTEX*
 EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g) ⁺	Benzene	Toluene	Ethylbenzene	Xylenes	% Rec. Surrogate
63370	RW-1	W	ND	4.2	ND	0.73	ND	98
63371	MW-2	W	56,a	0.84	3.0	0.61	2.9	96
63372	MW-8	W	ND	0.65	2.6	ND	2.7	95
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W	50 ug/L	0.5	0.5	0.5	0.5	0.5	
	S	1.0 mg/kg	0.005	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L
 # cluttered chromatogram; sample peak coelutes with surrogate peak
 + The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment; j) no recognizable pattern.

CHAIN OF CUSTODY

Laboratory: McCampbell Analytical
110 2nd Avenue South, D-7
Pacheco, California 94553.
telephone: (510) 798-1620 FAX: (510) 798-1622
Contact: Ed Hamilton



6240AEX81

Epigene International

CONSULTING GEOLOGISTS

38750 Paseo Padre Parkway, Suite A-11
Fremont, California, 94536

Business: (510) 791-1986 FAX: (510) 791-3306

Contact: John Alt	Sampler: JNA/GK
Project Name: Worthley Dr. San Lorenzo	
Project no.	Date:

Sample I.D.	Date/Time Sampled	Matrix Desc.	Container		Comments	Analyses Requested							Lab. #		
			No. of	Type		TPH/Gasoline	BTEX	TPH/Diesel	601/8010	602/8020	Total Oil & Grease				
1. RW-1	4/17/96	H ₂ O	2	VOAS	w/HCl	X	X								63370
2. MW-2	4/17/96	"	"	"	"	X	X								63371
3. MW-8	4/17/96	"	"	"	"	X	X								63372
4.															
5.															
6.															
7.															
8.															
9.															
10.															

Relinquished by: <i>[Signature]</i>	Date: 4/18/96	Time: 12:28 PM	Received by: G. Burke ACRO 640	Date: 4/18/96	Time: 12:25
Relinquished by: G. Burke 640	Date: 4-19-96	Time: 7:09 AM	Received by: <i>[Signature]</i>	Date: 4-19-96	Time: 7:50 AM
Relinquished by: <i>[Signature]</i> 601	Date: 4-19-96	Time: 9:40 AM	Received by: <i>[Signature]</i>	Date: 4-19-96	Time: 9:40 AM

Turnaround Time: Standard

Additional Comments: Project name shown on sample labels is shown as Worthley Ct. - correct name is Worthley Dr.

Page 1 of 1

04-25-1996 09:49PM FROM McCampbell Analytical Inc TO 7913306 P.02

TABLE 2. Laboratory Analysis of Ground Water Samples
(concentrations in ppb)

Well Number	Date	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW-2	07/14/87	110	1.2	1.9	-	2
	11/24/87	3,600	82	47	-	13
	02/29/88	800	ND	ND	-	ND
	05/25/88	250	ND	ND	-	ND
	08/10/88	260	ND	ND	-	ND
	11/29/88	870	9.	ND	1	1
	02/07/89	710	16	ND	ND	ND
	05/12/89	260	2.8	0.76	1.3	3
	08/04/89	360	ND	ND	ND	0.48
	11/14/89	85	ND	3.5	0.36	2.5
	02/22/90	120	ND	ND	1.5	0.55
	05/17/90	240	ND	ND	ND	ND
	08/17/90	130	ND	2.9	1.2	0.68
	11/06/90	170	0.37	1.2	2	1.5
	02/01/91	57	ND	ND	ND	0.73
	05/01/91	220	1.5	0.42	0.43	0.54
	08/08/91	710	4.1	0.84	ND	0.71
	11/15/91	630	2.3	ND	3.1	0.86
	02/12/92	580	5.9	1.2	0.52	ND
	05/21/92	790	26	5.4	ND	ND
	11/13/92	230	ND	ND	ND	ND
	02/24/93	400	17	ND	ND	ND
	05/28/93	110	<0.50	<0.50	<0.50	<0.50
	08/20/93	1,000	<0.50	0.75	1.1	5.4
	11/30/93	590	<0.50	<0.50	3.8	2.3
	04/08/94	480	5.2	<0.50	<0.50	<0.50
	08/08/94	330	<0.50	<0.50	<0.50	<0.50
	08/23/95	160	<0.50	0.68	<0.50	0.98
	04/17/96	56	0.84	3.0	0.61	2.9
MW-8	08/23/95	<50	<0.50	<0.50	<0.50	<0.50
	04/17/96	ND	0.65	2.6	ND	2.7

continued

TABLE 2. Laboratory Analysis of Ground Water Samples
 (concentrations in ppb)
 (continued)

Well Number	Date	TPIHg	Benzene	Toluene	Ethylbenzene	Total Xylenes
RW-1	11/28/89	3,200	<50	<100	<100	<100
	01/09/90	1,300	150	15	100	170
	01/16/91	78	17.0	2.7	7.7	1.3
	04/20/91	<30	<0.30	<0.30	<0.30	<0.30
	05/01/91	160	40	0.79	14	6.1
	05/24/91	<30	<0.30	<0.30	<0.30	<0.30
	06/14/91	57	12	<0.30	4.3	0.84
	07/03/91	<30	<0.30	<0.30	<0.30	<0.30
	07/22/91	18	<0.30	2.7	0.4	<0.30
	08/08/91	89	41	0.31	4.6	0.73
	11/15/91	140	41	<0.30	1.3	0.44
	12/18/91	<50	12	<0.50	0.78	<0.50
	02/12/92	260	78	.073	6.6	8.2
	03/06/92	480	81	1.2	21	21
	04/02/92	300	52	1.2	13	15
	05/21/92	57	20	ND	1.7	0.85
	06/30/92	<50	7.7	<0.50	<0.50	<0.50
	07/17/92	79	7.4	<0.50	1.2	1.4
	09/01/92	<50	4.2	<0.50	<0.50	<0.50
	11/13/92	ND	ND	ND	ND	ND
	01/08/93	ND	8	ND	0.78	0.59
	01/29/93	64	22	ND	4.8	3.7
	03/18/93	2,400	330	3.3	51	17
	04/22/93	<50	13	<0.50	1.5	<0.50
	05/28/93	<50	0.76	<0.50	<0.50	<0.50
	08/20/93	57	16	<0.50	0.70	1.92
	09/15/93	<50	1.5	<0.50	<0.50	<0.50
	10/08/93	<50	<0.50	<0.50	0.50	<0.50
	10/26/93	<50	<0.50	<0.50	0.50	<0.50
	12/16/93	<50	0.73	2.6	1.1	<0.50
04/08/94	130	15	1.4	1.9	1.9	
08/08/94	110	25	<0.50	0.86	3.2	
08/23/95	75	12	<0.50	1.8	3.5	
04/17/96	ND	4.2	ND	0.73	ND	

- no data obtained
 ND not detected

APPENDIX B

DRILLING AND ENCROACHMENT PERMITS



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE

PLEASANTON, CALIFORNIA 94588

(510) 484-2600

TELEFAX TRANSMITTAL

DATE: 28 Jun 96

DELIVER TO: John Aet

NAME OF FIRM: Epigene

FAX PHONE #: 791-3306

FROM: Wymon Hong

NUMBER OF PAGES: 2
(Including transmittal)

FOR VOICE CONTACT CALL: (510) 484-2600
FOR RETURN FAX: (510) 462-3914

REMARKS: Drilling permit 96455 for a
contamination investigation at 16525 Northley
Dr in San Lorenzo



ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE

PLEASANTON, CALIFORNIA 94588

VOICE (510) 464-2600

FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 16525 Worthley Dr.
San Lorenzo area of Alameda
County

PERMIT NUMBER 96455
LOCATION NUMBER _____

CLIENT
Name Mr. Anthony Varni
Address P.O. Box 728 Voice _____
City Hayward Zip 94543

PERMIT CONDITIONS

Circled Permit Requirements Apply

APPLICANT
Name John Alt / Epigene International
38150 Rockridge Rd Fax (510) 791-3306
Address Pkwy, Suite A-11 Voice (510) 791-1986
City Fremont, CA Zip 94536

A. GENERAL

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

B. WATER WELLS, INCLUDING PIEZOMETERS

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

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

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

E. WELL DESTRUCTION. See attached.

TYPE OF PROJECT
Well Construction _____ Geotechnical Investigation _____
Cathodic Protection _____ General _____
Water Supply _____ Contamination X
Monitoring _____ Well Destruction _____

PROPOSED WATER SUPPLY WELL USE
Domestic _____ Industrial _____ Other _____
Municipal _____ Irrigation _____

DRILLING METHOD:
Mud Rotary _____ Air Rotary _____ Auger _____
Cable _____ Other Direct push
hydro punch

DRILLER'S LICENSE NO. VBI / # 682 990

WELL PROJECTS
Drill Hole Diameter 2 in. Maximum _____
Casing Diameter _____ in. Depth 10 ft.
Surface Seal Depth _____ ft. Number 2

GEOTECHNICAL PROJECTS
Number of Borings 2 Maximum _____
Hole Diameter 2 in. Depth 10 ft.

ESTIMATED STARTING DATE June 14, 1996
ESTIMATED COMPLETION DATE June 14, 1996

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

Approved Wyman Hong Date 28 Jun 96
Wyman Hong

APPLICANT'S SIGNATURE John N. Alt Date 6/11/96

holes will be grouted to ground surface

Issue Date: 6/10/96

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
399 ELMHURST STREET, HAYWARD, CALIFORNIA 94544

FLOOD/WATERCOURSE ENCROACHMENT PERMIT

This permit is issued in accordance with the provisions of Ordinance No. 34 of the Alameda County Flood Control and Water Conservation District (Flood), or Chapter 10 of Title 7 of the Ordinance Code of the County of Alameda (Watercourse).

NAME & ADDRESS OF PERMITTEE:

Work Order Number: 02000
Expiration Date: 7/10/96
Receipt Number: _____

GARY KING
5157 BROPHY DR
FREMONT, CALIF
PHONE: 510-793558

JOB SITE(S): 16525 Worthley DL
SAN LEANDRO CA
Zone 2, Line N

This Permit authorizes an encroachment onto District right-of-way or into a watercourse, at the said Job Site(s), in order to perform the work described below; unless specifically exempted, this encroachment shall be subject to the terms and conditions of the said Ordinance/Chapter, and to all other provisions attached to and written into this Permit.

THE PERMITTEE INTENDS TO PERFORM THE FOLLOWING:

Obtain access to perform geotech survey.

Attention is directed to the inspection requirements and to the other general terms and conditions, as outlined on the back of this form -- and to those special requirements written below:

None

Other Required Permits: Zone 7

Bond Information: Waived

Inspection Fee/Deposit: Waived; Chg. Insp. to WO# _____

BY: [Signature] PERMITTEE
BY: [Signature] FOR THE DISTRICT

Reviewed By: _____
Work Completed: _____
Inspector: _____

APPENDIX C

CERTIFIED LABORATORY REPORT

SOIL AND GROUNDWATER SAMPLES

HYDROPUNCH LOCATIONS

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

06/26/96


Dear John:

Enclosed are:

- 1). the results of 6 samples from your # 96-150; 16525 Worthley Drive, San Lorenzo project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,



Edward Hamilton, Lab Director

Epigene International 38750 Paseo Padre Pkwy, # A-11 Fremont, CA 94536	Client Project ID: # 96-150; 16525 Worthley Drive, San Lorenzo	Date Sampled: 06/14/96
	Client Contact: John Alt	Date Received: 06/17/96
	Client P.O:	Date Extracted: 06/17-06/18/96
		Date Analyzed: 06/17-06/18/96

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*
EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g) [†]	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Rec. Surrogate
65999	HP-1 @ 5'	S	9.8,b,d	ND	0.41	0.020	0.037	0.023	106
66000	HP-1 @ 7.5'	S	990,b,d	ND< 2	2.8	3.0	24	5.7	102
66001	HP-2 @ 5'	S	ND	ND	ND	ND	ND	ND	97
66002	HP-2 @ 7.5'	S	ND	ND	ND	ND	ND	ND	103
66003	HP-1	W	67,b,c	ND	2.3	ND	3.7	2.3	97
66004	HP-2	W	ND	ND	ND	ND	ND	ND	101
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W	50 ug/L	5.0	0.5	0.5	0.5	0.5	0.5	
	S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; sample peak coelutes with surrogate peak

[†] The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant (aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment; j) no recognizable pattern.



QC REPORT FOR HYDROCARBON ANALYSES

Date: 06/17/96

Matrix: Soil

Analyte	Concentration (mg/kg) Sample (#65388)			Amount Spiked	% Recovery		
	MS	MSD	RPD		MS	MSD	RPD
TPH (gas)	0.000	2.290	2.317	2.03	113	114	1.2
Benzene	0.000	0.180	0.178	0.2	90	89	1.1
Toluene	0.000	0.180	0.178	0.2	90	89	1.1
Ethylbenzene	0.000	0.178	0.176	0.2	89	88	1.1
Xylenes	0.000	0.520	0.516	0.6	87	86	0.8
TPH (diesel)	0	283	285	300	94	95	0.7
TRPH (oil and grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR HYDROCARBON ANALYSES

Date: 06/18/96

Matrix: Water

Analyte	Concentration (ug/L) Sample (#65796)			Amount Spiked	% Recovery		RPD
	MS	MSD			MS	MSD	
TPH (gas)	0.0	100.7	104.5	100.0	100.7	104.5	3.8
Benzene	0.0	10.4	10.7	10.0	104.0	107.0	2.8
Toluene	0.0	10.4	10.7	10.0	104.0	107.0	2.8
Ethyl Benzene	0.0	10.4	10.7	10.0	104.0	107.0	2.8
Xylenes	0.0	31.5	32.4	30.0	105.0	108.0	2.8
TPH (diesel)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

CHAIN OF CUSTODY

6598AEI85



Epigene International

CONSULTING GEOLOGISTS

38750 Paseo Padre Parkway, Suite A-11
Fremont, California, 94536

Business: (510) 791-1986 FAX: (510) 791-3306

Laboratory: McCampbell Analytical	
110 2nd Avenue South, D-7	
Pacheco, California 94553.	
telephone: (510) 798-1620	FAX: (510) 798-1622
Contact: Ed Hamilton	

Contact: John Alt	Sampler: JNA
Project Name: 16525 Worthley Drive, San Lorenzo	
Project no. 96-150	Date: 6/14/96

Analyses Requested

Sample I.D.	Date/Time Sampled	Matrix Desc.	Container		Comments	Analyses Requested							Lab. #		
			No. of	Type		TPH/Gasoline	BTEX	TPH/Diesel	601/8010	602/8020	Total Oil & Grease	MTBE			
1. HP-1 5'	6/14 AM	Soil	1	gross tube		X	X					X			65999
2. HP-1 7 1/2'	6/14 AM	Soil	1	"		X	X					X			66000
3. HP-2 5'	6/14 AM	Soil	1	"		X	X					X			66001
4. HP-2 7 1/2'	6/14 AM	Soil	1	"		X	X					X			66002
5. HP-1	6/14 PM	H2O	2	VOAS	w/HCl	X	X					X			66003
6. HP-2	6/14 PM	H2O	2	VOAS	w/HCl	X	X					X			66004
7.															
8.															
9.															
10.															

Relinquished by: <i>[Signature]</i>	Date: 6/17/96	Time: 8:00 AM	Received by: <i>[Signature]</i>	Date: 6/17/96	Time: 8:00 AM
Relinquished by: <i>[Signature]</i>	Date: 6/17/96	Time: 4:15 PM	Received by: <i>[Signature]</i>	Date: 6/17/96	Time: 4:15 PM
Relinquished by: <i>[Signature]</i>	Date: 6/17/96	Time:	Received by: <i>[Signature]</i>	Date:	Time:

Turnaround Time: Standard

Additional Comments: _____

Page 1 of 1

APPENDIX D

CERTIFIED LABORATORY REPORT

SOIL SAMPLING OF JULY 10, 1996

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

07/19/96

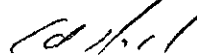
Dear John:

Enclosed are:

- 1). the results of 4 samples from your # 96-150; 16525 Worthley Dr., San Lorenzo project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,



Edward Hamilton, Lab Director

QC REPORT FOR HYDROCARBON ANALYSES

Date: 07/11/96-07/12/96

Matrix: Soil

Analyte	Concentration (mg/kg) Sample (#66181)			Amount Spiked	% Recovery		
	MS	MSD			MS	MSD	RPD
TPH (gas)	0.000	1.959	1.958	2.03	97	96	0.1
Benzene	0.000	0.198	0.208	0.2	99	104	4.9
Toluene	0.000	0.196	0.206	0.2	98	103	5.0
Ethylbenzene	0.000	0.202	0.206	0.2	101	103	2.0
Xylenes	0.000	0.594	0.614	0.6	99	102	3.3
TPH (diesel)	0	294	293	300	98	98	0.2
TRPH (oil and grease)	0.0	23.7	23.3	20.8	114	112	1.7

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

CHAIN OF CUSTODY



6754AEI91
Epigene International
 CONSULTING GEOLOGISTS

38750 Paseo Padre Parkway, Suite A-11
 Fremont, California, 94536
 Business: (510) 791-1986 FAX: (510) 791-3306

Laboratory: McCampbell Analytical
110 2nd Avenue South, D-7
Pacheco, California 94553.
telephone: (510) 798-1620 FAX: (510) 798-1622
Contact: Ed Hamilton

Contact: John N. Alt	Sampler: JNA
Project Name: 16525 Worthley Dr., San Lorenzo	
Project no. 96-150	Date: 7/10/96

Sample I.D.	Date/Time Sampled	Matrix Desc.	Container No. of Type		Comments	Analyses Requested							Lab. #	
						TPH/Gasoline	BTEX	TPH/Diesel	601/8010	602/8020	Total Oil & Grease	MTBE		
1. S-1	7/10/96 AM	soil	1	brass tube	east wall	X	X						X	66748
2. S-2	"	"	"	"	north wall	X	X						X	66749
3. S-3	"	"	"	"	bottom	X	X						X	66750
4. S-4	"	"	"	"	south wall	X	X						X	66751
5.														
6.														
7.														
8.														
9.														
10.														

Relinquished by: <i>John Alt</i>	Date: 7/12/96	Time: 12:40 PM	Received by: <i>Ed Hamilton</i>	Date: 7/12/96	Time: 12:40 PM
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by: <i>Ed Hamilton</i>	Date: 7/12/96	Time: 1:40 PM	Received by: <i>Nidia Roca</i>	Date: 7/12/96	Time: 1:40 PM

Turnaround Time: *Standard*

Additional Comments: _____

ICET GOOD CONDITION HEAD SPACE ABSENT PRESERVE APPROPRIATE CONTAINERS

NOIS | O&G | METALS | OTHER

Page (of)

APPENDIX E

CERTIFIED LABORATORY REPORT

SOIL SAMPLING OF JULY 24, 1996

Epigene International 38750 Paseo Padre Pkwy, # A-11 Fremont, CA 94536	Client Project ID: # 96-150; 16525 Worthley Dr., San Lorenzo	Date Sampled: 07/24/96
	Client Contact: John Alt	Date Received: 07/25/96
	Client P.O:	Date Extracted: 07/25/96
		Date Analyzed: 07/25-07/26/96

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*
EPA methods 5030, modified 8013, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g) ⁺	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Rec. Surrogate
67247	S-1 A	S	90,g	ND	ND	0.055	0.72	0.27	86
67248	S-2 A	S	900,b	0.48	0.28	1.6	18	23	103
67249	SP-2,5	S	ND	ND	ND	ND	ND	ND	102
67250	SP-1,3,4,6	S	18,b,d	ND < 0.02	0.008	0.022	0.12	0.097	96
4 to 1 composite from soil pile									
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, soil and sludge samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; sample peak coelutes with surrogate peak

* The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant (aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment; j) no recognizable pattern.

Total lead to be faxed directly to Altamont

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 510-798-1620 Fax: 510-798-1622

08/15/96

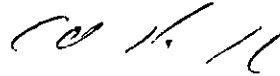
Dear John:

Enclosed are:

- 1). the results of 1 samples from your # 96-150; 16525 Worthley Dr., San Lorenzo project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,



Edward Hamilton, Lab Director

Epigene International 38750 Paseo Padre Pkwy, # A-11 Fremont, CA 94536	Client Project ID: # 96-150; 16525 Worthley Dr., San Lorenzo	Date Sampled: 07/24/96
	Client Contact: John Alt	Date Received: 07/25/96
	Client P.O:	Date Extracted: 08/06/96
		Date Analyzed: 08/06/96

Lead*

EPA analytical methods 6010/200.7, 239.2⁺

Lab ID	Client ID	Matrix	Extraction ^o	Lead*	% Recovery Surrogate
67250	SP-1,3,4,6	S	TTLIC	11	91
Reporting Limit unless otherwise stated; ND means not detected above the re- porting limit	S	TTLIC	3.0 mg/kg		
	W	TTLIC	0.005 mg/L		
	---	STLC,TCLP	0.2 mg/L		

* soil and sludge samples are reported in mg/kg, and water samples and all STLC & TCLP extracts in mg/L

+ Lead is analysed using EPA method 6010 (ICP) for soils, sludges, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples

^o EPA extraction methods 1311(TCLP), 3010/3020(water,TTLIC), 3040(organic matrices,TTLIC), 3050(solids,TTLIC); STLC from CA Title 22

surrogate diluted out of range; N/A means surrogate not applicable to this analysis

& reporting limit raised due matrix interference

i) liquid sample that contains greater than ~ 2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations.

QC REPORT FOR AA METALS

Date: 08/06/96

Matrix: Soil

Analyte	Concentration (mg/kg, mg/L)			Amount Spiked	% Recovery		
	Sample	MS	MSD		MS	MSD	RPD
Total Lead	0.0	5.55	5.58	5.0	111	112	0.5
Total Cadmium	0.0	5.93	5.97	5.0	119	119	0.6
Total Chromium	0.0	5.62	5.71	5.0	112	114	1.5
Total Nickel	0.0	5.51	5.51	5.0	110	110	0.0
Total Zinc	0.0	5.78	5.80	5.0	116	116	0.4
Total Copper	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hexachrome	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

6846AEI92

CHAIN OF CUSTODY



Epigene International

CONSULTING GEOLOGISTS

38750 Paseo Padre Parkway, Suite A-11

Fremont, California, 94536

Business: (510) 791-1986 FAX: (510) 791-3306

Laboratory: McCampbell Analytical
110 2nd Avenue South, D-7
Pacheco, California 94553.
telephone: (510) 798-1620 FAX: (510) 798-1622
Contact: Ed Hamilton

Contact: John N. Alt	Sampler: JNA
Project Name: 16525 Worthington Dr. San Lorenzo	
Project no. 96-150	Date: 7/24/96

Sample I.D.	Date/Time Sampled	Matrix Desc.	Container		Comments	Analyses Requested								ID	
			No. of	Type		TPH/Gasoline	BTEX	TPH/Diesel	601/8010	602/8020	Total Oil & Grease	MTBE	LEAD $\frac{3}{16}$ SPRAY		
1. S-1	7/24/96 AM	Soil	1	brass		X	X					X			67247
2. S-2	"	"	"	"		X	X					X			67248
3. SP-2	"	"	"	"	} composite 2 to 1	X	X					X			67249
4. SP-5	"	"	"	"											
5. SP-1	"	"	"	"	} composite 4 to 1										
6. SP-3	"	"	"	"		X	X					X	X		67250
7. SP-4	"	"	"	"											
8. SP-6	"	"	"	"											
9.															
10.															

Relinquished by: <i>[Signature]</i>	Date: 7/24/96	Time: 12:30	Received by: A. BENNETT 867	Date: 7-24-96	Time: 12:30
Relinquished by: A. BENNETT 867	Date: 7-24-96	Time: 12:50	Received by: James Field 601	Date: 7-25-96	Time: 7:00 AM
Relinquished by: James Field 601	Date: 7-25-96	Time: 9:22 AM	Received by: <i>[Signature]</i>	Date: 7-25-96	Time: 9:22 AM

Turnaround Time: 3 day - data by Monday 7/29/96

Additional Comments: Composites as shown

Page | of |

APPENDIX F

SOIL DISPOSAL MANIFESTS

38253 GRANVILLE DR.
FREMONT, CA. 94536-7166

510-793-7638

INVOICE # 12789 INVOICE DATE 8/31/96

TERMS: NET 10

BILL TO: 947

KING, GARY
TRI-CITY PROPERTIES
5157 BROPHY DR.
FREMONT, CA 94536

JOB: 812
16525 WORTHLEY DR & GRANT AVE
SAN LORENZO,

PURCHASE ORDER/JOB# NONE GIVEN

DATE	W-TAG/INVC	MATERIAL	QUANTITY	RATE	AMOUNT
8/28/96	37494	8 3/4" CL II AB	42.90	7.500	321.75
				MATERIAL SUB-TOTAL	321.75
8/28/96	37494	59 SEMI HOURLY	6.30	70.000	441.00
				MATERIAL SUB-TOTAL	441.00
				MATERIAL TOTAL	762.75
8.25 %ALAMEDA COUNTY				SALES TAX	62.93
				INVOICE TOTAL	825.68

PAID

CK. NO. 270
DATE 9/27/96

825.68

T - 104661
SR - CHA-21-652991

OFFICE COPY

VON EUW & NUNES TRUCKING, INC.

37837 VON EUW COMMON

FREMONT, CALIFORNIA 94536

TELEPHONE 793-7638

F 37494



DRIVER NO. 70 TRUCK NO. 47 T. NO. 48 NO. CU YDS. _____ DATE 8-28-76

UNDERLYING CARRIER _____ DISTANCE RATE NOTICE NO & DATE _____

RECEIVED FROM (CONSIGNOR) _____ DELIVERED TO (CONSIGNEE) _____

ADDRESS _____

CITY _____

NAME AND ADDRESS OF DEBTOR (IF OTHER THAN CONSIGNOR) _____ JOB NO. 210

(ZONE RATES ONLY) _____ FOR USE WITH DISTANCE OR ZONE RATES _____ (DISTANCE RATES ONLY) _____

PRODUCTION AREA LETTER DELIVERY ZONE NO. _____ PRECISE POINT OF ORIGIN Pump _____ PRECISE POINT OF DESTINATION Gant & Worthley Alhambra Pump _____ DISTANCE IN MILES _____

TIME	SCALE TAG NO	WEIGHT	TIME	SCALE TAG NO	WEIGHT
7:44	AW402604	21.68	10		
11:16	AW402692	21.22	11		
			12		
9:08	10812	15.45	13		
12:51	10910	17.76	14		
			15		
			16		
			17		
			18		

NUMBER OF AXLES 5 OVER 56 FEET BETWEEN FIRST AND LAST AXLE 8 TOTAL TONS: 42.90

COMMODITY TRANSPORTED CLII 314AB/Dirt TYPE OF LOADING AT ORIGIN POWER HAND OTHER

TIME DRIVER REPORTED FOR WORK 7:30 LOCATION AT WHICH DRIVER REPORTED FOR WORK _____

A STARTING TIME OF LAST TRIP	ENDING TIME OF LAST TRIP	ELAPSED TIME OF THE RUNNING TIME OF LAST TRIP	B STARTING TIME OF UNLOADING OF LAST TRIP	ENDING TIME OF UNLOADING TIME OF LAST TRIP	ELAPSED TIME OF THE UNLOADING TIME OF LAST TRIP	C OVERALL TIME (FROM THE REPORTING FOR WORK TO START OF LAST TRIP PLUS DOUBLE RUNNING TIME OF LAST TRIP PLUS UNLOADING TIME OF LAST LOAD)	D DEDUCTIBLE TIME FOR MEALS OR FAILURE OF CARRIER EQUIPMENT
12:05	12:50	45	12:50	1:00	10	6 1/4	

REMARKS: 947 810 NET CHARGEABLE TIME 6 1/4 CHARGES

TERMS: DEBTOR AGREES TO PAY ANY LEGAL FEES, COURT COSTS FOR COLLECTION OF DELINQUENT ACCOUNTS, LEGAL RATE OF INTEREST WILL BE CHARGED FOR ALL PAST DUE ACCOUNTS, TITLE TO MATERIAL PASSES TO CONSIGNEE UPON RECEIPT BY CONSIGNOR FOB PLANT TRANSPORTATION CHARGES IN ACCORDANCE WITH PUC REGULATIONS

APPLICABLE HOURLY RATE 70 TAX _____

RECEIVED IN EXCC ORDER BY AUTHORIZED REPRESENTATIVE _____ TOTAL _____

PUC REQUIRE PAYMENT FOR THESE CHARGES NOT LATER THAN THE 15TH OF THE FOLLOWING MONTH

WE MAKE ALL DELIVERIES INSIDE CURB AND ON LOT AT CUSTOMER'S RISK ONLY AND ACCEPT NO RESPONSIBILITY FOR DAMAGES RESULTING FROM SUCH DELIVERY.

Samy C. Payne