

DUGAN ASSOCIATES

ENVIRONMENTAL SERVICES 1023B Martin Ave., Santa Clara, CA 95050 408/988-5946 FAX: 988-5947

Ms. Deborah David
c/o Lebovits and David
Two Century Plaza
2049 Century Park East, Suite 3100
Los Angeles, California 90067

October 21, 1994
Project No. 121-QM

Subject: Third Quarter 1994 Groundwater Monitoring and Sampling at California Paperboard site at 106 and 110 Hegenberger Road in Oakland, California.

Ms. David:

The attached sampling report describes the methods and results of the groundwater monitoring and sampling performed by Dugan Technical Well Services during the third quarter of 1994 for the above-referenced site. Based upon our professional review of the data presented in the attached report and previous environmental reports prepared for the site, Dugan Associates concludes the following:

Lateral Extent of Petroleum Hydrocarbon-Impacted Groundwater

- 1) The occurrence of petroleum hydrocarbons in the first-encountered groundwater beneath the site appears to have been limited to the immediate area of well MW-4. This conclusion is based on nondetectable concentrations (below laboratory detection limits) of hydrocarbons in groundwater samples collected from wells MW-1, MW-2, and MW-3 in March 1994, and on nondetectable concentrations of hydrocarbons in groundwater samples collected from wells MW-1, MW-2, MW-3, and MW-4 in July 1994. Groundwater initially sampled from well MW-4 in March 1994 contained 81 ppb Total Petroleum Hydrocarbons as gasoline (TPHg), 65 ppb Total Petroleum Hydrocarbons as diesel (TPHd), and nondetectable concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX).

Groundwater Gradient

- 2) The first encountered groundwater in the areas of wells MW-1, MW-2, and MW-3 is confined.

This conclusion is based on the stabilized water levels in these wells approximately 8 to 10 feet above the level of first-encountered groundwater during drilling in February 1994. The average hydraulic gradient on July 3,

1994 was calculated to be approximately 0.02-foot per feet towards the south-southwest, or roughly parallel to the trend of Hegenberger Road. The average hydraulic gradient on August 4, 1994 was calculated to be 0.01 towards the southwest.

Perched Groundwater

- 3) The groundwater in well MW-4 appears to be unconfined and is perched within the coarse-grained backfilled materials of the former UST pit. The direction of flow of this perched groundwater is unknown.

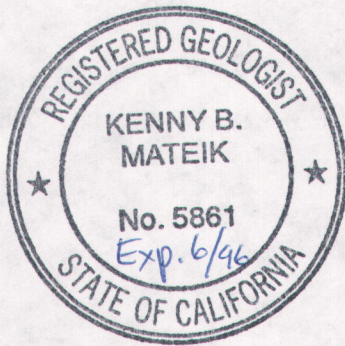
Recommendations:

- 1) Properly dispose of all onsite soil cuttings and drummed development and purge water.
- 2) Continue quarterly groundwater monitoring of all onsite wells for TOG, TPHd, TPHg, and BTEX to evaluate contaminant trends with time. Groundwater levels should also be monitored monthly to document short-term seasonal variations and to further evaluate the hydraulic gradient direction.
- 3) In order to evaluate whether perched groundwater and first-encountered groundwater beneath the site are potential sources of drinking water, we recommend that water from monitoring wells MW-1 and MW-4 be sampled for General Mineral and Total Fecal and Coliform analyses during the Fourth Quarter 1994 sampling episode.

Limitations: This report was prepared in accordance with standards of environmental geological practice generally accepted in California at the time this investigation was performed. This investigation was conducted solely for the purpose of evaluating environmental conditions with respect to petroleum hydrocarbons (TPHd, TPHg, and BTEX) in the areas sampled at the subject property. Actual subsurface conditions may differ at locations not sampled within the property. Accuracy or completeness of public and proprietary records used to conduct this limited assessment is not implied. Further investigation, including subsurface exploration and laboratory testing of soil and groundwater samples at the site, can aid in evaluating subsurface environmental conditions and reduce the inherent uncertainties associated with this type of limited environmental assessment. No soil engineering or geotechnical references are implied nor should be inferred.

Certification:

We certify that the work presented in this report was performed under our supervision. To the best of our knowledge, the data contained herein are true and accurate, and the work was performed in accordance with professional standards.



William R. Dugan 10/21/94
William R. Dugan Date
Project Manager

Kenny B. Mateik 10/21/94
Kenny B. Mateik Date
Registered Geologist No. 5861

Attached: Third Quarter 1994 Groundwater Monitoring and Sampling
Report prepared by Dugan Technical Services

- Figure 1, Site Vicinity Map
- Figure 2, Generalized Site Plan
- Figure 3, Groundwater Gradient Map for July 3, 1994
- Figure 4, Groundwater Gradient Map for August 4, 1994

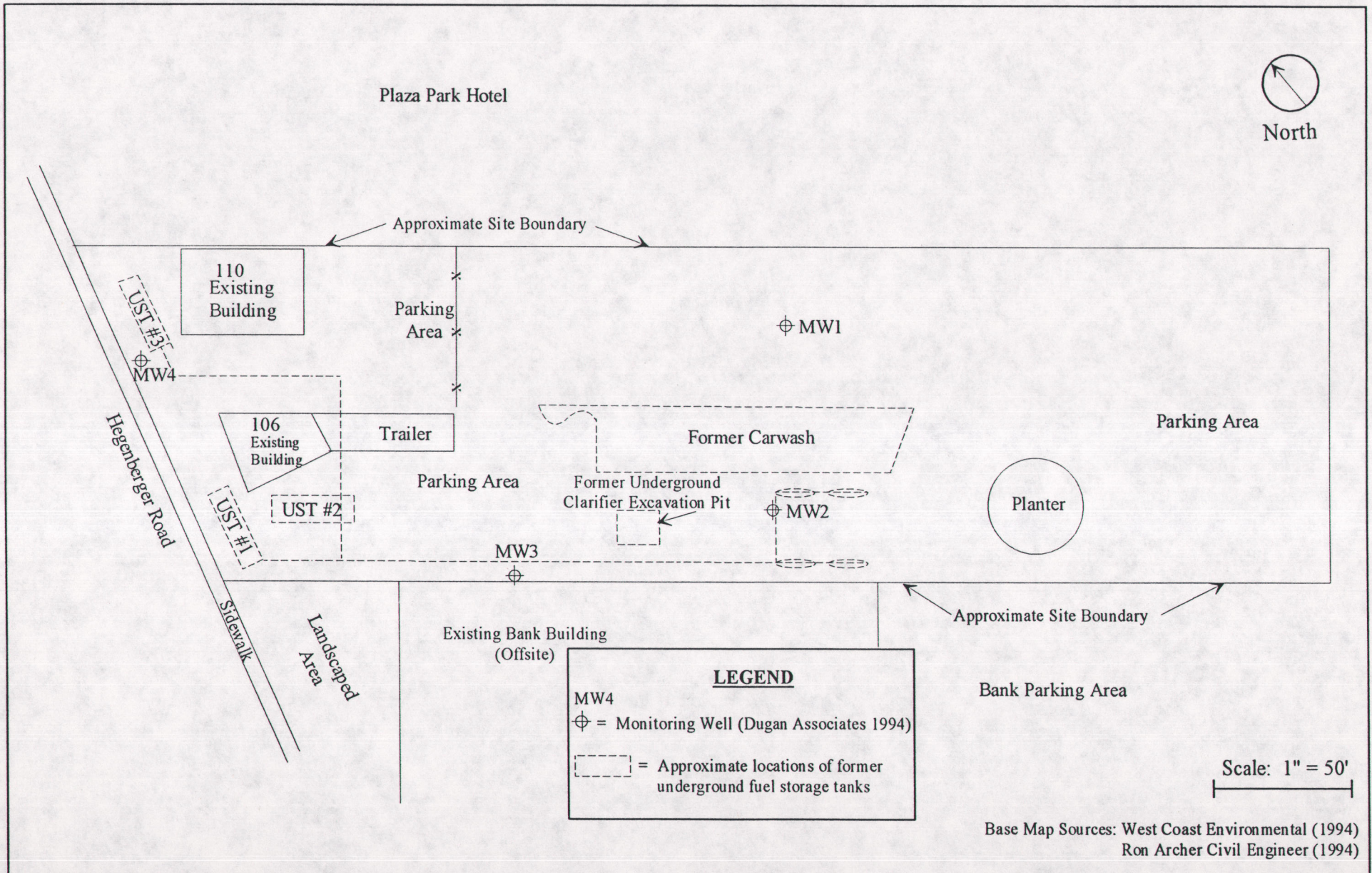
PREVIOUS REFERENCES

- Chips Environmental Consultants. December 6, 1985. Letter to Mr. Michael X. Randolph of the San Jose Fire Department. Chips Letter Report JFM03-8:NESTOR.LET 044.
- City of San Jose Fire Department. November 25, 1985. City of San Jose Fire Prevention Permit No. C-33141 with Closure Plan.
- Corson, E. January 7, 1994. Verbal communication between Mr. Ed Corson and Ken Mateik.
- Dugan Associates. January 27, 1994. Subsurface Environmental Investigation Report at Nestor Insulation, 1792 Rogers Avenue in San Jose, California. Report No. 119-1.
- Helley, E.J., K.R. LaJoie, W.E. Spangle, and M.L. Blair. 1979. Flatland Deposits of the San Francisco Bay Region, California - Their Geology and Engineering Properties, and their Importance to Comprehensive Planning. U.S. Geological Survey, Washington D.C. Professional Paper 943.
- State of California. 1988. California Code of Regulations, Title 22, Chapter 11, Article 3.



Source: San Leandro Quadrangle
7.5 series (Topographic)
Scale 1:24000

<p>DUGAN ASSOCIATES 1023B Martin Ave. Santa Clara, California</p>	<p>Site Vicinity Plan David Property 106/110 Hegenberger Road Oakland, California</p>	<p>FIGURE 1</p>
---------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------	---------------------

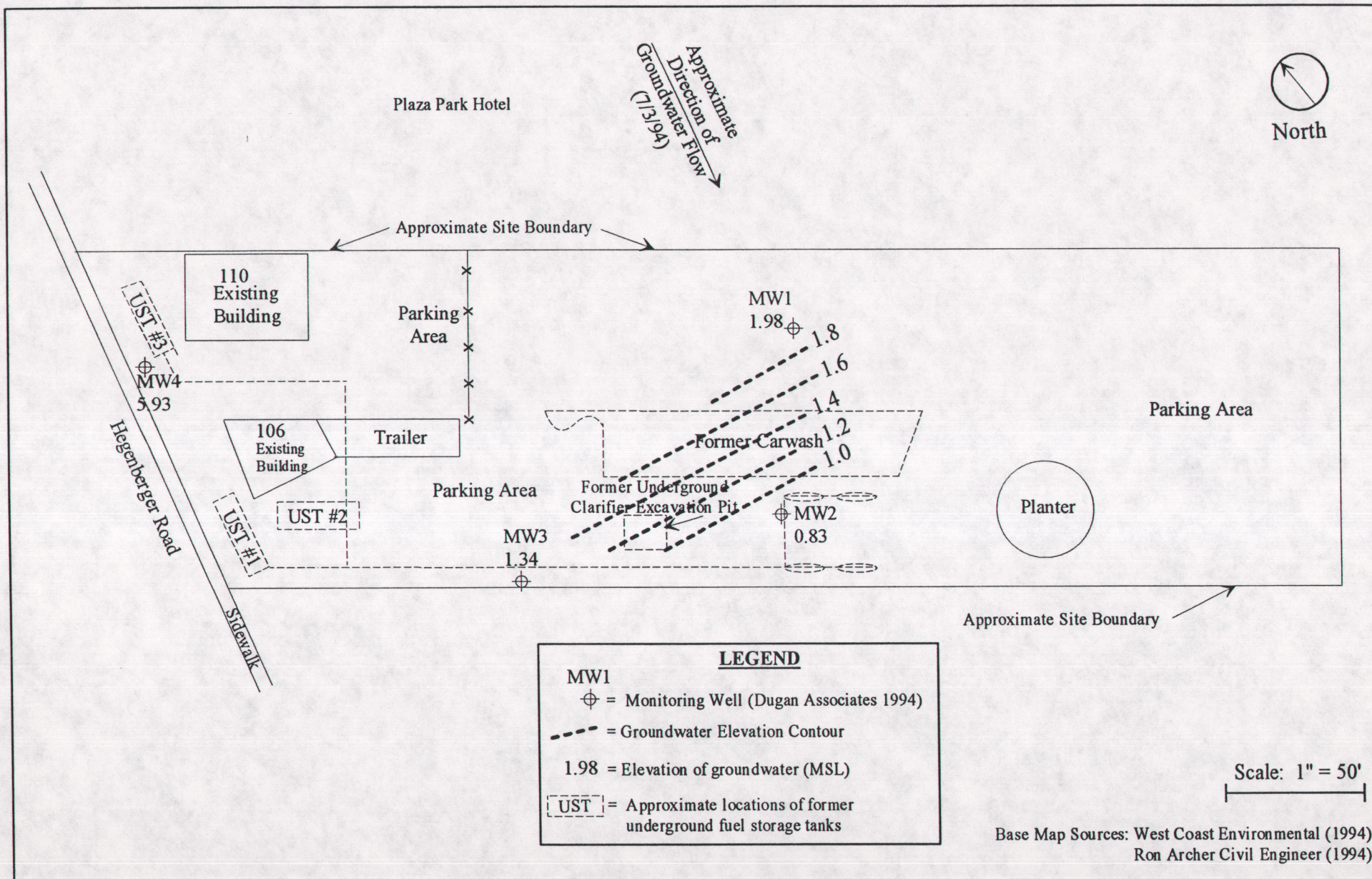


DUGAN ASSOCIATES
1023B Martin Ave.
Santa Clara, California

JOB NO. 121-QM3

Generalized Site Plan
David Property
106/110 Hegenberger Road
Oakland, California

FIGURE
2

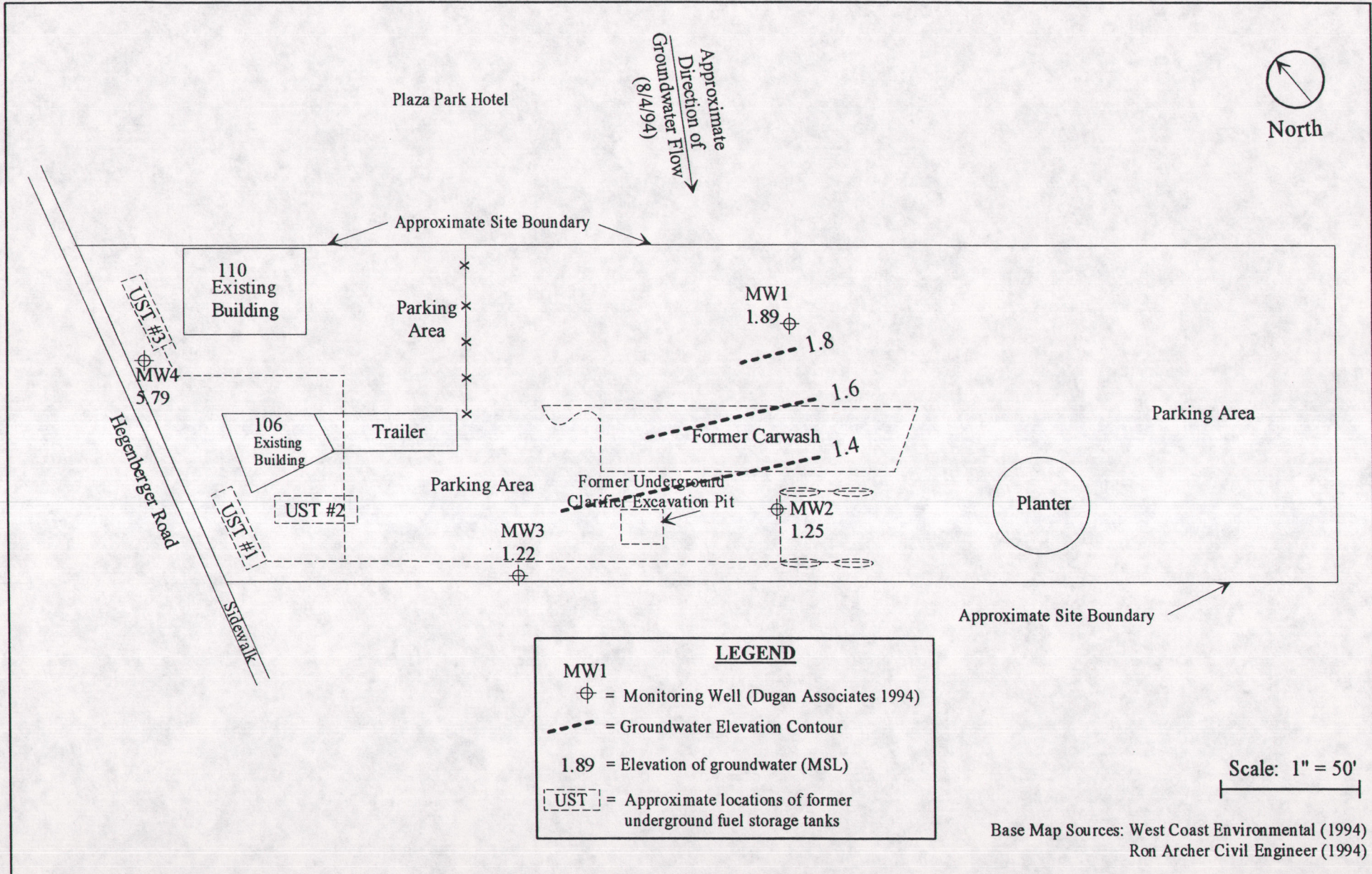


DUGAN ASSOCIATES
1023B Martin Ave.
Santa Clara, California

JOB NO. 121-QM3

Groundwater Gradient Map (07/03/94)
David Property
106/110 Hegenberger Road
Oakland, California

FIGURE
3



DUGAN ASSOCIATES
1023B Martin Ave.
Santa Clara, California

JOB NO. 121-QM3

Groundwater Gradient Map (08/04/94)
David Property
106/110 Hegenberger Road
Oakland, California

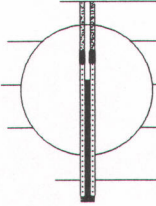
FIGURE

4

ATTACHMENT A

GROUNDWATER

SAMPLING REPORT



**DUGAN
TECHNICAL
WELL SERVICES**

1045 Martin Avenue
Santa Clara, CA. 95050

Groundwater Monitoring

Telephone: 408/970-8415
Facsimile: 408/970-8416

WELL SAMPLING DATA SHEET

David Property
106-110 Hegenberger Road
Oakland, CA

DATE: 07/03/94 **PROJECT NO.:** 013-QM
WELL NO.: MW-1 **WELL DEPTH:** 23'
WELL DIAMETER: 2" **DEPTH TO WATER:** 8.59'
 (For gradient calculation)
PURGE METHOD: Disposable Bailer
SAMPLE METHOD: Disposable Bailer **DEPTH TO WATER:** -
 (For recovery calculation)
SAMPLED BY: Bill Dugan

<u>TIME</u>	<u>CUMULATIVE GAL. PURGED</u>	<u>TURBIDITY*</u>	<u>pH</u>	<u>E.C.#</u>	<u>TEMP^</u>
-	10	-	-	-	-

* = ml/liter

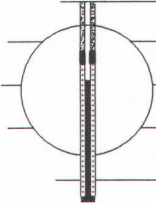
= umhos/cm

^ = fahrenheit

<u>SAMPLE NO.</u>	<u>PARAMETER</u>	<u>CONTAINER</u>	<u>PRESERVATIVE</u>
W-MW-1	TPHg & BTEX	3 VOAs (40 ml)	HCl
W-MW-1	TPHd	1 glass bottle (1 liter)	None

FIELD OBSERVATIONS: No product odor, no visible sheen.

RECOVERY PERCENTAGE - % at - Hrs



**DUGAN
TECHNICAL
WELL SERVICES**

1045 Martin Avenue
Santa Clara, CA. 95050

Groundwater Monitoring

Telephone: 408/970-8415
Facsimile: 408/970-8416

WELL SAMPLING DATA SHEET

David Property
106-110 Hegenberger Road
Oakland, CA

DATE:	07/03/94	PROJECT NO.	013-QM
WELL NO.	MW-2	WELL DEPTH:	23'
WELL DIAMETER:	2"	DEPTH TO WATER:	8.94' (For gradient calculation)
PURGE METHOD:	Disposable Bailer		
SAMPLE METHOD:	Disposable Bailer	DEPTH TO WATER:	- (For recovery calculation)
SAMPLED BY:	Bill Dugan		

<u>TIME</u>	<u>CUMULATIVE GAL. PURGED</u>	<u>TURBIDITY*</u>	<u>pH</u>	<u>E.C.#</u>	<u>TEMP^</u>
-	12	-	-	-	-

* = ml/liter

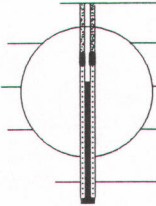
= umhos/cm

^ = fahrenheit

<u>SAMPLE NO.</u>	<u>PARAMETER</u>	<u>CONTAINER</u>	<u>PRESERVATIVE</u>
W-MW-2	TPHg & BTEX	3 VOAs (40 ml)	HCl
W-MW-2	TPHd	1 glass bottle (1 liter)	None

FIELD OBSERVATIONS: No product odor, no visible sheen.

RECOVERY PERCENTAGE - % at - Hrs



**DUGAN
TECHNICAL
WELL SERVICES**

1045 Martin Avenue
Santa Clara, CA. 95050

Groundwater Monitoring

Telephone: 408/970-8415
Facsimile: 408/970-8416

WELL SAMPLING DATA SHEET

David Property
106-110 Hegenberger Road
Oakland, CA

DATE:	07/03/94	PROJECT NO.	013-QM
WELL NO.	MW-3	WELL DEPTH:	31'
WELL DIAMETER:	2"	DEPTH TO WATER:	8.36' (For gradient calculation)
PURGE METHOD:	Disposable Bailer		
SAMPLE METHOD:	Disposable Bailer	DEPTH TO WATER:	- (For recovery calculation)
SAMPLED BY:	Bill Dugan		

<u>TIME</u>	<u>CUMULATIVE GAL. PURGED</u>	<u>TURBIDITY*</u>	<u>pH</u>	<u>E.C.#</u>	<u>TEMP^</u>
-	18	-	-	-	-

* = ml/liter

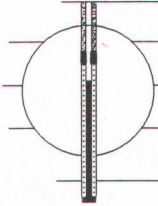
= umhos/cm

^ = fahrenheit

<u>SAMPLE NO.</u>	<u>PARAMETER</u>	<u>CONTAINER</u>	<u>PRESERVATIVE</u>
W-MW-3	TPHg & BTEX	3 VOAs (40 ml)	HCl
W-MW-3	TPHd	1 glass bottle (1 liter)	None

FIELD OBSERVATIONS: No product odor, no visible sheen.

RECOVERY PERCENTAGE - % at - Hrs



**DUGAN
TECHNICAL
WELL SERVICES**

1045 Martin Avenue
Santa Clara, CA. 95050

Groundwater Monitoring

Telephone: 408/970-8415
Facsimile: 408/970-8416

WELL SAMPLING DATA SHEET

David Property
106-110 Hegenberger Road
Oakland, CA

DATE:	07/03/94	PROJECT NO.	013-OM
WELL NO.	MW-4	WELL DEPTH:	24'
WELL DIAMETER:	4"	DEPTH TO WATER:	5.79' (For gradient calculation)
PURGE METHOD:	Submersible Pump		
SAMPLE METHOD:	Disposable Bailer	DEPTH TO WATER:	- (For recovery calculation)
SAMPLED BY:	Bill Dugan		

<u>TIME</u>	<u>CUMULATIVE GAL. PURGED</u>	<u>TURBIDITY*</u>	<u>pH</u>	<u>E.C.#</u>	<u>TEMP^</u>
-	55	-	-	-	-

* = ml/liter

= umhos/cm

^ = fahrenheit

<u>SAMPLE NO.</u>	<u>PARAMETER</u>	<u>CONTAINER</u>	<u>PRESERVATIVE</u>
W-MW-4	TPHg & BTEX	3 VOAs (40 ml)	HCl
W-MW-4	TPHd	1 glass bottle (1 liter)	None

FIELD OBSERVATIONS: No product odor, no visible sheen.

RECOVERY PERCENTAGE - % at - Hrs

McCAMPBELL ANALYTICAL INC.

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

07/22/94

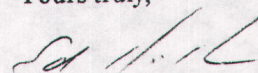
Dear Bill:

Enclosed are:

- 1). the results of 4 samples from your # 121-QM; David Property 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

Dugan & Associates 1023B Martin Avenue Santa Clara, CA 95050	Client Project ID: # 121-QM; David Property	Date Sampled: 07/03/94
	Client Contact: Bill Dugan	Date Received: 07/15/94
	Client P.O:	Date Extracted: 07/16/94
		Date Analyzed: 07/16/94

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
36743	W-MW-1	W	ND	ND	ND	ND	ND	94
36744	W-MW-2	W	ND	ND	ND	ND	ND	103
36745	W-MW-3	W	ND	ND	ND	ND	ND	107
36746	W-MW-4	W	ND	ND	ND	ND	ND	102
Detection Limit unless otherwise stated; ND means Not Detected	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 samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

cluttered chromatogram; sample peak co-elutes 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 are significant; no recognizable pattern; 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 phase is present.

McCAMPBELL ANALYTICAL INC.

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

Dugan & Associates 1023B Martin Avenue Santa Clara, CA 95050	Client Project ID: # 121-QM; David Property	Date Sampled: 07/03/94
		Date Received: 07/15/94
	Client Contact: Bill Dugan	Date Extracted: 07/16/94
	Client P.O:	Date Analyzed: 07/19-07/20/94

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d) ⁺	% Recovery Surrogate
36743	W-MW-1	W	ND	96
36744	W-MW-2	W	ND	95
36745	W-MW-3	W	ND	96
36746	W-MW-4	W	ND	95
Detection Limit unless otherwise stated; ND means Not Detected	W	50 ug/L		
	S	1.0 mg/kg		

*water samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L
 # cluttered chromatogram; surrogate and sample peaks co-elute or surrogate peak is on elevated baseline
 + 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 diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) modified diesel?; light(CL) or heavy(CH) diesel compounds are significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel(?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible phase is present.

QC REPORT FOR HYDROCARBON ANALYSES

Date: 07/16-07/18/94

Matrix: Water

Analyte	Concentration (ug/L)			Amount Spiked	% Recovery		RPD
	Sample	MS	MSD		MS	MSD	
TPH (gas)	0.0	113.2	105.7	100	113.2	105.7	6.9
Benzene	0	10.4	10.4	10	104.0	104.0	0.0
Toluene	0	10.4	10.3	10	104.0	103.0	1.0
Ethyl Benzene	0	10.4	10.1	10	104.0	101.0	2.9
Xylenes	0	31.7	32.1	30	105.7	107.0	1.3
TPH (diesel)	0	159	157	150	106	105	1.0
TRPH (oil & grease)	0	26600	26300	23700	112	111	1.1

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

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

QC REPORT FOR HYDROCARBON ANALYSES

Date: 07/19-07/20/94

Matrix: Water

Analyte	Concentration (ug/L)			Amount Spiked	% Recovery		RPD
	Sample	MS	MSD		MS	MSD	
TPH (gas)	0.0	97.3	94.5	100	97.3	94.5	2.9
Benzene	0	10.2	10.1	10	102.0	101.0	1.0
Toluene	0	10	10	10	100.0	100.0	0.0
Ethyl Benzene	0	10.1	10.2	10	101.0	102.0	1.0
Xylenes	0	31.2	31	30	104.0	103.3	0.6
TPH (diesel)	0	140	140	150	93	93	0.1
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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

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

2632 ADA163

McCAMPBELL ANALYTICAL

110 2nd AVENUE, # D7

(510) 798-1620

PACHECO, CA 94553

FAX (510) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH 24 HOUR 48 HOUR 5 DAY

REPORT TO:

BILL TO:

COMPANY:

DUGAN ASSOCIATES
1023 B MARTIN AVENUE
SANTA CLARA, CA 95050

TELE: 408 988 5946

FAX #: 408 988-5947

PROJECT NUMBER: 121-QM

PROJECT NAME: David property

PROJECT LOCATION: Oakland

SAMPLER SIGNATURE: *Michelle E. Dugan*

ANALYSIS REQUEST

OTHER

BTEX & TPH as Gasoline (602/8020 & 8015)	<input checked="" type="checkbox"/>
THP as Diesel (8015)	<input checked="" type="checkbox"/>
Total Petroleum Oil & Grease (5520 E&F/5520 B&F)	<input checked="" type="checkbox"/>
Total Petroleum Hydrocarbons (418.1)	<input checked="" type="checkbox"/>
EPA 601/8010	<input checked="" type="checkbox"/>
EPA 602/8020	<input checked="" type="checkbox"/>
EPA 608/8080	<input checked="" type="checkbox"/>
EPA 608/8080 - PCBs Only	<input checked="" type="checkbox"/>
EPA 624/8240/8260	<input checked="" type="checkbox"/>
EPA 625/8270	<input checked="" type="checkbox"/>
CAM - 17 Metals	<input checked="" type="checkbox"/>
EPA - Priority Pollutant Metals	<input checked="" type="checkbox"/>
LEAD (7240/7421/2392/6010)	<input checked="" type="checkbox"/>
ORGANIC LEAD	<input checked="" type="checkbox"/>
RCI	<input checked="" type="checkbox"/>

General mineral Analysis
Total Fecal Analysis

COMMENTS

SAMPLE ID	LOCATION	SAMPLING		# CONTAINERS	TYPE CONTAINERS	MATRIX					METHOD PRESERVED			
		DATE	TIME			WATER	SOIL	AIR	SLUDGE	OTHER	HCL	HNO ₃	OTHER	
W-MW-1		7/3/94		2/1	WA/L	X						X		
W-MW-2		7/3/94		2/1	WA/L	X						X		
W-MW-3		7/3/94		2/1	WA/L	X						X		
W-MW-4		7/3/94		2/1	WA/L	X						X		

36743
36744
36745
36746

RELINQUISHED BY: <i>Michelle E. Dugan</i>	DATE 7/15/94	TIME 1:55	RECEIVED BY: <i>Ron Hamilton</i>
RELINQUISHED BY: <i>Ron Hamilton</i>	DATE 7/15/94	TIME 3:45	RECEIVED BY: <i>Deirdre Ricca</i>
RELINQUISHED BY:	DATE	TIME	RECEIVED BY LABORATORY:

REMARKS:

ICE/GOOD CONDITION HEAD SPACE ABSENT

PRESERVATIVE APPROPRIATE CONTAINERS

WASH U&G METALS OTHER