

April 28, 1998

ENVIRONMENTAL  
PROTECTION

4 PM 4: 57



Mr. Ondrej Kojnok  
Tri Star Partnership  
2 North Second Street, #1390  
San Jose, CA 95113

**SUBJECT: FIRST QUARTER 1998 GROUNDWATER MONITORING REPORT  
AUTOPRO FACILITY  
5200 TELEGRAPH AVENUE  
OAKLAND, CALIFORNIA  
QST PROJECT NO. 65-95-219**

ENVIRONMENTAL  
PROTECTION  
98 MAY - 4 PM 4: 57

Dear Mr. Kojnok:

QST Environmental Inc. (QST) is pleased to present the results of first quarter 1998 groundwater monitoring activities for the Autopro Facility (site) located at 5200 Telegraph Avenue in Oakland, California (Figure 1 - Location Map). These activities were mandated by the Alameda County Health Care Services Agency (ACHCSA) in a letter dated September 13, 1995. Groundwater monitoring activities were completed at the downgradient former Chevron site on February 18, 1998 by Blaine Tech Services, Inc. (Blaine). The following report describes the activities completed and the results.

### FIELD ACTIVITIES

On March 23, 1998, QST personnel performed groundwater monitoring activities at the site. Depths to groundwater were measured using an electronic water level meter in four on-site groundwater monitoring wells (Figure 2 - Site Map). No evidence of free-product was found in any of the four on-site wells. A minimum of three volumes of groundwater was removed from each well using a pre-cleaned disposable bailer and new nylon cord. Temperature, pH, and electrical conductivity parameters were recorded during the well purging process. Groundwater samples were collected from the well following the purge process. Groundwater sample collection logs, documenting the collected parameters and other information, are presented as an attachment. Groundwater was decanted from the disposable bailer into laboratory-supplied glassware. The samples were then labeled and placed in a cooler on ice under proper chain-of-custody documentation for transport to a State-certified analytical laboratory.

The samples were analyzed by McCampbell Analytical Inc. (McCampbell) for Total Petroleum Hydrocarbons as gasoline (TPH-G), as diesel (TPH-D), and as motor oil (TPH-MO); benzene, toluene, ethylbenzene, and total xylenes (BTEX); and methyl tertiary butyl ether (MTBE) by

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Environmental Protection Agency (EPA) methods 8015, 8015M, 8015M, 8020, and 8020, respectively. Laboratory reports and chain-of-custody documentation are included as an attachment.

Purge water and equipment rinseate was stored on-site in properly labeled Department of Transportation (DOT)-rated 55-gallon drums pending analysis and proper disposal/recycling.

## RESULTS

Depth to groundwater in the four on-site wells from the most current sampling event, ranged from 3.49 feet to 5.12 feet below top of casing. Groundwater elevations were calculated and are presented in Table 1 - Historical Groundwater Data. Groundwater elevation contours were plotted on Figure 3 - Groundwater Elevation Contour Map, March 23, 1998. Groundwater onsite was found to flow generally towards the south at an approximate gradient of 0.012 foot per foot.

- TPH-G was detected in wells MW-2, MW-3, and MW-4 at concentrations of 200  $\mu\text{g/L}$ , 2,500  $\mu\text{g/L}$ , and 950  $\mu\text{g/L}$ , respectively.
- TPH-D was detected in wells MW-1, MW-2, MW-3, and MW-4 at concentrations of 96  $\mu\text{g/L}$ , 200  $\mu\text{g/L}$ , 1,900  $\mu\text{g/L}$  and 740  $\mu\text{g/L}$ , respectively.
- TPH-MO was detected in well MW-4 at a concentration of 500  $\mu\text{g/L}$ .
- Benzene was not detected above reporting limits in any well.
- Toluene was detected in wells MW-2, MW-3, and MW-4 at concentrations of 0.09  $\mu\text{g/L}$ , 3.2  $\mu\text{g/L}$ , and 2.7  $\mu\text{g/L}$ , respectively.
- Ethylbenzene was detected in wells MW-3 and MW-4 at concentrations of 3.5  $\mu\text{g/L}$ , and 1.0  $\mu\text{g/L}$ , respectively.
- Total Xylenes was detected in wells MW-3 and MW-4 at concentrations of 7.7  $\mu\text{g/L}$ , and 1.3  $\mu\text{g/L}$ , respectively.
- MTBE was not detected above reporting limits in any well.

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Table 2 - Historical Groundwater Analytical Data is a tabular summary of the laboratory report for this quarter and previous quarters. Figures 4 through 7 graphically depict the estimated extent of TPH-G, TPH-D, Benzene, and MTBE in groundwater for the site during this quarter.

### CONCLUSIONS

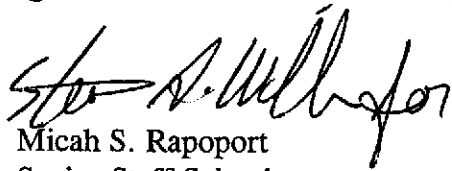
Based on the results of the first quarter 1998 groundwater monitoring activities, QST concludes the following:

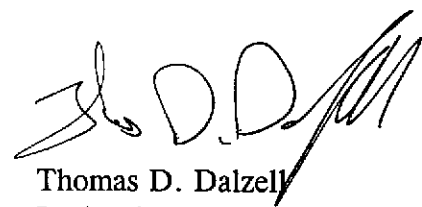
- Groundwater flow direction generally (to the south at a gradient of 0.012 ft/ft) compares with previously obtained data for the site.


### CLOSURE

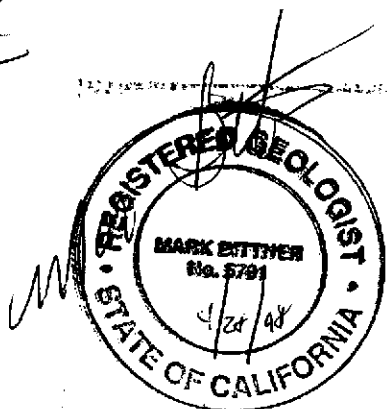
This report has been prepared by QST for the exclusive use by Mr. Ondrej M. Kojnok, Attorney at Law, and Mr. George Tuma of Autopro, as it pertains to their site located at 5200 Telegraph Avenue in Oakland, California. Our professional services have been performed using that degree of care and skill ordinarily exercised under similar circumstances by other geologists and engineers practicing in this field. No other warranty, expressed or implied, is made as to professional advice in this report.

Sincerely,  
QST ENVIRONMENTAL INC.

  
Micah S. Rapoport  
Senior Staff Scientist

  
Thomas D. Dalzell  
Project Manager

  
Mark F. Bittner, R.G.  
Senior Geologist  
California R.G. No. 5701



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Attachments: Table 1 - Historical Groundwater Elevation Data  
Table 2 - Historical Groundwater Analytical Data  
Figure 1 - Location Map  
Figure 2 - Site Map  
Figure 3 - Groundwater Elevation Contour Map, March 23, 1998  
Figure 4 - Estimated Extent of TPH-G in Groundwater, March 23, 1998  
Figure 5 - Estimated Extent of TPH-D in Groundwater, March 23, 1998  
Figure 6 - Estimated Extent of Benzene in Groundwater, March 23, 1998  
Figure 7 - Estimated Extent of MTBE in Groundwater, March 23, 1998  
Groundwater Sample Collection Logs  
Laboratory Reports and Chain-of-Custody Documentation

cc w/attachments: Mr. George Tuma, Autopro  
Ms. Susan Hugo, ACHCSA  
Mr. Kevin Graves, RWQCB-SF Bay Region

**TABLE 1**

**HISTORICAL GROUND WATER ELEVATION DATA**

**Tri-Star Partnership  
Autopro Facility  
5200 Telegraph Avenue  
Oakland, California**

Well I.D.	Date	Datum	Depth to Water (feet)	Ground Water Elevation (ft AMSL)
MW-1	04/26/94	115.44	12.69	102.75
	07/20/94		12.39	103.05
	10/21/94		13.06	102.38
	01/18/95		10.14	105.30
	06/26/96		11.90	103.54
	09/24/96		12.53	102.91
	12/11/96		9.95	105.49
	12/12/97		10.28	105.16
	3/23/98		5.12	95.44
MW-2	04/26/94	114.62	11.15	103.47
	07/20/94		11.44	103.18
	10/21/94		12.30	102.32
	01/18/95		9.21	105.41
	06/26/96		11.16	103.46
	09/24/96		11.81	102.81
	12/11/96		9.17	105.45
	12/12/97		9.39	105.23
	03/23/98		4.32	110.30
MW-3	04/26/94	113.90	10.97	102.93
	07/20/94		11.21	102.69
	10/21/94		11.92	101.98
	01/18/95		8.90	105.00
	06/26/96		10.88	103.02
	09/24/96		12.53	101.37
	12/11/96		8.17	105.73
	12/12/97		8.81	105.09
	03/23/98		3.65	110.25
MW-4	04/26/94	114.25	10.97	103.28
	07/20/94		11.16	103.09
	10/21/94		11.68	102.57
	01/18/95		9.02	105.23
	06/26/96		10.77	103.48
	09/24/96		11.51	102.74
	12/11/96		8.85	105.40
	12/12/97		8.95	105.30
	3/23/98		3.49	110.76

**Note:**

**ft AMSL = feet above mean sea level.**

TABLE 2

## HISTORICAL GROUND WATER ANALYTICAL DATA

Tri-Star Partnership  
Autopro Facility  
5200 Telegraph Avenue  
Oakland, California

Well I.D.	Date Sampled	TPH-D (µg/L)	TPH-MG (µg/L)	TPH-G (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	VOCs (µg/L)	Metals (mg/L)				
											cadmium	chromium	lead	nickel	zinc
MW-1	04/26/94	<50	--	1,400	<0.50	<0.50	4.5	2.1	--	<0.50	0.001	<0.05	<0.005	0.120	<0.10
	07/20/94	100	--	1,200	19	2.5	2.4	1.6	--	--	<0.010	0.220	0.044	0.360	0.350
	10/21/94	130	--	560	8.4	1.1	0.90	1.8	--	--	<0.010	<0.010	<0.020	0.041	0.077
	01/18/95	240	--	620	8.5	2.1	1.3	2.3	--	--	<0.010	0.026	<0.020	0.024	0.067
	06/26/96	56 <sup>b,d</sup>	<250	180 <sup>a</sup>	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--
	09/24/96	150 <sup>d</sup>	<250	170 <sup>c,b</sup>	3.7	0.92	0.54	0.63	6.5	--	--	--	--	--	--
	12/11/96	300 <sup>d</sup>	<250	520 <sup>j</sup>	<0.50	0.8	0.59	0.81	<5.0	--	--	--	--	--	--
	12/12/97	280	<250	380	<0.50	0.8	0.82	0.9	<5.0	--	--	--	--	--	--
	03/23/98	96 <sup>a,d</sup>	<250	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--
MW-2	04/26/94	<50	--	<50	<0.50	<0.50	<0.50	<0.50	--	<0.50	<0.001	<0.05	<0.005	0.060	<0.10
	07/20/94	<50	--	<50	<0.50	<0.50	<0.50	<0.50	--	--	<0.010	0.022	<0.020	0.045	0.068
	10/21/94	<50	--	<50	<0.50	<0.50	<0.50	<0.50	--	--	<0.010	0.031	<0.020	0.027	0.044
	01/18/95	<50	--	<50	<0.50	<0.50	<0.50	<0.50	--	--	<0.010	0.014	<0.020	0.023	0.045
	06/26/96	<50	<250	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	
	09/24/96	<50	<250	<50	<0.50	<0.50	<0.50	<0.50	9.6	--	--	--	--	--	
	12/11/96	<50	<250	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	
	12/12/97	58	<250	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	
	(Dup) 12/12/97	<50	<250	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	
03/23/98	200 <sup>b,j</sup>	<250	200 <sup>j</sup>	<0.50	0.09	<0.50	<0.50	<5.0	--	--	--	--	--		
MW-3	04/26/94	<3,000	--	10,000	70	40	40	50	--	<30	<0.001	<0.05	0.043	0.100	0.100
	07/20/94	1,400	--	7,500	120	38	36	39	--	--	<0.010	0.099	0.140	0.120	0.250
	10/21/94	1,200	--	6,300	69	37	29	38	--	--	<0.010	<0.010	<0.020	0.036	0.140
	01/18/95	1,600	--	8,000	84	16	48	49	--	--	<0.010	0.046	0.049	0.040	0.110
	06/26/96	2,800 <sup>d,f</sup>	<250	6,600 <sup>a</sup>	15	17	23	40	53	--	--	--	--	--	
	(Dup) 06/26/96	2,700 <sup>d,f</sup>	<250	6,600 <sup>a</sup>	14	16	21	37	49	--	--	--	--	--	
	09/24/96	2,600 <sup>b,d</sup>	290	4,800 <sup>b,d</sup>	12	11	18	43	42	--	--	--	--	--	
	12/11/96	2,900 <sup>d</sup>	<250	6,700 <sup>j</sup>	20	19	32	44	70	--	--	--	--	--	
	12/12/97	3,300	<250	7,400	32	37	46	90	<160	--	--	--	--	--	
03/23/98	1900 <sup>d</sup>	<250	2500 <sup>b,j</sup>	<0.50	3.2	3.5	7.7	<20	--	--	--	--	--		
(Dup) 3/23/98	1600 <sup>d</sup>	<250	2400 <sup>b,j</sup>	<0.50	4.0	3.4	4.4	<18	--	--	--	--	--		

**TABLE 2**  
**HISTORICAL GROUND WATER ANALYTICAL DATA**

Tri-Star Partnership  
Autopro Facility  
5200 Telegraph Avenue  
Oakland, California

Well I.D.	Date Sampled	TPH-D (µg/L)	TPH-MO (µg/L)	TPH-G (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	VOCs (µg/L)	Metals (mg/L)				
											cadmium	chromium	lead	nickel	zinc
MW-4	04/26/94	<300	--	6,800	<3.0	<3.0	3.0	4.0	--	<3.0	<0.001	<0.05	0.007	0.060	<0.10
	07/20/94	1,500	--	5,600	35	11	12	17	--	--	<0.010	0.023	<0.020	0.048	0.060
	10/21/94	870	--	4,300	26	19	12	20	--	--	<0.010	0.013	<0.020	<0.020	0.092
	01/18/95	1,300	--	5,700	19	15	13	16	--	--	<0.010	0.020	<0.020	0.021	0.036
	06/26/96	2,500 <sup>d,f</sup>	<250	4,700 <sup>b,d</sup>	<0.25	4.8	11	19	30	--	--	--	--	--	--
	09/24/96	2,200 <sup>b</sup>	<250	5,300 <sup>b,d</sup>	<1.0	5.3	8.2	8.3	<35	--	--	--	--	--	--
	(Dup) 09/24/96	2,200 <sup>b</sup>	<250	5,500 <sup>b,d</sup>	<1.0	6.6	9.4	8.4	<35	--	--	--	--	--	--
	(Dup) 12/11/96	2,400 <sup>d</sup>	<250	4,000 <sup>j</sup>	<0.25	4	7.6	9.2	22	--	--	--	--	--	--
	(Dup) 12/11/96	2,800 <sup>d</sup>	<250	7,000 <sup>j</sup>	18	20	34	49	73	--	--	--	--	--	--
	12/12/97	2,700	<250	3,100	<0.5	3.3	7.6	8.9	<41	--	--	--	--	--	--
03/23/98	740 <sup>d,g</sup>	500	950 <sup>j</sup>	<0.50	2.7	1.0	1.3	<17	--	--	--	--	--	--	
TRIP	06/26/96	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--
	09/24/96	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--
	12/11/96	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--
	12/12/97	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--
	3/23/98	--	--	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--
MCL	--	--	--	1	150	700	1,750	35 <sup>e</sup>	--	0.005	0.05	0 <sup>**</sup>	0.1	5 <sup>***</sup>	

**Notes:**

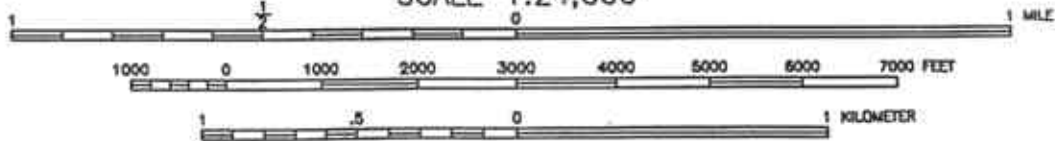
TPH-D = Total Petroleum Hydrocarbons as Diesel.  
 TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.  
 TPH-G = Total Petroleum Hydrocarbons as Gasoline.  
 MTBE = methyl tertiary butyl ether.

VOCs = Volatile Organic Compounds.  
 µg/L = micrograms per liter or parts per billion (ppb).  
 mg/L = milligrams per liter or parts per million (ppm).  
 < = less than listed detection limits.  
 -- = not applicable.

<sup>a</sup> = unmodified or weakly modified is significant.  
<sup>b</sup> = heavier gasoline range compounds are significant (aged gasoline?).  
<sup>c</sup> = lighter gasoline range compounds (the most mobile fraction) are significant.  
<sup>d</sup> = gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?  
<sup>e</sup> = oil range compounds are significant.  
<sup>f</sup> = one to a few isolated peaks present.  
<sup>j</sup> = no recognizable pattern.  
 MCL = primary Maximum Contaminant Limit as defined by the California Department of Health Services (DHS) Drinking Water Standards.  
<sup>a</sup> = DHS Action Level.  
<sup>\*\*</sup> = regulated by the Federal Lead and Copper Rule.  
<sup>\*\*\*</sup> = secondary MCL.



SCALE 1:24,000



ADAPTED FROM U.S.G.S. OAKLAND EAST AND OAKLAND WEST 7.5 MINUTE TOPOGRAPHIC QUADRANGLE MAPS, 1959, PHOTOREVISED 1980.

**QST** Environmental

DATE  
3/94  
REVISED  
2/6/95  
CAD FILE  
52191001

LOCATION MAP

FIGURE NO.

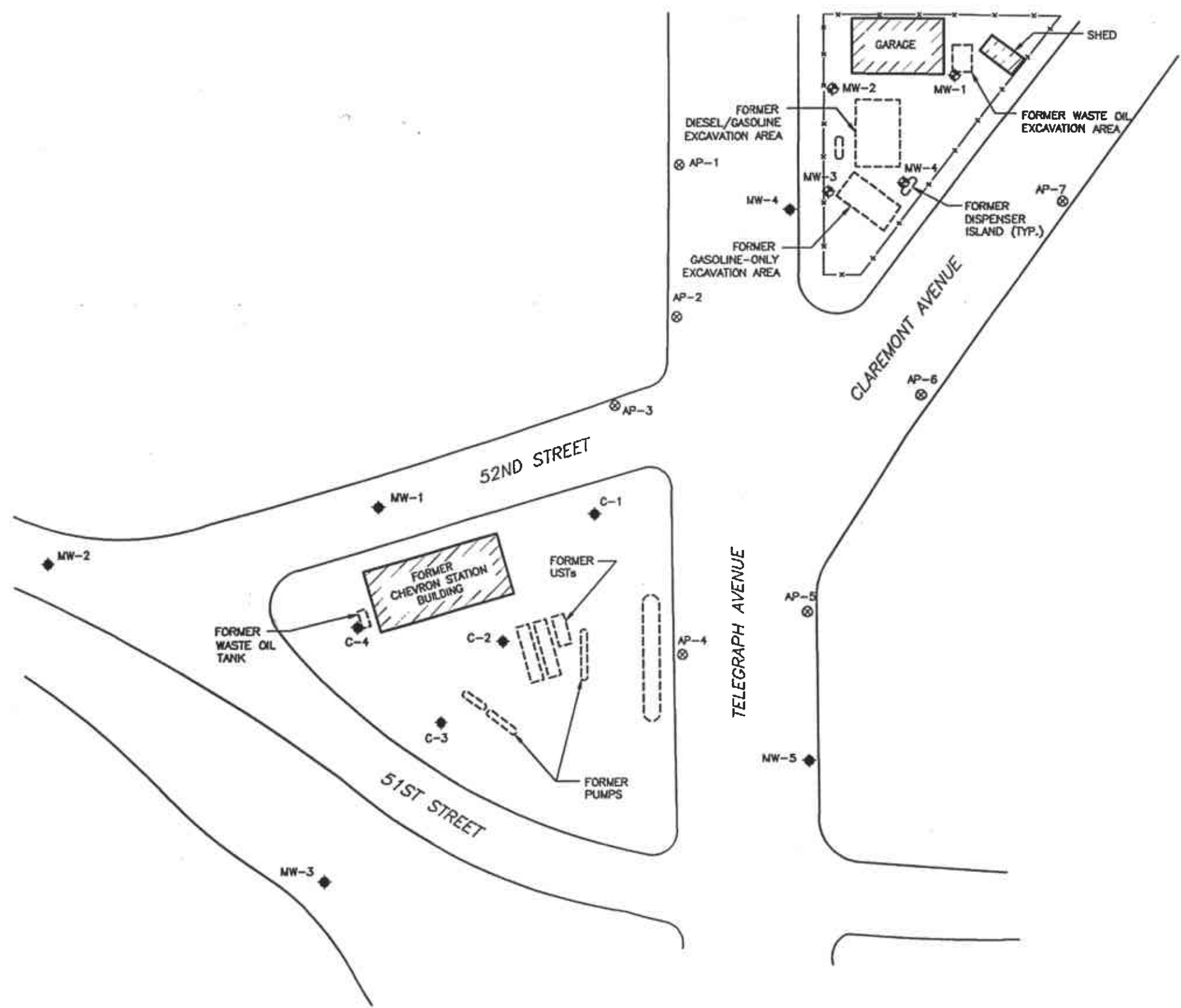
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1340 ARNOLD # 126  
MARTINEZ, CA 94553

AUTOPRO  
5200 TELEGRAPH AVENUE  
OAKLAND, CALIFORNIA

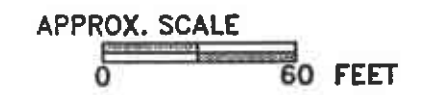
PROJ. NO.  
6-94-5219





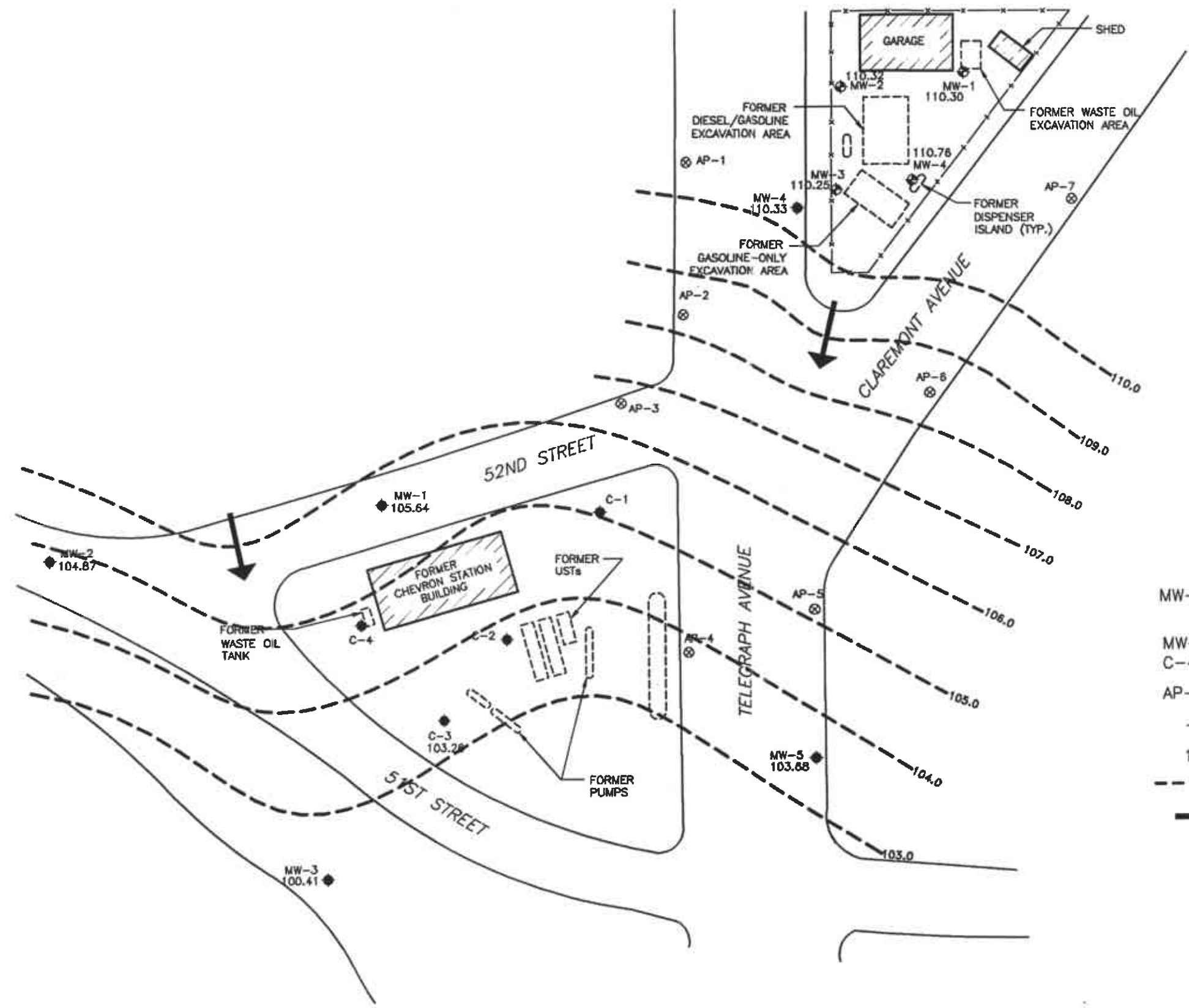
**LEGEND**

- MW-3 GROUND WATER MONITORING WELLS INSTALLED BY ESE
- MW-5 GROUND WATER MONITORING WELLS INSTALLED FOR CHEVRON
- C-4 GROUND WATER MONITORING WELLS INSTALLED FOR CHEVRON
- AP-7 SOIL BORING
- x- FENCE



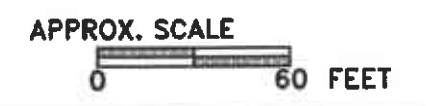
CHEVRON SITE BASE MAP FROM CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC.

Environmental Science & Engineering, Inc. <small>a GEACOM Company</small>	DATE	2/12/96	SITE MAP	FIGURE NO.
	REVISED	8/29/96		2
	CAD FILE	65521902	AUTOPRO 5200 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	PROJ. NO. 65-95-219
4090 NELSON AVENUE, SUITE J CONCORD, CA 94520				



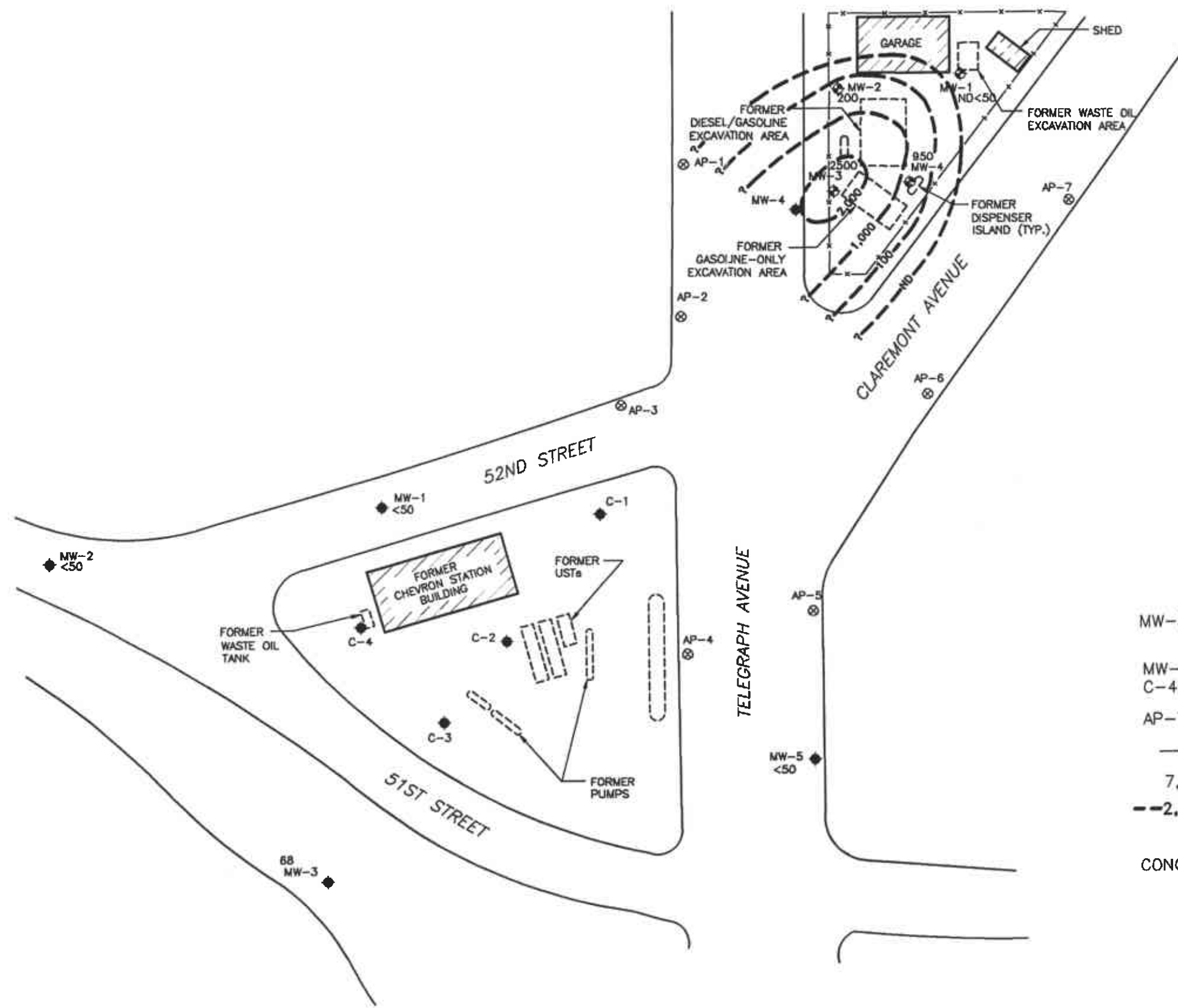
**LEGEND**

- MW-3 ⊕ GROUND WATER MONITORING WELLS INSTALLED BY ESE/QST
- MW-5 ● GROUND WATER MONITORING WELLS INSTALLED FOR CHEVRON
- C-4 ●
- AP-7 ⊗ SOIL BORING
- x- FENCE
- 109.93 GROUND WATER ELEVATION
- - 105.0 - - GROUND WATER ELEVATION CONTOUR
- ➔ ESTIMATED GROUND WATER FLOW DIRECTION



CHEVRON SITE BASE MAP FROM CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC.  
 CHEVRON SITE GROUND WATER ELEVATIONS FROM BLAINE TECH SERVICES, INC.  
 GROUND WATER ELEVATIONS FOR AUTOPRO SITE ARE DERIVED FROM AN ASSUMED DATUM.

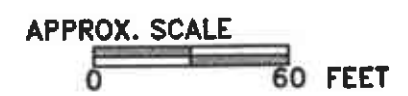
	DATE	8/8/96	<b>GROUND WATER ELEVATION CONTOUR MAP, MARCH 23, 1998</b>	FIGURE NO.	<b>3</b>
	REVISED	04/22/98		AUTOPRO	
	1340 ARNOLD #126 MARTINEZ, CA 94553		65521903	5200 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	65-95-219



**LEGEND**

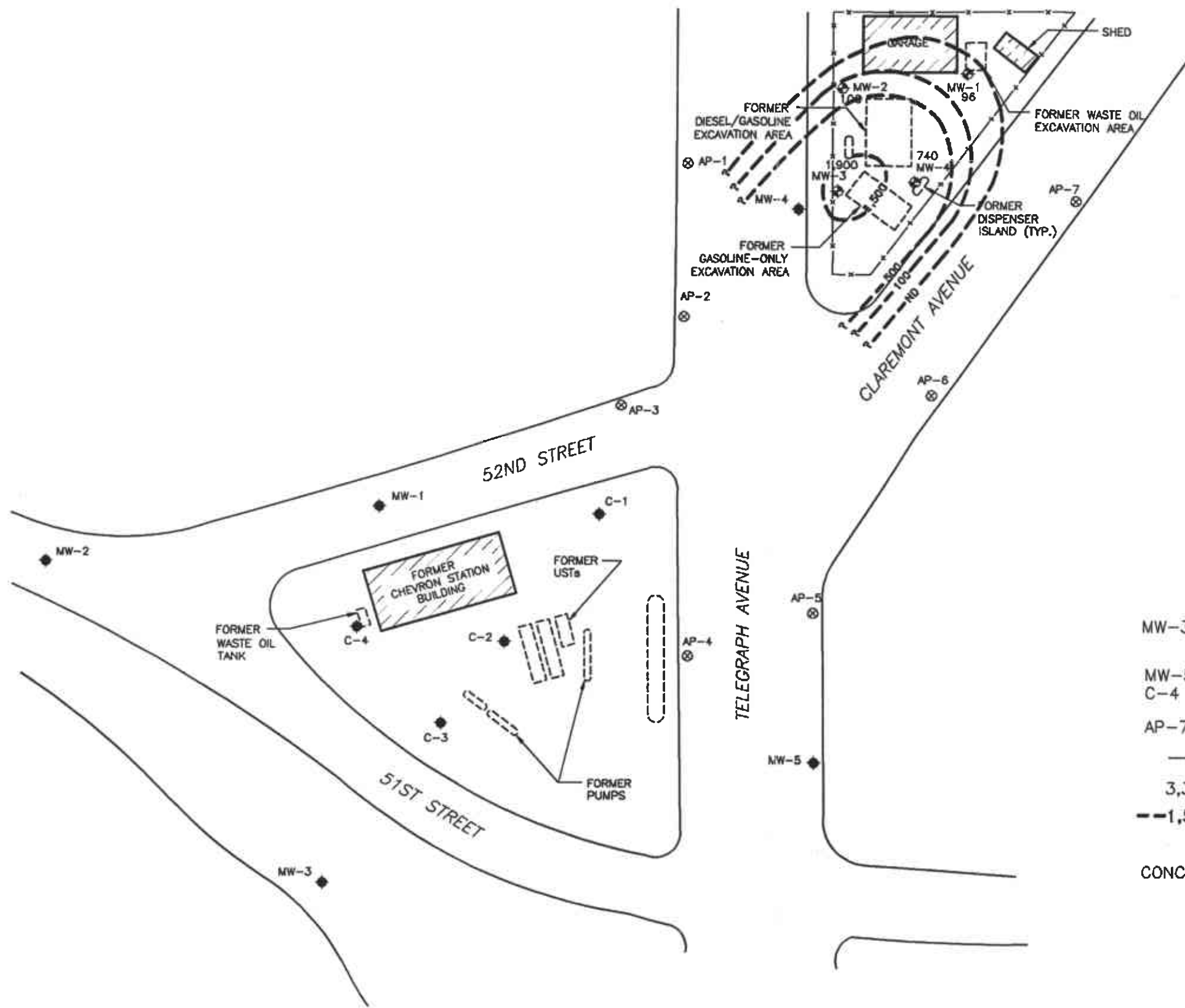
- MW-3 ⊕ GROUND WATER MONITORING WELLS INSTALLED BY ESE/QST
- MW-5 ● GROUND WATER MONITORING WELLS INSTALLED FOR CHEVRON
- C-4 ●
- AP-7 ⊗ SOIL BORING WITH GRAB GROUND WATER SAMPLE
- x- FENCE
- 7,400 CONCENTRATION OF TPH-G IN GROUND WATER
- 2,000 -- CONCENTRATION ISOPLETH

CONCENTRATIONS IN MICROGRAMS PER LITER (ug/L) or PARTS PER BILLION (ppb).



CHEVRON SITE BASE MAP FROM CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC.  
 CHEVRON WELLS ANALYTICAL DATA FROM BLAINE TECH SERVICES, INC. DATED 12/11/96  
 AUTOPRO WELLS ANALYTICAL DATA DATED 12/11/96

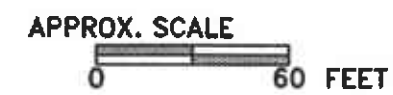
	DATE	8/8/96	<b>ESTIMATED EXTENT OF TPH-G          IN GROUND WATER,          MARCH 23, 1998</b>	FIGURE NO.
	REVISION	04/21/98		AUTOPRO 5200 TELEGRAPH AVENUE OAKLAND, CALIFORNIA
1340 ARNOLD #126 MARTINEZ, CA 94553		CAD FILE	65521904	
				65-95-219



**LEGEND**

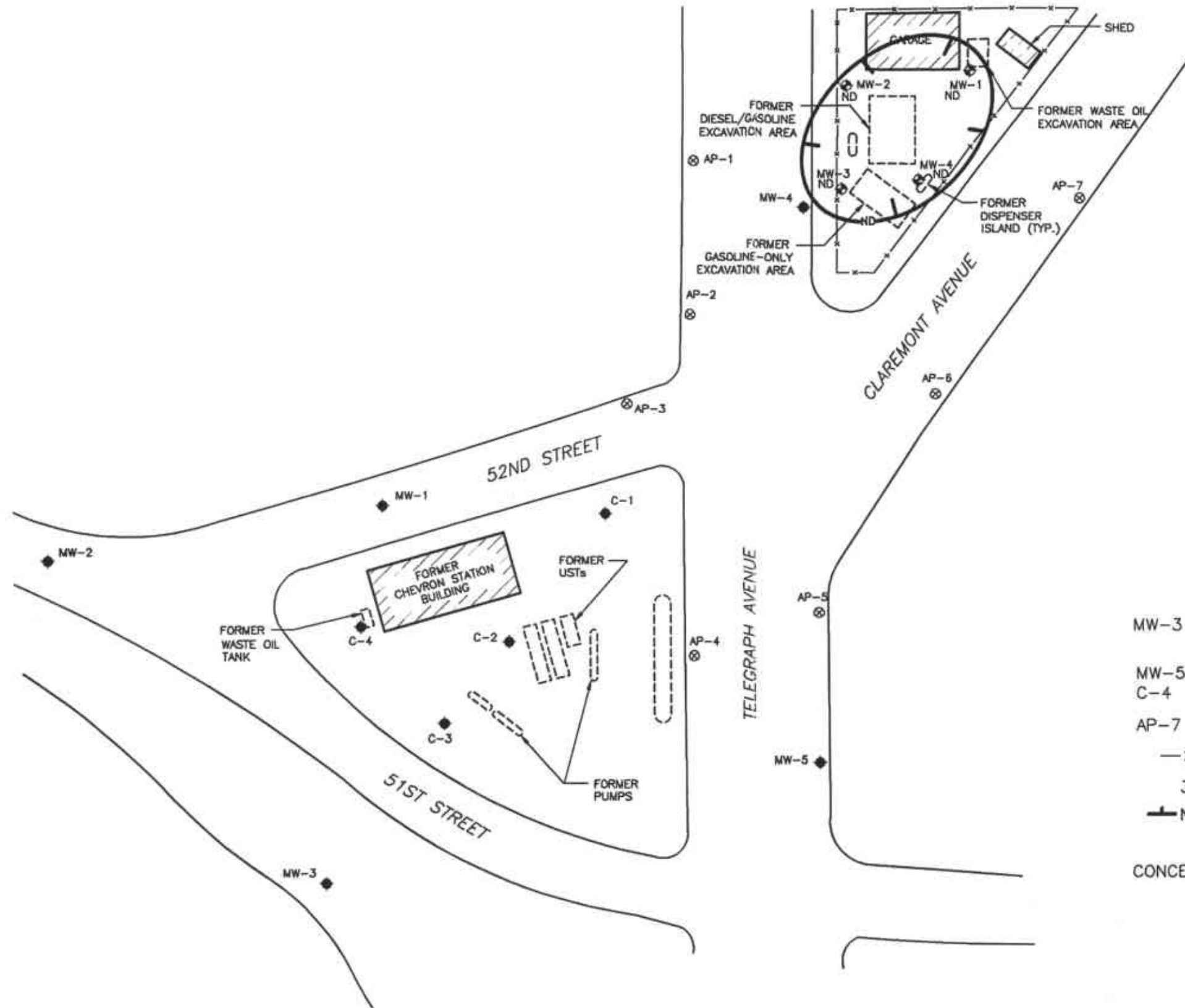
- MW-3 GROUND WATER MONITORING WELLS INSTALLED BY ESE/QST
- MW-5 GROUND WATER MONITORING WELLS INSTALLED FOR CHEVRON
- C-4 GROUND WATER MONITORING WELLS INSTALLED FOR CHEVRON
- AP-7 SOIL BORING WITH GRAB GROUND WATER SAMPLE
- x - FENCE
- 3,300 CONCENTRATION OF TPH-D IN GROUND WATER
- - 1,500 - - CONCENTRATION ISOPLETH

CONCENTRATIONS IN MICROGRAMS PER LITER (ug/L) or PARTS PER BILLION (ppb).



CHEVRON SITE BASE MAP FROM CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC.  
 CHEVRON WELLS ANALYTICAL DATA FROM BLAINE TECH SERVICES, INC. DATED 12/11/96  
 AUTOPRO WELLS ANALYTICAL DATA DATED 12/11/96

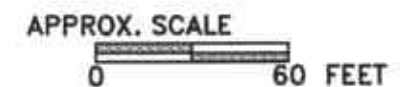
	DATE	8/8/96	<b>ESTIMATED EXTENT OF TPH-D          IN GROUND WATER,          MARCH 23, 1998</b>	FIGURE NO.
	REVISED	04/21/98		<b>5</b>
	1340 ARNOLD # 126 MARTINEZ, CA 94553	CAD FILE	65521905	AUTOPRO 5200 TELEGRAPH AVENUE OAKLAND, CALIFORNIA



**LEGEND**

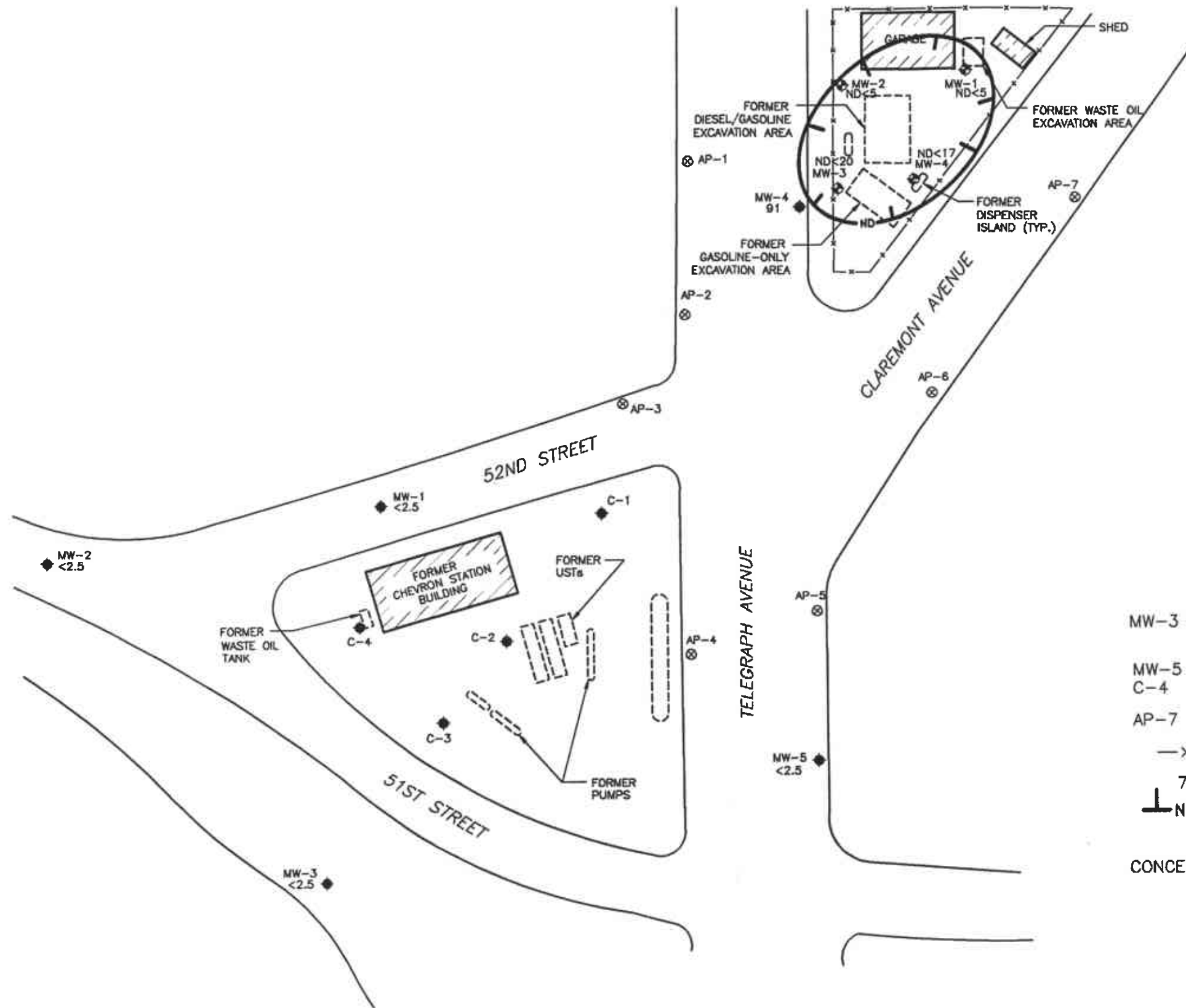
- MW-3 ◆ GROUND WATER MONITORING WELLS INSTALLED BY ESE/QST
- MW-5 ◆ GROUND WATER MONITORING WELLS INSTALLED FOR CHEVRON
- C-4 ◆
- AP-7 ⊗ SOIL BORING WITH GRAB GROUND WATER SAMPLE
- x— FENCE
- 32 CONCENTRATION OF BENZENE IN GROUND WATER
- ND— CONCENTRATION ISOPLETH

CONCENTRATIONS IN MICROGRAMS PER LITER (ug/L) or PARTS PER BILLION (ppb).



CHEVRON SITE BASE MAP FROM CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC.  
CHEVRON WELLS ANALYTICAL DATA FROM BLAINE TECH SERVICES, INC. DATED 12/11/96  
AUTOPRO WELLS ANALYTICAL DATA DATED 12/11/96

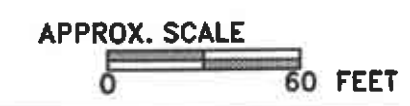
	DATE	8/8/96	<b>ESTIMATED EXTENT OF BENZENE IN GROUND WATER, MARCH 23, 1998</b>	FIGURE NO.
	REVISED	04/21/98		<b>6</b>
1340 ARNOLD # 126 MARTINEZ, CA 94553	CAD FILE	65521906	AUTOPRO 5200 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	PROJ. NO. 65-95-219



**LEGEND**

- MW-3 GROUND WATER MONITORING WELLS INSTALLED BY ESE/QST
- MW-5 GROUND WATER MONITORING WELLS INSTALLED FOR CHEVRON
- C-4 GROUND WATER MONITORING WELLS INSTALLED FOR CHEVRON
- AP-7 SOIL BORING WITH GRAB GROUND WATER SAMPLE
- x — FENCE
- 70 CONCENTRATION OF MTBE IN GROUND WATER
- ND CONCENTRATION ISOPLETH

CONCENTRATIONS IN MICROGRAMS PER LITER (ug/L) or PARTS PER BILLION (ppb).



CHEVRON SITE BASE MAP FROM CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC.  
 CHEVRON WELLS ANALYTICAL DATA FROM BLAINE TECH SERVICES, INC. DATED 12/11/96  
 AUTOPRO WELLS ANALYTICAL DATA DATED 12/11/96

	DATE 01/20/98 phx	<b>ESTIMATED EXTENT OF MTBE          IN GROUND WATER,          MARCH 23, 1998</b>	FIGURE NO. <b>7</b>
	REVISED 04/21/98		AUTOPRO 5200 TELEGRAPH AVENUE OAKLAND, CALIFORNIA
1340 ARNOLD # 126 MARTINEZ, CA 94553	CAD FILE 65521907		PROJ. NO. 65-95-219

**GROUNDWATER SAMPLE COLLECTION LOGS**

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### SAMPLE COLLECTION LOG

PROJECT NAME: TRISTAR PARTNERSHIP - OAKLAND  
 PROJECT NO.: 6595219  
 DATE: 3/23/98

SAMPLE LOCATION I.D.: MN-1  
 SAMPLER: M. KAPROSK  
 PROJECT MANAGER: T. DALZELL

#### CASING DIAMETER

2"   
 4" \_\_\_\_\_  
 Other \_\_\_\_\_

#### SAMPLE TYPE

Ground Water   
 Surface Water \_\_\_\_\_  
 Treat. Influent \_\_\_\_\_  
 Treat. Effluent \_\_\_\_\_  
 Other \_\_\_\_\_

#### WELL VOLUMES PER UNIT

Well Casing I.D. (inches)	Gal/Ft.
2.0	0.1632
4.0	0.6528
6.0	1.4690

DEPTH TO PRODUCT: — (ft.) PRODUCT THICKNESS: — (ft.) MINIMUM PURGE VOLUME  
 DEPTH TO WATER: 5.12 (ft.) WATER COLUMN: 2380 (ft.) (3 or 4 WCV): 11.65 (gal)  
 DEPTH OF WELL: 28.92 (ft.) WELL CASING VOLUME: 288 (gal) ACTUAL VOLUME PURGED: 12 (gal)

TIME	Volume (GAL)	pH (Units)	E.C. (Micromhos)	Temperature (F°)	Turbid. (NTU)	Other
<u>1000</u>	<u>0</u>	<u>7.24</u>	<u>0.87</u>	<u>64.6</u>	_____	_____
<u>1007</u>	<u>6</u>	<u>7.26</u>	<u>0.90</u>	<u>64.8</u>	_____	_____
<u>1015</u>	<u>12</u>	<u>7.26</u>	<u>0.92</u>	<u>64.8</u>	_____	_____

#### INSTRUMENT CALIBRATION

pH/COND./TEMP.: TYPE Hydax UNIT# 9518 DATE: 3/23/98 TIME: 0800 BY: MW  
 TURBIDITY: TYPE \_\_\_\_\_ UNIT# \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_ BY: \_\_\_\_\_

#### PURGE METHOD

Displacement Pump \_\_\_\_\_ Other \_\_\_\_\_  
 Bailer (Teflon/PVC/SS) \_\_\_\_\_  Submersible Pump

#### SAMPLE METHOD

Bailer (Teflon/PVC/SS) \_\_\_\_\_ Dedicated \_\_\_\_\_  
 Bailer (Disposable) \_\_\_\_\_ Other \_\_\_\_\_

#### SAMPLES COLLECTED

SAMPLE	ID	TIME	DATE	LAB	ANALYSES
DUPLICATE	<u>MN-1</u>	<u>1300</u>	<u>3/23/98</u>	<u>MAV</u>	<u>ETEX/TPH-G/TPH-D/TPH-MO/MTBE</u>
SPLIT	_____	_____	_____	_____	_____
FIELD BLANK	_____	_____	_____	_____	_____

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SAMPLER: [Signature] PROJECT MANAGER: \_\_\_\_\_  
 4090 Nelson Avenue, Suite J Concord, CA 94520 Phone (510) 685-4053 Fax (510) 685-5323



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### SAMPLE COLLECTION LOG

PROJECT NAME: RISAR PARTNERSHIP - OAKLAND  
PROJECT NO: 6595219  
DATE: 3/23/98

SAMPLE LOCATION I.D.: MW-2  
SAMPLER: M. RAPOPORT  
PROJECT MANAGER: BOB T. DALZELL

#### CASING DIAMETER

2"   
4" \_\_\_\_\_  
Other \_\_\_\_\_

#### SAMPLE TYPE

Ground Water   
Surface Water \_\_\_\_\_  
Treat. Influent \_\_\_\_\_  
Treat. Effluent \_\_\_\_\_  
Other \_\_\_\_\_

#### WELL VOLUMES PER UNIT

Well Casing I.D. (inches)	Gal/Ft.
2.0	0.1632
4.0	0.6528
6.0	1.4690

DEPTH TO PRODUCT: — (ft.) PRODUCT THICKNESS: — (ft.) MINIMUM PURGE VOLUME  
DEPTH TO WATER: 4.32 (ft.) WATER COLUMN: 20.04 (ft.) (3 or 4 WCV): 9.81 (gal)  
DEPTH OF WELL: 24.36 (ft.) WELL CASING VOLUME: 3.27 (gal) ACTUAL VOLUME PURGED: 10 (gal)

TIME	Volume (GAL)	pH (Units)	E.C. (Micromhos)	Temperature (F°)	Turbid. (NTU)	Other
<u>1020</u>	<u>0</u>	<u>7.20</u>	<u>1.01</u>	<u>66.2</u>	_____	_____
<u>1030</u>	<u>5</u>	<u>7.21</u>	<u>1.04</u>	<u>66.2</u>	_____	_____
<u>1040</u>	<u>10</u>	<u>7.21</u>	<u>1.04</u>	<u>66.2</u>	_____	_____

#### INSTRUMENT CALIBRATION

pH/COND./TEMP.: TYPE HYDAC UNIT# 9508 DATE: 3/23/98 TIME: 0800 BY: MJM  
TURBIDITY: TYPE \_\_\_\_\_ UNIT# \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_ BY: \_\_\_\_\_

#### PURGE METHOD

Displacement Pump  
 Bailer (Teflon/PVC/SS)  Other  Submersible Pump

#### SAMPLE METHOD

Bailer (Teflon/PVC/SS)  Bailer (Disposable)  Dedicated  Other

#### SAMPLES COLLECTED

SAMPLE	ID	TIME	DATE	LAB	ANALYSES
DUPLICATE	<u>MW-2</u>	<u>1400</u>	<u>3/23/98</u>	<u>MAL</u>	<u>PH/TPH/6/TPH-D/TPH-M/TPH-E</u>
SPLIT	_____	_____	_____	_____	_____
FIELD BLANK	_____	_____	_____	_____	_____

COMMENTS: \_\_\_\_\_  
\_\_\_\_\_

SAMPLER: [Signature] PROJECT MANAGER: \_\_\_\_\_  
4090 Nelson Avenue, Suite J | Concord, CA 94520 | Phone (510) 685-4053 | Fax (510) 685-5323

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### SAMPLE COLLECTION LOG

PROJECT NAME: TRISTAR PARTNERSHIP - OAKLAND  
PROJECT NO.: 6595219  
DATE: 3/23/99

SAMPLE LOCATION I.D.: MN-3  
SAMPLER: M. RAJOPARTY  
PROJECT MANAGER: T. DALZELL

#### CASING DIAMETER

2"   
4" \_\_\_\_\_  
Other \_\_\_\_\_

#### SAMPLE TYPE

Ground Water   
Surface Water \_\_\_\_\_  
Treat. Influent \_\_\_\_\_  
Treat. Effluent \_\_\_\_\_  
Other \_\_\_\_\_

#### WELL VOLUMES PER UNIT

Well Casing I.D. (Inches)	Gal/Ft.
2.0	0.1632
4.0	0.6528
6.0	1.4690

DEPTH TO PRODUCT: — (ft.) PRODUCT THICKNESS: — (ft.) MINIMUM PURGE VOLUME  
DEPTH TO WATER: 3.65 (ft.) WATER COLUMN: 20.43 (ft.) (3 or 4 WCV): 10.00 (gal)  
DEPTH OF WELL: 24.08 (ft.) WELL CASING VOLUME: 333 (gal) ACTUAL VOLUME PURGED: 10 (gal)

TIME	Volume (GAL)	pH (Units)	E.C. (Micromhos)	Temperature (F°)	Turbid. (NTU)	Other
<u>1045</u>	<u>0</u>	<u>7.18</u>	<u>1.04</u>	<u>66.8</u>	_____	_____
<u>1053</u>	<u>5</u>	<u>7.18</u>	<u>1.04</u>	<u>66.8</u>	_____	_____
<u>1105</u>	<u>10</u>	<u>7.18</u>	<u>1.04</u>	<u>66.8</u>	_____	_____

#### INSTRUMENT CALIBRATION

pH/COND./TEMP.: TYPE Hydrex UNIT# 9508 DATE: 3/23/98 TIME: 0800 BY: Hand  
TURBIDITY: TYPE \_\_\_\_\_ UNIT# \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_ BY: \_\_\_\_\_

#### PURGE METHOD

\_\_\_ Displacement Pump  
\_\_\_ Bailer (Teflon/PVC/SS)  Other  Submersible Pump

#### SAMPLE METHOD

\_\_\_ Bailer (Teflon/PVC/SS)  Dedicated  
\_\_\_ Bailer (Disposable)  Other

#### SAMPLES COLLECTED

SAMPLE	ID	TIME	DATE	LAB	ANALYSES
DUPLICATE	<u>MN-3</u>	<u>1600</u>	<u>3/23/98</u>	<u>NAL</u>	<u>BTEX/TPH-6/TPH-D/TPH-M/MTBE</u>
SPLIT	_____	_____	_____	_____	_____
FIELD BLANK	_____	_____	_____	_____	_____

COMMENTS: Removed Arc's PRIOR TO WELL MEASUREMENTS & SAMPLING

SAMPLER: [Signature]

PROJECT MANAGER

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### SAMPLE COLLECTION LOG

PROJECT NAME: TRISTAR PARTNERSHIP - OAKLAND  
PROJECT NO.: 6595219  
DATE: 3/23/98

SAMPLE LOCATION I.D.: MW-4  
SAMPLER: M. CARPORT  
PROJECT MANAGER: T. DALZELL

#### CASING DIAMETER

2"   
4" \_\_\_\_\_  
Other \_\_\_\_\_

#### SAMPLE TYPE

Ground Water   
Surface Water \_\_\_\_\_  
Treat. Influent \_\_\_\_\_  
Treat. Effluent \_\_\_\_\_  
Other \_\_\_\_\_

#### WELL VOLUMES PER UNIT

Well Casing I.D. (inches)	Gal/Ft.
2.0	0.1632
4.0	0.6528
6.0	1.4690

DEPTH TO PRODUCT: \_\_\_\_\_ (ft.) PRODUCT THICKNESS: \_\_\_\_\_ (ft.) MINIMUM PURGE VOLUME  
DEPTH TO WATER: 3.49 (ft.) WATER COLUMN: 20.56 (ft.) (3 or 4 WCV): 10.07 (gal)  
DEPTH OF WELL: 24.05 (ft.) WELL CASING VOLUME: 336 (gal) ACTUAL VOLUME PURGED: 11 (gal)

TIME	Volume (GAL)	pH (Units)	E.C. (Micromhos)	Temperature (F°)	Turbld. (NTU)	Other
<u>1105</u>	<u>0</u>	<u>7.08</u>	<u>1.24</u>	<u>64.8</u>	_____	_____
<u>1120</u>	<u>3</u>	<u>7.10</u>	<u>1.24</u>	<u>65.0</u>	_____	_____
<u>1140</u>	<u>11</u>	<u>7.12</u>	<u>1.24</u>	<u>65.2</u>	_____	_____

#### INSTRUMENT CALIBRATION

pH/COND./TEMP.: TYPE HYDAC UNIT# 9508 DATE: 3/23/98 TIME: 0800 BY: AMR  
TURBIDITY: TYPE \_\_\_\_\_ UNIT# \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_ BY: \_\_\_\_\_

#### PURGE METHOD

\_\_\_\_ Displacement Pump  
\_\_\_\_ Bailer (Teflon/PVC/SS)  Other  Submersible Pump

#### SAMPLE METHOD

\_\_\_\_ Bailer (Teflon/PVC/SS)  Bailer (Disposable) \_\_\_\_\_ Dedicated Other

#### SAMPLES COLLECTED

SAMPLE	ID	TIME	DATE	LAB	ANALYSES
DUPLICATE	<u>MW-4</u>	<u>1600</u>	<u>3/23/98</u>	<u>MLL</u>	<u>EXE/TPH-6/TPH-D/TPH-M6/NTPE</u>
SPLIT	_____	_____	_____	_____	_____
FIELD BLANK	_____	_____	_____	_____	_____

COMMENTS: Removed ORC's PRIOR TO WELL MEASUREMENTS & SAMPLING

SAMPLER: [Signature]

PROJECT MANAGER

**LABORATORY REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION**



McCAMPBELL ANALYTICAL INC.

110 Second Avenue South, #D7, Pacheco, CA 94553  
Telephone : 925-798-1620 Fax : 925-798-1622  
<http://www.mccampbell.com> E-mail: [main@mccampbell.com](mailto:main@mccampbell.com)

QST Environmental 1340 Arnold Drive, Suite 126 Martinez, CA 94553	Client Project ID: #6595219; Tristar Partnership	Date Sampled: 03/23/98
	Client Contact: Micah Rapoport	Date Received: 04/06/98
	Client P.O:	Date Extracted: 04/06/98
		Date Analyzed: 04/06/98

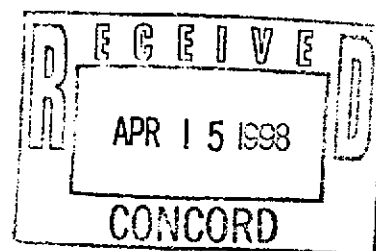
COPY

04/13/98

Dear Micah:

Enclosed are:

- 1). the results of 6 samples from your #6595219; Tristar Partnership project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.



All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

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



QST Environmental 1340 Arnold Drive, Suite 126 Martinez, CA 94553	Client Project ID: #6595219; Tristar Partnership	Date Sampled: 03/23/98
	Client Contact: Micah Rapoport	Date Received: 04/06/98
	Client P.O:	Date Extracted: 04/07-04/08/98
		Date Analyzed: 04/07-04/08/98

**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) <sup>+</sup>	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Recovery Surrogate
87811	MW-1	W	ND	ND	ND	ND	ND	ND	90
87812	MW-2	W	200,j	ND	ND	0.091	ND	ND	97
87813	MW-3	W	2500,b,j	ND<20	ND	3.2	3.5	7.7	104
87814	MW-4	W	950,j	ND<17	ND	2.7	1.0	1.3	105
87815	DUP	W	2400,b,j	ND<18	ND	4.0	3.4	4.4	105
87816	TRIP	W	ND	ND	ND	ND	ND	ND	103
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, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/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.



McCAMPBELL ANALYTICAL INC.

110 Second Avenue South, #D7, Pacheco, CA 94553  
 Telephone : 925-798-1620 Fax : 925-798-1622  
<http://www.mccampbell.com> E-mail: [main@mccampbell.com](mailto:main@mccampbell.com)

QST Environmental 1340 Arnold Drive, Suite 126 Martinez, CA 94553	Client Project ID: #6595219; Tristar Partnership	Date Sampled: 03/23/98
	Client Contact: Micah Rapoport	Date Received: 04/06/98
	Client P.O:	Date Extracted: 04/07-04/08/98
		Date Analyzed: 04/07-04/08/98

**Diesel Range (C10-C23) and Oil-Range (C18+) Extractable Hydrocarbons as Diesel and Motor Oil\***  
 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) <sup>+</sup>	TPH(mo) <sup>+</sup>	% Recovery Surrogate
87811	MW-1	W	96,g,b	ND	101
87812	MW-2	W	100,d/b	ND	101
87813	MW-3	W	1900,d	ND	100
87814	MW-4	W	740,d,g	500	101
87815	DUP	W	1600,d	ND	101
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W		50 ug/L	250 ug/L	
	S		1.0 mg/kg	5.0 mg/kg	

\*water samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP / STLC / SPLP extracts in ug/L

\* cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

\*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) aged diesel? is 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 sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment.

## QC REPORT FOR HYDROCARBON ANALYSES

Date: 04/06/98-04/07/98

Matrix: WATER

Analyte	Concentration (mg/L)			Amount Spiked	% Recovery		RPD
	Sample (#87490)	MS	MSD		MS	MSD	
TPH (gas)	0.0	111.3	107.4	100.0	111.3	107.4	3.6
Benzene	0.0	10.2	9.9	10.0	102.0	99.0	3.0
Toluene	0.0	10.6	10.3	10.0	106.0	103.0	2.9
Ethyl Benzene	0.0	10.5	10.1	10.0	105.0	101.0	3.9
Xylenes	0.0	31.3	30.1	30.0	104.3	100.3	3.9
TPH(diesel)	0	174	168	150	116	112	3.6
TRPH (oil & grease)	0	23800	23600	23700	100	100	0.8

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

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



## QC REPORT FOR HYDROCARBON ANALYSES

Date: 04/08/98-04/09/98

Matrix: WATER

Analyte	Concentration (mg/L)			Amount Spiked	% Recovery		
	Sample (#87875)	MS	MSD		MS	MSD	RPD
TPH (gas)	0.0	108.5	96.4	100.0	108.5	96.4	11.8
Benzene	0.0	9.8	9.6	10.0	98.0	96.0	2.1
Toluene	0.0	11.5	10.0	10.0	115.0	100.0	14.0
Ethyl Benzene	0.0	10.7	10.0	10.0	107.0	100.0	6.8
Xylenes	0.0	35.2	31.4	30.0	117.3	104.7	11.4
TPH(diesel)	0	162	153	150	108	102	5.9
TRPH (oil & grease)	0	25300	26200	23700	107	111	3.5

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

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

