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July 24, 1995

Ms. Eva Chu
Alameda County Health Agency
80 Swan Way, Room 200
Oakland, California 94621

Dear Ms. Chu:

SUBJECT: MARCH 1995 QUARTERLY GROUND WATER MONITORING REPORT FOR THE FORMER ALAMEDA SERVICE STATION A-528, 7608 AMADOR VALLEY BOULEVARD, DUBLIN, CALIFORNIA

Enclosed please find the above-captioned report. If you should have any questions, please do not hesitate to call Brad Wright at (510) 748-5697.

Sincerely,

Handwritten signature of Brad Wright in cursive.

Brad Wright, R.G.
Senior Geoscientist
Project Manager

Handwritten signature of David Watts in cursive.

David Watts
Environmental Scientist

Enclosures

File 400

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**MARCH 1995 QUARTERLY GROUND WATER
MONITORING REPORT FOR THE
FORMER ALAMEDA
SERVICE STATION A-528
TARGET DUBLIN
7608 AMADOR VALLEY BOULEVARD
DUBLIN, CALIFORNIA**

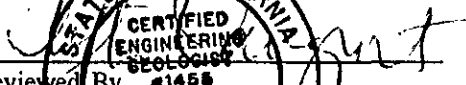
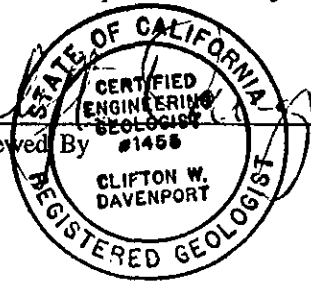
July 21, 1995

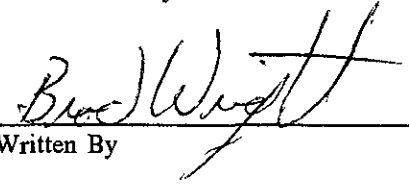
Prepared For:
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Prepared By:
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Project No: 04.0122638.001.001

The Information Contained Herein Is Submitted For the Sole and Exclusive Use of Target Stores and Shall Not Be Disclosed or Furnished to Any Other Entity, Corporation, or Third Party, For Purposes Outside the Specific Scope and Intent of This Contract Without the Express Written Consent of McLaren/Hart.

Reviewed By 

CLIFTON W. DAVENPORT
REGISTERED GEOLOGIST

Written By 



ENVIRONMENTAL ENGINEERING CORPORATION

INTRODUCTION

This report presents the March 1995 quarterly ground water monitoring results for the former Alameda Service Station A-528, located at 7608 Amador Valley Boulevard in Dublin, California ("the site"). This report was prepared in accordance with McLaren/Hart's quarterly ground water sampling and interim remediation measure plan (McLaren/Hart, 1993a) and followed previously presented recommendations (McLaren/Hart, 1994). Interim remediation from well MW-2 and sampling from wells MW-1 and MW-3 have been discontinued as recommended by Ms. Eva Chu of the Alameda County Health Care Services Agency, Department of Environmental Health, Environmental Protection Division (ACHCSA) in letter StID 3746, dated July 21, 1994.

OBJECTIVES AND SCOPE OF WORK

A site location map is presented as Figure 1 and a site map showing monitoring well locations is included as Figure 2. Quarterly monitoring of site wells is being conducted to monitor lateral extent of petroleum hydrocarbons in shallow ground water beneath the site.

The work associated with the March 1995 quarterly monitoring event included: sampling monitoring wells MW-2, MW-4, MW-5 and MW-6 for the presence of gasoline-related constituents and collecting water elevations from all monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6).

Ground Water Elevations and Flow Directions

Ground water surface elevations were measured on March 29, 1995, prior to sampling (Table 1). These data were used to construct the March 1995 ground water contour map (Figure 3). The inferred ground water flow direction is generally toward the east and is apparently influenced by the presence of more permeable materials in the excavation area, causing a small ground water mound to form. This flow direction is generally consistent with historic ground water flow directions. Based on the observed contour pattern, MW-2 and MW-5 appear to be downgradient while MW-4 is down-to cross-gradient of the former excavation area.

The static depth to ground water ranged from 3.29 to 4.99 feet below ground surface or 336.02 to 337.55 feet above mean sea level. The average hydraulic gradient is approximately 0.013 feet/foot. The March water level measurements indicate that ground water levels in all wells have increased since January 1995 (Table 2). These increases range from 0.24 to 0.52 feet; the average increase was 0.39 feet. Figure 3 illustrates inferred ground water contours developed using the March 1995 data. Flow direction and gradient are consistent with historic ground water flow.

Ground Water Sampling Activities

Ground water samples were collected from MW-2, MW-4, MW-5 and MW-6 on March 29, 1995. Prior to sampling each well, four casing volumes were purged with either a centrifugal or peristaltic pump. Temperature, pH, electric conductivity, and turbidity were measured after each casing volume was removed. After all parameters had stabilized and with the turbidity at or below 1.6 Nephelometric Turbidity Units (NTU), sampling was performed using a disposable bailer. Sampling Event Data Sheets are enclosed as Appendix I.

Ground water samples were stored in a container filled with ice and delivered to MBT Environmental Laboratories, a state-certified laboratory located in Rancho Cordova, California. A chain-of-custody record was completed during sampling and accompanied each sample shipment to the laboratory. The samples were submitted for analysis by EPA Method 5030 (LUFT) for total petroleum hydrocarbons as gasoline (TPH/G) and for benzene, toluene, ethyl benzene, and xylenes (BTEX) analyses by EPA Method 8020. Trip blanks were included in the shipments to the laboratory to be analyzed for TPH/G and BTEX.

Ground water Analytical Results

Table 3 and Figure 4 present the March 1995 sampling event analytical results. TPH/G was not detected in samples from any wells.

Chemicals at or above the reporting limits were not detected in MW-5 or MW-6. This was the first event in which all chemicals of concern were not detected in MW-6.

Ethylbenzene (0.89 ppb), benzene (5.2 ppb), and total xylenes (0.92 ppb) were detected in the sample collected from MW-2. Benzene (2.0 ppb) was detected in the sample collected from MW-4. These levels are consistent with recent analytical results.

The trip blank sample did not contain any contaminants above the reporting limits. The Analytical Data Sheets and Chain-of-Custody Records for the ground water samples are included as Appendix II.

The DHS Maximum Contaminant Levels (MCLs) for BTEX compounds in drinking water include: 1 ppb benzene; 700 ppb ethyl benzene; and 1,750 ppb total xylenes. The Federal MCL for toluene is 1,500 ppb. There is no state action level for TPH/G.

CONCLUSIONS

The following conclusions are based on the data collected:

- Free-floating petroleum product was not observed in any of the wells.
- Concentrations of gasoline-related constituents were not detected in well MW-6. This represents the third consecutive quarter that benzene concentrations in MW-6 were less than the reporting level of 0.3 ppb.
- MW-5 continues to be free of the chemicals of concern.
- The apparent ground water flow direction at the site is generally to the east.

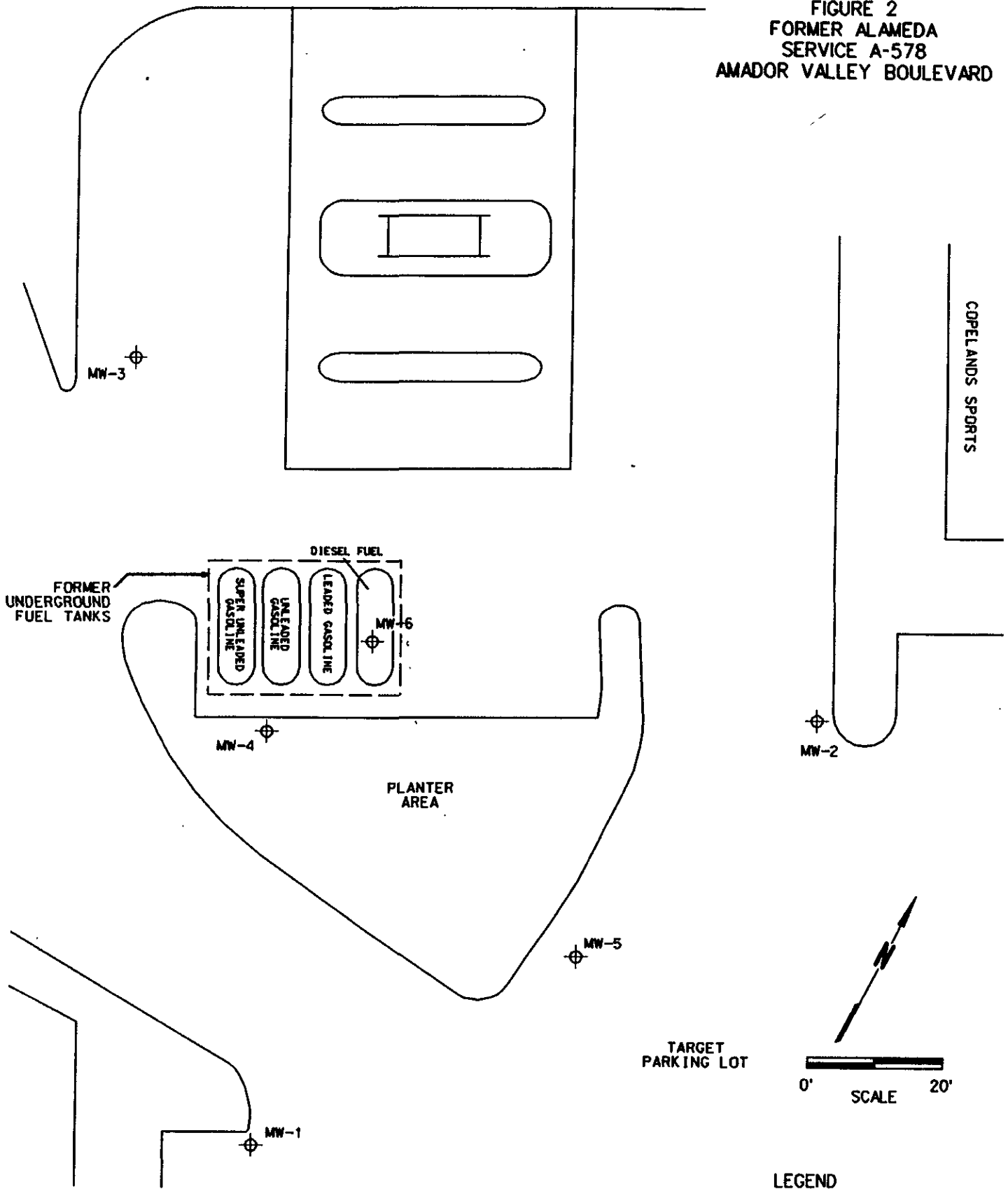
REFERENCES

- Alameda County Health Care Service Agency, 1992, "Revision of Quarterly Monitoring Program at the former Alameda Service Station A-558, 7608 Amador Valley Boulevard, Dublin", December 18, 1993
- McLaren/Hart, 1993a, "Proposal to Conduct Quarterly Ground water Sampling and Interim Remediation at the Target Store T-328 Dublin, California", September 13, 1993
- McLaren/Hart, 1994, "September 1994 Quarterly Ground water Monitoring and Interim Remediation Report for the Former Alameda Service Station A-528."
- Alameda County Health Care Service Agency, 1994, "QMR at Former Alameda Service Station A-527, 7608 Amador Valley Blvd., Dublin 94568". Letter St ID 3746 to McLaren/Hart, July 21, 1994.
- Alameda County Health Care Service Agency, 1995, "Sampling Frequency at 7608 Amador Valley Blvd., Dublin 94568". Letter StID 3746 to McLaren/Hart, March 15, 1995.

FIGURES

PLANTER AREA

FIGURE 2
FORMER ALAMEDA
SERVICE A-578
AMADOR VALLEY BOULEVARD

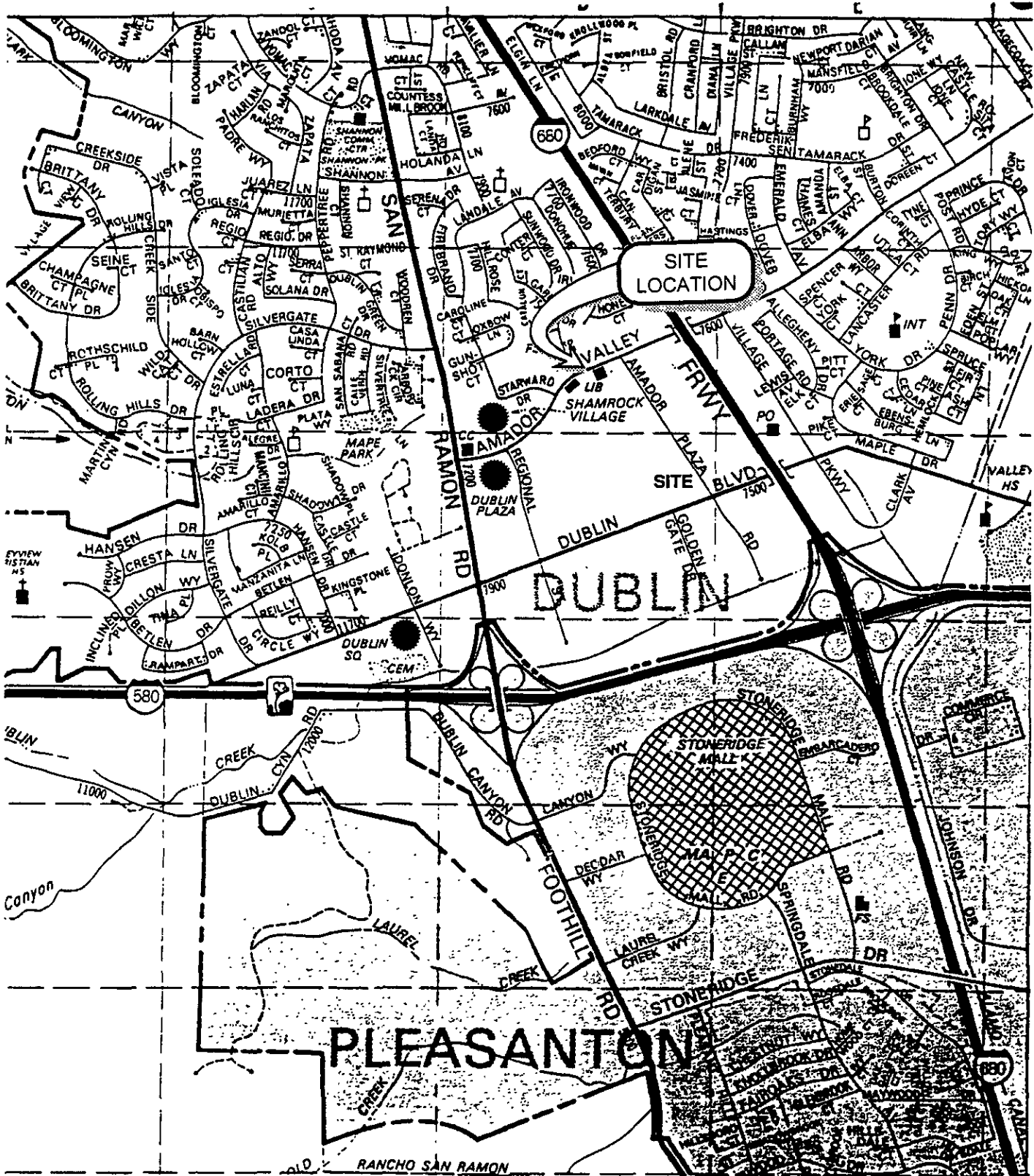


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MW-5 ⊕ MONITORING WELL LOCATION

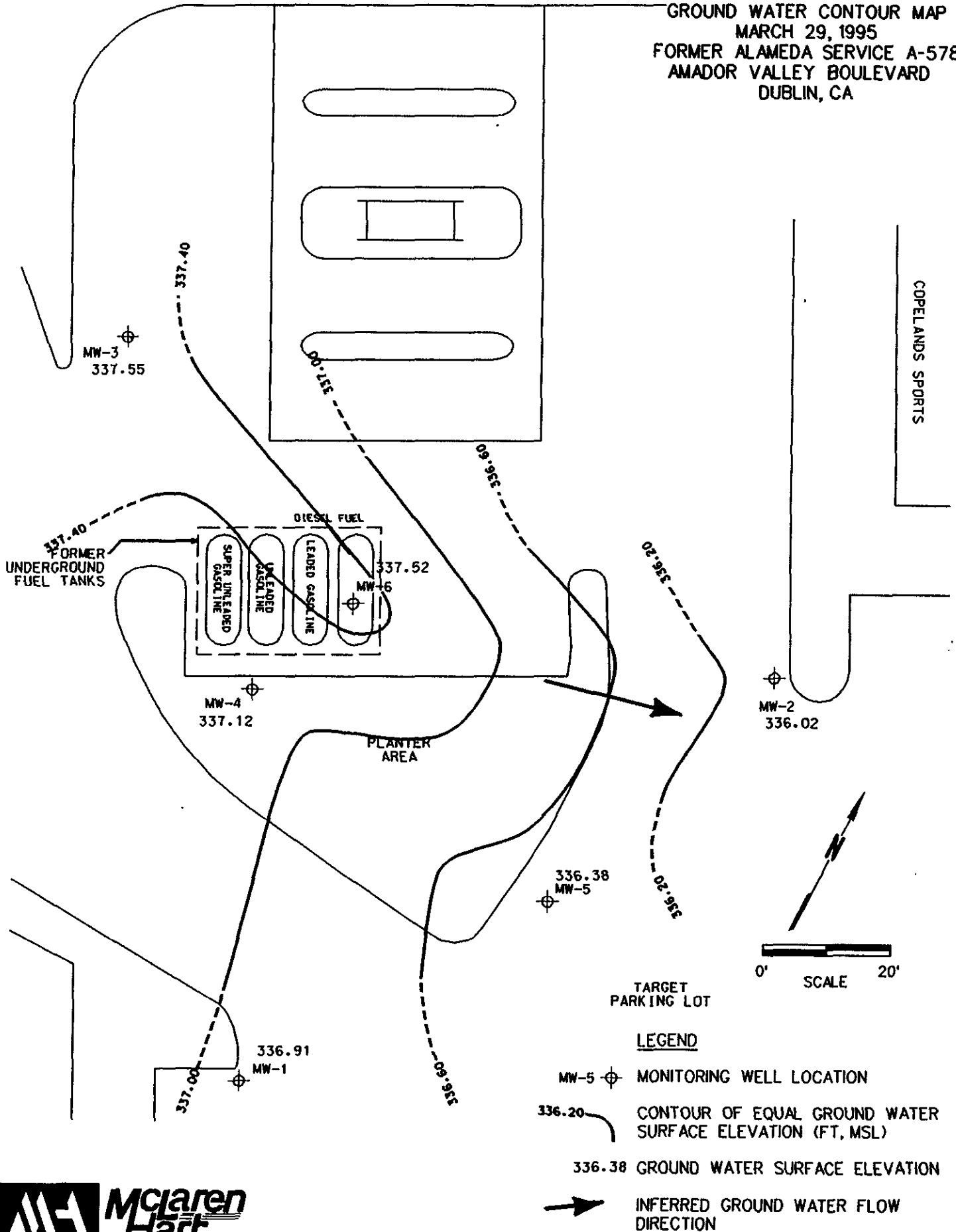


FIGURE 1
SITE LOCATION MAP
FORMER ALAMEDA SERVICE STATION
A-578
DUBLIN, CA



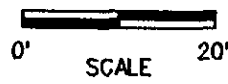
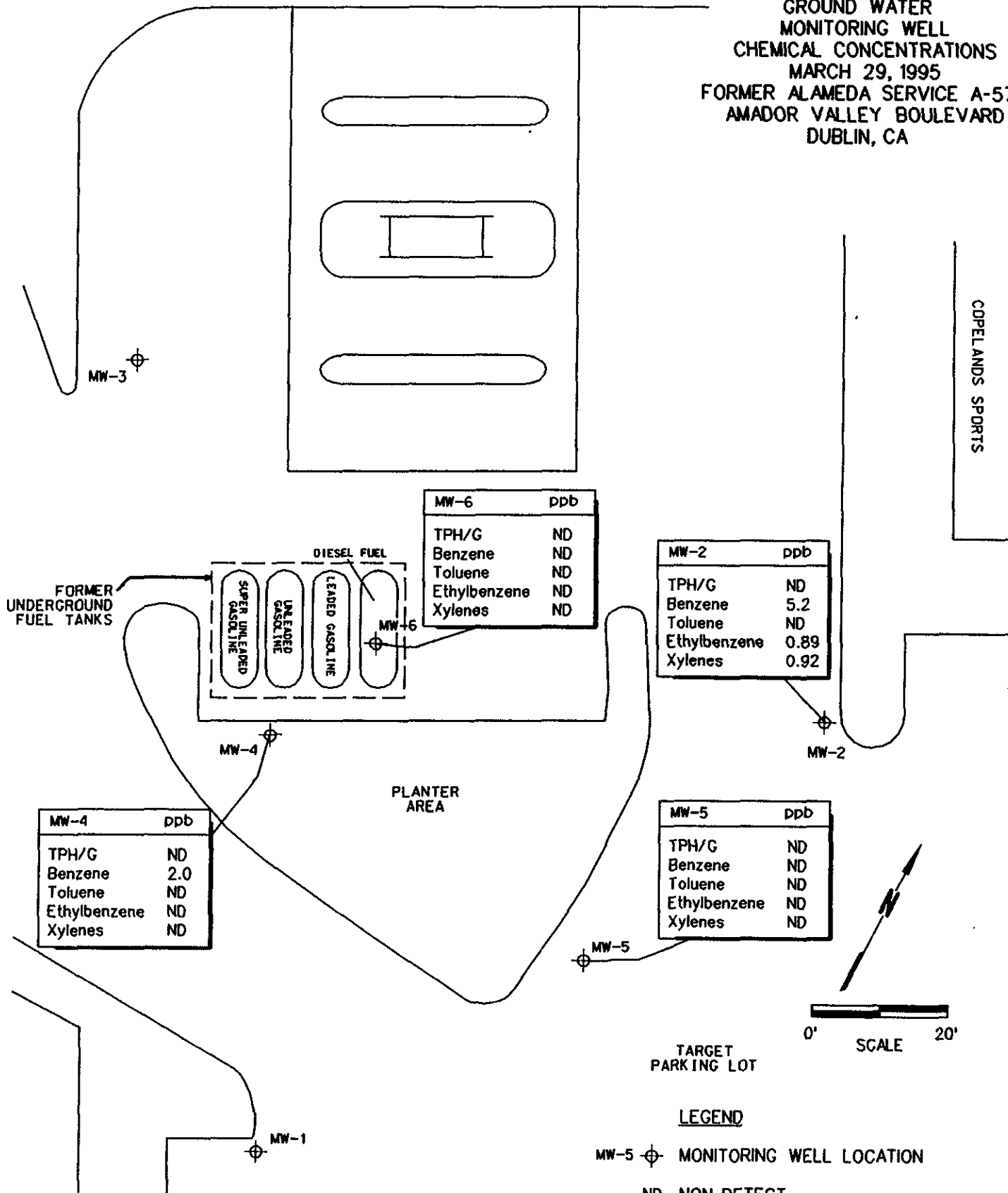
PLANTER AREA

FIGURE 3
GROUND WATER CONTOUR MAP
MARCH 29, 1995
FORMER ALAMEDA SERVICE A-578
AMADOR VALLEY BOULEVARD
DUBLIN, CA



PLANTER AREA

FIGURE 4
GROUND WATER
MONITORING WELL
CHEMICAL CONCENTRATIONS
MARCH 29, 1995
FORMER ALAMEDA SERVICE A-578
AMADOR VALLEY BOULEVARD
DUBLIN, CA



LEGEND

- MW-5 MONITORING WELL LOCATION
- ND NON-DETECT
- ppb PARTS PER BILLION
- TPH/G TOTAL PETROLEUM HYDROCARBONS AS GASOLINE



TABLES

TABLE 1

WELL CONSTRUCTION DETAILS AND GROUND WATER SURFACE ELEVATIONS
 FORMER ALAMEDA SERVICE STATION, A-578
 DUBLIN, CALIFORNIA

WELL DESIGNATION	SCREENED INTERVAL (feet below grade)	GROUND SURFACE ELEVATION (MSL)*	SCREENED INTERVAL (MSL)	TOP OF CASING ELEVATION (MSL)	STATIC WATER LEVEL (feet below TOC)	
					03/29/95	03/29/95
MW-1	5-20	340.30	320.30 - 335.30	340.20	3.29	336.91
MW-2	5-20	340.52	320.52 - 335.52	340.27	4.25	336.02
MW-3	5-20	341.67	321.67 - 336.67	341.00	3.45	337.55
MW-4	5-20	342.31	322.31 - 337.31	342.11	4.99	337.12
MW-5	5-20	340.52	320.52 - 335.52	340.09	3.71	336.38
MW-6	4.5 - 14.5	341.13	326.63 - 336.63	340.81	3.29	337.52

*Feet above mean sea level

TABLE 2
SUMMARY OF GROUND WATER ELEVATION DATA
FORMER ALAMEDA SERVICE STATION A-578
DUBLIN, CALIFORNIA

WELL I.D.	TOP OF CASING ELEVATION (MSL)*	DATE MEASURED	DEPTH TO WATER (ft)	WATER ELEVATIONS (MSL)	CHANGE SINCE LAST READING (ft)
MW-1	340.20	02/28/91	5.00	335.20	
		06/14/91	5.53	334.67	-0.59
		09/26/91	5.97	334.23	-0.38
		12/30/91	5.50	334.70	0.47
		03/26/92	4.65	335.55	0.85
		06/23/92	4.92	335.28	-0.27
		09/24/92	5.10	335.10	-0.18
		12/29/92	4.89	335.31	0.21
		03/24/93	3.57	336.63	1.32
		06/28/93	3.79	336.41	-0.22
		09/28/93	4.24	335.96	-0.45
		12/16/93	4.72	335.48	-0.48
		03/28/94	4.90	335.30	-0.18
		06/16/94	4.93	335.27	-0.03
		09/30/94	5.32	334.88	-0.39
		12/21/94	5.02	335.18	0.30
01/24/95	3.74	336.46	1.28		
03/29/95	3.29	336.91	0.45		
MW-2	340.27	02/28/91	5.46	334.81	
		06/14/91	5.90	334.37	-0.44
		09/26/91	6.54	333.73	-0.64
		12/30/91	5.83	334.44	0.71
		03/27/92	5.35	334.92	0.48
		06/23/92	5.69	334.58	-0.34
		09/24/92	5.70	334.57	-0.01
		12/29/92	5.52	334.75	0.18
		03/24/93	4.48	335.79	1.04
		06/28/93	4.67	335.60	-0.19
		09/28/93	5.01	335.26	-0.34
		12/16/93	5.40	334.87	-0.39
		03/28/94	5.58	334.69	-0.18
		06/16/94	5.59	334.68	-0.01
		09/30/94	5.89	334.38	-0.30
		12/21/94	5.65	334.62	0.24
01/24/95	4.49	335.78	1.16		
03/29/95	4.25	336.02	0.24		
MW-3	341.00	02/28/91	5.61	335.39	
		06/14/91	5.40	335.60	0.21
		09/26/91	6.29	334.71	-0.89
		12/30/91	5.75	335.25	0.54
		03/26/92	4.58	336.42	1.17
		06/23/92	5.27	335.73	-0.69
		09/24/92	5.47	335.53	-0.20
		12/29/92	5.08	335.92	0.39
		03/24/93	3.83	337.17	1.25
		06/28/93	4.02	336.98	-0.19
		09/28/93	4.42	336.58	-0.40
		12/16/93	4.97	336.03	-0.55
		03/28/94	4.99	336.01	-0.02
		06/16/94	5.06	335.94	-0.07
		09/30/94	5.45	335.55	-0.39
		12/21/94	5.15	335.85	0.30
01/24/95	3.87	337.13	1.28		
03/29/95	3.45	337.55	0.42		

TABLE 2
SUMMARY OF GROUND WATER ELEVATION DATA
FORMER ALAMEDA SERVICE STATION A-578
DUBLIN, CALIFORNIA
(continued)

WELL I.D.	TOP OF CASING ELEVATION (MSL)*	DATE MEASURED	DEPTH TO WATER (ft)	WATER ELEVATIONS (MSL)	CHANGE SINCE LAST READING (ft)
MW-4	342.11	02/28/91	7.01	335.10	
		06/14/91	7.01	335.10	0.00
		09/26/91	7.81	334.30	-0.80
		12/30/91	7.17	334.94	0.64
		03/27/92	6.44	335.67	0.73
		06/23/92	6.70	335.41	-0.26
		09/24/92	6.84	335.27	-0.14
		12/29/92	6.59	335.52	0.25
		03/24/93	5.38	336.73	1.21
		06/28/93	5.52	336.59	-0.14
		09/28/93	5.89	336.22	-0.37
		12/16/93	6.51	335.60	-0.62
		03/28/94	6.54	335.57	-0.03
		06/16/94	6.58	335.53	-0.04
		09/30/94	6.92	335.19	-0.34
		12/21/94	6.66	335.45	0.26
01/24/95	5.38	336.73	1.28		
03/29/95	4.99	337.12	0.39		
MW-5	340.09	06/14/91	5.81	334.28	
		09/26/91	5.92	334.17	-0.11
		12/30/91	5.52	334.57	0.40
		03/26/92	4.80	335.29	0.72
		06/23/92	5.23	334.86	-0.43
		09/24/92	5.07	335.02	0.16
		12/29/92	5.04	335.05	0.03
		03/24/93	3.99	336.10	1.05
		06/28/93	4.11	335.98	-0.12
		09/28/93	4.50	335.59	-0.39
		12/16/93	4.99	335.10	-0.49
		03/28/94	5.15	334.94	-0.16
		06/16/94	5.15	334.94	0.00
		09/30/94	5.49	334.60	-0.34
		01/24/95	4.00	336.09	1.49
		03/29/95	3.71	336.38	0.29
MW-6	340.81	09/26/91	6.45	334.36	
		12/30/91	5.71	335.10	0.74
		03/27/92	5.03	335.78	0.68
		06/23/92	5.38	335.43	-0.35
		09/24/92	5.57	335.24	-0.19
		12/29/92	5.22	335.59	0.35
		03/24/93	3.86	336.95	1.36
		06/28/93	3.95	336.86	-0.09
		09/28/93	4.30	336.51	-0.35
		12/16/93	5.05	335.76	-0.75
		03/28/94	4.82	335.99	0.23
		06/16/94	4.93	335.88	-0.11
		09/30/94	5.41	335.40	-0.48
		12/21/94	5.07	335.74	0.34
		01/24/95	3.81	337.00	1.26
		03/29/95	3.29	337.52	0.52

* MSL = Mean Sea Level

TABLE 3

ANALYTICAL RESULTS OF GROUND WATER SAMPLES (ppb)
 FORMER ALAMEDA SERVICE STATION, A-578
 DUBLIN, CALIFORNIA
 (continued)

<u>WELL DESIGNATION</u>	<u>DATE</u>	<u>TPH/G</u>	<u>TPH/D</u>	<u>BENZENE</u>	<u>TOLUENE</u>	<u>ETHYL BENZENE</u>	<u>TOTAL XYLENES</u>	
MW-4	2/91	6,000	<500	680	<20	160	250	
	6/91	6,100	---	680	<25	150	<25	
	9/91	<50	---	100	<0.5	45	8.1	
	12/91	180	---	6.4	<1.0	16	25.8	
	3/92	560	---	120	6.0	5.0	<0.5	
	6/92	<50	---	<0.3	<0.3	<0.3	<0.3	
	9/92	<50	---	<0.3	<0.3	<0.3	<0.3	
	12/92	<50	---	0.92	<0.3	<0.3	<0.3	
	3/93	<50	---	4.3	<0.3	0.98	<0.3	
	6/93	<50	---	2.1	<0.3	<0.3	0.31	
	9/93	<50	---	2.8	<0.3	<0.3	<0.3	
	12/93	<50	---	1.0	<0.3	<0.3	<0.3	
	3/94	460 ^b	---	3.2 ^b	<3.0	45 ^b	19 ^b	
	6/94	<500 ^c	---	<5 ^c	<5 ^c	<5 ^c	<5 ^c	
	9/94	<500 ^c	---	<3 ^c	<3 ^c	<3 ^c	<3 ^c	
	12/94	<50	---	<0.3	<0.3	<0.3	<0.3	
	3/95	<50	---	2.0	<0.3	<0.3	<0.3	
	MW-5	6/91	<50	---	<0.5	<0.5	<0.5	<0.5
		9/91	<50	---	<0.5	<0.5	<0.5	<0.5
12/91		<50	---	<0.5	<0.5	<0.5	<0.5	
3/92		<50	---	<0.3	<0.3	<0.3	<0.3	
6/92		<50	---	<0.3	<0.3	<0.3	<0.3	
9/92		<50	---	<0.3	<0.3	<0.3	<0.3	
12/92		<50	---	<0.3	<0.3	<0.3	<0.3	
3/93		<50	---	<0.3	<0.3	<0.3	<0.3	
6/93		<50	---	<0.3	<0.3	<0.3	<0.3	
9/93		<50	---	<0.3	<0.3	<0.3	<0.3	
12/93		<50	---	<0.3	<0.3	<0.3	<0.3	
3/94		<50	---	<0.3	<0.3	<0.3	<0.3	
6/94		<50	---	1.5	<0.5	<0.5	<0.5	
9/94		<50	---	<0.3	<0.3	<0.3	<0.3	
3/95		<50	---	<0.3	<0.3	<0.3	<0.3	

TABLE 3

ANALYTICAL RESULTS OF GROUND WATER SAMPLES (ppb)
FORMER ALAMEDA SERVICE STATION, A-578
DUBLIN, CALIFORNIA

<u>WELL DESIGNATION</u>	<u>DATE</u>	<u>TPH/G</u>	<u>TPH/D</u>	<u>BENZENE</u>	<u>TOLUENE</u>	<u>ETHYL BENZENE</u>	<u>TOTAL XYLENES</u>
MW-1	2/91	<50	<500	<0.5	<0.5	<0.5	<0.5
	6/91	<50	---	<0.5	<0.5	<0.5	<0.5
	9/91	<50	---	<0.5	<0.5	<0.5	<0.5
	12/91	<50	---	<0.5	<0.5	<0.5	<0.5
	3/92	<50	---	<0.3	<0.3	<0.3	<0.3
	6/92	<50	---	<0.3	<0.3	<0.3	<0.3
	9/92	<50	---	<0.3	<0.3	<0.3	<0.3
	3/94	<50	---	<0.3	<0.3	<0.3	<0.3
	MW-2	2/91	50	<500	2.0	0.8	1.1
6/91		51	---	6.6	<0.5	1.1	1.33
9/91		<50	---	5.0	<0.5	0.64	<0.5
12/91		<50	---	6.1	<0.5	<0.5	<0.5
3/92		<50	---	3.6	<0.5	<0.5	<0.5
6/92		<50	---	9.5	<0.3	<0.3	<0.3
9/92		<50	---	1.3	<0.3	<0.3	<0.3
12/92		150	---	35 ^b	0.81	4.0	3.2
3/93		<50	---	3.2	<0.3	<0.3	0.86
6/93		<50	---	17.0 ^b	<0.3	0.93	0.41
9/93		81	---	5.0 ^b	<0.3	3.8	4.06
12/93		<50	---	0.53	<0.3	<0.3	<0.3
3/94		67	---	9.2	0.47	2.5	4.40
6/94		95	---	14.0	<0.5	4.1	4.90
9/94		130	---	42.0 ^b	<0.3	2.4	<0.3
12/94		<50	---	<0.3	<0.3	<0.3	<0.3
3/95	<50	---	5.2	<0.3	0.89	0.92	
MW-3	2/91	<50	<500	<0.5	<0.5	<0.5	<0.5
	6/91	<50	---	<0.5	<0.5	<0.5	<0.5
	9/91	<50	---	<0.5	<0.5	<0.5	<0.5
	12/91	<50	---	<0.5	<0.5	<0.5	<0.5
	3/92	<50	---	<0.3	<0.3	<0.3	<0.3
	6/92	<50	---	<0.3	<0.3	<0.3	<0.3
	9/92	<50	---	<0.3	<0.3	<0.3	<0.3
	6/94	<50	---	<0.5	<0.5	<0.5	<0.5

TABLE 3
 ANALYTICAL RESULTS OF GROUND WATER SAMPLES (ppb)
 FORMER ALAMEDA SERVICE STATION, A-578
 DUBLIN, CALIFORNIA
 (continued)

<u>WELL DESIGNATION</u>	<u>DATE</u>	<u>TPH/G</u>	<u>TPH/D</u>	<u>BENZENE</u>	<u>TOLUENE</u>	<u>ETHYL BENZENE</u>	<u>TOTAL XYLENES</u>
MW-6	9/91	2,300	---	760	11	360	236
	10/91	1,900	---	230	<5	140	12.1
	12/91	2,500	<500	360	<50 ^a	260	<50 ^a
	3/92	2,600	<500	400	<50 ^a	280	<50 ^a
	6/92	1,500	---	220	<3 ^b	190	<3 ^b
	9/92	<480 ^b	---	28	<3 ^b	120	<3 ^b
	12/92	250	---	16 ^b	<0.3	33 ^b	16.4
	3/93	<50	<500	<0.3	<0.3	0.37	0.88
	6/93	<50	---	<0.3	<0.3	0.72	1.48
	9/93	230	---	0.46	<0.3	6.4	12.6
	12/93	<50	---	2.5	<0.3	2.6	3.5
	3/94	45	---	0.34	<0.3	2.2	2.2
	6/94	120	---	0.79	<0.5	5.9	8.7
	9/94	<50	---	<0.3	<0.3	0.47	0.43
	12/94	<50	---	<0.3	<0.3	1.3	0.67
	3/95	<50	---	<0.3	<0.3	<0.3	<0.3

- a = The analysis was run at a 1:100 dilution to bring target analytes within linear working range of the GC.
 b = The analysis was run at a 1:10 dilution to bring target analytes within linear working range of the GC.
 c = The analysis was run at a 1:10 dilution due to the presence of non-target analyte interferences.
 --- = Not analyzed.

APPENDIX I
SAMPLING EVENT DATA SHEETS

PROJECT: TARGET-DUB EVENT: QTRLY SAMPLER: CG/MS/SC

NO.	WELL OR LOCATION	DATE			TIME		MEASUREMENT	CODE	COMMENTS
		MO	DA	YR	HR	MIN			
1	MW-1	3	29	95	12	10	3.29	SWL	VBF
2	MW-2				12	13	4.25		VBF
3	MW-3				12	09	3.45		VBF
4	MW-4				12	15	4.99		
5	MW-5				12	12	3.71		VBF
6	MW-6				12	14	3.29		
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									

CODES:

- *SWL - Static Water Level (Feet)
- *IWL - Instant Water Level; Non-Static (Feet)
- *OIL - Oil Level (Feet)
- *OWI - Oil/Water Interface (Feet)
- *MTD - Measured Total Depth (Feet)
- FLO - Flow Rate (Gallons/Minute)
- CUM - Cumulative (Gallons)
- HRS - Total (Hours)
- PSI - Pressure (psi)²
- pH - 1 to 14
- Ec - Conductivity (µm HOS)
- TMP - Temperature (°C)
- TRB - Turbidity (NTU)
- VBF - Vacuum Box (Additional Code)

*All levels are depth from inner casing - describe any other reference points in comments column; when in doubt, describe reference point.

Note in comments column if well is not: properly labeled, locked, or able to be locked. Describe corrective action. Note flooding of vault box, odor, access problems.

*Negative pressure (Vacuum) psi = approx -1/2 x mmHg



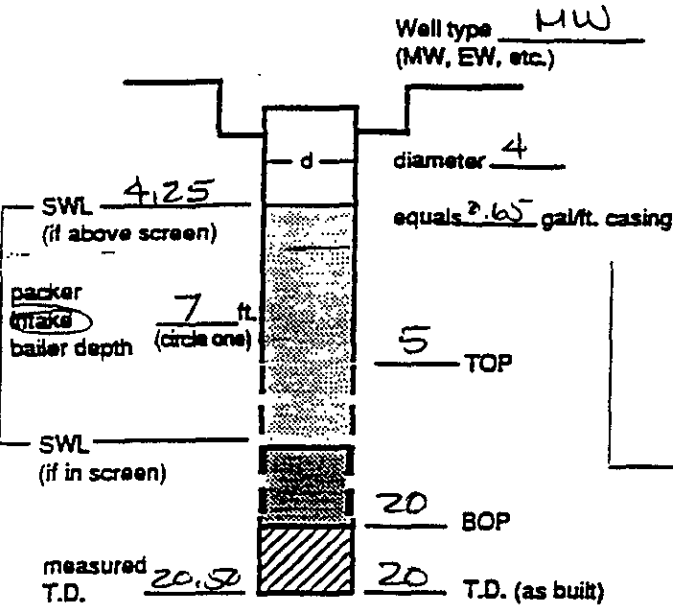
SAMPLING EVENT DATA SHEET

(fill out completely)

WELL OR LOCATION MW-2

PROJECT TAR6-DUBLIN EVENT QTRLY SAMPLER CM DATE 3/29/95

Well / Hydrologic statistics



Action	Time	Pump rate	IWL (low yield)
Start pump / Begin	<u>1402</u>	<u>16GPM</u>	
	<u>1708</u>		<u>6.60</u>
	<u>1419</u>		<u>6.65</u>
	<u>1424</u>		<u>6.65</u>
Stop	<u>1447</u>		<u>6.65</u>
Sampled	<u>1450</u>		
(Final IWL)	<u>1455</u>		<u>4.50</u>

Purge calculation

0.65 gal/ft. * 16.25 ft. = 11 gals x 3 = 44 gals.

SWL to BOP or packer to BOP one volume
purge volume- 3 casings

Head purge calculation (Airlift only)

gal/ft. _____ ft. = _____ gals.

packer to SWL _____

Equipment Used / Sampling Method / Description of Event:
CENTRIFUGAL PUMP w/ DISPOSABLE BAILER

Actual gallons purged 45

Actual volumes purged 4

Well yield ⊕ HY/HY
(see below)

COC # 7792

Sample I.D.	Analysis	Lab
<u>211813-16</u>	<u>TPH-G/BTEX</u>	<u>MBT</u>

Additional comments:

Gallons purged *	TEMP °C (°F) (circle one)	EC (us / cm)	PH	TURBIDITY (NTU)		
<u>11</u>	<u>68.5</u>	<u>1120</u>	<u>6.81</u>	<u>0.80</u>		
<u>22</u>	<u>69.0</u>	<u>1140</u>	<u>6.82</u>	<u>0.50</u>		
<u>33</u>	<u>69.0</u>	<u>1170</u>	<u>6.86</u>	<u>0.50</u>		
<u>44</u>	<u>69.0</u>	<u>1160</u>	<u>6.88</u>	<u>0.60</u>		
<u>5. SAMPLE</u>				<u>0.30</u>		

* Take measurement at approximately each casing volume purged.

⊕ HY - Minimal W.L drop MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump.

LY - Able to purge 3 volumes by returning later or next day. VLY - Minimal recharge - unable to purge 3 volumes.

11
13
24
35
46

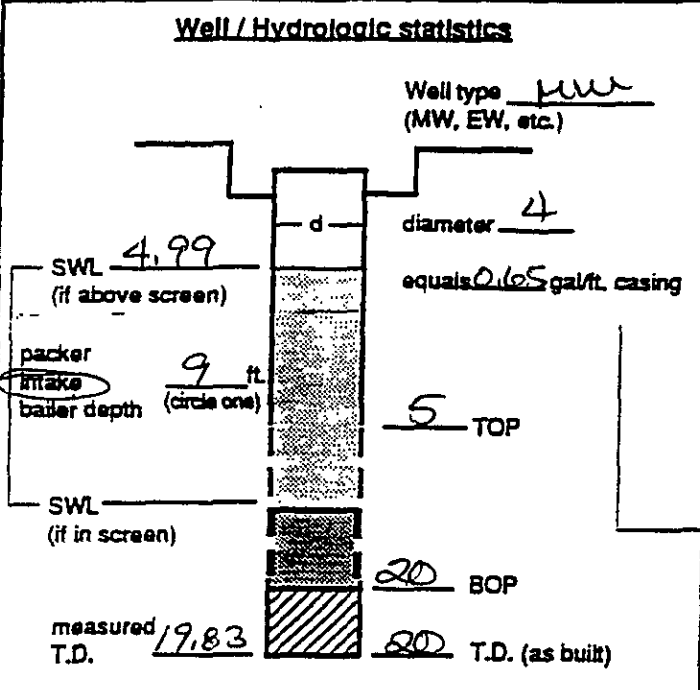


SAMPLING EVENT DATA SHEET

(fill out completely)

WELL OR LOCATION MW-24

PROJECT TARG-DUB EVENT OTRLY SAMPLER CH DATE 3/29/95



Action	Time	Pump rate	IWL (low yield)
Start pump / Begin	1250	16PM	
	1256		7.30
	1308		7.95
Stop	1331		8.65
Sampled	1337		7.00
(Final IWL)	1342		5.64

Purge calculation

$0.165 \text{ gal/ft.} \times 15.01 \text{ ft.} = 10 \text{ gals} \times \frac{4}{4} = 40 \text{ gals.}$

SWL to BOP or one packer to BOP or one volume

purge volume - 3 casings

Head purge calculation (Airlift only)

gal/ft. ft. gals.

packer to SWL

10
00
10
20
30

Equipment Used / Sampling Method / Description of Event:
CENTRIFUGAL PUMP w/ DISPOSABLE BAILER

Actual gallons purged	<u>41</u>
Actual volumes purged	<u>4</u>
Well yield (see below)	<u>MY</u>
COC #	<u>7792</u>
Sample I.D.	<u>Analysis Lab</u>
<u>211805-08</u>	<u>TPH-6/BTEX MBT</u>
<u>211801-04</u>	<u>TPH-6/BTEX (13) 1258</u>

Additional comments:

Gallons purged *	TEMP °C/°F (circle one)	EC (µs/cm)	PH	TURBIDITY (NTU)
1. <u>10</u>	<u>65.5</u>	<u>1020</u>	<u>6.65</u>	<u>1.00</u>
2. <u>20</u>	<u>65.0</u>	<u>960</u>	<u>6.70</u>	<u>1.00</u>
3. <u>30</u>	<u>65.5</u>	<u>950</u>	<u>6.74</u>	<u>2.50</u>
4. <u>40</u>	<u>65.5</u>	<u>930</u>	<u>6.80</u>	<u>1.00</u>
5. <u>SAMPLE</u>				<u>0.50</u>

* Take measurement at approximately each casing volume purged.

⊕ HY - Minimal W.L. drop MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump. LY - Able to purge 3 volumes by returning later or next day. VLY - Minimal recharge - unable to purge 3 volumes.

10F 5% 0.15



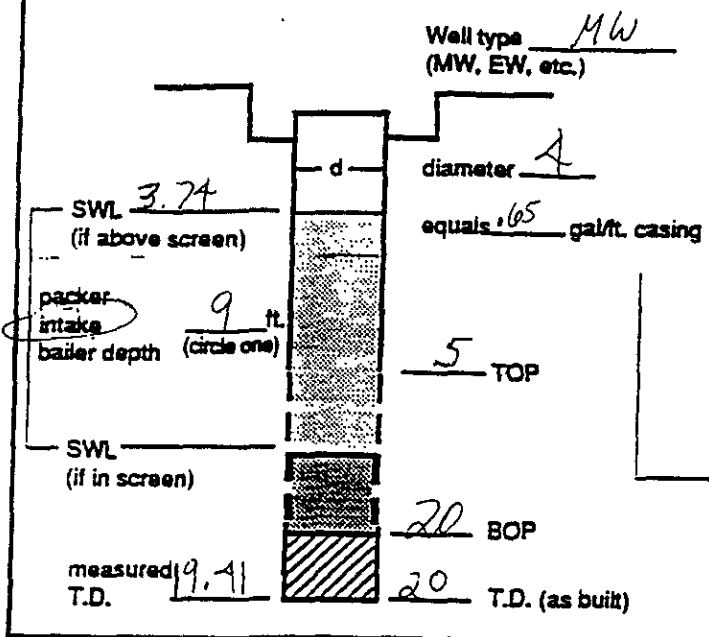
SAMPLING EVENT DATA SHEET

(fill out completely)

WELL OR LOCATION MW-5

PROJECT Target - Dublin EVENT QTRLY SAMPLER SL DATE 3/29/95

Well / Hydrologic statistics



Action	Time	Pump rate	IWL (low yield)
Start pump / Begin	1410	1,256 PM	
	1421		5.54
	1430		5.78
	1440		6.43
Stop	1454		6.68
Sampled	1500		5.72
(Final IWL)	1506		4.06

Purge calculation

65 gal/ft. * 16.26 ft. = 10.5 gals x 4 = 42 gals.

SWL to BOP or one packer to BOP volume purge volume- 3 casings

Head purge calculation (Airlift only)

gal/ft. = _____ ft. = _____ gals.

packer to SWL

Equipment Used / Sampling Method / Description of Event:
Centrifugal pump w/ Disposable Bailor

Actual gallons purged 55

Actual volumes purged 5

Well yield (see below) ⊕ M4

COC # 7792

Sample I.D.	Analysis	Lab
<u>212007-10</u>	<u>TPH-6/BTEX</u>	<u>MBT</u>

Additional comments:

Gallons purged *	TEMP °C / °F (circle one)	EC (µs / cm)	PH	TURBIDITY (NTU) (circle one)
1. <u>10.5</u>	<u>69.3</u>	<u>816</u>	<u>7.35</u>	<u>13.00</u>
2. <u>21.0</u>	<u>67.3</u>	<u>844 (2)</u>	<u>7.45</u>	<u>8.5</u>
3. <u>31.5</u>	<u>67.4</u>	<u>911</u>	<u>7.43</u>	<u>1.70</u>
4. <u>42.0</u> ⊕	<u>67.3</u>	<u>961</u>	<u>7.37</u>	<u>.90</u>
5. <u>52.5</u>	<u>67.0</u>	<u>948</u>	<u>7.40</u>	<u>.80</u>

* Take measurement at approximately each casing volume purged.

⊕ HY - Minimal W.L. drop MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump. LY - Able to purge 3 volumes by returning later or next day. VLY - Minimal recharge - unable to purge 3 volumes.

11
10
21
32
43
54



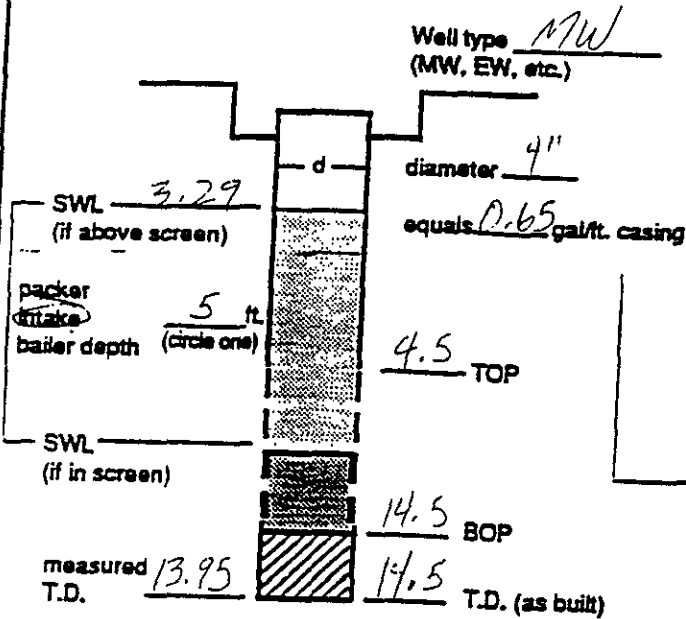
SAMPLING EVENT DATA SHEET

(fill out completely)

WELL OR LOCATION MW-6

PROJECT Target-Dublin EVENT Over-ferky SAMPLER M.S. DATE 3-29-95

Well / Hydrologic statistics



Action	Time	Pump rate	IWL (low yield)
Start pump / Begin	1350	0.25	
	1406		4.78
	1425		4.78
	1451		4.80
Stop	1542		4.80
Sampled (Final IWL)	1550		3.50

Purge calculation
 $0.65 \text{ gal/ft.} \cdot 11.21 \text{ ft.} = 7.3 \text{ gals} \times 4 = 29.2 \text{ gals.}$

SWL to BOP or packer to BOP one volume
 purge volume - 3 casings

Head purge calculation (Airlift only)
 gal/ft. = _____ ft. = _____ gals.

Equipment Used / Sampling Method / Description of Event:

Peristaltic pump / Disposable Bailer

Actual gallons purged 29.5
 Actual volumes purged 4
 Well yield (see below) \oplus MY

COC # 7792
 Sample I.D. 211809-12 Analysis TPH-6/BTEX Lab MBT

Additional comments:

TEMPERATURE CHANGES DUE TO DIRECT SUNLIGHT ON INTAKE TUBING

Gallons purged *	TEMP °C/°F (circle one)	EC (µs/cm)	PH	TURBIDITY (NTU)
1. <u>7</u>	<u>62.4</u>	<u>430</u>	<u>7.11</u>	<u>5.00</u>
2. <u>14</u>	<u>63.7</u>	<u>430</u>	<u>7.17</u>	<u>2.40</u>
3. <u>21</u>	<u>62.2</u>	<u>430</u>	<u>7.16</u>	<u>1.60</u>
4. <u>28</u>	<u>60.4</u>	<u>410</u>	<u>7.18</u>	<u>1.60</u>
5. <u>Sample</u>				<u>1.20</u>

* Take measurement at approximately each casing volume purged.

\oplus HY - Minimal W.L. drop MY - WL drop - able to purge 3 volumes during one sitting by reducing pump rate or cycling pump. LY - Able to purge 3 volumes by returning later or next day. VLY - Minimal recharge - unable to purge 3 volumes.

APPENDIX II
ANALYTICAL DATA SHEETS
AND
CHAIN-OF-CUSTODY RECORDS

MBT Environmental
Laboratories

3083 Gold Canal Drive
Rancho Cordova
CA 95670
Phone 916/852-6600
Fax 916/852-7292



Master Builders Technologies

Date: April 6, 1995
LP #: 11498

Brad Wright
McLaren/Hart Environmental Engineering
1135 Atlantic Avenue
Alameda, CA 94501

Dear Mr. Wright:

Enclosed are the laboratory results for the five samples submitted to MBT Environmental Laboratories on March 31, 1995, for the project *Target-Dublin*.

The analyses requested are:

EPA 8020 (BTEX) & TPH/G (5 - Water)

The report consists of the following sections:

1. Cover Page
2. Copy of Chain-of-Custody
3. General Narrative
4. Quality Control Report
5. Analytical Results

Unless otherwise instructed by you, samples will be disposed of two weeks from the date of this letter.

Thank you for choosing MBT Environmental Laboratories. We are looking forward to serving you in the future. Should you have any questions concerning this analytical report or the analytical methods employed, please do not hesitate to call.

Sincerely,


Shakoora Azimi
Laboratory Director, Principal Scientist

ANALYTICAL REPORT
LABORATORY PROJECT (LP) NUMBER 11498

TARGET-DUBLIN

The analyses performed by MBT Environmental Laboratories in this report comply with the requirements under the following certification/approval:

ARIZONA:	Hazardous Waste, #AZ0468 Waste Water, # AZ0468 Drinking Water, #AZ0468	OKLAHOMA:	Hazardous Waste, #9318 Waste Water, #9318
✓ CALIFORNIA:	Hazardous Waste, #1417 Waste Water, # 1417 Drinking Water, #1417	TENNESSEE:	Underground Storage Tank
CONNECTICUT:	Waste Water, #PH0799	UTAH:	Hazardous Waste, #E-165 Waste Water, #E-165 Drinking Water, #E-165
FLORIDA:	Environmental Water, #E87298	WASHINGTON:	Hazardous Waste, #C048
KANSAS:	Hazardous Waste, #E-1167 Waste Water, #E-192 Drinking Water, #E-192	WISCONSIN:	Hazardous Waste, #999940920 Waste Water, #999940920
NEW HAMPSHIRE:	Waste Water, #253193-A	USACOE:	Hazardous Waste Waste Water
NEW JERSEY:	Waste Water, #44818	AFCEE	
NEW YORK:	Hazardous Waste, #11241 Waste Water, #11241 CLP, #11241		

(CN11498)





MBT Environmental
Laboratories

3083 Gold Canal Drive
Rancho Cordova
CA 95670
Phone 916/852-6600
Fax 916/852-7292

CHAIN OF CUSTODY RECORD

SEE SIDE 2 FOR
COMPLETE
INSTRUCTIONS

Client To: MBT
Address: _____

Project Name: TARGET- DUBLIN
Project Number: 04.0126368.001.001
Project Location: (State) CA

FOR LABORATORY USE ONLY
Laboratory Project #: 11498
Storage Refrigerator ID: #1
Storage Freezer ID: _____

Sampler Name: CHRIS GIUNTOLI
Acquired By: Chris Giuntoli
Acquired By: Express IT

Signature: Chris Giuntoli
PPE Worn in Field: D
Received By or Method of Shipment/ Shipment I.D.: EXPRESS-IT
Received By or Method of Shipment/ Shipment I.D.: [Signature]

Date/Time: 3/30/95 1600
Date/Time: 3/31/95 0815

- Common Analytical Methods**
- 413.1
 - 413.2 Long Method
 - 413.2 Short Method
 - 418.1 Long Method
 - 418.1 Short Method
 - 420.1
 - 502.2
 - 503E
 - 503.1
 - 524.2
 - 601
 - 602
 - 604
 - 608
 - 610
 - 624
 - 625
 - 8010
 - 8015
 - 8015 Mod
 - 8020
 - 8021
 - 8040
 - 8080
 - 8100
 - 8150
 - 8240
 - 8270
 - 8310
 - Acidity
 - Alkalinity
 - BTEX
 - Chloride
 - CLP (see Side 2)
 - COD
 - Color
 - Conductivity
 - Corrosivity
 - Cyanide
 - Flashpoint
 - Fluoride
 - General Mineral
 - Hex. Chromium
 - Ion Balance
 - Metals (write specific metal & method #)
 - Metals 6010*
 - Metals PP*
 - Metals Title 22.
 - TTL Level
 - STLC Level (see Side 2)
 - Nitrate
 - Nitrite
 - Odor
 - Org. Lead
 - Org. Mercury
 - Percent Moisture
 - Percent Solid
 - Perchlorate
 - pH
 - Phosphates
 - Phosphorus
 - Sulfate
 - Sulfides
 - TCLP:
 - VQA
 - Semivolatile Metals
 - Pesticide
 - TDS
 - Total Hardness
 - Total Solids
 - TPH/D
 - TPH/G
 - TSS

Sample Disposal (check one)
 Laboratory Standard
 Other

Level of QC (see Side 2)
 1 2 3 4 5 6A 6B
 6C 6D 6E 6F 7 8

ANALYSES REQUESTED
Write in Analysis Method →
TPH-G (LWET)
BTEX (6020)

SAMPLE INFORMATION

LABORATORY USE ONLY Lab ID	Sample ID Number	Date	Time	Description		Container(s)		Matrix Type	Pres. Type	TAT	TPH-G (LWET)	BTEX (6020)
				Locator	Depth	#	Type					
11498.001	211801-04	3/29/95	1258	TRIP BLANK	-	4	V	H ₂ O	HCl	3	X	X
-002	211805-08		1337	MW-4							X	X
-003	211809-12		1550	MW-6							X	X
-004	211813-16		1450	MW-2							X	X
-005	212007-10		1500	MW-5							X	X

Special Instructions/Comments: _____

Container Types: A=1 Liter Amber TAT (Analytical Turn Around Time)
 B=Brass Tube C=Cassette 1 = 24 hours 2 = 48 hours
 G=Glass Jar P=Polyethylene 3 = 1 week 4 = 2 weeks
 O=Other V=Voal 0 = Other

LABORATORY USE ONLY Sample Condition Upon Receipt: TEMP = 2°C
Samples intact; air bubbles in 211801-04

SEND DOCUMENTATION AND RESULTS TO (Check one):
 Project Manager/Office: BRAD WRIGHT / ALAMEDA
 Client Name: _____
 Company: _____
 Address: _____

GENERAL NARRATIVE

Comments:

Test methods may include minor modifications of published EPA methods (e.g., reporting limits or parameter lists). Reporting limits are adjusted to reflect dilution of the sample when appropriate. Solids and waste are analyzed with no correction made for moisture content.

EPA 8020 (BTEX) & TPH/G

The reporting limits for 8020 meet those specified in the California LUFT Manual.

Abbreviations and Definitions:

MB	<i>Method Blank</i> - An aliquot of a blank matrix carried throughout the entire analytical process
LCS	<i>Laboratory Control Sample</i> - A blank to which known quantities of specific analytes are added prior to sample preparation and analysis to assess the accuracy of the method
MS/MSD	<i>Matrix Spike/Matrix Spike Duplicate</i> - Duplicate samples to which known quantities of specific analytes are added prior to sample preparation and analysis to assess the extent of matrix bias or interference on analyte recovery
RPD	<i>Relative Percent Difference</i> - The measurement of precision between duplicate analyses
BRL	<i>Below Reporting Limit</i>
NS	<i>Not Specified</i>
NA	<i>Not Applicable</i>

(CN11498)



QUALITY CONTROL REPORT

Quality Control Summary

Method: EPA 8020 (BTEX) & TPH/G

CRITERIA	Analytical Section Review		10% QA/QC Validation	
	YES	NO	YES	NO
All samples met holding time.	✓		✓	
All surrogate recoveries met QC acceptance criteria.		✓		✓
Laboratory Control sample recoveries met QC acceptance criteria.	✓		✓	
Matrix spike recoveries met advisory QC acceptance criteria.	NA		NA	
Method blanks met QC acceptance criteria.	✓		✓	
Initial calibration met QC acceptance criteria.	✓		✓	
Continuing calibration met QC acceptance criteria.	✓		✓	
Internal standards met QC acceptance criteria.	✓		✓	
Tuning and mass calibrations met QC acceptance criteria.	NA		NA	

Note: For any criteria listed above which are not met, please refer to the sample data sheet, QC data sheet, or General Narrative for applicable comments.

Analytical Section Review:

QA/QC Validation:

Sarbjit Grewal

Vicki McCartney



QUALITY CONTROL REPORT

METHOD BLANK

Method: Mod. EPA 8020 (BTEX) & TPH/G
 Units: ug/L (ppb)

Date Analyzed: 04/04/95

<u>Analyte</u>	<u>Reporting Limit</u>	<u>Concentration</u>
Benzene	0.30	BRL
Toluene	0.30	BRL
Ethylbenzene	0.30	BRL
1,2-Xylene	0.30	BRL
1,3-Xylene	0.30	BRL
1,4-Xylene	0.30	BRL
Total Petroleum Hydrocarbons - Gasoline	50	BRL
 <u>Surrogate</u>	 <u>% Recovery</u>	 <u>Acceptance Limits</u>
Orthochlorotoluene (PID)	104	80 - 120
Orthochlorotoluene (FID)	103	80 - 120



QUALITY CONTROL REPORT

**Laboratory Control Sample
Method 8020**

LP#: 11498

Spike Sample ID: 0404-LCSW

Date Of Analysis: 04/04/95

Spike ID Code: W-1-1074

Column: DBWax

Surrogate ID Code: W-1-1057

Instrument #: 3

Matrix: Water Units: ug/L

EPA METHOD	COMPOUNDS	(a)	(b)	(c)	(d)	(e)	(f)	(g)	ACCEPTANCE LIMITS	
		SAMPLE CONC.	SPIKE CONC.	SAMPLE + SPIKE CONC.	SPIKE REC.%	SAMPLE DUP. + SPIKE CONC.	SPIKE DUP. REC. %	RPD%	% REC.	RPD
8020	Chlorobenzene	0	4.00	3.21	80	NA	NA	NA	69 - 131	≤20
8020	Benzene	0	4.00	3.18	80	NA	NA	NA	72 - 134	≤20
8020	Ethyl Benzene	0	4.00	3.16	79	NA	NA	NA	72 - 128	≤20

$$\text{Spike Recovery} = d = ((c-a)/b) \times 100$$

$$\text{Spike Duplicate Recovery} = f = ((e-a)/b) \times 100$$

$$\text{Relative Percent Difference} = g = (|c-e|)/((c+e) \times .5) \times 100$$

EPA METHOD	SURROGATE COMPOUNDS	DET.	(h)	(i)	(j)	(k)	(l)	ACCEPTANCE LIMITS	
			SUR. SPIKE CONC.	SAMPLE + SUR. SPIKE CONC.	SUR. REC. %	SAMPLE DUP. + SUR. SPIKE CONC.	SUR. DUP. RECOVERY %	% REC.	
8020	Orthochlorotoluene	PID	4.00	4.04	101	NA	NA	80 - 120	

$$\text{Surrogate \% Recovery} = j = (i/h) \times 100$$

$$\text{Surrogate Dup \% Recovery} = l = (k/h) \times 100$$



QUALITY CONTROL REPORT

**Laboratory Control Sample
Total Petroleum Hydrocarbons/TPH-Gasoline**

LP#: 11498

Date of Analysis: 04/04/95

Column: RTX-VOA

Instrument #: 3

Spike Sample ID: 0404-LCSW

Spike ID Code: W-1-1035

Surrogate ID Code: W-1-1057

Matrix: Water Units: ug/L

COMPOUNDS	(a)	(b)	(c)	(d)	(e)	(f)	(g)	ACCEPTANCE LIMITS	
	SAMPLE CONC.	SPIKE CONC.	SAMPLE + SPIKE CONC.	SPIKE REC. %	SAMPLE DUP. + SPIKE CONC.	SPIKE DUP. REC. %	RPD %	% REC.	RPD
Gasoline	0	100	104	104	NA	NA	NA	100 - 127	≤20

$$\text{Spike Recovery} = d = ((c-a)/b) \times 100$$

$$\text{Spike Duplicate Recovery} = f = ((e-a)/b) \times 100$$

$$\text{Relative Percent Difference} = g = (|c-e|)/((c+e) \times .5) \times 100$$

SURROGATE COMPOUNDS	(h)	(i)	(j)	(k)	(l)	ACCEPTANCE LIMITS
	SUR. SPIKE CONC.	SAMPLE + SUR. SPIKE CONC.	SUR. REC. %	SAMPLE DUP. + SUR. SPIKE CONC.	SUR. DUP. RECOVERY %	% REC.
Orthochlorotoluene	4.00	4.92	123 ^a	NA	NA	80 - 120

$$\text{Surrogate \% Recovery} = j = (i/h) \times 100$$

$$\text{Surrogate Dup \% Recovery} = l = (k/h) \times 100$$

^a Sample surrogate recovery is beyond acceptance limits. All other quality control is acceptable.



VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX) and
Total Petroleum Hydrocarbons Gasoline by LUFT
Preparation Method: EPA 5030

Project Name: *Target-Dublin*

Project Number: 040126368001001

Sample Description: *Trip Blank*

Lab Project-ID Number: 11498-1

Sample Number: 211804

Date Sampled: 03/29/95

Date Received: 03/31/95

Date Analyzed: 04/04/95

Analyte	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)
Benzene	BRL	0.30
Toluene	BRL	0.30
Ethylbenzene	BRL	0.30
1,2-Xylene	BRL	0.30
1,3-Xylene	BRL	0.30
1,4-Xylene	BRL	0.30
Total Petroleum Hydrocarbons - Gasoline	BRL	50

Surrogates	Percent Recovery	Acceptance Limits
Orthochlorotoluene (PID)	105	80 - 120
Orthochlorotoluene (FID)	107	80 - 120

Comments

The cover letter and enclosures are integral parts of this report.

Approved by: *Ko* Date: 4/6/95



VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX) and
Total Petroleum Hydrocarbons Gasoline by LUFT
Preparation Method: EPA 5030

Project Name: *Target-Dublin*

Project Number: 040126368001001

Sample Description: *MW-2*

Lab Project-ID Number: 11498-4

Sample Number: 211816

Date Sampled: 03/29/95

Date Received: 03/31/95

Date Analyzed: 04/04/95

Analyte	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)
Benzene	5.2	0.30
Toluene	BRL	0.30
Ethylbenzene	0.89	0.30
1,2-Xylene	BRL	0.30
1,3-Xylene	BRL	0.30
1,4-Xylene	0.92	0.30
Total Petroleum Hydrocarbons - Gasoline	BRL	50

Surrogates

	Percent Recovery	Acceptance Limits
Orthochlorotoluene (PID)	108	80 - 120
Orthochlorotoluene (FID)	104	80 - 120

Comments

The cover letter and enclosures are integral parts of this report.

Approved by: *KP*

Date: 4/6/95

VOLATILE AROMATIC COMPOUNDS

**Analytical Method: Modified EPA 8020 (BTEX) and
Total Petroleum Hydrocarbons Gasoline by LUFT
Preparation Method: EPA 5030**

Project Name: *Target-Dublin*

Project Number: *040126368001001*

Sample Description: *MW-4*

Lab Project-ID Number: *11498-2*

Sample Number: *211806*

Date Sampled: *03/29/95*

Date Received: *03/31/95*

Date Analyzed: *04/04/95*

Analyte	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)
Benzene	2.0	0.30
Toluene	BRL	0.30
Ethylbenzene	BRL	0.30
1,2-Xylene	BRL	0.30
1,3-Xylene	BRL	0.30
1,4-Xylene	BRL	0.30
Total Petroleum Hydrocarbons - Gasoline	BRL	50

Surrogates	Percent Recovery	Acceptance Limits
Orthochlorotoluene (PID)	108	80 - 120
Orthochlorotoluene (FID)	101	80 - 120

Comments

The cover letter and enclosures are integral parts of this report.

Non-target analytes are present on the chromatograph.

Approved by: _____ *CM* _____ Date: *4-6-95*



VOLATILE AROMATIC COMPOUNDS

Analytical Method: Modified EPA 8020 (BTEX) and
Total Petroleum Hydrocarbons Gasoline by LUFT
Preparation Method: EPA 5030

Project Name: *Target-Dublin*

Project Number: 040126368001001

Sample Description: *MW-5*

Lab Project-ID Number: 11498-5

Sample Number: 212008

Date Sampled: 03/29/95

Date Received: 03/31/95

Date Analyzed: 04/04/95

Analyte	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)
Benzene	BRL	0.30
Toluene	BRL	0.30
Ethylbenzene	BRL	0.30
1,2-Xylene	BRL	0.30
1,3-Xylene	BRL	0.30
1,4-Xylene	BRL	0.30
Total Petroleum Hydrocarbons - Gasoline	BRL	50

Surrogates	Percent Recovery	Acceptance Limits
Orthochlorotoluene (PID)	103	80 - 120
Orthochlorotoluene (FID)	102	80 - 120

Comments

The cover letter and enclosures are integral parts of this report.

Approved by: *[Signature]* Date: 4/16/95



VOLATILE AROMATIC COMPOUNDS

**Analytical Method: Modified EPA 8020 (BTEX) and
Total Petroleum Hydrocarbons Gasoline by LUFT
Preparation Method: EPA 5030**

Project Name: *Target-Dublin*

Project Number: *040126368001001*

Sample Description: *MW-6*

Lab Project-ID Number: *11498-3*

Sample Number: *211810*

Date Sampled: *03/29/95*

Date Received: *03/31/95*

Date Analyzed: *04/04/95*

Analyte	Concentration ug/L (ppb)	Reporting Limit ug/L (ppb)
Benzene	BRL	0.30
Toluene	BRL	0.30
Ethylbenzene	BRL	0.30
1,2-Xylene	BRL	0.30
1,3-Xylene	BRL	0.30
1,4-Xylene	BRL	0.30
Total Petroleum Hydrocarbons - Gasoline	BRL	50

Surrogates	Percent Recovery	Acceptance Limits
Orthochlorotoluene (PID)	108	80 - 120
Orthochlorotoluene (FID)	103	80 - 120

Comments

The cover letter and enclosures are integral parts of this report.

Approved by: *[Signature]* Date: *4/6/95*

