Regional GW flow to SE but site tends to suggest GW flows to W, NW, SW

July 27, 1998

Project Number 192-03-02

Mr. Hooshang Hadjian
Dublin Auto Wash
7240 Dublin Boulevard
Dublin, CA 94568

Subject: Groundwater Sampling Report, Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, California

This facility is a Auto Wash Station that also sells gasoline. Figure 1 showing the site location is attached.

This Groundwater Sampling Report describes the routine quarterly groundwater monitoring for this Beacon facility. The work includes inspection, gauging, evacuation, purgewater containment, sample collecting and sample handling in accordance with standard Regional Water Quality Control Board requirements. Ms. Eva Chu of the Alameda Health Services Department Environmental Health Division requested the sampling and analysis.

Groundwater samples were obtained on July 7, 1998. Prior to sampling, groundwater elevation measurements were obtained. Results are presented in the table below.

Table 2 - Groundwater Measurement Results
Dublin Auto Wash
7240 Dublin Boulevard, Dublin, California
Measured on July 7, 1998*

Well Name	Well Elevation	Depth to GW.	GW Elevation
MW-1	333.66	12.45	321.21
MW-2	329.29	8.21	321.08
MW-3	332.86	11.62	321.24
MW-4	332.63	10.16	322.47
MW-5	333.04	10.33	322.71
EA-1	331.21	9.84	321.37
EA-2	330.41	8.52	321.89
EA-3	331.50	†	†

* elevation above mean sea level, in feet. † not measured, could not open

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The groundwater flow direction (more precisely direction of groundwater gradient, since the horizontal hydraulic conductivity anisotropy is unknown) is as shown on Figure 2 - Groundwater Gradient.

All monitoring wells except MW-4, MW-5 and EA-3 were purged using an electric purge pump prior to sampling. MW-4 and MW-5 were not scheduled for sampling, while the well cover for EA-3 was not able to be opened. All purge water was placed in a sealed metal 55 gallon drum (DOT 17H). After each well was purged, a sample was taken from the end of the pump hose. The water was placed in two 40 milliliter vials filled so that there was no air (head space) remaining in the vials. Samples were labeled and placed on ice in a cooler for transport to a state certified hazardous materials testing laboratory, McCampbell Analytical of Pacheco, California. Before the next well was purged and sampled, the pump was run and washed in one bucket with bio-degradable detergent and two separate buckets with tap water. The equipment wash water was placed in 55 gallon steel drums and remains on-site.

All samples were analyzed for TPH-gasoline, MTBE and BTEX using EPA Methods 5030, modified 8015, and 8020. MW-3 was also analyzed for Oxygenated Compounds using EPA Method 8260. A copy of the laboratory report and Chain of Custody form are appended to this report.

Table 3 - Groundwater Sample Analysis Results
Dublin Auto Wash
7240 Dublin Boulevard, Dublin, California
Groundwater Samples Collected on July 7, 1998

Sample #	TPH-g	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
MW-1	65	700	1.4	1.6	ND	ND
MW-2	ND	1100	ND	ND	ND	ND
MW-3	7400	150,000	1100	490	270	980
EA-1	5000	ND<130	60	150	220	850
EA-2	ND	ND	ND	ND	ND	ND
Det. Limit	50	5.0	0.5	0.5	0.5	0.5

TPH-g and BTEX are in parts per billion, or µg/L. ND = Not Detected

This data has been added to the Cumulative Table of Well Data and Analytical Results, which is attached.

Copies of this report will be forwarded to the Alameda County Health Svcs Department, Environmental Health Division, 1131 Harbor Bay Parkway, #250 Alameda, CA 94502-6577, and to the San Francisco Bay Regional Water Quality Control Board, 2101 Webster Street, Suite 500, Oakland, CA 94612.

Sincerely:
PARKER ENVIRONMENTAL SERVICES

James D. Parker
President

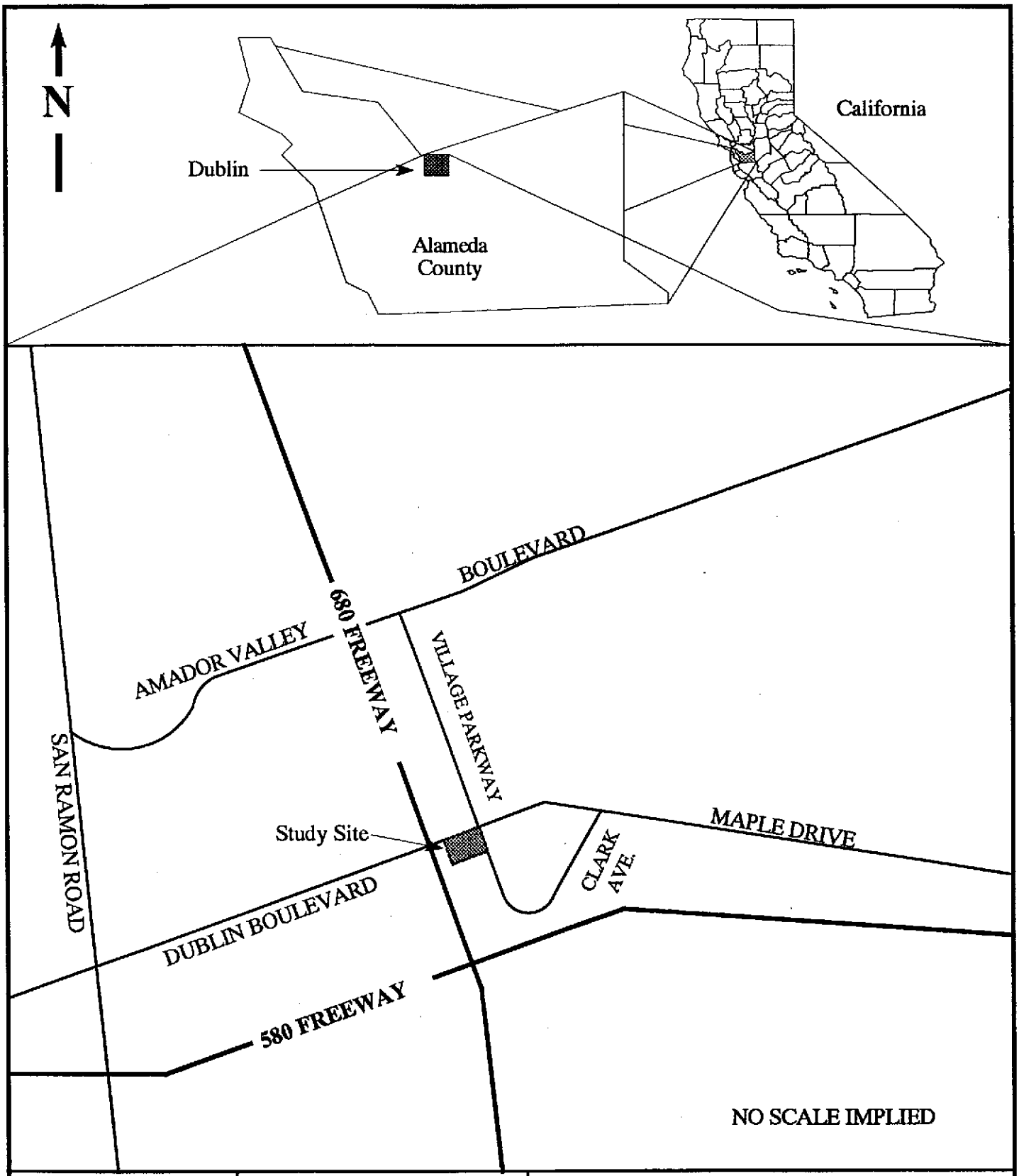
REGISTERED ENVIRONMENTAL ASSESSOR
No. 1059
Expires: 6-99
STATE OF CALIFORNIA

Reviewed By:

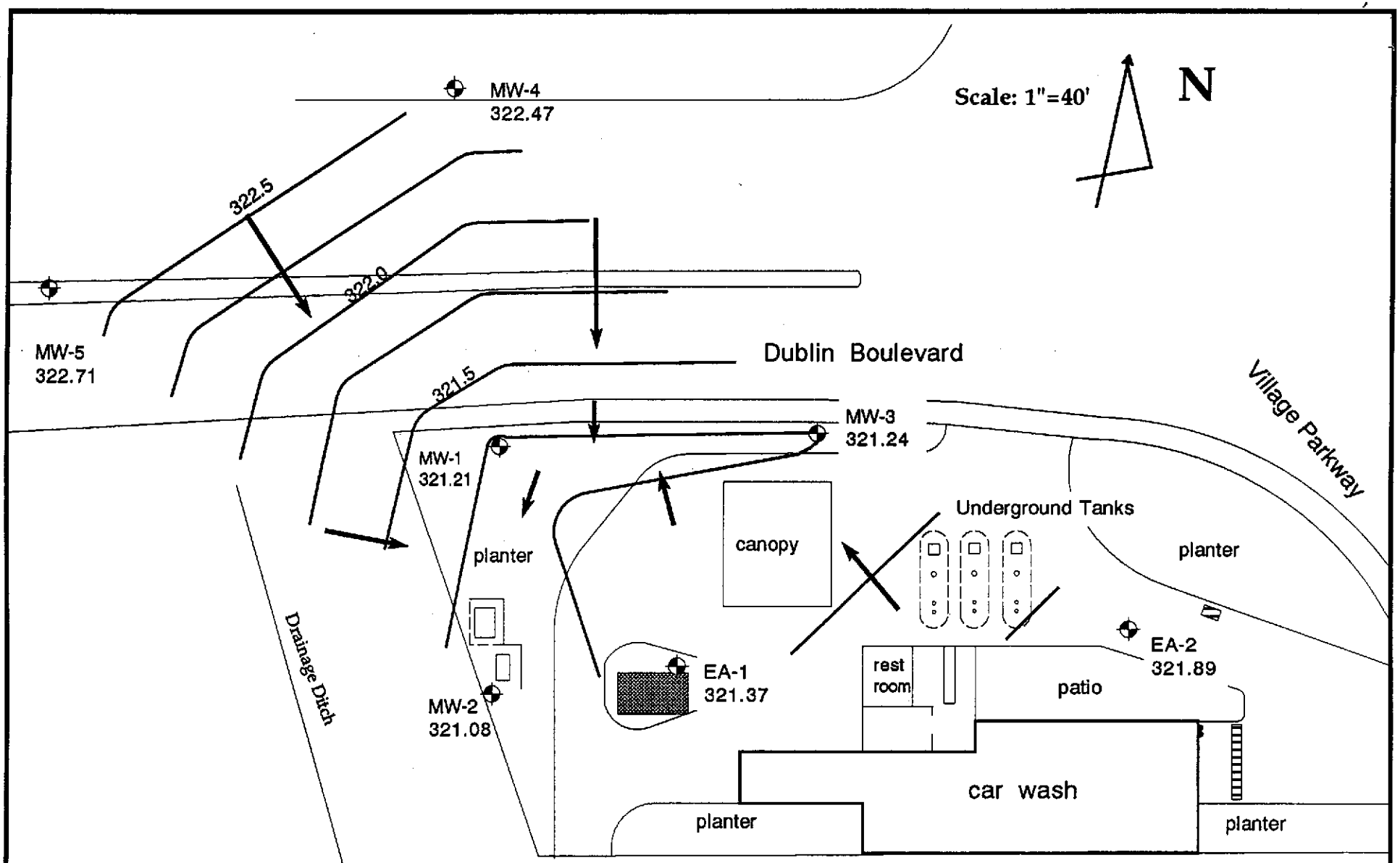
Gary D. Lowe, R.G., C.E.G.
Principal, Hydrogeologist
H_2OGEOL, A GroundWater Consultancy

REGISTERED GEOLOGIST
GARY D. LOWE
No. 1559
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

Attachments

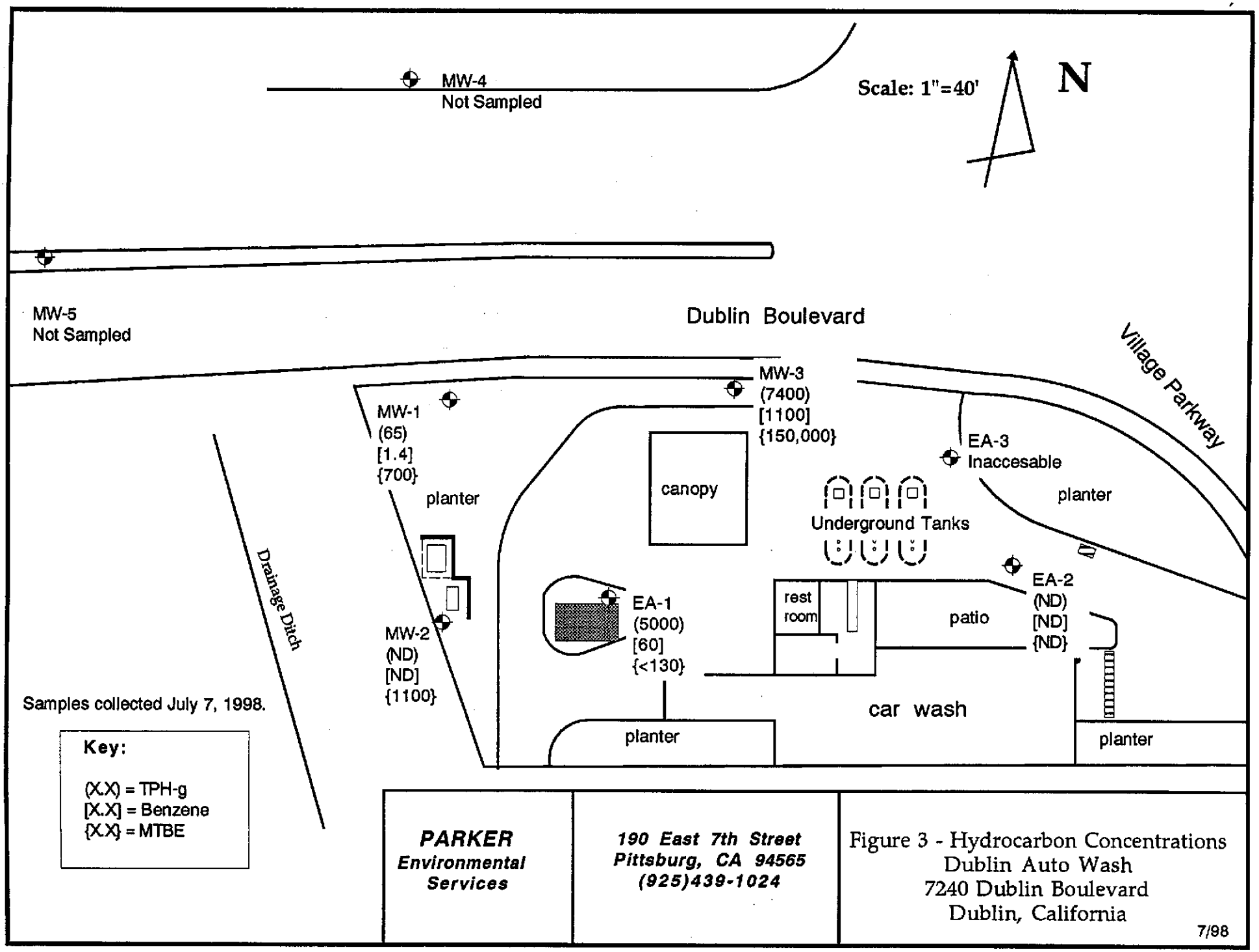


PARKER *Environmental Services*	*190 East 7th Street* *Pittsburg, CA 94565* *(510) 439-1024*	DUBLIN AUTO WASH 7420 Dublin Boulevard Dublin, California Figure 1 - Vicinity Map 7/98



Wells measured July 7, 1998.

PARKER ***Environmental Services***	***190 East 7th Street*** ***Pittsburg, CA 94565*** ***(925)439-1024***	Figure 2 - Groundwater Gradient Dublin Auto Wash 7240 Dublin Boulevard Dublin, California 7/98


MW-4
Not Sampled
Scale: 1"=40'
N
MW-5
Not Sampled
Dublin Boulevard
Village Parkway
MW-3
(7400)
[1100]
{150,000}
MW-1
(65)
[1.4]
{700}
planter
canopy
EA-3
Inaccesable
planter
Underground Tanks
Drainage Ditch
EA-2
(ND)
[ND]
{ND}
rest
room
patio
EA-1
(5000)
[60]
{<130}
MW-2
(ND)
[ND]
{1100}
car wash
planter
planter
Samples collected July 7, 1998.
Key:
(X.X) = TPH-g
[X.X] = Benzene
{X.X} = MTBE
PARKER
Environmental
Services
190 East 7th Street
Pittsburg, CA 94565
(925)439-1024
Figure 3 - Hydrocarbon Concentrations
Dublin Auto Wash
7240 Dublin Boulevard
Dublin, California
7/98

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

Parker Environmental Services 190 East 7th Street Pittsburg, CA 94565	Client Project ID: #192-03-03, Mr. Hadjian	Date Sampled: 07/07/98
		Date Received: 07/08/98
	Client Contact: Jim Parker	Date Extracted: 07/08-07/13/98
	Client P.O:	Date Analyzed: 07/08-07/13/98

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)+	MTBE	Benzene	Toluene	Ethylben-zene	Xylenes	% Recovery Surrogate
91842	MW-1	W	65,c	700	1.4	1.6	ND	ND	102
91843	MW-2	W	ND	1100	ND	ND	ND	ND	94
91844	MW-3	W	7400, a	150,000	1100	490	270	980	107
91845	EA-1	W	5000, a	ND<130	60	150	220	850	---#
91846	EA-2	W	ND	ND	ND	ND	ND	ND	96
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 aresignificant(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.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Telephone : 925-798-1620 Fax : 925-798-1622
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Parker Environmental Services 190 East 7th Street Pittsburg, CA 94565	Client Project ID: #192-03-03, Mr. Hadjian	Date Sampled: 07/07/98
		Date Received: 07/08/98
	Client Contact: Jim Parker	Date Extracted: 07//10-07/13/98
	Client P.O:	Date Analyzed: 07/10-07/13/98

Oxygenated Volatile Organics By GC/MS

EPA method 8260 modified

Lab ID	91844				Reporting Limit	
Client ID	Mw-3					
Matrix	W				S	W
Compound	Concentration*				ug/kg	ug/L
Di-isopropyl Ether (DIPE)	ND<1000				5.0	1.0
Ethyl tert-Butyl Ether (ETBE)	ND<1000				5.0	1.0
Methyl-tert Butyl Ether (MTBE)	190,000				5.0	1.0
tert-Amyl Methyl Ether (TAME)	ND<1000				5.0	1.0
tert-Butanol	ND<10,000				25	5.0
Surrogate Recoveries (%)						
Dibromofluoromethane	97					
Comments:						

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

ND means not detected above the reporting limit; N/A means surrogate not applicable to this analysis

(h) lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.
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Tele: 510-798-1620 Fax: 510-798-1622

QC REPORT FOR HYDROCARBON ANALYSES

Date: 07/08/98-07/09/98 Matrix: WATER

Analyte	Concentration (mg/L) Sample (#91209)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
TPH (gas)	0.0	96.6	94.8	100.0	96.6	94.8	1.8
Benzene	0.0	9.2	9.1	10.0	92.0	91.0	1.1
Toluene	0.0	9.6	9.6	10.0	96.0	96.0	0.0
Ethyl Benzene	0.0	10.0	9.9	10.0	100.0	99.0	1.0
Xylenes	0.0	29.9	29.7	30.0	99.7	99.0	0.7
TPH(diesel)	0.0	160	156	150	107	104	2.3
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

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Tele: 510-798-1620 Fax: 510-798-1622

QC REPORT FOR VOCs (EPA 8240/8260)

Date: 07/10/98-07/13/98 Matrix: WATER

Analyte	Concentration (ug/kg,u Sample (#91827)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
1,1-Dichloroethe	0	115	112	100	115	112	2.6
Trichloroethene	0	80	76	100	80	76	5.1
EDB	0	103	103	100	103	103	0.0
Chlorobenzene	0	93	88	100	93	88	5.5
Benzene	0	96	91	100	96	91	5.3
Toluene	0	90	86	100	90	86	4.5

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

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Environmental Services
190 East 7th Street
Pittsburg, CA 94565
(925) 439-1024
Fax (925) 439-2566

CHAIN OF CUSTODY FORM

11688 xpe 368

Job, Client: 192-03-03, MR. HADJIAN
Site Name: DUBLIN ~~CAR WASH~~ AUTO WASH
Location: 7240 Dublin Blvd, Dublin, CA.
Date 7-8-98

	Sample Number	Type Soil	Type Water	Time	Analysis Requested TPH-g	TPH-d	BTEX	O & G	MTBE	Metals (list)	Asbestos	Other	Remarks
+	MW-1		X		X		X		X				NORMAL TAT
(+)	MW-2		X		X		X		X				
(+)	MW-3		X		X		X		X			8260 OXY MTBE	
✓	EA-1		X		X		X		X				
✓	EA-2		X		X		X		X				

91842
91843
91844
91845
91846

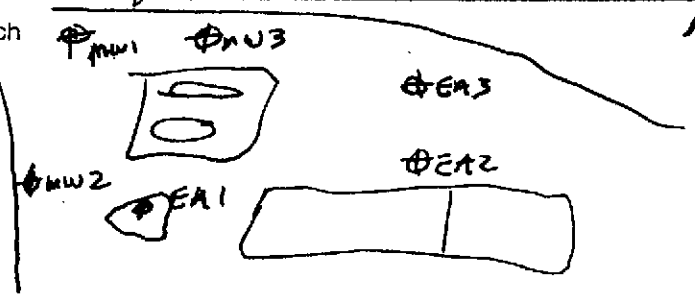
VOAS | O&G | METALS | OTHER

ICE/T ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
PRESERVATION APPROPRIATE CONTAINERS ✓

Sampler Name (Print) Jim PARKER **Sampler Signature** Jim Parker

Relinquished By: Date and Time	Received By: Date and Time
Jim Parker 7/8/98 12:20	Heidi Mira 7-8-98 12:20
Relinquished By: Date and Time	Received By: Date and Time
Relinquished By: Date and Time	Received By: Date and Time
Relinquished By: Date and Time	Received By: Date and Time

Sampling Site Sketch



WATER SAMPLING DATA FORM

PARKER ENVIRONMENTAL SERVICES

Project Name	Project No.	Well Name	Date	Time	Name	Page
DUBLIN AUTO WASH	192-03-03	MW-1	7-7-98		J. PARKER	1 of 5

Well Depth (ft.)	Sounded Depth (ft.)	Sampling Equipment
26	25.08'	☒ Monitoring Well ☐ Sampling Point ☐ Other (describe)
Depth to Water (ft.)	Date/Time	
12.45	7-7-98, 13:09	
Well Diameter (in.)	LHC Present? ☐ Yes ☒ No	LHC Thickness
2		N/A

Initial Height of Water in Casing (ft)	Well Volume Conversions	Sampling Equipment
12.53	2" casing = 0.163 gal/ft 3" casing = 0.367 gal/ft 4" casing = 0.653 gal/ft 4.5" casing = 0.826 gal/ft 6" casing = 1.470 gal/ft 8" casing = 2.610 gal/ft 10" casing = 4.080 gal/ft	Dedicated System ☐ Bladder Pump ☐ Bailer PVC Bailer ☐ 1/2 inch Teflon " ☐ 1 1/4 inch ☐ 3 inch Sampling Port No.
Volume (gal)		Volume / Rate (gpm)
2.04		
Volume to be Evacuated ☒ x 3 ☐ x 4		
6.16		

	Time	pH Probe No.	Temp. Probe No.	Cond. Probe No.
1	15:28	7.94	79.2	717
2	15:32	7.19	67.2	867
3	15:36	7.01	66.8	789
4	15:39	6.65	66.4	7.24
5				
6				

Evacuation

	Evacuated	Evacuated	Evacuated	Evacuated
Stop Time	15:28	15:32	15:36	15:38
Start Time	15:27	15:30	15:34	15:37
Minutes	1.5	2	2	1.5
Amt Evacuated	2	2	2	2

Total Evacuated: 8 gal
Total Minutes: 6.5 min
Evacuation Rate: _____ gpm

Pumped Dry?	Amt (gal)
☐ Yes ☐ No	
Depth to Water During Pumping (ft)	Time
Depth to Water for 80% Recovery	Recovery Rate (gpm)
Sampled After: ☐ 80% Rec. ☐ 2 hrs	% Recovery at Time of Sampling

Recovery

	Time	Depth to Water
1.		
2.		
3.		
4.		
5.		

Point of Collection	Time Samples Taken	Date
☒ PE Hose ☐ End of Bailer ☐ Other:	15:41	7/7/98
	Depth to Water (ft)	Refrigerated? ☒ Yes ☐ No

Sample Color: GRAY
Odor: SLIGHT Sulfur
Sediment/Foreign Matter: >5%
Sampling Sequence:

Sample ID Number	Volume	Time	Preservative	Analysis	Lab
MW-1	3V	15:41	HCL	[redacted]-1	McCampbell

Container Codes: P = Plastic Bottle, V = VOA, B = Brown Glass, C = Clear Glass, ml = milliliter, Other: describe, L = liter

Notes:

WATER SAMPLING DATA FORM

PARKER ENVIRONMENTAL SERVICES

Project Name	Project No.	Well Name	Date	Time	Name	Page
DUBLIN AUTO WASH	192-03-03	MW-2	7-7-98		J. PARKER	2 of 5

Well Depth (ft.)	Sounded Depth (ft.)	Sampling Equipment
20	19.78'	☒ Monitoring Well ☐ Sampling Point ☐ Other (describe)
Depth to Water (ft.)	**Date/Time**	
8.21	7-7-98 13:03	
Well Diameter (in.)	**LHC Present?**	**LHC Thickness**
2	☐ Yes ☒ No	N/A

Initial Height of Water in Casing (ft)	Well Volume Conversions	Sampling Equipment
11.57	2" casing = 0.163 gal/ft 3" casing = 0.367 gal/ft 4" casing = 0.653 gal/ft 4.5" casing = 0.826 gal/ft 6" casing = 1.470 gal/ft 8" casing = 2.610 gal/ft 10" casing = 4.080 gal/ft	Dedicated System ☐ Bladder Pump ☐ Bailer PVC Bailer ☐ 1/2 inch Teflon " ☐ 1 1/4 inch ☐ 3 inch Sampling Port No.
Volume (gal)		Volume / Rate (gpm)
1.89		
Volume to be Evacuated		
☒ x 3 ☐ x 4		
5.67		

Evacuation

	Evacuated	Evacuated	Evacuated	Evacuated
Stop Time	1600	16:03	16:08	16:12
Start Time	1558	16:02	16:06	16:10
Minutes	2	1	2	2
Amt Evacuated	2	2	2	1

Total Evacuated: 7 gal
Total Minutes: 7 min
Evacuation Rate: 1 gpm

Pumped Dry?	If After (gal)
☐ Yes ☐ No	
Depth to Water During Pumping (ft)	**Time**
Depth to Water for 80% Recovery	**Recovery Rate (gpm)**
Sampled After: ☐ 80% Rec. ☐ 2 hrs	**% Recovery at Time of Sampling**

Recovery

	Time	Depth to Water
1.		
2.		
3.		
4.		
5.		

	Time	pH Probe No.	Temp. Probe No.	Cond. Probe No.
1	1600	8.79	72.3	707
2	16:04	6.62	69.6	635
3	16:08	7.84	71.0	606
4	16:12	7.02	71.0	602
5				
6				

Point of Collection	Time Samples Taken	Date
☒ PE Hose ☐ End of Bailer ☐ Other:	16:15	7-7-98
	Depth to Water (ft)	**Refrigerated?** ☐ Yes ☐ No

Sample Color: CLR Odor: NONE

Sediment/Foreign Matter: NONE

Sampling Sequence:

Sample ID Number	Volume	Time	Preservative	Analysis	Lab
MW2	2V	16:15	HCL	1	MCL

Container Codes: P = Plastic Bottle, V = VOA, B = Brown Glass, C = Clear Glass, ml = milliliter, Other: describe, L = liter

Notes:

WATER SAMPLING DATA FORM

PARKER ENVIRONMENTAL SERVICES

Project Name	Project No.	Well Name	Date	Time	Name	Page
DUBLIN AUTO WASH	192-03-03	MW-3	7-7-98		J. PARKER	3 of 5

Well Depth (ft.)	Sounded Depth (ft.)	Sampling Equipment
26	25.18	☐ Monitoring Well ☐ Sampling Point ☐ Other (describe)
Depth to Water (ft.)	Date/Time	
11.62	7-7-98 13:11	
Well Diameter (in.)	LHC Present?	LHC Thickness
2	☐ Yes ☒ No	

Initial Height of Water in Casing (ft)	Well Volume Conversions	Sampling Equipment
13.56	2" casing = 0.163 gal/ft 3" casing = 0.367 gal/ft 4" casing = 0.653 gal/ft 4.5" casing = 0.826 gal/ft 6" casing = 1.470 gal/ft 8" casing = 2.610 gal/ft 10" casing = 4.080 gal/ft	Dedicated System ☐ Bladder Pump ☐ Bailer PVC Bailer Teflon " ☐ 1/2 inch ☐ 1 1/4 inch ☐ 3 inch Sampling Port No. Volume / Rate (gpm)
Volume (gal)		
2.22		
Volume to be Evacuated		
☒ x 3 ☐ x 4		
6.65		

Evacuation

	Evacuated ₃A	Evacuated	Evacuated	Evacuated
Stop Time	16:28	16:33	16:39	16:44
Start Time	16:26	1631	16:37	16:42
Minutes	2	2	2	
Amt Evacuated	2.5	2	2	

Total Evacuated _____ gal

Total Minutes _____ min

Evacuation Rate _____ gpm

A = 5 SHEEN & FLOATING PRODUCT

Pumped Dry? ☐ Yes ☐ No — After (gal)

Depth to Water During Pumping (ft) — Time

Depth to Water for 80% Recovery — Recovery Rate (gpm)

Sampled After: ☐ 80% Rec. ☐ 2 hrs — % Recovery at Time of Sampling

Recovery

Time	Depth to Water
1.	
2.	
3.	
4.	
5.	

	Time	pH Probe No.	Temp. Probe No.	Cond. Probe No.
1	16:30	6.85	70.4	604
2	16:33	7.66	73.8	1259
3	16:39	2	73.8	935
4	16:43	2	74.2	993
5				
6				

Point of Collection: ☐ PE Hose ☐ End of Bailer ☐ Other:

Time Samples Taken: 16:45 — Date: 7-7-98

Depth to Water (ft) — Refrigerated? ☒ Yes ☐ No

Sample Color: GRAY — Odor: STRONG/HC

Sediment/Foreign Matter: ~5%

Sampling Sequence

Sample ID Number	Volume	Time	Preservative	Analysis	Lab
MW3	3V	16:45	HCL	1, 2	MeC.

Container Codes: P = Plastic Bottle, V = VOA, B = Brown Glass, C = Clear Glass, ml = milliliter, Other: describe, L = liter

Notes:

1 = TPHg BTEX

2 = 8260 Oxygenate

WATER SAMPLING DATA FORM

PARKER ENVIRONMENTAL SERVICES

Project Name	Project No.	Well Name	Date	Time	Name	Page
DUBLIN AUTO WASH	192-03-03	EA-1	7-7-98		Jim Parker	4 of 5

Well Depth (ft.)	Sounded Depth (ft.)	Sampling Equipment
40	39.32	☐ Monitoring Well ☐ Sampling Point ☐ Other (describe)
Depth to Water (ft.) 9.82	Date/Time 7-7-98 13:17	
Well Diameter (in.) 4	LHC Present? ☐ Yes ☐ No	LHC Thickness

Initial Height of Water in Casing (ft)	Well Volume Conversions	Sampling Equipment
29.50	2" casing = 0.163 gal/ft 3" casing = 0.367 gal/ft 4" casing = 0.653 gal/ft 4.5" casing = 0.826 gal/ft 6" casing = 1.470 gal/ft 8" casing = 2.610 gal/ft 10" casing = 4.080 gal/ft	Dedicated System ☐ Bladder Pump ☐ Bailer PVC Bailer ☐ 1/2 inch Teflon " ☐ 1 1/4 inch ☐ 3 inch Sampling Port No.
Volume (gal) 24.28		Volume / Rate (gpm)
Volume to be Evacuated ☒ x 3 ☐ x 4 72.84		

Evacuation	Evacuated	Evacuated	Evacuated	Evacuated
Stop Time	17:16			
Start Time	16:58			
Minutes	18			
Amt Evacuated	30			
Total Evacuated	30 gal			
Total Minutes	18 min			
Evacuation Rate	30/18 gpm			

Pumped Dry? ☐ Yes ☐ No	After (gal)
Depth to Water During Pumping (ft)	Time
Depth to Water for 80% Recovery	Recovery Rate (gpm)
Sampled After: ☐ 80% Rec. ☐ 2 hrs	% Recovery at Time of Sampling

Recovery	Time	Depth to Water
1.		
2.		
3.		
4.		
5.		

	Time	pH Probe No.	Temp. Probe No.	Cond. Probe No.
1	1700	7	78.2	772
2	1704	—	72.9	685
3	17:08	—	72.2	692
4	17:12	—	72.4	699
5				
6				

Point of Collection	Time Samples Taken	Date
☐ PE Hose ☐ End of Bailer ☐ Other:	12:17	7-7-98
	Depth to Water (ft)	Refrigerated? ☒ Yes ☐ No

Sample Color: NONE Odor: SULFUR

Sediment/Foreign Matter: NONE

Sampling Sequence:

Sample ID Number	Volume	Time	Preservative	Analysis	Lab
EA-1	2V	12:17	HCL	1	MEC

Container Codes: P = Plastic Bottle, V = VOA, B = Brown Glass, C = Clear Glass, ml = milliliter, Other: describe, L = liter

Notes:

WATER SAMPLING DATA FORM

PARKER ENVIRONMENTAL SERVICES

Project Name	Project No.	Well Name	Date	Time	Name	Page
DUBLIN AUTO WASH	192-03-03	EA-2	7-7-98		Jim Parker	5 of 5

Well Depth (ft.)	Sounded Depth (ft.)	Sampling Equipment
40	38.96	☐ Monitoring Well ☐ Sampling Point ☐ Other (describe)
Depth to Water (ft.) 8.52	Date/Time 7-7-98, 13:14	
Well Diameter (in.) 4	LHC Present? ☐ Yes ☒ No	LHC Thickness

Initial Height of Water in Casing (ft)	Well Volume Conversions	Sampling Equipment
30.44	2" casing = 0.163 gal/ft 3" casing = 0.367 gal/ft 4" casing = 0.653 gal/ft 4.5" casing = 0.826 gal/ft 6" casing = 1.470 gal/ft 8" casing = 2.610 gal/ft 10" casing = 4.080 gal/ft	Dedicated System ☐ Bladder Pump ☐ Bailer PVC Bailer ☐ 1/2 inch Teflon " ☐ 1 1/4 inch ☐ 3 inch
Volume (gal) 24.78		Sampling Port No.
Volume to be Evacuated ☒ x 3 ☐ x 4 73.44		Volume / Rate (gpm)

	Time	pH Probe No.	Temp. Probe No.	Cond. Probe No.
1	14:41	6.49	76.2	1980
2	14:46	7.21	72.2	1110
3	14:50	7.22	72.2	1218
4	14:54	9.61	70.7	888
5				
6				

Evacuation

	Evacuated	Evacuated	Evacuated	Evacuated
Stop Time	14:41	14:46	14:50	14:54
Start Time	14:39	14:44	14:48	14:52
Minutes	2	2	2	2
Amt Evacuated	3	3	3	3

Total Evacuated 12 gal
Total Minutes 8 min
Evacuation Rate 1.5 gpm

45 gal TOTAL

Point of Collection	Time Samples Taken	Date
☐ PE Hose ☐ End of Bailer ☐ Other:	14:58	7/7/98
	Depth to Water (ft) 14.40	Refrigerated? ☒ Yes ☐ No

Sample Color C/R Odor

Sediment/Foreign Matter NONE

Sampling Sequence

Sample ID Number	Volume	Time	Preservative	Analysis	Lab
EA-2	2V	14:58	HCL	1	MxC.

Container Codes: P = Plastic Bottle, V = VOA, B = Brown Glass, C = Clear Glass, ml = milliliter, Other: describe, L = liter

Pumped Dry?	After (gal)
☐ Yes ☒ No	
Depth to Water During Pumping (ft)	Time
Depth to Water for 80% Recovery	Recovery Rate (gpm)
Sampled After: ☐ 80% Rec. ☐ 2 hrs	% Recovery at Time of Sampling

Recovery

	Time	Depth to Water
1.		
2.		
3.		
4.		
5.		

Notes:

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical values are in parts ber billion (ppb)

DATE	Well Head Elevation	Ground Water Elevation	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE	1,2-DCA
EA-1 (CONTINUED)											
03/02/95	333.03	321.07	9.96	--	6900	82	570	210	970	--	--
06/15/95	333.03	321.23	9.80	--	4800	44	210	160	620	<25	--
09/26/95	333.03	320.55	10.48	--	13,000	150	620	370	1400	<125	--
12/28/95	333.03	320.89	10.14	--	11,000	74	250	200	750	79	--
02/29/96	333.03	322.29	8.74	--	17,000	59	480	350	1600	<125	--
06/27/96	333.03	320.82	10.21	--	3600	22	130	130	49	46	--
09/12/96	333.03	320.72	10.49	--	2000	20	<10	18	44	<50	--
03/31/97	333.21	321.02	10.19	--	17,000	87	230	330	1200	310	--
07/07/98	333.21	321.37	9.84	--	5000	60	150	220	850	<130	--

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical values are in parts ber billion (ppb)

DATE	Well Head Elevation	Ground Water Elevation	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE	1,2-DCA
EA-2											
10/17/88	332.59	--	--	--	<50	<0.5	<0.5	<0.5	1.2	--	--
10/24/88	332.59	322.89	9.70	Gauging	--	--	--	--	--	--	--
11/02/88	332.59	322.56	10.03	Gauging	--	--	--	--	--	--	--
12/20/88	332.59	322.61	9.98	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
03/28/89	332.59	323.79	8.80	--	<250	<0.5	<0.5	<0.5	<0.5	--	--
08/02/89	332.59	323.15	9.44	--	<50	<0.1	<0.1	<0.1	<0.1	--	<0.1
11/06/89	332.59	323.06	9.53	--	<500	<3.0	<5.0	<5.0	<5.0	--	<5.0
01/25/90	332.59	323.32	9.27	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
04/23/90	332.59	323.24	9.35	--	71	2.0	5.0	3.0	8.0	--	--
08/01/90	332.59	322.88	9.71	--	300	86	21	10	33	--	--
10/24/90	332.59	322.51	10.08	--	280	69	13	11	16	--	--
01/31/91	332.59	322.38	10.21	--	460	160	11	17	17	--	--
01/31/91	332.59	--	--	Duplicate	2400	400	220	44	120	--	--
08/21/91	332.59	322.79	9.80		2300	390	210	42	120	--	--
10/07/91	332.59	322.61	9.98	Not Sampled	--	--	--	--	--	--	--
01/28/92	332.59	322.78	9.81	--	3600	320	360	110	310	--	--
06/05/92	332.59	322.73	9.86	--	1700	290	89	61	130	--	--
09/30/92	332.59	322.99	10.60	--	2100	160	260	80	350	--	--
12/30/92	332.59	323.48	9.11	--	3200	240	180	110	310	--	--
03/29/93	332.59	324.86	7.73	--	23,000	700	3000	610	--	--	--
06/25/93	332.59	323.37	9.22	--	2700	130	590	130	590	--	--
09/16/93	332.59	322.59	10.00	--	3900	410	830	220	890	--	--
12/20/93	332.59	322.21	9.38	--	27,000	1200	2600	1100	4200	--	--
03/29/94	332.59	323.29	9.30	--	6300	250	700	200	830	--	--
06/22/94	332.59	323.10	9.49	--	4100	71	240	110	460	<30	<10
09/26/94	332.59	322.87	9.72	--	8500	1200	1300	370	1400	--	--
10/04/94	332.59	323.01	9.58	--	7600	97	360	150	620	--	--
11/30/94	332.59	323.89	8.74	--	8800	180	490	240	900	--	--

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Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical values are in parts ber billion (ppb)

DATE	Well Head Elevation	Ground Water Elevation	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE	1,2-DCA
EA-2 (Continued)											
03/02/95	330.21	321.67	8.54	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
06/07/95	330.21	321.79	8.42	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
09/26/95	330.21	320.87	9.34	--	540	6.8	<0.5	47	29	13	--
12/28/95	330.21	321.37	8.84	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
02/29/96	330.21	322.77	7.44	--	<50	<0.5	<0.5	<0.5	1.5	<2.5	--
06/27/96	330.21	321.38	8.83	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
09/12/96	330.41	321.01	9.40	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
03/31/97	330.41	321.30	9.11	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
07/07/98	330.41	321.89	8.52	--	<50	<5.0	<0.5	<0.5	<0.5	<0.5	

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical values are in parts ber billion (ppb)

DATE	Well Head Elevation	Ground Water Elevation	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE	1,2-DCA
EA-3											
10/17/88	333.64	--	--	--	<50	1.8	<0.5	<0.5	3	--	--
10/24/88	333.64	322.61	11.03	Gauging	--	--	--	--	--	--	--
11/02/88	333.64	322.61	11.03	Gauging	--	--	--	--	--	--	--
12/20/88	333.64	322.68	10.96	--	240	90	1.2	13	3.3	--	--
03/28/89	333.64	322.87	9.77	--	2300	380	130	240	910	--	--
08/02/89	333.64	322.99	10.65	--	<50	<0.1	<0.1	<0.1	<0.1	--	<0.1
11/06/89	333.64	322.86	10.78	--	<500	<3.0	<5.0	<5.0	<5.0	--	<5.0
01/25/90	333.64	322.98	10.66	--	<50	<0.5	<0.5	<0.5	<0.5	--	<0.5
04/23/90	333.64	322.96	10.68	--	<50	0.8	<0.5	0.9	<0.5	--	<0.5
08/01/90	333.64	322.61	11.03	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/24/90	333.64	322.29	11.35	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/31/91	333.64	322.12	11.52	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
08/21/90	333.64	--	--	Not Sampled	--	--	--	--	--	--	--
10/07/91	333.64	322.49	11.15	--	180	40	20	4.7	8.4	--	--
10/07/91	333.64	--	--	Duplicate	200	43	17	4.1	6.7	--	--
01/28/92	333.64	322.12	11.08	--	640	69	85	13	46	--	--
06/05/92	333.64	322.66	10.98	--	250	63	8.3	3.0	9.5	--	--
09/30/92	333.64	322.26	11.38	--	330	120	33	6.3	22	--	--
12/30/92	333.64	323.16	10.48	--	58	7.6	1.3	2.5	5.4	--	--
03/29/93	333.64	324.34	9.30	--	120	11	4.5	6.2	13	--	--
06/25/93	333.64	323.18	10.46	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
09/16/93	333.64	322.74	10.90	--	85	3.9	8.8	4.5	22	--	--
12/20/93	333.64	322.98	10.66	--	190	12	12	13	50	--	--
03/29/94	333.64	323.14	10.50	--	<50	<0.5	1.2	<0.5	0.9	--	--
06/22/94	333.64	323.00	10.64	--	<50	<0.5	<0.5	<0.5	<0.5	<3.0	<1.0
09/26/94	333.64	322.92	10.72	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/04/94	333.64	322.96	10.68	--	<50	<0.5	<0.5	<0.5	0.7	--	--
11/30/94	333.64	323.98	9.66	--	170	6.1	3.0	6.5	28	--	--

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Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical values are in parts ber billion (ppb)

DATE	Well Head Elevation	Ground Water Elevation	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE	1,2-DCA
EA-3 (Continued)											
03/02/95	331.30	321.38	9.92	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
06/07/95	331.30	321.58	9.72	--	<50	<0.5	<0.5	<0.5	<0.5	3.2	--
09/26/95	331.30	320.70	10.60	--	2000	140	<5.0	<5.0	190	280	--
12/28/95	331.30	321.48	9.82	--	<50	<0.5	<0.5	<0.5	<0.5	26	--
02/29/96	331.30	323.02	8.28	--	<50	2.1	<0.5	2.5	6.0	31	--
06/27/96	331.30	321.39	9.91	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
09/12/96	331.50	320.91	10.59	--	13,000	<20	<20	<20	<20	48	--
03/31/97	331.50	--	--	Inaccessable	--	--	--	--	--	--	--
04/15/97	331.50	321.25	10.25	--	<125	2.0	<1.2	<1.2	<1.2	680	--
07/07/98	331.50	--	--	Inaccessable	--	--	--	--	--	--	--

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical values are in parts ber billion (ppb)

DATE	Well Head Elevation	Ground Water Elevation	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE	1,2-DCA
MW-1											
10/04/94	333.56	320.76	12.80	--	2100	150	170	61	320	--	--
11/30/94	333.56	321.18	12.38	--	1500	210	17	73	130	--	--
03/02/95	333.56	320.68	12.88	--	2600	510	<10	160	<10	--	--
06/07/95	333.56	320.98	12.58	--	710	160	<2.0	45	<2.0	<10	--
09/26/95	333.56	320.41	13.15	--	1100	140	1.4	92	1.8	<5.0	--
12/28/95	333.56	320.47	13.09	--	750	96	2.5	61	7.4	37	--
02/29/96	333.56	321.39	12.17	--	250	17	<0.5	18	0.81	9.0	--
06/27/96	333.56	320.61	12.95	--	710	72	<2.0	92	2.2	<10	--
09/12/96	333.66	320.55	13.11	--	300	53	<0.5	32	0.65	21	--
03/31/97	333.66	320.67	12.99	--	<200	4.1	<2.0	4.8	<2.0	640	--
07/07/98	333.66	321.21	12.45	--	65	1.4	1.6	ND	ND	700	--

Cumulative Table of Well Data and Analytical Results

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DATE	Well Head Elevation	Ground Water Elevation	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE	1,2-DCA
MW-2											
10/04/94	329.18	320.62	8.56	--	2300	160	280	96	480	--	--
11/30/94	329.18	320.85	8.33	--	1600	170	16	110	120	--	--
03/02/95	329.18	320.83	8.35	--	1200	220	5.6	140	36	--	--
06/07/95	329.18	320.56	8.62	--	160	25	<0.5	16	<0.5	240	--
09/26/95	329.18	320.47	8.71	--	150	15	<0.5	7.2	<0.5	120	--
12/28/95	329.18	320.40	8.78	--	400	34	1.3	26	5.1	170	--
02/29/96	329.18	321.36	7.82	--	120	29	<0.5	<0.5	<0.5	790	--
06/27/96	329.18	320.46	8.72	--	150	13	<0.5	7.0	<0.5	850	--
09/12/96	329.29	320.48	8.81	--	<1000	18	<10	<10	<10	3100	--
03/31/97	329.29	320.64	8.65	--	<500	<5.0	<5.0	<5.0	<5.0	1400	--
07/07/98	329.29	321.08	8.21	--	<50	5.0	<5.0	<5.0	<5.0	1100	--

Cumulative Table of Well Data and Analytical Results

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DATE	Well Head Elevation	Ground Water Elevation	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE	1,2-DCA
MW-3											
10/04/94	332.73	320.67	12.06	--	6300	610	750	68	670	--	--
11/30/94	332.73	321.35	11.38	--	17,000	3600	490	430	610	--	--
03/02/95	332.73	320.76	11.97	--	8500	2200	<50	240	<50	64,000	--
06/07/95	332.73	321.19	11.54	--	3000	710	18	220	44	3100	--
09/26/95	332.73	320.37	12.36	--	<10,000	230	<100	130	<100	64,000	--
12/28/95	332.73	320.66	12.07	--	<12,500	760	<125	<125	<125	100,000	--
02/29/96	332.73	320.72	11.01	--	1600	380	<10	84	17	33,000	--
06/27/96	332.73	320.80	11.93	--	1400	<2.5	4.3	130	4.0	96,000	--
09/12/96	332.86	320.60	12.26	--	<10,000	560	<100	110	<100	100,000	--
03/31/97	332.86	320.82	12.04	--	<25,000	1200	370	<250	380	130,000	--
07/07/98	332.86	321.24	11.62	--	7400	1100	490	270	850	150,000	--

Cumulative Table of Well Data and Analytical Results

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DATE	Well Head Elevation	Ground Water Elevation	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE	1,2-DCA
MW-4											
03/01/96	332.64	322.74	9.90	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/02/96	332.64	322.87	9.77	--	--	--	--	--	--	--	--
06/27/96	332.64	322.64	10.00	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
09/12/96	332.63	320.96	11.67	--	<50	<0.5	<0.5	<0.5	<0.5	3.5	--
03/31/97	332.63	322.04	10.59	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
07/07/98	332.63	322.47	10.16	Measure Only							

Cumulative Table of Well Data and Analytical Results

Vertical Measurements are in feet. Analytical values are in parts ber billion (ppb)

DATE	Well Head Elevation	Ground Water Elevation	Depth To Water	Notes	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE	1,2-DCA
MW-5											
03/01/96	333.20	322.58	10.62	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/02/96	333.20	323.06	10.14	--	--	--	--	--	--	--	--
06/27/96	333.20	322.98	10.22	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
09/12/96	333.04	322.19	10.85	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
03/31/97	333.04	322.60	10.44	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
07/07/98	333.04	322.71	10.33	Measure Only							