



ENVIRONMENTAL
PROTECTION

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July 23, 1997

Project Number 192-03-02

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

Subject: Report of Subsurface Investigation at Dublin Car Wash, 7240 Dublin Boulevard, Dublin, California

This Subsurface Investigation Report describes the recent site history, field work and laboratory analysis results for a sampling event at the subject property.

I. INTRODUCTION

The project site is located on the southwest corner of the intersection of Dublin Boulevard and Village Parkway in Dublin, California. The site is currently used as a auto washing facility selling gasoline under the Beacon brand.

Site History

The information in this section reflects that found in the Weiss Associates Report: "Low Risk Fuel Site Evaluation" dated December 19, 1996.

Hydrocarbon distribution in the soils between 2 and 11.5 feet BGS have been detected at or above 100 ppm for TPH-g, and above 1 ppm for Benzene near the western end of the former station's southern pump island and beneath the former USTs. Most of the hydrocarbon-bearing soil near the southern pump island, the largest area of hydrocarbon bearing soil, was excavated and disposed offsite. Soil from 10 feet BGS in MW-2 and MW-3 also contained more than 100 ppm TPH-g. The hydrocarbon concentrations in soil between 7 and 14 feet depth may be the result of smearing due to the fluctuating water table. Much of the impacted soil in the source areas and the smear zone was likely remediated by the site's soil vapor extraction (SVE) system, which was operated for over four years. All told, approximately 15,260 pounds of hydrocarbons has been removed by excavation and the SVE system.

Recycled Paper

Groundwater from wells EA-1, MW-1, MW-2 and MW-3 has consistently contained over 1,000 ppb TPH-g and over 100 ppb benzene, although hydrocarbon concentrations in MW-1, MW-2 and MW-3 have declined significantly since 1994. Hydrocarbon concentrations in groundwater from wells EA-2, EA-3 MW-4 and MW-5 are generally below laboratory method detection limits. Therefore, these wells adequately delineate the northern and eastern extent of the dissolved hydrocarbons. Hydrocarbons were not detected in groundwater from well EA-1, located near the former Chevron and current Beacon southern pump island until after Chevron left the property and excavated over 1300 cubic yards from the area. It appears that hydrocarbons detected in groundwater from EA-1 are from release following Chevron's departure from the property. Since June, 1995, up to 850 and 100,000 ppb methyl tertiary-butyl ether (MTBE) has been detected in samples from wells MW-2 and MW-3 respectively.

A release of petroleum hydrocarbons was discovered in February, 1997 underneath the northwest pump due to a twist in the piping attachment from the pump to the lines from the tank. Subsequently, the piping to the tanks was tested, and the secondary piping failed the pressure test in June, 1997.

II. Current Activities

Parker Environmental Services obtained soil samples during the replacement of the underground piping from the pumps to the tanks. Samples 1-9 were collected under the observation of Ms. Eva Chu, the Alameda County Environmental Health Inspector assigned to this site. Samples from B-1 and B-2 were collected on July 14th, while samples from B-3 and B-4 were collected on July 15th. An excavation underneath and south of the northwest fuel pump location was made by backhoe to an approximate depth of 8 feet BGS. About 31 cubic yards of soil was removed from the area. Pea gravel was encountered under the middle of the canopy, and is assumed to be the replacement material for the excavation done before.

Samples 1 through 9 were collected by hammering a 6-inch long 2-inch diameter brass tube into the ground using a manual 20 pound slide hammer, or by hammering the brass tube into soil excavated from the ground that remained in the back hoe bucket using a wooden mallet. Samples from B-1 through B-4 were obtained by hand augering to the desired depth, and then hammering the tube using the slide hammer.

The slide hammer shoe and the hand auger bucket were washed in a TSP-substitute solution, rinsed twice in tap water and then rinsed in deionized water after each soil sample was obtained.

Once a sample was extracted from the ground, aluminum foil and plastic caps were placed over the ends, the tube was labeled and inserted in a zip-lock bag and placed

on wet ice in a portable cooler. Chain of custody procedures were initiated for transport to McCampbell Analytical in Pacheco, California, a State certified (#1644) hazardous materials testing laboratory. All samples were analyzed for TPH-g, MTBE and benzene, toluene, ethylbenzene and xylenes. Sample analysis result are presented in Table 1 - below, while sample locations are shown in Figure 2 - Sample Locations (attached).

Table 1 - Soil Sample Analysis Results
 Dublin Auto Wash
 Samples Obtained July 14 and 15, 1997

Sample	^{ppm} TPH-g	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
1@1'	7700	740	40	590	130	910
2@1'	24	13	0.26	0.8	0.59	2.7
3@1'	ND	ND	ND	0.008	ND	0.012
4@3'	22000	67	43	770	290	2000
5@1'	ND	ND	ND	0.015	ND	0.018
6@1.5'	ND	0.19	ND	ND	ND	ND
7@1'	ND	4.6	ND	0.005	ND	0.008
8@4'	6200	45	30	290	120	630
9@4'	12000	540	40	760	180	1300
B1@5'	10	6	0.41	0.027	0.16	0.01
B1@9'	1400	45	13	45	26	130
B2@5'	1.8	0.33	0.006	0.007	0.013	0.033
B2@10'	1100	20	11	35	18	91
B3@7'	230	6	2.4	2	3.8	19
B3@10'	1000	10	9.8	32	17	84
B4@7'	33	1.5	0.11	0.034	0.39	0.87
B4@10'	1900	ND<4.5	2.2	14	19	170
det. limits	1	0.05	0.005	0.005	0.005	0.005

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

From the surface and excavation samples (1-9), high hydrocarbon concentrations were detected in samples 1, 4, 8 and 9, all located beneath or within 13 feet of the northwest fuel pump. Samples 8 and 9 were about 8 feet from the pump location and 4 feet below grade, showing lateral movement of the hydrocarbons. The high concentration of sample 4 could be due to travel of the hydrocarbons along the subsurface piping. The remaining surface samples exhibit minimal or non-detectable amounts of petroleum hydrocarbons.

Boring samples show an expected increase in hydrocarbon concentrations with advanced depth. All 9 or 10 foot sample depths showed at least 1,000 ppm TPH-g, while the 5 foot sample depths showed between 1.8 and 230 ppm TPH-g, a significant difference.

III Conclusions and Recommendations

An unknown amount of gasoline has been released to the subsurface soils at the Dublin Car Wash due to a broken connection at the northwest gasoline pump. The amount and length of release is unknown. Soil samples collected during this sampling event show highest concentrations of petroleum hydrocarbons at or near the pump location. High concentrations of petroleum hydrocarbons in the lower bore hole samples indicate a possible smear of product from the fluctuating water table. Some of the high concentrations at the lower depths may be due to the older gasoline release from Chevron.

We recommend groundwater monitoring of the existing wells and analysis for TPH-g, MTBE and BTEX.

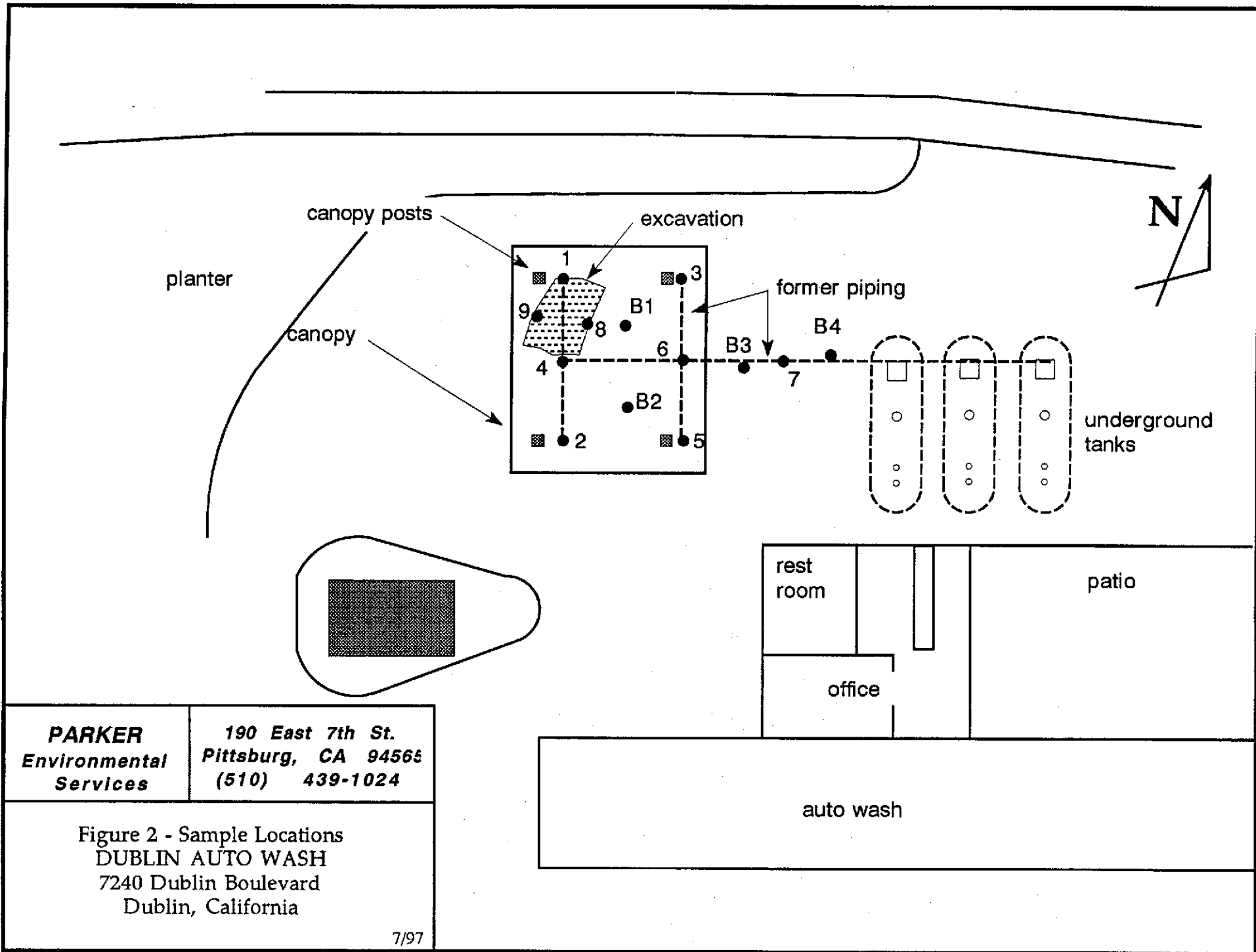
Copies of this report will be forwarded to Ms. Eva Chu, Alameda County Environmental Health Department, and to the California Regional Water Quality Control Board, San Francisco Bay Region.

Sincerely:
PARKER ENVIRONMENTAL SERVICES



James D. Parker
President


Attachments



PARKER
Environmental
Services

190 East 7th St.
Pittsburg, CA 94565
(510) 439-1024

Figure 2 - Sample Locations
DUBLIN AUTO WASH
7240 Dublin Boulevard
Dublin, California

 McCAMPBELL ANALYTICAL INC.	110 Second Avenue South, #D7, Pacheco, CA 94553 Telephone: 510-798-1620 Fax: 510-798-1622 http://www.mccampbell.com E-mail: main@mccampbell.com
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Parker Environmental Services 190 East 7 th Street Pittsburg, CA 94565	Client Project ID: #192-03-02: Dublin Auto Wash	Date Sampled: 07/14/97
	Client Contact: Jim Parker	Date Received: 07/15/97
	Client P.O.:	Date Extracted: 07/15/97
		Date Analyzed: 07/15-07/16/97


Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*
 EPA methods 5030, modified 801S, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g) [†]	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Recovery Surrogate
78595	1@1'	S	7700,a	740	40	590	130	910	103
78596	2@1'	S	24,b,c	13	0.026	0.80	0.59	2.7	106
78597	3@1'	S	ND	ND	ND	0.008	ND	0.012	102
78598	4@3'	S	22,000,b,c	67	43	770	290	2000	113 [#]
78599	5@1'	S	ND	ND	ND	0.015	ND	0.018	104
78600	6@1.5'	S	ND	0.19	ND	ND	ND	ND	102
78601	7@1'	S	ND	4.6	ND	0.005	ND	0.008	98
78602	8@4'	S	6200,b,c	45	30	290	120	630	101
78603	9@4'	S	12,000,a	540	40	760	180	1300	97
78604	B1@5'	S	10,a	6.0	0.41	0.027	0.16	0.010	100
78605	B1@9'	S	1400,a	45	13	45	26	130	95
78606	B2@5'	S	1.8,a	0.33	0.006	0.007	0.013	0.033	98
78607	B2@10'	S	1100,a	20	11	35	18	91	93
78608	B3@7'	S	230,a	6.0	2.4	2.0	3.8	19	105
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W	50 ug/L	5.0	0.5	0.5	0.5	0.5	0.5	
		1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, 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 : 510-798-1620 Fax : 510-798-1622 http://www.mccampbell.com E-mail: main@mccampbell.com
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	Client Contact: Jim Parker	Date Received: 07/15/97
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		Date Analyzed: 07/15-07/16/97

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g) ⁺	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Recovery Surrogate
78609	B3@10'	S	1000,a	10	9.8	32	17	84	112*
78610	B4@7'	S	33,a	1.5	0.11	0.034	0.39	0.87	107
78611	B4@10'	S	1900,b,c	ND<4.5	2.2	14	19	170	100
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

PARKER

Environmental Services
 190 East 7th Street
 Pittsburg, CA 94565
 (510) 439-1024
 Fax (510) 439-2566

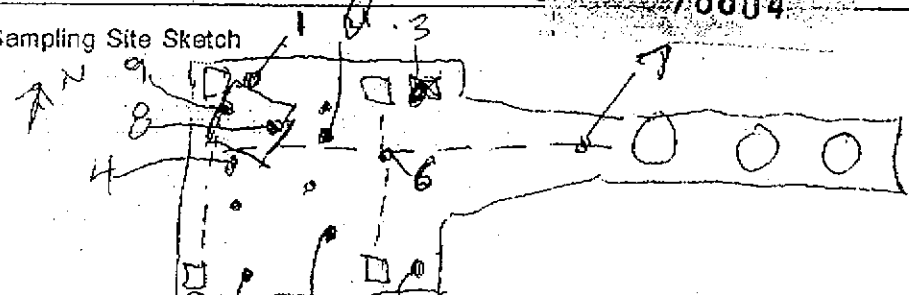
CHAIN OF CUSTODY FORM

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Job Client: 192-03-02 Hoeshang Hadjian
 Site Name: Dublin Auto Wash
 Location: 7240 Dublin Blvd - Dublin, CA
 Date: 7/14/97

Sample Number	Type			Analysis Requested							Remarks	
	Soil	Water	Time	TPH-g	TPH-d	BTEX	O & G	MTBE	Metals (list)	Asbestos		Other
1@1	X		13:33	X		X		X				Set Sample from marked end (X) 78595 78596 78605 78597 78606 78598 78607 78599 78600 78601 78602 78603
2@1	X		13:47	X		X		X				
3@1	X		13:51	X		X		X				
4@3	X		14:06	X		X		X				
5@1	X		14:11	X		X		X				
6@1.5	X		14:20	X		X		X				
7@1	X		14:35	X		X		X				
8@4	X		14:47	X		X		X				
9@3.4	X		14:58	X		X		X				
10@5	X		15:54	X		X		X				
B10@9	X		16:22	X		X		X				
B20@5	X		16:48	X		X		X				
B20@10	X		17:30	X		X		X				

Sampler Name (Print) Jim Parker
 Sampler Signature *Jim Parker* 78604

Relinquished By: <i>Jim Parker</i> 7/15/97 11:26	Received By: <i>Deirdre P... 7-15-97 11:26</i>	Sampling Site Sketch 
Relinquished By: _____	Received By: _____	
Relinquished By: _____	Received By: _____	
Relinquished By: _____	Received By: _____	

07-17-1997 05:55PM FROM McCampbell Analytical Inc TO 4392566 P.02

PARKER

Environmental Services
 190 East 7th Street
 Pittsburg, CA 94565
 (510) 439-1024
 Fax (510) 439-2666

CHAIN OF CUSTODY FORM 9029

Pg 2 of 2

Job, Client: 192-03-02 Hooshang Hadjian
 Site Name: Dublin Auto Wash
 Location: 7240 Dublin Blvd - Dublin CA

Date: 7/15/97

Sample Number	Type			Analysis Requested							Remarks	
	Soil	Water	Time	TPH-g	TPH-d	BTEX	O & G	MTBE	Metals (llst)	Asbestos		Other
B307	X		0845	X		X		X				TAKE SOIL FROM END MARKED (X)
B3010	X		09:10	X		X		X				
B407	X		09:27	X		X		X				
B4010	X		09:55	X		X		X				
												78608
												78609
												78610
												78611
IGBT <input checked="" type="checkbox"/> PRESERVATIVE <input type="checkbox"/> GOOD CONDITION <input checked="" type="checkbox"/> APPROPRIATE <input type="checkbox"/> HEADSPACE ABSENT <input checked="" type="checkbox"/> CONTAINERS <input checked="" type="checkbox"/>												

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

Relinquished By: <u>Jim Parker</u> Date and Time: <u>7/15/97 11:26</u>	Received By: <u>Heidi Pica</u> Date and Time: <u>7-15-97 11:26</u>	Sampling Site Sketch
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: _____	

07-1-1997 05:56PM FROM McCampbell Analytical Inc TO 4392566 P.03