



HARTCROWSER

Earth and Environmental Technologies

Hart Crowser, Inc.
353 Sacramento Street Suite 1140
San Francisco, California 94111
FAX 415.391.2216
415.391.1885

November 9, 1994

Ms. Madhula Logan
Hazardous Materials Division
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Room 250
Alameda, California 94502

Reference: Quarterly Status Report
Grand Auto Facility
4240 East 14th Street
Oakland, California J-6077

Dear Ms. Logan:

Hart Crowser, Inc. has prepared this Quarterly Status Report on behalf of PACCAR Automotive, Inc. for the above-referenced site. The following sections present summaries of environmental activities completed at the site prior to July 1994 (Previous Site Activities), during the period of July 1994 to September 1994 (Current Activities) and the activities planned for the next quarter, October 1994 to December 1994 (Proposed Activities).

PREVIOUS SITE ACTIVITIES

The Grand Auto retail facility is located on an approximate 1.2 acre site. The site is currently used as an auto service and retail merchandise facility. The site was previously used for retail gasoline sales, with underground fuel storage tanks and a car wash with an associated drainage sump. The underground fuel tanks were removed in 1986. In July 1992, Hart Crowser performed a site investigation as outlined in "Sampling and Analysis Plan, Grand Auto/Super Tire Facilities," July 6, 1992. The investigation included drilling two borings (B-4 and B-5) in the vicinity of the former location of the underground fuel storage tanks (Figure 1). Analytical results of soil samples from these borings did not show significant petroleum hydrocarbon concentrations.

HAZARDOUS
MATERIALS
SECTION
NOV 14 1994



The car wash drainage sump was removed on August 7, 1992. A soil sample (S2C) was collected from beneath the sump at a depth of 8.5 feet below ground surface (BGS) (Figure 1). Analytical results indicated the presence of petroleum hydrocarbons, halogenated hydrocarbons, and some metals in the soil beneath the sump. A groundwater monitoring well (MW-1) was installed within ten feet southwest of the sump, which, according to regional information, is the downgradient direction. Despite some slightly wet conditions encountered at eight feet BGS, free groundwater was not encountered until approximately 36 feet BGS. There appears to be a discontinuous perching layer at the site at approximately 8 feet BGS. The results of this phase of the investigation were summarized in the report, "Preliminary Site Investigation Report," dated November 20, 1992.

During April 1993, we drilled five soil borings (B-8 to B-12) and converted three of them to groundwater monitoring wells (MW-2, MW-3, MW-4). Hart Crowser also installed an off-site groundwater monitoring well (HC-1) at the adjacent Super Tire facility. We have included the results from this well as part of the assessment for the Grand Auto site. The wells were developed and then sampled in April 1993. The results of this phase of the assessment were summarized in a report, "Supplemental Site Investigation", June 18, 1993.

During October 1993, fuel conveyance piping associated with the former underground fuel storage tanks was excavated and removed from the site. Verification soil samples were taken from the base of the excavation at the four locations shown on Figure 1. Each sample was analyzed for TPH as gasoline with BTEX distinction, and all samples reported non-detectable concentrations of all compounds.

CURRENT ACTIVITIES

On September 20, 1994, Hart Crowser measured groundwater elevations in, and collected groundwater samples from, all five groundwater monitoring wells onsite (MW-1, MW-2, MW-3, and MW-4) and from the offsite well (HC-1). Approximately three to four well volumes of water were purged from each monitoring well before the sample was collected. Field parameters including pH, conductivity and temperature were recorded to verify stabilization prior to sampling. Pre-cleaned disposable bailers (single-use) were used to obtain samples from each well. All sampling equipment was decontaminated before use and between wells to minimize the potential for cross-contamination.





Groundwater samples were contained in hydrochloric acid preserved, laboratory cleaned, 40 milliliter glass vials with Teflon lined septa. After labeling, they were promptly stored in a cold ice chest. Strict chain-of-custody procedures were followed throughout sample acquisition, storage, and transport.

Samples were submitted to Superior Precision Analytical, Inc. for analysis of halogenated volatile organics by EPA Method 8010. The laboratory results are summarized in Table 1. Certified Analytical Reports and a copy of the Chain-of-Custody record can be found in Appendix A.

Petroleum hydrocarbons as gasoline were not analyzed during this sampling event due to the previous five quarters of sampling which indicated that petroleum hydrocarbons were not present at the site (Table 2). Although total petroleum hydrocarbons were reported they were noted by the laboratory as not typical of a gasoline pattern. They most likely represented analytical overlap from the halogenated volatile organic compounds detected in the samples.

The five metals (cadmium, chromium, lead, nickel, and zinc) were also dropped from the list of analyses, because the last five rounds of sampling indicated that metals were not present in the groundwater (Table 3).

The analytical results from this sampling were generally consistent with previous results. The concentrations of halogenated compounds were relatively the same as measured during the previous round of sampling in February 1994. Tetrachloroethylene (PCE) continues to be detected in all five monitoring wells with the highest concentration of 270 $\mu\text{g}/\text{L}$ (duplicate sample also 270 $\mu\text{g}/\text{L}$) found in MW-1. Reportable concentrations of trichloroethylene (TCE) and cis-1,2-Dichloroethylene (cis-1,2-DCE) were also found in all five monitoring wells, but the highest concentrations were reported in the MW-2 sample.

Groundwater elevations measured on September 20, 1994 are presented in Table 4. The groundwater elevations for each well are shown on Figure 2 for this date. The measured groundwater elevations in all the wells increased by approximately 0.5 feet compared to the June 7, 1994 measurements. The measured groundwater gradient is again relatively flat, and does not appear to exhibit a preferential flow direction.





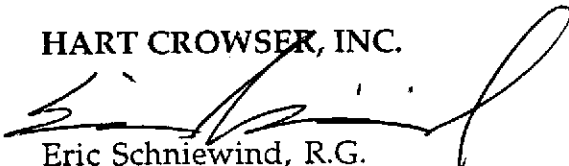
PROPOSED ACTIVITIES


Future activities proposed for the site include the continuation of quarterly groundwater monitoring for halogenated volatile organics only. The next sampling event is scheduled for December 1994. We are currently formulating a plan to further characterize the halogenated volatile organic plume.

If you have any questions regarding work at this site, please contact our office at your earliest convenience.

Sincerely,

HART CROWSER, INC.


Eric Schniewind, R.G.
Senior Project Hydrogeologist


for Dharme Rathnayake, P.E.
Technical Manager

ETS/DR:pr

Attachments: Figure 1 - Site Plan
 Figure 2 - Groundwater Elevation Map 9/20/94

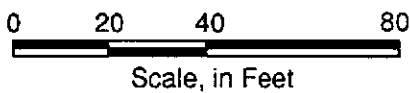
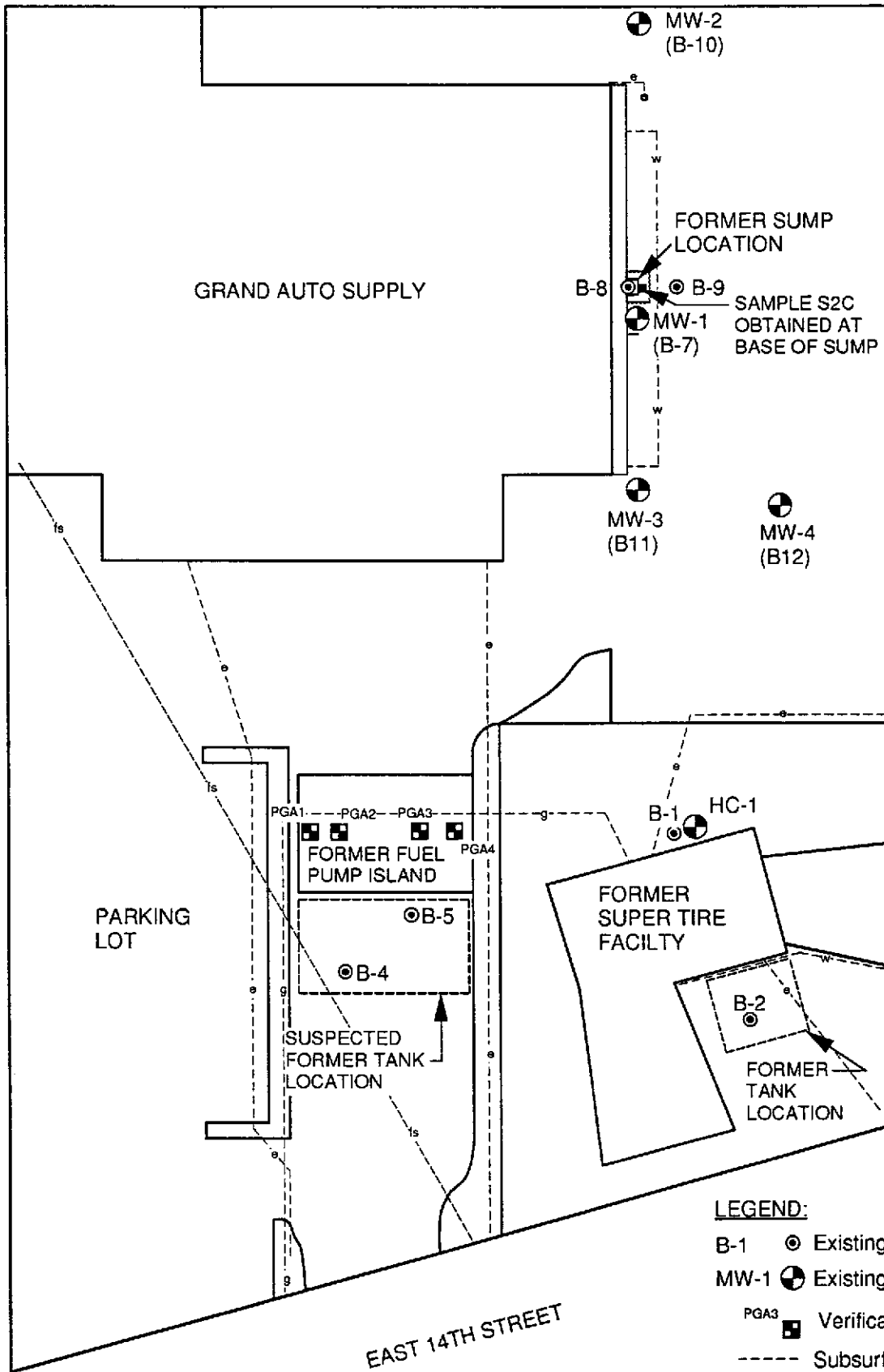
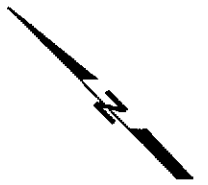
 Table 1 - Historical GW Quality Data - Halogenated Hydrocarbons
 Table 2 - Historical GW Quality Data - Petroleum Hydrocarbons
 Table 3 - Historical GW Quality Data - Metals
 Table 4 - Monitoring Well Data

 Appendix A - Certified Analytical Reports

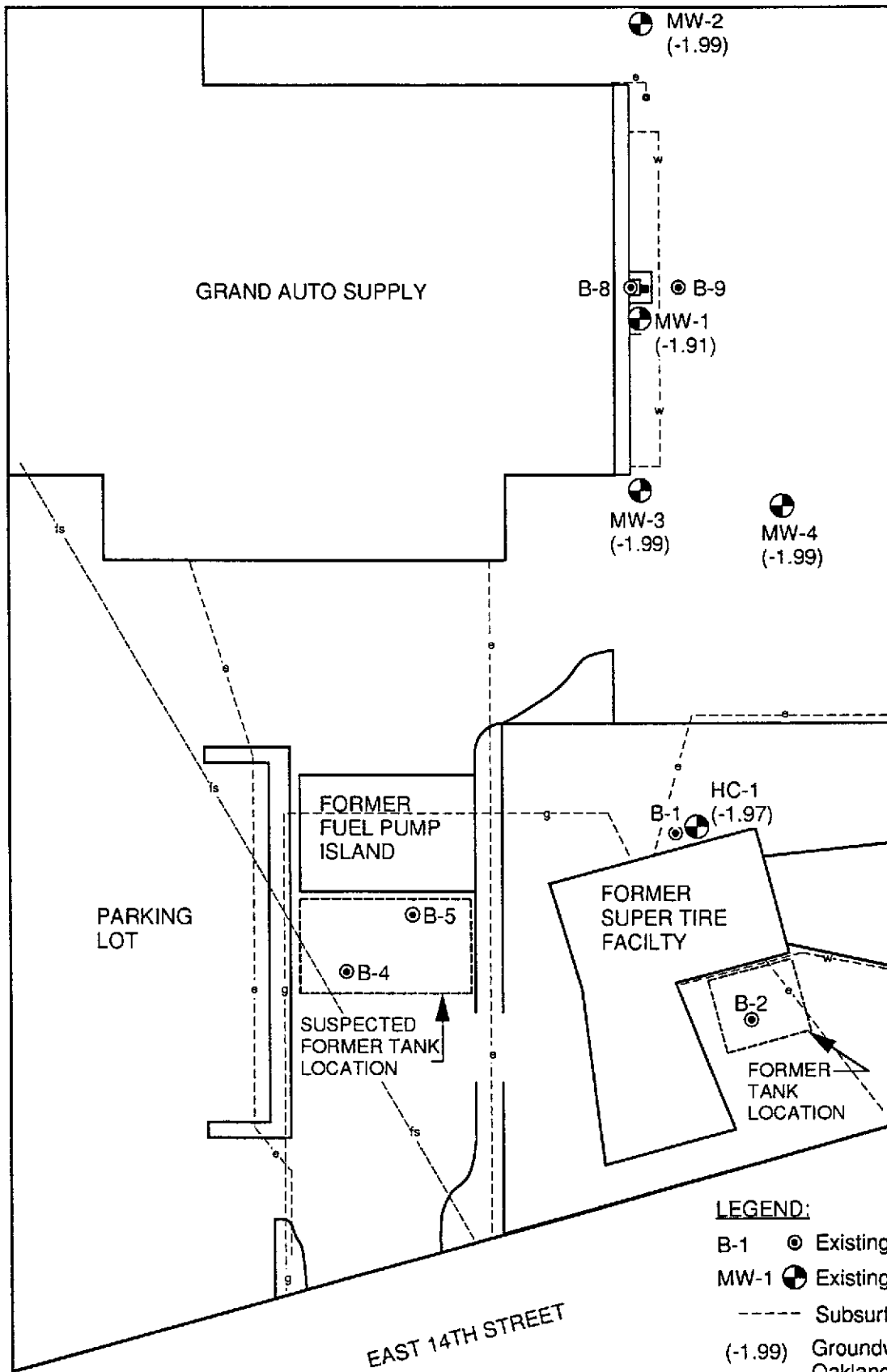
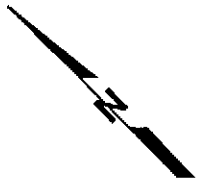
cc: Ms. Lisa Robbins, PACCAR, Inc.
 Mr. Raymond Elliott, PACCAR, Inc.
 Mr. Richard Hiatt, Regional Water Quality Control Board



FIGURES

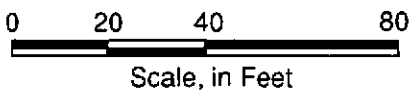


SITE PLAN
GRAND AUTO RETAIL FACILITY
 EAST 14TH & HIGH STREETS
 OAKLAND, CALIFORNIA



LEGEND:

- B-1 ● Existing boring location
- MW-1 ● Existing well location
- Subsurface utility lines
- (-1.99) Groundwater elevation in feet
Oakland City Datum, on
September 20, 1994.



GROUNDWATER ELEVATIONS
 SUPER TIRE FACILITY
 4256 EAST 14 TH STREET
 OAKLAND, CALIFORNIA

TABLES

TABLE 1
HISTORICAL GROUNDWATER QUALITY DATA - HALOGENATED HYDROCARBONS
GRAND AUTO, OAKLAND

WELL	DATE	Freon 1,2 (ug/L)	cis-1,2-DCE (ug/L)	Chloroform (ug/L)	1,1,1-TCA (ug/L)	1,2-DCA (ug/L)	TCE (ug/L)	PCE (ug/L)
MW-1	9/10/92	NR	11	1.1	ND 0.5	ND 0.5	26	310
GC/MS	1/19/93	NR	14	ND 3	ND 3	ND 1	28	220
	4/26/93	37	8.7	1	ND 0.5	ND 0.5	22	300
(d)	4/26/93	110	8.7	1.1	0.6	ND 0.5	22	300
	8/4/93	NR	10	ND 5	ND 5	ND 5	23	290
	11/17/93	NR	15	1.8	ND 0.5	ND 0.5	28	230
	2/18/94	NR	12	1	ND 0.5	ND 0.5	25	200
	6/7/94	NR	25	1.6	ND 0.5	ND 0.5	28	200
(d)	6/7/94	NR	22	1.5	ND 0.5	ND 0.5	35	340
	9/20/94	NR	19	ND 5	ND 5	ND 5	37	270
(d)	9/20/94	NR	18	ND 5	ND 5	ND 5	36	270
MW-2	4/26/93	31	8.5	0.9	0.6	0.6	32	7.5
	8/4/93	NR	22	ND 1.2	ND 1.2	ND 1.2	110	7.2
	11/17/93	NR	8.7	ND 0.5	ND 0.5	ND 0.5	32	6.1
	2/18/94	NR	25	ND 0.5	ND 0.5	1.5	75	4.8
	6/7/94	NR	31	ND 0.5	ND 0.5	1.8	120	6.9
	9/20/94	NR	36	ND 5	ND 5	ND 5	130	6
MW-3	4/26/93	35	9.7	ND 0.5	0.8	ND 0.5	21	79
	8/4/93	NR	ND 5	ND 5	ND 5	ND 5	28	170
	11/17/93	NR	12	1.3	0.8	ND 0.5	29	170
	2/18/94	NR	5	0.7	ND 0.5	ND 0.5	19	85
	6/7/94	NR	8.3	0.6	0.6	ND 0.5	34	160
	9/20/94	NR	11	ND 5	ND 5	ND 5	37	240

TABLE 1
HISTORICAL GROUNDWATER QUALITY DATA - HALOGENATED HYDROCARBONS
GRAND AUTO, OAKLAND

WELL	DATE	Freon 1,2 (ug/L)	cis-1,2-DCE (ug/L)	Chloroform (ug/L)	1,1,1-TCA (ug/L)	1,2-DCA (ug/L)	TCE (ug/L)	PCE (ug/L)
MW-4	4/26/93	28	3.9	0.6	ND 0.5	ND 0.5	17	78
	8/4/93	NR	ND 5	ND 5	ND 5	ND 5	16	110
	11/17/93	NR	6.6	1	ND 0.5	ND 0.5	20	87
	2/18/94	NR	6	1.9	0.7	ND 0.5	31	120
	6/7/94	NR	7.1	0.9	0.9	ND 0.5	28	140
	9/20/94	NR	5	ND 5	ND 5	ND 5	32	220
HC-1	4/26/93	47	13	ND 0.5	ND 0.5	ND 0.5	22	46
	8/4/93	NR	15	ND 0.5	ND 0.5	ND 0.5	27	83
	11/17/93	NR	16	1.1	0.7	ND 0.5	27	130
	2/18/94	NR	13	0.7	ND 0.5	ND 0.5	30	140
	(d) 2/18/94	NR	11	0.6	ND 0.5	ND 0.5	22	150
(d)	6/7/94	NR	22	1	ND 0.5	ND 0.5	42	180
	9/20/94	NR	15	ND 5	ND 5	ND 5	37	190

Notes: ND - Not detected at specified detection limit.

NR - Not reported

GC/MS - denotes that EPA Method 8240 was used, all other results for EPA Method 8010.

(d) - denotes results are for a duplicate sample.

* - does not match typical gasoline pattern, single peaks within gasoline range.

TABLE 2
HISTORICAL GROUNDWATER QUALITY DATA - PETROLEUM HYDROCARBONS
GRAND AUTO, OAKLAND

WELL	DATE	TPH AS GASOLINE (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	XYLENES (ug/L)	OIL & GREASE (ug/L)
MW-1	9/10/92	150*	ND 0.3	ND 0.3	ND 0.3	ND 0.3	NT
GC/MS	1/19/93	160	ND 1	ND 3	ND 3	ND 3	NT
	4/26/93	57*	ND 0.3	ND 0.3	ND 0.3	ND 0.9	NT
(d)	4/26/93	74*	ND 0.3	ND 0.3	ND 0.3	ND 0.9	NT
	8/4/93	150*	ND 0.3	0.3	ND 0.3	ND 0.9	NT
	11/17/93	99*	ND 0.5	ND 0.5	ND 0.5	ND 0.5	NT
	2/18/94	110*	ND 0.5	ND 0.5	ND 0.5	ND 0.5	NT
	6/7/94	83*	ND 0.5	ND 0.5	ND 0.5	ND 0.5	NT
MW-2	4/26/93	70	0.8	1.1	ND 0.3	1.0	ND 5,000
	8/4/93	120*	ND 0.3	0.3	ND 0.3	ND 0.9	NT
	11/17/93	ND 50	ND 0.5	ND 0.5	ND 0.5	ND 0.5	NT
	2/18/94	58*	ND 0.5	ND 0.5	ND 0.5	ND 0.5	NT
	6/7/94	52*	ND 0.5	ND 0.5	ND 0.5	ND 0.5	NT
MW-3	4/26/93	ND 50	ND 0.3	ND 0.3	ND 0.3	ND 0.9	NT
	8/4/93	170*	0.3	0.4	ND 0.3	ND 0.9	NT
	11/17/93	ND 50	ND 0.5	ND 0.5	ND 0.5	ND 0.5	NT
	2/18/94	64*	ND 0.5	ND 0.5	ND 0.5	ND 0.5	NT
	6/7/94	78*	ND 0.5	ND 0.5	ND 0.5	ND 0.5	NT
MW-4	4/26/93	ND 50	ND 0.3	ND 0.3	ND 0.3	ND 0.9	NT
	8/4/93	110*	ND 0.3	0.4	ND 0.3	ND 0.9	NT
	11/17/93	ND 50	ND 0.5	ND 0.5	ND 0.5	ND 0.5	NT
	2/18/94	95*	ND 0.5	ND 0.5	ND 0.5	ND 0.5	NT
	6/7/94	62*	ND 0.5	ND 0.5	ND 0.5	ND 0.5	NT

TABLE 2
HISTORICAL GROUNDWATER QUALITY DATA - PETROLEUM HYDROCARBONS
GRAND AUTO, OAKLAND

WELL	DATE	TPH AS GASOLINE (ug/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL BENZENE (ug/L)	XYLENES (ug/L)	OIL & GREASE (ug/L)
HC-1	4/26/93	ND 50	ND 0.3	ND 0.3	ND 0.3	ND 0.9	ND 5,000
	8/4/93	100*	ND 0.3	ND 0.3	ND 0.3	ND 0.9	NT
	11/17/93	ND 50	ND 0.5	ND 0.5	ND 0.5	ND 0.5	NT
	2/18/94	96*	ND 0.5	0.5	ND 0.5	ND 0.5	ND 5,000
(d)	2/18/94	90*	ND 0.5	ND 0.5	ND 0.5	ND 0.5	NT
	6/7/94	69*	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 5,000

Notes: ND: Not detected at specified detection limit.
GC/MS - denotes that EPA Method 8240 was used, all other results for EPA Method 8020.
(d) - denotes results are for a duplicate sample.
NT - denotes that sample was not tested for indicated analyte.
* - indicates that laboratory qualified result as not matching the standard gasoline chromatogram.

TABLE 3
HISTORICAL GROUNDWATER QUALITY DATA - METALS
GRAND AUTO, OAKLAND

WELL	DATE	CADMIUM (ug/L)	CHROMIUM (ug/L)	LEAD (ug/L)	NICKEL (ug/L)	ZINC (ug/L)
MW-1 (d)	9/10/92	NT	NT	NT	NT	NT
	1/19/93	ND 50	ND 50	ND 100	ND 50	ND 50
	4/26/93	ND 50	ND 50	ND 100	ND 50	ND 50
	4/26/93	NT	NT	NT	NT	NT
	8/4/93	NT	ND 50	ND 100	NT	NT
	11/17/93	NT	ND 50	ND 100	ND 50	ND 50
	2/18/94	ND 50	ND 50	ND 100	ND 50	ND 50
	6/7/94	NT	ND 20	ND 100	ND 20	ND 20
(d)	6/7/94	NT	NT	NT	NT	NT
MW-2	4/26/93	ND 50	ND 50	ND 100	ND 50	ND 50
	8/4/93	NT	ND 50	NT	NT	NT
	11/17/93	NT	ND 50	ND 100	ND 50	ND 50
	2/18/94	ND 50	ND 50	ND 100	ND 50	ND 50
	6/7/94	NT	ND 20	ND 100	ND 20	20
MW-3	4/26/93	ND 50	170	ND 100	ND 50	ND 50
	8/4/93	NT	ND 50	NT	NT	NT
	11/17/93	NT	ND 50	ND 100	ND 50	ND 50
	2/18/94	ND 50	ND 50	ND 100	ND 50	ND 50
	6/7/94	NT	ND 20	ND 100	ND 20	ND 20
MW-4	4/26/93	ND 50	60	ND 100	ND 50	ND 50
	8/4/93	NT	ND 50	NT	NT	NT
	11/17/93	NT	ND 50	ND 100	ND 50	ND 50
	2/18/94	ND 50	ND 50	ND 100	ND 50	ND 50
	6/7/94	NT	ND 20	ND 100	ND 20	ND 20
HC-1	4/26/93	ND 50	ND 50	ND 100	ND 50	ND 50
	8/4/93	NT	ND 50	NT	NT	NT
	11/17/93	NT	ND 50	ND 100	ND 50	ND 50
	2/18/94	ND 50	ND 50	ND 100	ND 50	ND 50
	2/18/94	ND 50	ND 50	ND 100	ND 50	ND 50
	6/7/94	NT	ND 20	ND 100	20	ND 20

Notes: ND: Not detected at specified detection limit.

NT denotes that sample was not tested for indicated analyte.

Table 4
Monitoring Well Data
September 20, 1994
 Grand Auto Supply
 Oakland, California

WELL	TOTAL DEPTH (feet BGS)	SCREENED INTERVAL (feet BGS)	SURFACE ELEVATION (feet above msl)	TOP OF CASING ELEVATION (feet above msl)	DEPTH TO GROUNDWATER (feet BGS)	GROUNDWATER ELEVATION (feet above msl)
MW-1	43	33-43	30.8	30.53	32.44	-1.91
MW-2	45	31-45	30.7	30.41	32.40	-1.99
MW-3	45	30-45	30.7	30.31	32.30	-1.99
MW-4	45	30-45	29.5	29.08	31.07	-1.99
HC-1	42	30-42	28.7	28.33	30.30	-1.97

Notes:

1. See Figure 1 for well locations.
2. BGS = below ground surface.
3. MSL = mean seal level

APPENDIX A
Certified Analytical Reports



Superior Precision Analytical, Inc.

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Attn: ERIC SCHNIEWIND

Project 6077
Reported 30-September-1994

HALOGENATED VOLATILE ORGANICS by EPA SW-846 Methods 5030/8010.

Chronology

Laboratory Number 92639

Identification	Sampled	Received	Extracted	Analyzed	Run #	Lab #
HC-MW1-92094	09/20/94	09/23/94	09/29/94	09/29/94		1
HC-MW1D-92094	09/20/94	09/23/94	09/29/94	09/29/94		2
HC-MW2-92094	09/20/94	09/23/94	09/29/94	09/29/94		3
HC-MW3-92094	09/20/94	09/23/94	09/29/94	09/29/94		4
HC-MW4-92094	09/20/94	09/23/94	09/29/94	09/29/94		5
HC-1-92094	09/20/94	09/23/94	09/29/94	09/29/94		6

Certified Laboratories

825 Arnold Dr., Suite 114
Martinez, California 94553
(510) 229-1512 / fax (510) 229-1526

1555 Burke St., Unit I
San Francisco, California 94124
(415) 647-2081 / fax (415) 821-7123

309 S. Cloverdale St., Suite B-24
Seattle, Washington 98108
(206) 763-2992 / fax (206) 763-8429



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Hartcrowser Inc.
Attn: ERIC SCHNIEWIND

Project 6077
Reported 30-September-1994

HALOGENATED VOLATILE ORGANICS by EPA SW-846 Methods 5030/8010.

Laboratory Number	Sample Identification	Matrix
92639- 1	HC-MW1-92094	Water
92639- 2	HC-MW1D-92094	Water
92639- 3	HC-MW2-92094	Water
92639- 4	HC-MW3-92094	Water
92639- 5	HC-MW4-92094	Water

RESULTS OF ANALYSIS

Laboratory Number: 92639- 1 92639- 2 92639- 3 92639- 4 92639- 5

Chloromethane:	ND<5	ND<5	ND<5	ND<5	ND<5
Vinyl Chloride:	ND<5	ND<5	ND<5	ND<5	ND<5
Bromomethane:	ND<5	ND<5	ND<5	ND<5	ND<5
Chloroethane:	ND<5	ND<5	ND<5	ND<5	ND<5
Trichlorofluoromethane:	ND<5	ND<5	ND<5	ND<5	ND<5
1,1-Dichloroethene:	ND<5	ND<5	ND<5	ND<5	ND<5
Dichloromethane:	ND<5	ND<5	ND<5	ND<5	ND<5
t-1,2-Dichloroethene:	ND<5	ND<5	ND<5	ND<5	ND<5
1,1-Dichloroethane:	ND<5	ND<5	ND<5	ND<5	ND<5
c-1,2-Dichloroethene:	19	18	36	11	5
Chloroform:	ND<5	ND<5	ND<5	ND<5	ND<5
1,1,1-Trichloroethane:	ND<5	ND<5	ND<5	ND<5	ND<5
Carbon tetrachloride:	ND<5	ND<5	ND<5	ND<5	ND<5
1,2-Dichloroethane:	ND<5	ND<5	ND<5	ND<5	ND<5
Trichloroethene:	37	36	130	37	32
c-1,3-Dichloropropene:	ND<5	ND<5	ND<5	ND<5	ND<5
1,2-Dichloropropane:	ND<5	ND<5	ND<5	ND<5	ND<5
t-1,3-Dichloropropene:	ND<5	ND<5	ND<5	ND<5	ND<5
Bromodichloromethane:	ND<5	ND<5	ND<5	ND<5	ND<5
1,1,2-Trichloroethane:	ND<5	ND<5	ND<5	ND<5	ND<5
Tetrachloroethene:	270	270	6	240	220
Dibromochloromethane:	ND<5	ND<5	ND<5	ND<5	ND<5
Chlorobenzene:	ND<5	ND<5	ND<5	ND<5	ND<5
Bromoform:	ND<5	ND<5	ND<5	ND<5	ND<5
1,1,2,2-Tetrachloroeth:	ND<5	ND<5	ND<5	ND<5	ND<5
1,3-Dichlorobenzene:	ND<5	ND<5	ND<5	ND<5	ND<5
1,2-Dichlorobenzene:	ND<5	ND<5	ND<5	ND<5	ND<5
1,4-Dichlorobenzene:	ND<5	ND<5	ND<5	ND<5	ND<5

Concentration: ug/L ug/L ug/L ug/L ug/L

Page 2 of 4

Certified Laboratories

825 Arnold Dr., Suite 114
Martinez, California 94553
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Attn: ERIC SCHNIEWIND

Project 6077
Reported 30-September-1994

HALOGENATED VOLATILE ORGANICS by EPA SW-846 Methods 5030/8010.

Laboratory Number	Sample Identification	Matrix
92639- 6	HC-1-92094	Water

RESULTS OF ANALYSIS

Laboratory Number: 92639- 6

Chloromethane: ND<5
 Vinyl Chloride: ND<5
 Bromomethane: ND<5
 Chloroethane: ND<5
 Trichlorofluoromethane: ND<5
 1,1-Dichloroethene: ND<5
 Dichloromethane: ND<5
 t-1,2-Dichloroethene: ND<5
 1,1-Dichloroethane: ND<5
 c-1,2-Dichloroethene: 15
 Chloroform: ND<5
 1,1,1-Trichloroethane: ND<5
 Carbon tetrachloride: ND<5
 1,2-Dichloroethane: ND<5
 Trichloroethene: 37
 c-1,3-Dichloropropene: ND<5
 1,2-Dichloropropane: ND<5
 t-1,3-Dichloropropene: ND<5
 Bromodichloromethane: ND<5
 1,1,2-Trichloroethane: ND<5
 Tetrachloroethene: 190
 Dibromochloromethane: ND<5
 Chlorobenzene: ND<5
 Bromoform: ND<5
 1,1,2,2-Tetrachloroeth: ND<5
 1,3-Dichlorobenzene: ND<5
 1,2-Dichlorobenzene: ND<5
 1,4-Dichlorobenzene: ND<5

Concentration: ug/L

Certified Laboratories

825 Arnold Dr., Suite 114
Martinez, California 94553
(510) 229-1512 / fax (510) 229-1526

1555 Burke St., Unit I
San Francisco, California 94124
(415) 647-2081 / fax (415) 821-7123

309 S. Cloverdale St., Suite B-24
Seattle, Washington 98108
(206) 763-2992 / fax (206) 763-8429



Superior Precision Analytical, Inc.

A member of ESSCON Environmental Support Service Consortium

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HALOGENATED VOLATILE ORGANICS by EPA SW-846 Methods 5030/8010.
Quality Assurance and Control Data - Water

Laboratory Number 92639

Compound	Method Blank (ug/L)	RL (ug/L)	Spike Recovery (%)	Limits (%)	RPD (%)
Chloromethane:	ND<0.5	0.5			
Vinyl Chloride:	ND<0.5	0.5			
Bromomethane:	ND<0.5	0.5			
Chloroethane:	ND<0.5	0.5			
Trichlorofluoromethane:	ND<0.5	0.5			
1,1-Dichloroethene:	ND<0.5	0.5	73/72	50-189	1%
Dichloromethane:	ND<1.0	1.0			
t-1,2-Dichloroethene:	ND<0.5	0.5			
1,1-Dichloroethane:	ND<0.5	0.5			
c-1,2-Dichloroethene:	ND<0.5	0.5			
Chloroform:	ND<0.5	0.5			
1,1,1-Trichloroethane:	ND<0.5	0.5			
Carbon tetrachloride:	ND<0.5	0.5			
1,2-Dichloroethane:	ND<0.5	0.5			
Trichloroethene:	ND<0.5	0.5	85/84	53-161	1%
c-1,3-Dichloropropene:	ND<0.5	0.5			
1,2-Dichloropropane:	ND<0.5	0.5			
t-1,3-Dichloropropene:	ND<0.5	0.5			
Bromodichloromethane:	ND<0.5	0.5			
1,1,2-Trichloroethane:	ND<0.5	0.5			
Tetrachloroethene:	ND<1.0	1.0			
Dibromochloromethane:	ND<0.5	0.5			
Chlorobenzene:	ND<0.5	0.5	105/105	57-171	0%
Bromoform:	ND<0.5	0.5			
1,1,2,2-Tetrachloroeth:	ND<0.5	0.5			
1,3-Dichlorobenzene:	ND<0.5	0.5			
1,2-Dichlorobenzene:	ND<0.5	0.5			
1,4-Dichlorobenzene:	ND<0.5	0.5			

Definitions:

ND = Not Detected
 RPD = Relative Percent Difference
 RL = Reporting Limit
 ug/L = Parts per billion (ppb)
 QC File No. 92639

Mukul R. Verma
 Senior Chemist
 Account Manager



92639

Hart Crowser, Inc.
353 Sacramento Street, Suite 1140
San Francisco, California 94111

Sample Custody Record

DATE 9/21/94 PAGE 1 OF 1

HARTCROWSER

JOB NUMBER <u>6077</u> LAB NUMBER _____					TESTING										NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS							
PROJECT MANAGER <u>ERIC SCHNIEWIND</u>					8010	TPH-D																	
PROJECT NAME <u>PACCAR - OAKLAND</u>																							
SAMPLED BY: <u>BRENT WHEELER</u>																							
LAB NO.	SAMPLE	TIME	STATION	MATRIX																			
		14:30	HC-MW1-92094	WATER	✓															2	TWO - WEEKS		
		14:30	HC-MW1D-92094	"	✓																	"	
		10:00	HC-MW2-92094	"	✓																	"	
		11:10	HC-MW3-92094	"	✓																	"	
		11:55	HC-MW4-92094	"	✓																	"	
		13:25	HC-1-92094	"	✓	✓																"	
		ALL SAMPLES COLLECTED ON 9/20/94																					
RELINQUISHED BY		DATE	RECEIVED BY		DATE	TOTAL NUMBER OF CONTAINERS					METHOD OF SHIPMENT												
		9/23/94			9/23/94	13																	
SIGNATURE		TIME	SIGNATURE		TIME	SPECIAL SHIPMENT/HANDLING OR STORAGE REQUIREMENTS																	
B. Borklund		11:20	Brent Wheeler		1:20																		
PRINTED NAME			PRINTED NAME																				
HC			AERO																				
COMPANY			COMPANY																				
RELINQUISHED BY		DATE	RECEIVED BY		DATE	DISTRIBUTION:																	
		9/23/94			9/23/94	1. PROVIDE WHITE AND YELLOW COPIES TO LABORATORY																	
SIGNATURE		TIME	SIGNATURE		TIME	2. RETURN PINK COPY TO PROJECT MANAGER																	
			Mike Verona			3. LABORATORY TO FILL IN SAMPLE NUMBER AND SIGN FOR RECEIPT																	
PRINTED NAME			PRINTED NAME			4. LABORATORY TO RETURN WHITE COPY TO HART CROWSER																	
			SUPERIOR LABS		14:32																		
COMPANY			COMPANY																				