

CORPORATE ENVIRONMENTAL

July 1, 2003

Eva Chu Alameda County Environmental Health Services 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577 IUL O 9 2003
Environmental Heave

Re:

2003 Groundwater Monitoring Results

4240 East 14th Street (High Street), Oakland, CA

Dear Eva:

Enclosed please find one (1) paper copy of the 2003 Annual Groundwater Monitoring Report dated June 23, 2003 which was prepared by AllWest Environmental.

At this time and per your letter dated September 12, 2001, we are submitting this report and requesting site closure at this property.

If you have any questions, please contact me at <u>vicki.zumbrunnen@paccar.com</u> or 425-468-7055.

Sincerely,

V. L. ZumBrunnen Project Manager

Enclosure

Cc:

B. N. Holliday

L. C. Robbins

Randi Val Morrison - CSK Auto Inc



AllWest Environmental, Inc.

Specialists in Physical Due Diligence and Remedial Services

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2003 ANNUAL GROUNDWATER MONITORING REPORT

Grand Auto #43 4240 East 14th Street Oakland, California

PREPARED FOR:

PACCAR, Inc.
Corporate Environmental Department
P.O. Box 1518
Bellevue, WA 98009

ALLWEST PROJECT No. 23010.28 June 23, 2003

PREPARED BY:

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2003 Annual Groundwater Monitoring Report

Grand Auto #43 4240 East 14th Street Oakland, California

I. INTRODUCTION

This report presents the results of the 2003 annual groundwater monitoring event conducted by AllWest Environmental at the former Grand Auto Retail Store #43, Oakland, California, on May 15, 2003. The sampling event involved the monitoring of the four on-site groundwater wells, MW-1, MW-2, MW-3A and MW-4. Included in this report is an abbreviated site setting, a description of field activities, a summary of analytical results, our interpretation of the data and conclusions. Supporting information such as site figures, sampling logs, and laboratory reports are included as attachments or appendices to this report.

The purpose of this report is to present findings from the recent groundwater sampling of the four on-site groundwater monitoring wells, to demonstrate the stability of the plume and that the residual chemicals in the site groundwater are naturally attenuating over time, and to present the findings of the investigation to the Alameda County Health Care Services (ACHCS) and Regional Water Quality Control Board (RWQCB) for their review and to petition the ACHCS and the RWQCB to grant Site Soil and Groundwater Closure status for the subject property.

II. PROJECT BACKGROUND

A. Site Setting

The approximately 1.2 acre former Grand Auto retail facility is located at the northwest corner of High Street and International Boulevard (formerly 14th Street) in Oakland, California. The site currently is used as a Kragen Auto retail merchandise facility. Previously the site was used for retail gasoline sales and had underground storage tanks (USTs) and a car wash with an associated drainage sump. The underground fuel tanks were removed in 1986. The car wash drainage sump was removed in August 1992. During October 1993, the remaining fuel conveyance piping associated with the former underground fuel storage tanks was excavated and removed from the site.

When environmental activities were initiated at the subject property, the former Super Tire store at 4256 East 14th Street (currently All Mufflers Discounted) located southeast of the subject property was included as part of the Grand Auto site. Subsequently, the former Super Tire store was considered by both PACCAR and ACHCS as a separate site. In a letter

to PACCAR dated December 27, 1993, the ACHCS indicated that no further action was required for soil-related issues at the former Super Tire store. In a second letter dated November 20, 2000, ACEHS approved the destruction of a single groundwater well, HC-1, located on the former Super Tire facility.

Review of previous work indicated that the site is underlain by an irregularly layered sequence of silty to gravelly sand lenses separated by clayey silt to depths of 46 feet. The groundwater gradient in this area is very flat, thus the determination of the groundwater flow direction is difficult to assess. Regionally, groundwater is typically reported to flow from the east to the west from the Oakland Hills towards the San Francisco Bay. Groundwater levels continued to show a gradual increase since the California drought years of the late 1980s and early 1990s. Groundwater levels have risen approximately 10 feet at the site since 1993. Groundwater levels measured in 2003 have declined slightly from their 2002 levels.

Several series of site investigations and remedial activities have be performed at the property since the USTs were removed in 1986. They include drilling of borings at the former location of the USTs, collection of soil samples during removal of the car wash sump, installation and periodic sampling of monitoring wells, removal of conveyance piping, preparation of a closure report, completion of a risk assessment, an issuance of a closure letter for soil by the ACHS in 1996, the reestablishing of groundwater monitoring in 1999, an issuance of a no further remedial action letter by the ACHS in 2000, and the abandonment of two wells and replacement of one well in 2001. A summary of this work was presented in AllWest's "Annual Groundwater Monitoring and Well Destruction Report" dated August 27, 2001.

III. GROUNDWATER SAMPLING AND FIELD OBSERVATIONS

This groundwater monitoring event included gauging the depth to groundwater to calculate the groundwater flow direction and gradient, and sampling of the wells to demonstrate the stability of the groundwater plume and that the chlorinated constituents are naturally attenuating over time. The sampling of the four wells, MW-1 through MW-4 occurred May 15, 2003. In addition, a duplicate sample (MW-3A-D) was collected from well MW-3A.

A. Sampling Protocols

AllWest's standard groundwater sampling protocol, as presented in Appendix A, was generally followed. As per these protocols, an electronic sounder was utilized to measure the depth to groundwater in each well. Each well was then purged a minimum of three well volumes using a downhole submersible pump. During purging, groundwater field parameters (temperature, pH, and conductivity) were monitored and recorded on a field log. After purging, samples from each well were collected using a disposable Teflon bailer for chemical analysis. Copies of the groundwater sampling field logs are presented in Appendix A. The purged groundwater was temporarily stored on site in 55-gallon drums and are

scheduled to be removed from the site by IWM, a state licensed hazardous waste transporter. The purge water will be transported under appropriate state and local regulations.

B. Well Sampling Purge Characteristics

The groundwater observed during purging varied from clear to slightly cloudy. Field parameters measured were all within normal ranges for shallow groundwater in this portion of Oakland and similar to the 2002 measurements. pH measured in the samples ranged from 5.38 to 7.05. Conductivity levels were measured between 470 uS to 854 uS. Temperatures were measured between 62.3°F to 75.4°F.

C. Groundwater Depth and Gradient

The depth to groundwater ranged between 23.82 feet below ground surface (bgs) in MW-4 to 25.43 feet bgs in MW-3A. As compared to 2002 groundwater levels, the measurements conducted during this investigation show a slight decrease averaging approximately 0.4 feet. The current groundwater levels are approximately 10 feet higher than those measure in 1993 at the end of the California drought years of the late 1980s and early 1990s. For detailed information of groundwater elevations with time, please see Table 2.

In comparison to mean sea level (MSL), groundwater elevations between the wells varied only slightly (0.03 feet). As shown on Figure 3, groundwater elevations ranged from a low of 5.24 feet MSL from MW-1 to a high of 5.27 feet MSL from MW-3A. The groundwater flow direction measured during this and recent sampling events is towards the east. The groundwater gradient calculated in the vicinity of MW-1, MW3A and MW-4 is approximately 0.001 feet/foot. As noted during previous investigations, groundwater gradients have historically been very flat.

IV. LABORATORY ANALYSES

The collected groundwater samples were forwarded to STL of Pleasanton, California, a state certified analytical laboratory, for chemical analyses. The samples were analyzed to detect the presence of halogenated volatile organic compounds (HVOCs) including chlorinated solvents by EPA Method 8260B.

A. Halogenated Volatile Organic Compounds Results (HVOCs)

PCE and its common degradation product, TCE were detected in all four groundwater samples collected during the 2003 investigation. The degradation product cis-1,2-DCE was detected in wells MW-1, MW-2 and MW-4. Cis-1,2-DCE was previously detected in only MW-2 during the 2002 sampling event. Concentrations of PCE ranged from a high of 130 parts per billion (ppb) from MW-3A to a low of 3.9 ppb from MW-2. TCE followed similar trends as PCE but at lower concentrations. The maximum concentration of TCE was

reported from MW-3A at 16 ppb. The maximum concentration of cis-1,2-DCE was reported from MW-1 at 5.8 ppb.

The only other HVOCs detected above their respective laboratory detection limits during the 2003 sampling event included dichlorodifluoromethane (Freon 12) and 1,2-DCA. Freon 12 was reported in all four groundwater wells. The maximum concentration of Freon 12 was reported from MW-2 at 56 ppb which is slightly higher than the 2002 sampling event of 44 ppb. 1,2-DCA was only reported in one groundwater sample collected from MW-2 at 0.63 ppb. Other HVOCs, including 1,1,1-TCA, carbon tetrachloride, vinyl chloride and chloroform previously detected in groundwater samples collected from the wells were not detected above their respective laboratory detection limits during the 2003 sampling event.

B. Laboratory QA/QC

A review of laboratory internal quality assurance/quality control (QA/QC) report indicates the method blank and sample spike data are within the laboratory recovery limits. The results reported from the field duplicate sample (MW-3A-D) collected from MW-3A were similar. The laboratory QA/QC report indicated that the groundwater samples were analyzed within the acceptable EPA holding time. Based on the laboratory QA/QC report, the analysis data from STL are considered to be of good quality. A copy of the laboratory analytical reports and chain-of-custody records are presented in the LABORATORY RESULTS section of this report. A summary of the analytical results is presented on Table 3.

V. DISCUSSION AND CONCLUSIONS

A. Spatial Distribution of Chemical Constituents

A review of the spatial distribution of the chemicals observed during the 2003 sampling and previous groundwater sampling events does not indicate a clear source for the chemicals being detected. Based on sampling results, it appears that the chlorinated solvents being detected are found in both the up and down gradient monitoring wells at the property and likely are a regional occurrence.

B. Contaminant Trend Analyses

The chlorinated solvent concentrations have generally remained stable since the last sampling period. The maximum concentration of PCE from the 2003 sampling round is 130 ppb which is well below the historic maximum concentration of 340 ppb reported from a 1994 sampling event. Similar decreasing trends were noted for TCE. For further details on the contaminant concentrations over time, please see Table 3.

Ratios of the chlorinated solvents are commonly used to assess the age of contaminant releases. This is based on the assumption that most PCE plumes originate as a pure product

of PCE as the result of leakage or spillage from dry cleaning facilities, and through time, the PCE will naturally biodegrade to TCE, cis-1,2-DCE, vinyl chloride and ultimately to carbon dioxide and water as the plume disperses in the down gradient flow direction.

With the exception of the MW-2, the ratios of PCE to TCE from this investigation were from 4:1 to 15:1. This ration indicates that PCE is breaking down due to the biodegradation process of reductive dechlorination. Concentrations of TCE exceeded those of PCE in MW-2 during thee 2003 sampling event. From 1993 to 1996, TCE has been reported to be more than 7 times higher than PCE indicating that the TCE from this location is probably not exclusively a degradational product of PCE and another source is likely responsible for the source of TCE at this location. Since sampling was reinstated in 1999, the levels of TCE in this well have significantly decreased from a high of 130 ppb in September 1994 to 3.9 ppb in May 2003. Concentrations of cis-1,2-DCE have also shown similar trends with a high of 36 ppb detected in September 1994 decreasing to 2.9 ppb detected in May 2003. This trend supports the presupposition that natural attenuation, through the processes of natural biodegradation along with dispersion and volatilization are reducing the mass of volatile organics at the site.

A review of the trends of the PCE concentrations detected in the wells at the property since sampling recommenced in 1999 indicates a general decrease in the concentration of PCE in MW-1 and steady state conditions in wells MW-2, MW-3A and MW-4. Concentrations of TCE and cis-1,2-DCE have shown a general steady state decrease in concentration in all wells over this same time period.

VI. CONCLUSIONS AND RECOMMENDATIONS

The results of the 2003 groundwater sampling event indicate that the shallow groundwater of the subject property is impacted with chlorinated solvents. The spatial distribution of the volatile organics indicates that more than one source or individual release is responsible for the concentrations of the chemicals at the site. Based on the industrial nature of the surrounding area several sources could be contributing chemicals to those being detected at the property.

Based on the overall decrease in the concentration of the organic chemicals at the site, which is attributed to the process of natural attenuation, it is highly likely that this trend will continue and will further reduce the mass of volatile organics overtime.

Based on site specific results and current health risk based action levels, it is unlikely that the residual contamination in the site groundwater poses as an unacceptable risk to human health or the environment. See "AllWest Environmental, Site Closure and Groundwater Monitoring Report, Grand Auto Store No. 43, 4240 East 14th Street, Oakland California, August 15, 2000." Based on the above and that the likely source of the chemicals currently being detected at the property is from an off-site source and not from historical use of the property, AllWest recommends Site Closure status be granted for the subject property by the ACHCS and the RWQCB.

VII. REPORT LIMITATIONS

The work described in this report is performed in accordance with the Environmental Consulting Agreement between PACCAR and AllWest Environmental, dated September 20, 1999. AllWest has prepared this report for the exclusive use of PACCAR for this particular project and in accordance with generally accepted practices at the time of the work. No other warranties, certifications or representation, either expressed or implied are made as to the professional advice offered. The services provided for PACCAR were limited to their specific requirements; the limited scope allows for AllWest to form no more than an opinion of the actual site conditions.

The conclusions and recommendations contained in this report are made based on observed conditions existing at the site, laboratory test results of the submitted samples, and interpretation of a limited data set. It must be recognized that changes can occur in subsurface conditions due to site use or other reasons. Furthermore, the distribution of chemical concentrations in the subsurface can vary spatially and over time. The results of chemical analysis are valid as of the date and at the sampling location only. AllWest cannot be held accountable for the accuracy of the test data from independent laboratories nor for any analyte quantities falling below the recognized standard detection limits for the method utilized by the independent laboratories.

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Table 1 - Well Construction Details

Grand Auto #43 4240 East 14th Street Oakland, California Oakland, California

AllWest Project Number 23010.28

Well Number	Surface Elevation (ft MSL)	Top of Casing (ft MSL)	Total Depth (ft bgs)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	Well Diameter (Inches)
MVV-1	30.8	30.53	43	33	43	4
MW-2	30.7	30.41	45	31	45	4
MW-3	30.7	30.31	45	30	45	4
MW-3A	30.9	30.70	41	20	41	4
MW-4	29.5	29.08	45	30	45	4
HC-1	28.7	28.33	42	30	42	4

Notes:

MW-3 was replaced by MW-3A on May 25, 2000

HC-1 was abandoned on June 18, 2001

bgs = below ground surface MSL = mean sea level NM = not measured

Elevations relative to City of Oakland datum

Well	arcono avieni	Depth to	Graungwater	Case
Number	Casing	Gownswater	Elevation	Collected
	Feet above	Feet	Feet above	
	MSL	bgs	MSi.	
MANV-1	30.53	25.29	5.24	15-May-03
MW-1	30.53	24.91	5.62	21-May-02
MW+	30.53	25.67	4.86	19-Jun-01
MAYA-1	30.53	27.40	3.13	4-Nov-99
MW-1	30.53	28.18	2.35	10-May-96
MAN-1	30.53	29.34	1.19	15-Sep-95
MANA 1	30.53	30.83	-0.30	31-Jan-95
MANAL+1	30.53	32.44	-1.91	20-Sep-94
MW-1	30.53	33.04	-2.51	7-Jun-94
MIN-1	30.53	34.60	-4.07	18-Feb-94
Marie	30.53	35.30	-4.77	17-Nov-93
MW	30.53	34.93	-4.40	4-Aug-93
	30.53	35,45	-4.92	5-May-93
MW-2	30.41	25.16	5.25	15-May-03
MW-2	30.41	24.78	5.63	21-May-02
NAVY-2	30.41	25.54	4.87	19-Jun-01
MW-2	30.41	27.28	3.13	4-Nov-99
MW-2	30.41	28.06	2.35	10-May-96
MW-2	30.41	29.19	1.22	15-Sep-95
MW-2	30.41	30.71	-0.30	31-Jan-95
MW-2	30.41	32.40	-1.99	20-Sep-94
MW-2	30.41	32.92	-2.51	7-Jun-94
MW-2	30.41	34.46	-4.05	18-Feb-94
MW-2	30.41	35.18	-4.77	17-Nov-93
MAVV-2	30.41	34.79 35.32	-4.38 -4.91	4-Aug-93 5-May-93
MAV4-2	30.41	35.32	-4.91	J-Way-83
		55.40	. coz	45 14 02
MW-SA	30.70	25.43	5.27	15-May-03
MVV-SA	30.70	25.04 25.81	5.66 4.89	21-May-02 19-Jun-01
MW-3A NAW-3	30.70	27.22	3.09	4-Nov-99
	30.31 30.31	27.96	2.35	10-May-96
MW-3	30.31	29.11	1.20	15-Sep-95
MW-3	30.31	30.62	-0.31	31-Jan-95
MW-3	30.31	32.30	-1.99	20-Sep-94
MW-3	30.31	32.83	-2.52	7-Jun-94
MW-3	30.31	34.38	-4.07	18-Feb-94
MW-3	30.31	35.13	4.82	17-Nov-93
MW-3	30.31	34.70	-4.39	4-Aug-93
1407-3	30.31	35,22	-4.91	5-May-93
705000512225-802-000000	1 00.01	1 10.120		
NW-4	29.08	23.82	5.26	15-May-03
MVV-4	29.08	23.46	5.62	21-May-02
N/VV-4	29.08	24.20	4.88	19-Jun-01
NAVV-4	29.08	25.92	3.16	4-Nov-99
MW-4	29.08	26.70	2.38	10-May-96
MW-4	29.08	27.86	1.22	15-Sep-95
MW-4	29.08	29.38	-0.30	31-Jan-95
MAY 4	29.08	31.07	-1.99	20-Sep-94
MW-4	29.08	31.60	-2.52	7-Jun-94
MW-4	29.08	33.14	-4.06	18-Feb-94
1444-4	29.08	33.90	-4.82	17-Nov-93
MW-4	29.08	33.47	-4.39	4-Aug-93
MW-4	29.08	33.98	-4.90	5-May-93
				

TABLE 3 - Summary of Groundwater Analytical Results

4240 East 14th Street Oakland, California

Project Number 23010.28 Att results in parts per billion (ppb)

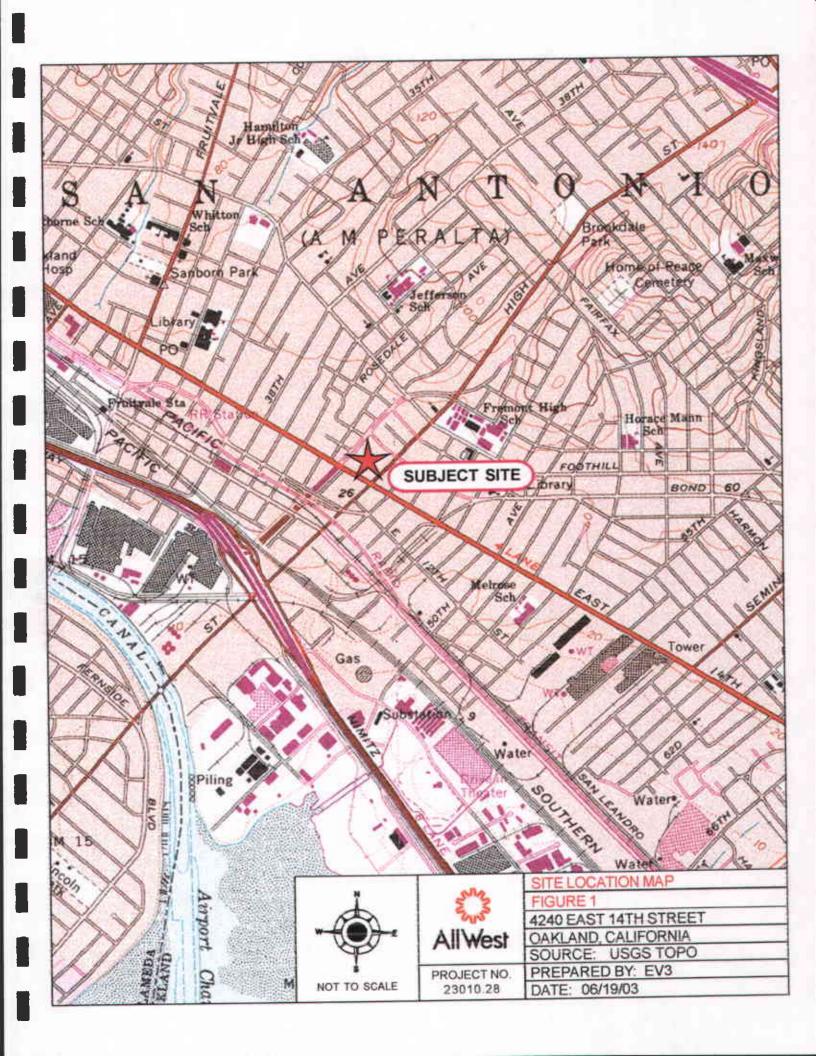
Location	PCE	TCE	cis-1,2	FREON	Chloro-	1,1,1-TCA	1,2-DCA	Vinyl Chloride	Carbon Tetrachloride	TPH-g	All others	Date Collected
			DCE	50	form ND	ND	ND	ND	ND	NÃ	ND	15-May-03
	120	15	5.8			ND	ND	ND	ND	NA	ND	21-May-02
i.	140	15	ND	ND	ND		ND ND	ND ND	ND	NA	ND	19-Jun-01
. [130	17	53	35	ND	ND		ND ND	ND	ND	ND	4-Nov-99
ſ	120	17	6.6	. 62	ND	ND	ND		ND	NR	ND	10-May-96
I	270	24	43	NR	26	ND 1.3	ND 1.3	ND 1 3		ND ND	ND ND	15-Sep-95
<u> </u>	200	25	68	ZŔ	14	ND 0.5	ND 0.5	ND 0.5	ND			
<u> </u>	54	13	9.7	NR .	ND 1	ND 1	ND 1	ND 2	ND	ND.	ND	31-Jan-95
⊢ ⊢	54	13	9.3	NR	ND 1	ND 1	ND 1	ND 2	ND	ND	ND	31-Jan-95
-			19	NR	ND 5	ND 5	ND 5	ND 5	ND	ND_	ND _	20-Sep-94
	270	37					ND 5	ND 5	ND	ND	ND	20-Sep-94
MW-1	270	36	18	NR	ND 5	ND 5		ND 0.5	ND	ND	ND	7-Jun-94
ſ	200	28	25	NR	. 16	ND 0.5	ND 0.5			ND	ND T	7-Jun-94
	340	35	22	NR	1.5	ND 0.5	ND 0.5	ND 0.5	ND		-	18-Feb-94
ļ l	200	25	12	NR	1	ND 0.5	ND 0.5	ND 0.5	ND _	ND	ND	
 	230	28	15	NR	1.8	ND 0 5	ND 0.5	ND 1	ND	ND	ИD	17-Nov-9
ļ.			10	NR.	ND 5	ND 5	ND 5	ND 10	ND	ND	ND I	4-Aug-93
L	290	23					ND 0.5	ND 1	ND	ND	ND	26-Apr-93
L.	300	22	87	37	1	ND 0.5		ND 1	ND	ND	ND	26-Арг-9:
l l	300	22	<u>87</u>	110	1.1	0.6	ND 0.5			ND	ND	19-Jan-9:
Ī	220	28	14	NR	ND3	ND 3	ND 1		ND			
†	310	26	11	NR	1.1	ND 0.5	ND 0.6		ND	ND	ND	10-Sep-9
					· · · · · · · · · · · · · · · · · · ·							
				T 66	L ND I	NID	0.63	ND	ND .	NA.	ND	15-May-0
Į.	3.9	12	2.9	56	ND ND	ND		ND ND	0.61	NA	ND	21-May-0
ſ	6.3	4.7	0.84	44	ND	ND	ND			NA.	ND	19-Jun-0
l	9.1	5.3	1	38	ND	ND	ND	ND	0.83		\rightarrow	4-Nov-99
į	7.6	8.1	1.9	55	ND	ND .	ND	ND.	2	ND	ND	
ŀ	7.2	51	13	NR	ND1	ND 1	ND 1	ND 1	ND_	NR	ND	10-May-9
ŀ		52	17	NR	ND 0.5	ND 0,5	ND 0.5	0.8	ND	ND	ND	15-Sep-9
	6.3			NR NR	ND 0.5	ND 0.5	0.9	0.9	ND	ND	ND	15-Sep-9
MW-2	6.5	69	17				ND 1	ND2	ND	ND	ND	31-Jan-9
	3	60	17	NR	ND1	ND 1			ND ND	ND	ND.	20-Sep-9
İ	6	130	36	NR	ND 5	ND 5	ND 5	ND 5			ND ND	7-Jun-94
	6.9	120	31	NR	ND 0.5	ND 0.5	1.8	ND 0.5	ND	ND		
	4.8	75	25	NR	ND 0.5	ND 0.5	1.5	ND 0.5	ND_	ND	ND	18-Feb-9
	6.1	32	8.7	NR	ND 0.5	ND 0.5	ND 0.5	ND 1	ND	ND	ND	17-Nov-9
l				NR.	ND 1.2	ND 1.2	ND 1.2	ND 2.4	ND	ND	ND	4-Aug-93
	7.2	110	22			0.6	0.6	ND 1	ND	ND	ND	26-Apr-9
	7.5	32	8.5	31	0.9	0.0	0.0	1,40		1	<u> </u>	· · · · · ·
-											T NE I	15 May f
	130	16	NĎ	21	ND	ND	ND _	ND.	ND	NA	ND	15-May-0
	120	16	ND	7.1	ND	ND	ND	ND	ND	NA.	ND	2-May-0:
		-	ND	ND	ND	ND	ND	ND	ND	NA.	ND	19-Jun-0
	120	21						ND	ND	61	ND	4-Nov-9
	150	24	14	14	ND	ND	ND _			NR	ND	10-May-9
	160	25	7.2	NR	ND 1	ND 1	ND 1	ND 1	ND			
	170	25	6.2	NR.	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND	ND_	ND	15-Sep-9
MW-3A	160	34	6.2	NR	ND 1	ND 1	ND 1	ND 5	ND	ND_	ND	31-Jan-9
12,47		37	11	NR	ND 5	ND 5	ND 5	ND 5	ND	ND	ND	20-Sep-9
	240						ND 0.5	ND 0.5	ND	ND	ND	7-Jun-9
	160	34	8.3	NR	0.6	. 0.6			ND	ND	ND	18-Feb-9
	85	19	5	NR	0.7	ND 0.5	ND 0.5	ND 0.5				17-Nov-9
	170	29	12	NR	1.3	0.8	ND 0.5	ND 1	ND	ND	ND_	
	170	28	ND 5	NR	ND 5	ND 5	ND 5	ND 10	ND	ND	ND	4-Aug-9
	79	21	9.7	35	ND 0.5	8.0	ND 0.5	ND 1	ND	ND	ND	26-Apr-5
	,,,,,					<u> </u>						
						1 105	l Kir	ND	ND	NA	ND	15-May-
	120_	7.7	0.75	16	ND	ND	ND_				ND	21-May-
	70	7.7	ND	18	ND	ND.	ND	ND	ND.	NA NA		19-Jun-0
	47	7	1.2	19	ND	ND	ND	ND	ND	NA.	ND	
	61	10	2.2	41	ND	ND	ND	ND	ND	ND	ND	4-Nov-9
	190	22	2.5	NR	ND 1.3	ND 1,3	ND 1.3	ND 1.3	ND	NR	ND	10-May-
			4.4	NR NR	ND 0.5	ND 0.5	ND 0.5	ND 0.6	ND	ND	ND	15-Sep-
64.41.4	160	24					ND 1	ND 5	ND.	ND	ND	31-Jan-
MW-4	140	20	4.7	NR	ND 1	ND 1		ND 5	ND	ND	ND	20-Sep-
	220	32	5	NR_	ND 5	ND 5	ND 5					7-Jun-9
	140	28	7.1	NR	0.9	0.9	ND 0.5	ND 0.5	ND	ND	ND	
	120	31	- 6	NR	1.9	0.7	ND 0.5	ND 0.5	ND	ND	ND	18-Feb-
	87	20	6.6	NR	1	ND 0.5	ND 0.5	ND 1	ND	ND	ND	17-Nov-
			ND 5		ND 5	ND 5	ND 5	ND 10	ND	ND	ND	4-Aug-9
	110_	16		NR.				ND 1	ND	ND	ND	26-Apr-9
	78	17	3.9	28	0.5	ND 0.5	ND 0.5	ND I	IND	+	+	
		i		L	1	1				+	+	
	100	17	8.7	43	ND	. ND	ND	ND	ND	ND	ND	4-Nov-9
	200	27	13	NR	ND 5	ND 5	ND 5	ND 5	ND	NR	ND	10-May-
			14	NR	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND	ND	ND	15-Sep-
	170	27					ND 1	ND 5	ND	ND	ND	31-Jan-
	120	27.	11	NR	ND 1	ND 1					ND	20-Sep-
	190	37	15	NR	ND 5	ND 5	ND 5	ND 5	ND	ND_		
HC-1	180	42	22	NR	1	ND 0.5	ND 0.5	ND 0.5	ND	ND	ND	7-Jun-9
	140	30	13	NR	0.7	ND 0.5	ND 0.5	ND 0.5	ND	ND	, ND	18-Feb-
	150	22	11	NR	0.6	ND 0.5	ND 0.5	ND 0.5		ND	ND	18-Feb-
							ND 0.6	ND 2	ND	ND	ND	17-Nov-
	130	27	16	NR	1.1	0.7					ND	4-Aug-1
	83	27	15	NR	ND 0.5	ND 0.5	ND 0.5	ND 1	ND_	ND		26-Apr-
	46	22	13	47	ND 0.5	ND 0.5	ND 0.5	ND 1	ND	ND	ND	Z6-Apr-
				_								
UID 4 (MW. DA P.)	100	13	ND	24	ND	ND.	ND	I ND	ND	NA	ND	15-May
UP-1 (MW-3A-D)							0.63	ND.	ND	NA.	ND	15-May
Maximum	130	16	5.8	56	ND	ND					ND	
Minimum	3.9	7.7	ND	16	ND	ND	ND	ND	ND	NA	NU	15-May
	1				1			1				1
	+	11,000	NA	NA	12,000	NA.	11,000	59	260	NA	NA	1
Oakland Tier 1	3 3 300		1373							610	NA	
Oakland Tier 1 GW Indoor (C)	3,300		1,000,00	n I NA	ተ ቋቡስ በብላ	3 50	830 ODG) I NA	7,800	NA	INA	
Oakland Tier 1 GW Indoor (C) GW Indoor (H)	>sol	230,000	1,000,00		800,000		830,000					
Oakland Tier 1 GW Indoor (C)		230,000	1.000.00 NA >sol	NA NA	800,000 130,000 >sol		69,000 5,000,00	960	4200 130,000	NA NA	NA NA	

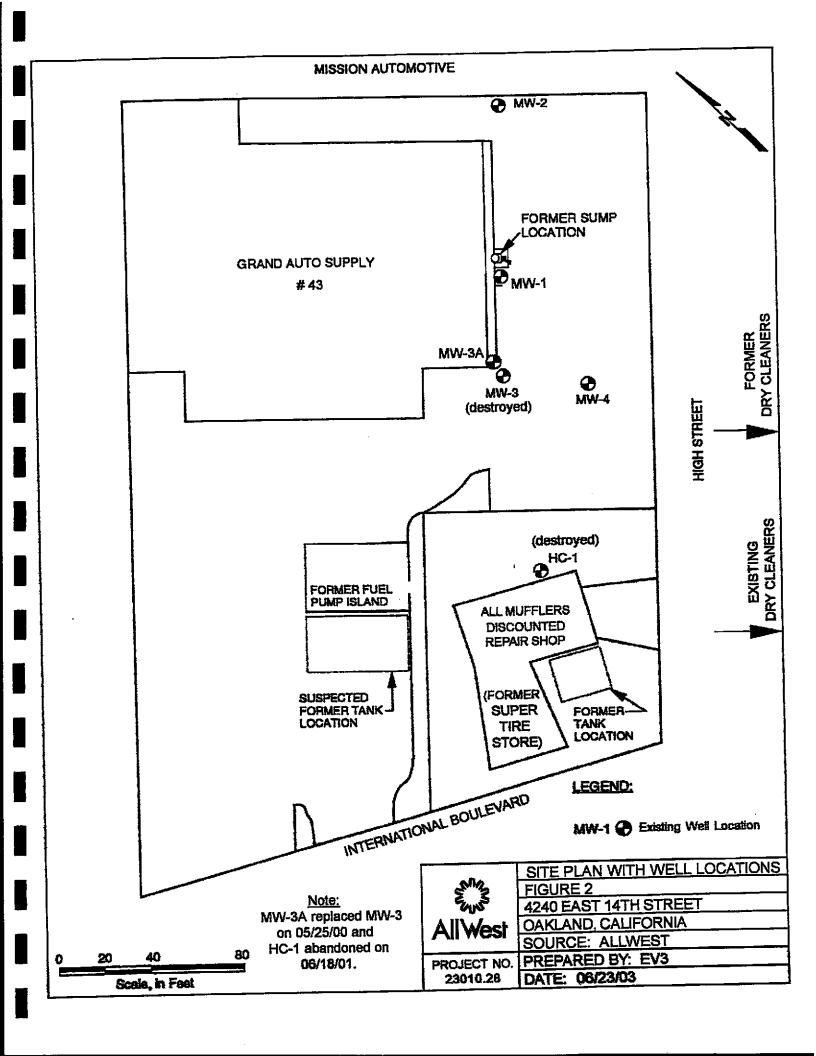
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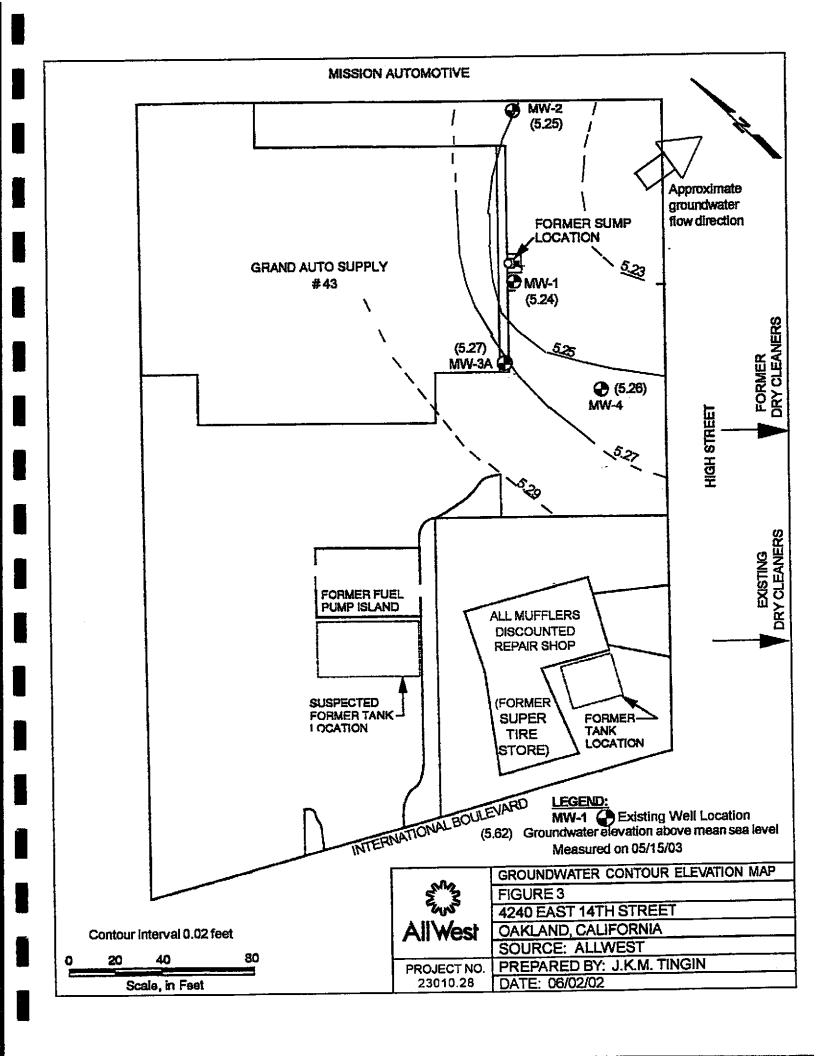
ND = not detected above laboratory method reporting limit (MRL)

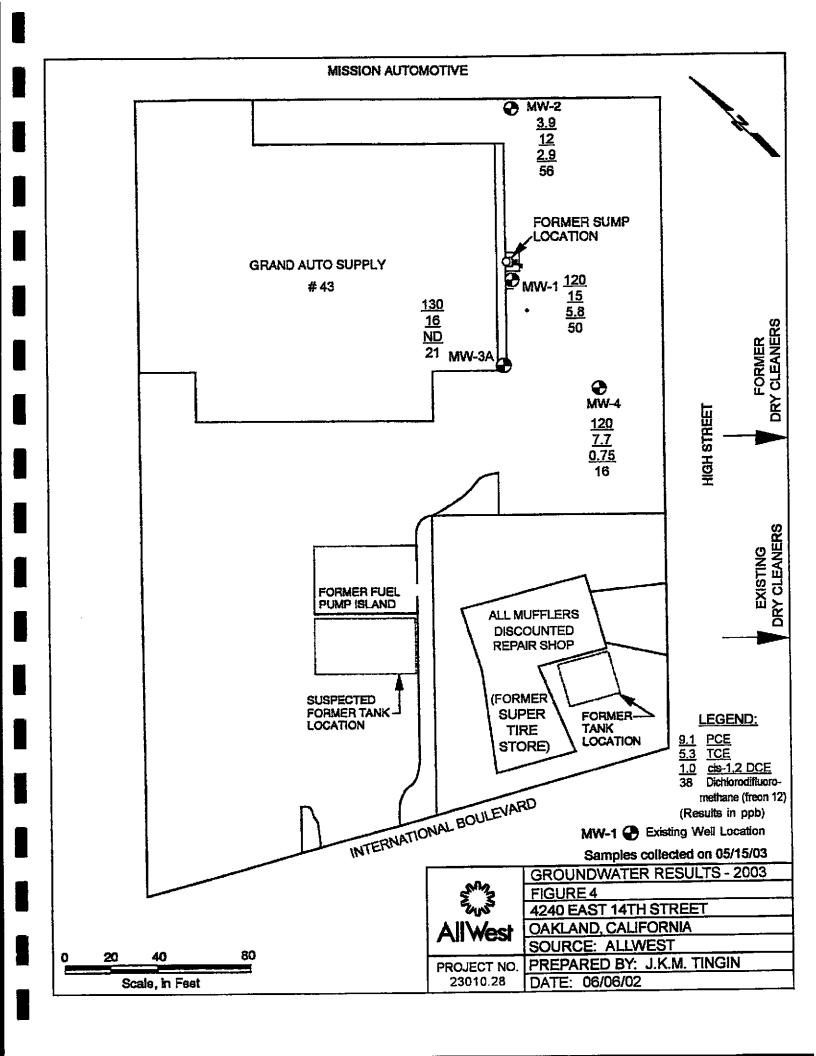
NR = not reported NA = not analyzed (C) = Type of risk (carcinogenic) (H) = Type of risk (hazard)

DUP = duplicate sample(MW-3A-2) collected from well MW-3A The number behind ND is the dection limit
TPHg analysis discontinued in 2001 per ACHCS connecurance











Submission#: 2003-05-0505

May 23, 2003

Allwest Environmental

530 Howard Street, Suite #300 San Francisco, CA 94105

Attn.:

Michael Siembieda

Project#: 23010.28

Project:

PACCAR-GW-03

Site:

Oakland

Dear Mr. Siembieda,

Attached is our report for your samples received on 05/16/2003 18:22 This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

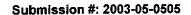
Please note that any unused portion of the samples will be discarded after 06/30/2003 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.

You can also contact me via email. My email address is: vvancil@stl-inc.com

Sincerely,

Vincent Vancil Project Manager





Allwest Environmental

Attn.: Michael Siembieda

530 Howard Street, Suite #300 San Francisco, CA 94105

Phone: (415) 391-2510 Fax: (415) 391-2008

Project: 23010.28

PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Samples Reported

Sample Name	Date Sampled	Matrix	Lab#
MW-1	05/15/2003 10:32	Water	1
MW-2	05/15/2003 13:00	Water	2
MW-3A	05/15/2003 09:49	Water	3
MW-3A-D	05/15/2003 09:50	Water	4
MW-4	05/15/2003 11:30	Water	5





Allwest Environmental Attn.: Michael Siembieda

530 Howard Street, Suite #300 San Francisco, CA 94105

Phone: (415) 391-2510 Fax: (415) 391-2008

Project: 23010.28

PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Prep(s):

5030B

Test(s):

8260B

Sample ID: MW-1

Lab ID:

2003-05-0505 - 1

Sampled: 05/15/2003 10:32

Extracted:

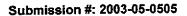
5/22/2003 22:26

Matrix:

Water

QC Batch#: 2003/05/22-V1.06

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Dichlorodifluoromethane	50	5.0	ug/L	5.00.	05/22/2003 22:26	
Vinyl chloride	ND	2.5	ug/L	5.00	05/22/2003 22:26	
Chloroethane	ND	5.0	ug/L	5.00	05/22/2003 22:26	
Trichlorofluoromethane	ND	5.0	ug/L	5.00	05/22/2003 22:26	
1,1-Dichloroethene	ND	2.5	ug/L	5.00	05/22/2003 22:26	
Methylene chloride	ND	25	ug/L	5.00	05/22/2003 22:26	
trans-1,2-Dichloroethene	ND	2.5	ug/L	5.00	05/22/2003 22:26	
cis-1,2-Dichloroethene	5.8	2.5	ug/L	5.00	05/22/2003 22:26	
1,1-Dichloroethane	ND	2.5	ug/L	5.00	05/22/2003 22:26	
Chloroform	ND	2.5	ug/L	5.00	05/22/2003 22:26	
1,1,1-Trichloroethane	ND	2.5	ug/L	5.00	05/22/2003 22:26	
Carbon tetrachloride	ND	2.5	ug/L	5.00	05/22/2003 22:26	
1,2-Dichloroethane	ND	2.5	ug/L	5.00	05/22/2003 22:26	
Trichloroethene	15	2.5	ug/L	5.00	05/22/2003 22:26	
1,2-Dichloropropane	ND	2.5	ug/L	5.00	05/22/2003 22:26	
Bromodichloromethane	ND	2.5	ug/L	5.00	05/22/2003 22:26	
2-Chloroethylvinyl ether	ND	2.5	ug/L	5.00	05/22/2003 22:26	
trans-1,3-Dichloropropene	ND	2.5	ug/L	5.00	05/22/2003 22:26	
cis-1,3-Dichloropropene	ND	2.5	ug/L	5.00	05/22/2003 22:26	
1,1,2-Trichloroethane	ND	2.5	ug/L	5.00	05/22/2003 22:26	
Tetrachioroethene	120	2.5	ug/L	5.00	05/22/2003 22:26	
Dibromochloromethane	ND	2.5	ug/L	5.00	05/22/2003 22:26	ļ
Chlorobenzene	ND	2.5	ug/L	5.00	05/22/2003 22:26	
Bromoform	ND	10	ug/L	5.00	05/22/2003 22:26	
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	5.00	05/22/2003 22:26	
1,3-Dichlorobenzene	ND	2.5	ug/L	5.00	05/22/2003 22:26	
1.4-Dichlorobenzene	ND	2.5	ug/L	5.00	05/22/2003 22:26	
1,2-Dichlorobenzene	מא	2.5	ug/L	5.00	05/22/2003 22:26	<u></u>





Allwest Environmental Attn.: Michael Siembieda

530 Howard Street, Suite #300 San Francisco, CA 94105

Phone: (415) 391-2510 Fax: (415) 391-2008

Project: 23010.28

PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Prep(s):

5030B

Test(s):

8260B

Sample ID: MW-1

Lab ID:

2003-05-0505 - 1

Sampled: 05/15/2003 10:32

Extracted:

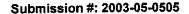
5/22/2003 22:26

Matrix:

Water

QC Batch#: 2003/05/22-V1.06

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Trichlorotrifluoroethane	ND	2.5	ug/L	5.00	05/22/2003 22:26	
Chloromethane	ND	5.0	ug/L	5.00	05/22/2003 22:26	
Bromomethane	ND	5.0	ug/L	5.00	05/22/2003 22:26	
Surrogates(s)						
4-Bromofluorobenzene	91.3	86-115	%	5.00	05/22/2003 22:26	
1.2-Dichloroethane-d4	101.1	76-114	%	5.00	05/22/2003 22:26	
Toluene-d8	98.6	88-110	%	5.00	05/22/2003 22:26	





Allwest Environmental Attn.: Michael Siembleda

530 Howard Street, Suite #300 San Francisco, CA 94105

Phone: (415) 391-2510 Fax: (415) 391-2008

Project: 23010.28

PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Prep(s):

5030B

Test(s):

8260B

Sample ID: MW-2

Lab ID:

2003-05-0505 - 2

Matrix:

Sampled: 05/15/2003 13:00

Extracted:

5/22/2003 18:26 5/23/2003 12:21

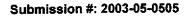
Water

QC Batch#: 2003/05/22-V1.07

2003/05/22-V1.07

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Dichlorodifluoromethane	56	5.0	ug/L	5.00	05/23/2003 12:21	
Vinyl chloride	ND	0.50	ug/L	1.00	05/22/2003 18:26	
Chloroethane	ND	1.0	ug/L	1.00	05/22/2003 18:26	
Trichlorofluoromethane	ND	1.0	ug/L	1.00	05/22/2003 18:26	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	05/22/2003 18:26	
Methylene chloride	ND	5.0	ug/L	1.00	05/22/2003 18:26	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	05/22/2003 18:26	
cis-1,2-Dichloroethene	2.9	0.50	ug/L	1.00	05/22/2003 18:26	
1,1-Dichloroethane	ND	0.50	ug/L	1.00	05/22/2003 18:26	
Chloroform	ND	0.50	ug/L	1.00	05/22/2003 18:26	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	05/22/2003 18:26	
Carbon tetrachloride	ND	0.50	ug/L	1.00	05/22/2003 18:26	
1,2-Dichloroethane	0.63	0.50	ug/L	1.00	05/22/2003 18:26	
Trichloroethene	12	0.50	ug/L	1.00	05/22/2003 18:26	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	05/22/2003 18:26	
Bromodichloromethane	ND	0.50	ug/L	1.00	05/22/2003 18:26	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	05/22/2003 18:26	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	05/22/2003 18:26	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	05/22/2003 18:26	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	05/22/2003 18:26	
Tetrachloroethene	3.9	0.50	ug/L	1.00	05/22/2003 18:26	
Dibromochloromethane	ND	0.50	ug/L	1.00	05/22/2003 18:26	
Chlorobenzene	ND	0.50	ug/L	1.00	05/22/2003 18:26	ļ
Bromoform	ND	2.0	ug/L	1.00	05/22/2003 18:26	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	05/22/2003 18:26	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	05/22/2003 18:26	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	05/22/2003 18:26	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	05/22/2003 18:26	<u> </u>

05/23/2003 17:21





Allwest Environmental Attn.: Michael Siembieda

530 Howard Street, Suite #300 San Francisco, CA 94105

Phone: (415) 391-2510 Fax: (415) 391-2008

Project: 23010.28

PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Prep(s):

5030B

Test(s):

8260B

Sample ID: MW-2

Lab ID:

2003-05-0505 - 2

Sampled: 05/15/2003 13:00

Extracted:

5/22/2003 18:26

5/23/2003 12:21

Matrix:

Water

QC Batch#: 2003/05/22-V1.07

2003/05/22-V1.07

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Trichlorotrifluoroethane	ND	0.50	ug/L	1.00	05/22/2003 18:26	
Chloromethane	ND	1.0	ug/L	1.00	05/22/2003 18:26	
Bromomethane	ND	1.0	ug/L	1.00	05/22/2003 18:26	
Surrogates(s)						
4-Bromofluorobenzene	95.2	86-115	%	1.00	05/22/2003 18:26	
4-Bromofluorobenzene	97.8	86-115	%	1.00	05/23/2003 12:21	
1.2-Dichloroethane-d4	101.4	76-114	%	1.00	05/22/2003 18:26	
1,2-Dichloroethane-d4	96.6	76-114	%	1.00	05/23/2003 12:21	
Toluene-d8	100.4	88-110	%	1.00	05/22/2003 18:26	
Toluene-d8	103.7	88-110	%	1.00	05/23/2003 12:21	





Allwest Environmental Attn.: Michael Siembieda

530 Howard Street, Suite #300 San Francisco, CA 94105

Phone: (415) 391-2510 Fax: (415) 391-2008

Project: 23010.28

PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Prep(s):

5030B

Test(s):

8260B

Sample ID: MW-3A

Water

Lab ID:

2003-05-0505 - 3

Matrix:

Sampled: 05/15/2003 09:49

Extracted:

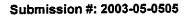
5/22/2003 18:51

QC Batch#: 2003/05/23-V1.07

5/23/2003 12:46

2003/05/23-V1.07

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Dichlorodifluoromethane	21	5.0	ug/L	1.00	05/22/2003 18:51	*
Vinyl chloride	ND	2.5	ug/L	5.00	05/23/2003 12:46	
Chloroethane	ND	5.0	ug/L	5.00	05/23/2003 12:46	
Trichlorofluoromethane	. ND	5.0	ug/L	5.00	05/23/2003 12:46	
1,1-Dichloroethene	ND	2.5	ug/L	5.00	05/23/2003 12:46	
Methylene chloride	ND	25	ug/L	5.00	05/23/2003 12:46	
trans-1,2-Dichloroethene	ND	2.5	ug/L	5.00	05/23/2003 12:46	
cis-1,2-Dichloroethene	ND	2.5	ug/L	5.00	05/23/2003 12:46	
1,1-Dichloroethane	ND	2.5	ug/L	5.00	05/23/2003 12:46	
Chloroform	ND	2.5	ug/L	5.00	05/23/2003 12:46	
1,1,1-Trichloroethane	ND	2.5	ug/L	5.00	05/23/2003 12:46	
Carbon tetrachloride	ND	2.5	ug/L	5.00	05/23/2003 12:46	
1,2-Dichloroethane	ND	2.5	ug/L	5.00	05/23/2003 12:46	
Trichloroethene	16	2.5	ug/L	5.00	05/23/2003 12:46	ļ
1,2-Dichloropropane	ND	2.5	ug/L	5.00	05/23/2003 12:46	
Bromodichloromethane	ND	2.5	ug/L	5.00	05/23/2003 12:46	
2-Chloroethylvinyl ether	ND	2.5	ug/L	5.00	05/23/2003 12:46	
trans-1,3-Dichloropropene	ND	2.5	ug/L	5.00	05/23/2003 12:46	
cis-1,3-Dichloropropene	ND	2.5	ug/L	5.00	05/23/2003 12:46	
1,1,2-Trichloroethane	ND	2.5	ug/L	5.00	05/23/2003 12:46	
Tetrachloroethene	130	2.5	ug/∟	5.00	05/23/2003 12:46	Į
Dibromochloromethane	ND	2.5	ug/L	5.00	05/23/2003 12:46	
Chlorobenzene	ND	2.5	ug/L	5.00	05/23/2003 12:46	
Bromoform	ND	10	ug/L	5.00	05/23/2003 12:46	
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	5.00	05/23/2003 12:46	
1,3-Dichlorobenzene	ND	2.5	ug/L	5.00	05/23/2003 12:46	
1,4-Dichlorobenzene	ND	2.5	ug/L	5.00	05/23/2003 12:46	<u> </u>





Allwest Environmental Attn.: Michael Siembieda

530 Howard Street, Suite #300 San Francisco, CA 94105

Phone: (415) 391-2510 Fax: (415) 391-2008

Project: 23010.28

PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Prep(s):

5030B

Test(s):

8260B

Sample ID: MW-3A

Lab ID:

2003-05-0505 - 3

Sampled: 05/15/2003 09:49

Extracted:

5/22/2003 18:51

5/23/2003 12:46

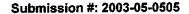
Matrix:

Water

QC Batch#: 2003/05/23-V1.07

2003/05/23-V1.07

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
1,2-Dichlorobenzene	ND	2.5	ug/L	5.00	05/23/2003 12:46	
Trichlorotrifluoroethane	NĐ	2.5	ug/L	5.00	05/23/2003 12:46	
Chloromethane	ND	5.0	ug/L	5.00	05/23/2003 12:46	
Bromomethane	ND	5.0	ug/L	5.00	05/23/2003 12:46	
Surrogates(s)						
4-Bromofluorobenzene	98.6	86-115	%	1.00	05/23/2003 12:46	
4-Bromofluorobenzene	97.4	86-115	%	1.00	05/22/2003 18:51	
1,2-Dichloroethane-d4	103.4	76-114	%	1.00	05/23/2003 12:46	
1,2-Dichloroethane-d4	103.6	76-114	%	1.00	05/22/2003 18:51	
Toluene-d8	98.6	88-110	%	1.00	05/23/2003 12:46	
Toluene-d8	100.3	88-110	%	1.00	05/22/2003 18:51	





Allwest Environmental Attn.: Michael Siembieda

530 Howard Street, Suite #300 San Francisco, CA 94105

Phone: (415) 391-2510 Fax: (415) 391-2008

Project: 23010.28

PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Prep(s):

5030B

Test(s):

8260B

Sample ID: MW-3A-D

Lab ID:

2003-05-0505 - 4

Sampled: 05/15/2003 09:50

Extracted:

5/22/2003 19:16

5/23/2003 13:11

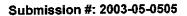
Matrix:

Water

QC Batch#: 2003/05/23-V1.07

2003/05/23-V1.07

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Dichlorodifluoromethane	24	5.0	ug/L	1.00	05/22/2003 19:16	
Vinyl chloride	ND	2.5	ug/L	5.00	05/23/2003 13:11	
Chloroethane	ND	5.0	ug/L	5.00	05/23/2003 13:11	
Trichlorofluoromethane	ND	5.0	ug/L	5.00	05/23/2003 13:11	,
1,1-Dichloroethene	ND	2.5	ug/L	5.00	05/23/2003 13:11	
Methylene chloride	ND	25	ug/L	5.00	05/23/2003 13:11	
trans-1,2-Dichloroethene	ND	2.5	ug/L	5.00	05/23/2003 13:11	
cis-1,2-Dichloroethene	ND	2.5	ug/L	5.00	05/23/2003 13:11	
1,1-Dichloroethane	ND	2.5	ug/L	5.00	05/23/2003 13:11	
Chloroform	ND	2.5	ug/L	5.00	05/23/2003 13:11	
1,1,1-Trichloroethane	ND	2.5	ug/L	5.00	05/23/2003 13:11	
Carbon tetrachloride	ND	2.5	ug/L	5.00	05/23/2003 13:11	
1,2-Dichloroethane	ND	2.5	ug/L	5.00	05/23/2003 13:11	
Trichloroethene	13	2.5	ug/L	5.00	05/23/2003 13:11	
1,2-Dichloropropane	ND	2.5	ug/L	5.00	05/23/2003 13:11	
Bromodichloromethane	ND	2.5	ug/L	5.00	05/23/2003 13:11	
2-Chloroethylvinyl ether	ND	2.5	ug/L	5.00	05/23/2003 13:11	
trans-1,3-Dichloropropene	ND	2.5	ug/L	5.00	05/23/2003 13:11	
cis-1,3-Dichloropropene	ND	2.5	ug/L	5.00	05/23/2003 13:11	
1,1,2-Trichloroethane	ND	2.5	ug/L	5.00	05/23/2003 13:11	
Tetrachloroethene	100	2.5	ug/L	5.00	05/23/2003 13:11	
Dibromochloromethane	ND	2.5	ug/L	5.00	05/23/2003 13:11	
Chiorobenzene	ND	2.5	ug/L	5.00	05/23/2003 13:11	
Bromoform	ND	10	ug/L	5.00	05/23/2003 13:11	
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	5.00	05/23/2003 13:11	
1,3-Dichlorobenzene	ND	2.5	ug/L	5.00	05/23/2003 13:11	
1,4-Dichlorobenzene	ND	2.5	ug/L	5.00	05/23/2003 13:11	





Allwest Environmental Attn.: Michael Siembieda

530 Howard Street, Suite #300 San Francisco, CA 94105

Phone: (415) 391-2510 Fax: (415) 391-2008

Project: 23010.28

PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Prep(s):

5030B

Water

Test(s):

8260B

Sample ID: MW-3A-D

Lab ID:

2003-05-0505 - 4

Matrix:

Sampled: 05/15/2003 09:50

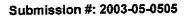
Extracted:

5/22/2003 19:16 5/23/2003 13:11

QC Batch#: 2003/05/23-V1.07

2003/05/23-V1.07

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
1,2-Dichlorobenzene	ND	2.5	ug/L	5.00	05/23/2003 13:11	
Trichlorotrifluoroethane	ND	2.5	ug/L	5.00	05/23/2003 13:11	
Chloromethane	ND	5.0	ug/L	5.00	05/23/2003 13:11	
Bromomethane	ND	5.0	ug/L	5.00	05/23/2003 13:11	
Surrogates(s)						
4-Bromofluorobenzene	96.9	86-115	%	1.00	05/22/2003 19:16	
4-Bromofluorobenzene	96.1	86-115	%	1.00	05/23/2003 13:11	
1,2-Dichloroethane-d4	96.2	76-114	%	1.00	05/22/2003 19:16	
1,2-Dichloroethane-d4	102.7	76-114	%	1.00	05/23/2003 13:11	
Toluene-d8	100.1	88-110	%	1.00	05/22/2003 19:16	
Toluene-d8	99.8	88-110	%	1.00	05/23/2003 13:11	





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Phone: (415) 391-2510 Fax: (415) 391-2008

Project: 23010.28

PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Prep(s):

5030B

Test(s):

8260B

Sample ID: MW-4

Lab ID:

2003-05-0505 - 5

Sampled: 05/15/2003 11:30

Extracted:

5/22/2003 19:41

5/23/2003 13:36 5/23/2003 13:36

Matrix:

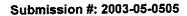
Water

QC Batch#: 2003/05/22-V1.07

2003/05/22-V1.07

2003/05/23-V1.07

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Dichlorodifluoromethane	16	1.0	ug/L	1.00	05/22/2003 19:41	
Vinyl chloride	ND	0.50	ug/L	1.00	05/22/2003 19:41	
Chloroethane	ND	1.0	ug/L	1.00	05/22/2003 19:41	
Trichlorofluoromethane	ND	1.0	ug/L	1.00	05/22/2003 19:41	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	05/22/2003 19:41	
Methylene chloride	ND	5.0	ug/L	1.00	05/22/2003 19:41	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	05/22/2003 19:41	
cis-1,2-Dichloroethene	0.75	0.50	ug/L	1.00	05/22/2003 19:41	
1,1-Dichloroethane	ND	0.50	ug/L	1.00	05/22/2003 19:41	
Chloroform	ND	0.50	ug/L	1.00	05/22/2003 19:41	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	05/22/2003 19:41	
Carbon tetrachloride	ND	0.50	ug/L	1.00	05/22/2003 19:41	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	05/22/2003 19:41	1
Trichloroethene	7.7	0.50	ug/L	1.00	05/22/2003 19:41	,
1,2-Dichloropropane	ND	0.50	ug/L	1.00	05/22/2003 19:41	<u> </u>
Bromodichloromethane	ND	0.50	ug/L	1.00	05/22/2003 19:41	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	05/22/2003 19:41	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00.	05/22/2003 19:41	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	05/22/2003 19:41	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	05/22/2003 19:41	
Tetrachioroethene	120	2.5	ug/L	5.00	05/23/2003 13:36	
Dibromochloromethane	ND	0.50	ug/L	1.00	05/22/2003 19:41	
Chlorobenzene	ND	0.50	ug/L	1.00	05/22/2003 19:41	
Bromoform	ND	2.0	ug/L	1.00	05/22/2003 19:41	•
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	05/22/2003 19:41	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	05/22/2003 19:41	1





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Project: 23010.28

PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Prep(s):

5030B

Water

Test(s):

8260B

Lab ID:

2003-05-0505 - 5

Sample ID: MW-4

Sampled: 05/15/2003 11:30

Extracted:

5/22/2003 19:41

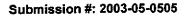
5/23/2003 13:36 5/23/2003 13:36

Matrix:

QC Batch#: 2003/05/22-V1.07

2003/05/22-V1.07 2003/05/23-V1.07

Compound	ompound Conc. RL Unit		Unit	Dilution	Analyzed	Flag
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	05/22/2003 19:41	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	05/22/2003 19:41	
Trichlorotrifluoroethane	IND	0.50	ug/L	1.00	05/22/2003 19:41	
Chloromethane	ND	1.0	ug/L	1.00	05/22/2003 19:41	
Bromomethane	ND	1.0	ug/L	1.00	05/22/2003 19:41	
Surrogates(s)		ĺ				
4-Bromofluorobenzene	99.6	86-115	1%	1.00	05/23/2003 13:36	
4-Bromofluorobenzene	96.8	86-115	%	1.00	05/22/2003 19:41	
1.2-Dichloroethane-d4	99.3	76-114	%	1.00	05/22/2003 19:41	
1.2-Dichloroethane-d4	105.9	76-114	%	1.00	05/23/2003 13:36	
Toluene-d8	102.5	88-110	%	1.00	05/22/2003 19:41	
Toluene-d8	101.7	88-110	%	1.00	05/23/2003 13:36	





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PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Batch QC Report

Prep(s): 5030B Method Blank

MB: 2003/05/22-V1.06-004

Water

Test(s): 8260B QC Batch # 2003/05/22-V1.06

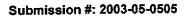
Date Extracted: 05/22/2003 12:56

Compound	Conc.	RL	Unit	Analyzed	Flag
Bromodichloromethane	ND	0.5	ug/L	05/22/2003 12:56	
Bromoform	ND	2.0	ug/L	05/22/2003 12:56	
Bromomethane	ND	1.0	ug/L	05/22/2003 12:56	
Carbon tetrachloride	ND	0.5	ug/L	05/22/2003 12:56	
Chlorobenzene	ND	0.5	ug/L	05/22/2003 12:56	
Chloroethane	ND	1.0	ug/L	05/22/2003 12:56	
2-Chloroethylvinyl ether	ND	0.5	ug/L	05/22/2003 12:56	
Chloroform	ND	0.5	ug/L	05/22/2003 12:56	
Chloromethane	ND	1.0	ug/L	05/22/2003 12:56	
Dibromochloromethane	ND	0.5	ug/L	05/22/2003 12:56	
1,2-Dichlorobenzene	ND	0.5	ug/L	05/22/2003 12:56	
1.3-Dichlorobenzene	ND	0.5	ug/L	05/22/2003 12:56	İ
1,4-Dichlorobenzene	ND	0.5	ug/L	05/22/2003 12:56	
Dichlorodifluoromethane	ND	1.0	ug/L	05/22/2003 12:56	}
1,1-Dichloroethane	ND	0.5	ug/L	05/22/2003 12:56	
1,2-Dichloroethane	ND	0.5	ug/L	05/22/2003 12:56]
1,1-Dichloroethene	ND	0.5	ug/L	05/22/2003 12:56	
cis-1,2-Dichloroethene	ND	0.5	ug/L	05/22/2003 12:56	
trans-1,2-Dichloroethene	ND	0.5	ug/L	05/22/2003 12:56	
1,2-Dichloropropane	ND	0.5	ug/L	05/22/2003 12:56	<u> </u>
cis-1,3-Dichloropropene	ND	0.5	ug/L	05/22/2003 12:56	
trans-1,3-Dichloropropene	ND	0.5	ug/L	05/22/2003 12:56	
Methylene chloride	ND	5.0	ug/L	05/22/2003 12:56	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	05/22/2003 12:56	
Tetrachloroethene	ND	0.5	ug/L	05/22/2003 12:56	
1,1,1-Trichloroethane	ND	0.5	ug/L	05/22/2003 12:56	
1,1,2-Trichloroethane	ND	0.5	ug/L	05/22/2003 12:56	
Trichloroethene	ND	0.5	ug/L	05/22/2003 12:56	
Trichlorofluoromethane	ND	1.0	ug/L	05/22/2003 12:56	

Severn Trent Laboratories, Inc.

STL San Francisco * 1220 Quarry Lane, Pleasanton, CA 94566
Tel 925 484 1919 Fax 925 484 1096 * www.stl-inc.com * CA DHS ELAP# 2496

05/23/2003 17:21





Allwest Environmental
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Phone: (415) 391-2510 Fax: (415) 391-2008

Project: 23010.28

PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Batch QC Report

Prep(s): 5030B Method Blank

Water

Test(s): 8260B QC Batch # 2003/05/22-V1.06

MB: 2003/05/22-V1.06-004

Date Extracted: 05/22/2003 12:56

Compound	Conc.	Conc. RL		Analyzed	Flag
Trichlorotrifluoroethane Vinyl chloride	ND 0.5 ND 0.5		ug/L ug/L	05/22/2003 12:56 05/22/2003 12:56	
Surrogates(s) 4-Bromofluorobenzene 1,2-Dichloroethane-d4 Toluene-d8	91.0 99.3 98.5	86-115 76-114 88-110	% % %	05/22/2003 12:56 05/22/2003 12:56 05/22/2003 12:56	





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PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Batch QC Report

Prep(s): 5030B Method Blank

MB: 2003/05/22-V1.07-005

Water

Test(s): 8260B QC Batch # 2003/05/22-V1.07

Date Extracted: 05/22/2003 12:33

Compound	Conc.	RL	Unit	Analyzed	Flag
Bromodichloromethane	ND	0.5	ug/L	05/22/2003 12:33	
Bromoform	ND	2.0	ug/L	05/22/2003 12:33	
Bromomethane	ND	1.0	ug/L	05/22/2003 12:33	
Carbon tetrachloride	ND	0.5	ug/L	05/22/2003 12:33	
Chlorobenzene	ND	0.5	ug/L	05/22/2003 12:33	
Chloroethane	ND	1.0	ug/L	05/22/2003 12:33	
2-Chloroethylvinyl ether	ND	0.5	ug/L	05/22/2003 12:33	
Chloroform	ND	0.5	ug/L	05/22/2003 12:33	
Chloromethane	ND	1.0	ug/L	05/22/2003 12:33	
Dibromochloromethane	ND	0.5	ug/L	05/22/2003 12:33	
1,2-Dichlorobenzene	ND	0.5	ug/L	05/22/2003 12:33	
1,3-Dichlorobenzene	ND	0.5	ug/L	05/22/2003 12:33	
1,4-Dichlorobenzene	ND	0.5	ug/L	05/22/2003 12:33	
Dichlorodifluoromethane	ND	1.0	ug/L	05/22/2003 12:33	
1,1-Dichloroethane	ND	0.5	ug/L	05/22/2003 12:33	
1,2-Dichloroethane	ND	0.5	ug/L	05/22/2003 12:33	
1,1-Dichloroethene	ND	0.5	ug/L	05/22/2003 12:33	
cis-1,2-Dichloroethene	ND	0.5	ug/L	05/22/2003 12:33	
trans-1,2-Dichloroethene	ND	0.5	ug/L	05/22/2003 12:33	
1,2-Dichloropropane	ND	0.5	ug/L	05/22/2003 12:33	
cis-1,3-Dichloropropene	ND	0.5	ug/L	05/22/2003 12:33	ļ
trans-1,3-Dichloropropene	ND	0.5	ug/L	05/22/2003 12:33	
Methylene chloride	ND	5.0	ug/L	05/22/2003 12:33	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	05/22/2003 12:33	
Tetrachioroethene	ND	0.5	ug/L	05/22/2003 12:33	
1,1,1-Trichloroethane	ND	0.5	ug/L	05/22/2003 12:33	
1,1,2-Trichloroethane	ND	0.5	ug/L	05/22/2003 12:33	
Trichloroethene	ND	0.5	ug/L	05/22/2003 12:33	
Trichlorofluoromethane	ND	1.0	ug/L	05/22/2003 12:33	





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Project: 23010.28

PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Batch QC Report

Prep(s): 5030B Method Blank

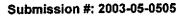
Water

Test(s): 8260B QC Batch # 2003/05/22-V1.07

MB: 2003/05/22-V1.07-005

Date Extracted: 05/22/2003 12:33

Compound	Conc.	RL	Unit	Analyzed	Flag
Trichlorotrifluoroethane Vinyl chloride	ND ND	0.5 0.5	ug/L ug/L	05/22/2003 12:33 05/22/2003 12:33	
Surrogates(s) 4-Bromofluorobenzene 1,2-Dichloroethane-d4 Toluene-d8	93.7 107.0 100.2	86-115 76-114 88-110	% % %	05/22/2003 12:33 05/22/2003 12:33 05/22/2003 12:33	





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PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Batch QC Report

Prep(s): 5030B Method Blank

Water

Test(s): 8260B QC Batch # 2003/05/23-V1.07

MB: 2003/05/23-V1.07-004

Date Extracted: 05/23/2003 11:55

Compound	Conc.	RL	Unit	Analyzed	Flag
Bromodichloromethane	ND	0.5	ug/L	05/23/2003 11:55	
Bromoform	ND	2.0	ug/L	05/23/2003 11:55	
Bromomethane	ND	1.0	ug/L	05/23/2003 11:55	
Carbon tetrachioride	ND	0.5	ug/L	05/23/2003 11:55	
Chlorobenzene	ND	0.5	ug/L	05/23/2003 11:55	
Chloroethane	ND	1.0	ug/L	05/23/2003 11:55	
2-Chloroethylvinyl ether	ND	0.5	ug/L	05/23/2003 11:55	
Chloroform	ND	0.5	ug/L	05/23/2003 11:55	
Chloromethane	ND	1.0	ug/L	05/23/2003 11:55	
Dibromochloromethane	ND	0.5	ug/L	05/23/2003 11:55	
1,2-Dichlorobenzene	ND	0.5	ug/L	05/23/2003 11:55	
1,3-Dichlorobenzene	ND	0.5	ug/L	05/23/2003 11:55	
1,4-Dichlorobenzene	ND	0.5	ug/L	05/23/2003 11:55	
Dichlorodifluoromethane	ND	1.0	ug/L	05/23/2003 11:55	
1,1-Dichloroethane	ND	0.5	ug/L	05/23/2003 11:55	
1,2-Dichloroethane	ND	0.5	ug/L	05/23/2003 11:55	
1,1-Dichloroethene	ND	0.5	ug/L	05/23/2003 11:55	
cis-1,2-Dichloroethene	ND	0.5	ug/L	05/23/2003 11:55	
trans-1,2-Dichloroethene	ND	0.5	ug/L	05/23/2003 11:55	
1,2-Dichloropropane	ND	0.5	ug/L	05/23/2003 11:55	
cis-1,3-Dichloropropene	ND	0.5	ug/L	05/23/2003 11:55	
trans-1,3-Dichloropropene	ND	0.5	ug/L	05/23/2003 11:55	
Methylene chloride	ND	5.0	ug/L	05/23/2003 11:55	į
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	05/23/2003 11:55	
Tetrachloroethene	ND	0.5	ug/L	05/23/2003 11:55	[
1,1,1-Trichloroethane	ND	0.5	ug/L	05/23/2003 11:55	
1,1,2-Trichloroethane	ND	0.5	ug/L	05/23/2003 11:55	
Trichloroethene	ND	0.5	ug/L	05/23/2003 11:55	
Trichlorofluoromethane	ND	1.0	ug/L	05/23/2003 11:55	<u> </u>





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Project: 23010.28

PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Batch QC Report

Prep(s): 5030B Method Blank

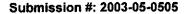
Water

Test(s): 8260B QC Batch # 2003/05/23-V1.07

MB: 2003/05/23-V1.07-004

Date Extracted: 05/23/2003 11:55

Compound	Conc.	RL	Unit	Analyzed	Flag
Trichlorotrifluoroethane	ND	0.5	ug/L	05/23/2003 11:55	
Vinyl chloride	ND	0.5	ug/L	05/23/2003 11:55	
Surrogates(s)					
4-Bromofluorobenzene	96.7	86-115	%	05/23/2003 11:55	
1,2-Dichloroethane-d4	103.6	76-114	%	05/23/2003 11:55	
Toluene-d8	97.8	88-110	%	05/23/2003 11:55	





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Project: 23010.28

PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2003/05/22-V1.06

LCS

2003/05/22-V1.06-002

Extracted: 05/22/2003

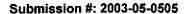
Analyzed: 05/22/2003 11:49

LCSD 2003/05/22-V1.06-003

Extracted: 05/22/2003

Analyzed: 05/22/2003 12:20

Compound	Conc.	ug/L	Exp.Conc.	Recovery		RPD Ctrl.I		imits % Flags		ags
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Chiorobenzene 1,1-Dichloroethene Trichloroethene	47.8 44.3 43.6	47.6 45.3 44.6	50 50 50	95.6 88.6 87.2	95.2 90.6 89.2	0.4 2.2 2.3	61-121 65-125 74-134	20 20 20		
Surrogates(s) 4-Bromofluorobenzene 1,2-Dichloroethane-d4 Toluene-d8	456 484 476	455 496 482	500 500 500	91.2 96.8 95.2	91.0 99.2 96.4		86-115 76-114 88-110			





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Project: 23010.28

PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2003/05/22-V1.07

LCS 2003/05/22-V1.07-003 LCSD

Extracted: 05/22/2003

Analyzed: 05/22/2003 11:43 Analyzed: 05/22/2003 12:08

2003/05/22-V1.07-004

Extracted: 05/22/2003

RPD Ctrl Limits % Flags **RPD** LCS LCSD % Rec. 61-121 20 10.5 20 65-125 8.0 20 74-134 3.4

Conc. Exp.Conc. Recovery ug/L Compound LCS LCSD LCS LCSD 105.5 Chlorobenzene 19.0 21.1 20 95.0 125.0 1,1-Dichloroethene 24.8 25.0 20 124.0 Trichloroethene 17.4 18.0 20 87.0 90.0 Surrogates(s) 4-Bromofluorobenzene 447 464 500 89.4 92.8 86-115 1,2-Dichloroethane-d4 492 457 500 98.4 91.4 76-114 88-110 Toluene-d8 483 479 500 96.6 95.8





Halogenated Volatile Organic Compounds by 8021B/8260B

Allwest Environmental Attn.: Michael Siembieda

530 Howard Street, Suite #300 San Francisco, CA 94105

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Project: 23010.28

PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2003/05/23-V1.07

LCS LCSD

2003/05/23-V1.07-002

Extracted: 05/23/2003

Analyzed: 05/23/2003 11:05 Analyzed: 05/23/2003 11:30

2003/05/23-V1.07-003

Extracted: 05/23/2003

Conc.	ug/L	Exp.Conc.	Rec	overy	RPD	, Ctrl.Lin	nits %	Fla	ags
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Halogenated Volatile Organic Compounds by 8021B/8260B

Allwest Environmental
Attn.: Michael Siembieda

530 Howard Street, Suite #300 San Francisco, CA 94105

Phone: (415) 391-2510 Fax: (415) 391-2008

Project: 23010.28

PACCAR-GW-03

Received: 05/16/2003 18:22

Site: Oakland

Legend and Notes

Analysis Flag

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Reporting limits were raised due to high level of analyte present in the sample.

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DATE	TIME	S	AMPLE METHOD	MATRIX	NO.	TAINER TYPE	₹	1_1_	I				ļ"ģ	4.5	3	₹	
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Standard Operating Procedure Groundwater Sampling

Prior to sampling, an electric water level sounder was lowered into the well casing to measure the depth to the water relative to the top of the casing. A clear poly bailer was then lowered into the well casing and partially submerged. Upon retrieval of the clear bailer, the surface of the water column retained in the bailer was examined for any floating product or product sheen.

After initial measurements were completed and recorded, the wells were purged by a disposable bailer. Approximately 3 well columns of groundwater was purged. During the purging process, the physical property (temperature, pH and conductivity) and bioparameters (dissolved oxygen and redox) of the groundwater were monitored periodically with various field meters. Purging was considered complete when physical property indicators were stabilized (consecutive readings within 10% of each other) and the purged water was free of sediments.

Groundwater sampling was conducted after the water level recovered to at least 80% of the initial level, recorded prior to purging. The groundwater samples were collected by using a disposable bailer that was discarded after the sampling event to avoid cross-contamination. Upon retrieval of the disposable bailer, the retained water was carefully transferred to appropriate pre-cleaned glassware by the analytical laboratory. A special adapter fitted to the bottom end of the bailer was used to minimize the loss of chlorinated solvents during transfer. All sample containers were fitted with a Teflon lined septum/cap and filled such that no headspace was present. After the water sample was properly transferred to the appropriate container, the container was labeled and immediately placed on ice to preserve its chemical characteristics. A well sampling log was maintained during the sampling event to document sampling activities.

Samples were field stored and transported in an insulated cooler filled with crushed ice and delivered the same day of collection to the analytical laboratory. All samples were transported to the laboratory under proper chain of custody documentation from the time of collection to the time of arrival at the laboratory.

To avoid cross-contamination, all groundwater sampling equipment that came in contact with the groundwater was thoroughly cleansed by washing it in Alconox (a non-phosphor detergent) solution and rinsed with distilled water prior to each well sampling event. Sample collection was by a disposable bailer which was discarded after each well sampling event. The purged water was temporarily stored on-site in a labeled DOT-approved 55-gallon steel drum until they were removed for off-site disposal.

Ground ater Monitoring Well Samplin Field Log

Project No.	: <u> </u>	0128	Project Name: PRECER STATE							
Well No.: _	MW-1	_	Well Location: 4240 E 144 Sty Oal(land							
Well Depth	: <u>43.7</u>	<u>O</u> (ft.)		Casing Diame	ter: 4"	(in.)				
Depth to W	7ater: 2	5.29 (ft.)	Ι	Date: 5 151	O3 Time	: 0942				
Water Colu	ımn in W	ell: <u>18.41</u>	* 0.452 (_ (ft.) V	<i>sel[t</i>] > Well Volume	: <u>12.0</u> (g	ai.) x 3 uoL = 36.0				
Odor? No	<u></u>	Free Produ	ict? No	Thick:	ness: <u>N/A</u>	<u> </u>				
Purging M	ethod: H	and Pump _			X Baile	Other				
Time	pН	Conduc. (µS)	Temp.	Formplate,	Volume Removed	Remark				
0945	5.79	551	63.5		1.00	clear				
0952	5.70	576	65.7	0.71	6.00	clear				
1005	5.62	700	67.4	NM	12:00	clear adjusted tubu				
1011	5.61	741	67.6	0.86	18.00	clean				
1018	5.58	750	67.6	0.86	24.00	clean				
1024	5 50	745	64.3	1.00	30.0	clear				
1029	5.50	717	66.7	0.83	360	clear				
Total Voi Water Le	ume Purg vel Prior	to Sampling	0 (gal.)) (ft.) Tin	ne: <u>1032</u>	ater? <u>No</u>				
						Sampling Pump				
Sample C	Collected:	3 VOAS	/HVOC3		Sample N	o.: <u>MW-1</u>				
Remark:										
			<u> </u>							
					·					
										
C1	. JSK	MUS		Date/Time	5/15/0	3				

Grour water Monitoring Well Sampling Field Log

oject No.: 23010.28 Project Name: PACCAR 2003 GW
ell No.: MW-Z Well Location: 4240 E 144 Sty Oal(land
ell Depth: 46.16 (ft.) Casing Diameter: 4" (in.)
epth to Water: 25.16 (ft.) Date: \$15/03 Time: 1052
ater Column in Well: 21.0 (ft.) Well Volume: 13.7 (gal.) \times 3 UOL = 41.1
dor? No Free Product? No Thickness: N/A
urging Method: Hand Pump Submersible Pump X Bailer Other
Emp Reter Promote
Time pH Conduc. Temp. Volume Remark (μS) (° C) Removed
1200 5.46 744 64.9 1.0 It. brown
1207 5.38 705 67.8 0.86 7.0 clear
120 B 5.40 640 657 0.79 14.0 cleur
1223 5.41 687 65.5 0.78 21.0 clear
1234 5.42 694 65.7 078 28.0 cleur
1240 5.42 692 65.5 35.0 clear
1257 5,42 690 65,4 41.1 clear
- 154
Purging Start Time: <u>1260</u> Purging Stop Time: <u>1254</u>
Total Volume Purged: 41.5 (gal.) Well Dewater? No
Water Level Prior to Sampling: 25.18 (ft.) Time: 1300
Sampling Method: Teflon Bailer Disposable Bailer X Sampling Pump
Sample Collected: 3 VoA's / HVoC's Sample No.: MW-2
Sample Collected:
Remark:
· · · · · · · · · · · · · · · · · · ·
1.
Sampler: JSK / MLS Date/Time: 5/15/03

Sampler: JSK/MLS

Ground ater Monitoring Well Samplin Field Log

Project No.: 23010-28	Project Name: PACCAR 2003 GW
Well No.: MW-3A	Well Location: 4240 F 144 St. Oal(land
Well Depth: 39.33 (ft.)	Casing Diameter: 4" (in.)
25 43 (ft)	Date: \$\15\03 Time: \0830
Water Column in Well: 13.90	*0.652 sol/n = (ft.) Weil Volume: 9.66 (gal.) x 3 vol = 27.2
Odor? <u>Nr</u> Free Product	? <u>Nu</u> Thickness: <u>s/A</u>
Purging Method: Hand Pump	Submersible Pump X Bailer Other

Time	pН	Conduc.	Temp. (° F)	Water Level JPm	Volume Removed	Remark
1842	7.05	535	623		0.25	silty brown
0848	6.75	470	63.3	0.83	5.00	light brown
0855	6.50	518	65.3	0.71	10.00	clear
0902	6.36	509	64.3	0.71	15.00	clean
0909	6.04	509	65.3	0.71	20.00	clean
0916	5.95	515	63.5	0.71	25.00	clear
0920	5.89	520	65.0		27.5	clear

Purging Start Time: 0841 Purging Stop Time: 0921
Total Volume Purged: 24.5 (gal.) Well Dewater? No
Water Level Prior to Sampling: 25.46 (ft.) Time: 0924
Sampling Method: Teflon Bailer Disposable Bailer X Sampling Pump
Sample Collected: HVOCS - 3 VOAS Sample No.: MW - 3A-W
Remark: Soft Lottom:
Also Collected Duplicate Sample MW-3A-D
Sampler: JSK Date/Time: 5/15/03 0924
Sampler:

Groun ater Monitoring Well Samplia Field Log

Project No.	2301	0.28			ccar 20	
Well No.:	MW-4	_				Sty Oal(land
Well Depth	: <u>44.3</u>	<u>C</u> (ft.)			eter: 4"	
Depth to W	ater: 2	3.82(ft.)	I	ate: 5 15	O3 Time	:: <u>1003</u>
Water Colu	ımn in W	ell: 20.48	* 0.652 (ft.) V	y <i>al[t</i> i > Vell Volume	: <u>13,4</u> (e	gal.) x 3 UOL = 40.0
Odor? N	<u></u>	Free Produ	ict? No	_ Tnick	ness: <i>N</i> /	<u>/</u>
				rsible Pump		other
Time	рН	Conduc.	Temp. (° €)	Pump Bott	Volume Removed	Remark
1047	5.56	341	65.5	9	1.0	yellow
1054	5.53	854	69.5	0.86	7.0	'clear_
1103	5.51	837	71.2	0.78	14.0	dear
1110	5.52	840	73.3	1.0	21.0	dear
1117	5.53	817	73.8	1.0	28.0	clear
1124	5.51		74.3	1.0	35.0	clean
1130	-		75.4	0.83	40.0	clear
Purging S Total Vol Water Le Sampling Sample C	tart Time ume Purg vel Prior Method: Collected:	to Sampling Teflon Baile	0 (gal.) : 23. 15 er 1	(ft.) Tir Disposable E	Sample N	ater? <u>No</u>
Remark:						
		·				

Sampler: JSK/MLS Date/Time: 5/15/03



APPLICATION FOR AUTHORIZATION TO USE

REPORT TITLE: Grand Auto #43, 4240 East 14th Street, Oakland, California

То:	AllWest Environmental, Inc 530 Howard Street, Suite 3 San Francisco, CA 94105		
From		ly identify name and address of person/entity applying for o use or copy this document)	
Ladies	and Gentlemen:		
Applica here th	nt hereby applies for permiss e purpose for which you wish	to rely upon AllWest's work product, as described above, rely upon the work product)	for the purpose of: (state
all provissued please	isions in the Terms and Con- by AllWest shall be subject to sign below and return one co- ned letter will be returned. A	AllWest work product under the strict understanding that ns attached to the report. Every report, recommendation, e limitations stated in the Agreement and subject report(s of this letter to us along with the applicable fees. Upon re- est may withhold permission at its sole discretion or require	finding, or conclusion If this is agreeable, ceipt and if acceptable,
reprodu	action fee, we will reissue the	e fee, payable in advance, will apply. If desired, for an add ort in the name of the Applicant; the report date, however, st for reliance is not approved.	litional \$75 report will remain the same.
	REQUESTED BY	APPROV	ED BY
	Applicant Company	AllWest Enviro	nmental, Inc.
	Print name and Title	Print Name	and Title
	Signature and Date	Signature a	nd Date

PROJECT NAME: Grand Auto #43, 4240 East 14th Street, Oakland, California

PROJECT NUMBER: 23010.28

GENERAL CONDITIONS TO THE WORK AUTHORIZATION

AGREEMENT

It is hereby agreed that the Client retains AllWest to act for and represent it in all matters set forth in the Work Authorization attached hereto (the "Work"). Such contracts of a retainer shall be subject to and is conditioned upon the following terms, conditions, and stipulations, which terms, conditions and stipulations will also apply to any further agreements, purchase orders, or documentation regarding the Work unless modified by a writing signed by both Parties to this Agreement. Signature by client on work authorization constitutes agreement with General Conditions as stated here.

It is recognized and agreed that AllWest has assumed responsibility only for making the investigations, reports and recommendations to the Client included within the Scope of Work. The responsibility for making any disclosures or reports to any third party and for the taking of corrective, remedial, or mitigative action shall be solely that of the Client.

REIMBURSABLE COSTS/INTEREST AND ATTORNEYS FEES

1. Reimbursable Costs will be charged to the Client in addition to the fees for the basic services under this Agreement and all Additional Services under the Agreement. Reimbursable Costs include, but are not limited to, expenses for travel, including transportation, meals, lodging, long distance telephone and other related expenses, as well as the costs of reproduction of all drawings for the Client's use, costs for specifications and typewritten reports, permit and approval fees, automobile travel reimbursement, costs and fees of subcontractors, and soil and other materials testing. No overtime is accrued for time spent in travel. All costs incurred which relate to the services or materials provided by a contractor or subcontractor to AllWest shall be invoiced by AllWest on the basis of cost plus twenty percent (20%). Automobile travel reimbursement shall be at the rate of thirty-five cents (\$.35) per mile. All other reimbursable costs shall be invoiced and billed by AllWest at the rate of 1.1 times the direct cost to AllWest. Any rates set orth in this Agreement are subject to reasonable increases by AllWest upon giving thirty days' written notice to Client. Reimbursable costs will be charged to the client *only as outlined* in the attached proposal if the work is for Phase I Environmental Site Assessment. A client knowingly and willingly agrees to pay interest on the balance of on unpaid invoices overdue more than 30 days at a rate of 18% per annum and all attorney fees incurred by AllWest to secure payment of unpaid invoices. AllWest may waive such fees at its discretion.

WARRANTY AND LIMITATION OF LIABILITY

2. AllWest hereby warrants that it will perform the Work with the usual degree and standard of care and skill observed by members of AllWest's profession in the same geographic area on projects of the type engaged in by AllWest. Client's sole remedy under this Agreement shall be to request that AllWest repeat or correct any of the Work performed by AllWest which fails to meet these standards. AllWest's financial liability including attorney fees shall not exceed the dollar value of this agreement and shall be limited to direct damages. All other damages such as loss of use, profits, anticipated profits and like losses are consequential damages for which AllWest is not liable. Client hereby releases AllWest from all liability and damage incurred by the Client or other people who are associated with the services provided by AllWest, or the employees, agents, contractors or subcontractors of AllWest, under this Agreement.

Further. Client hereby releases AllWest from any and all liability for risks or damages to the Project site. AllWest assumes no liability or duties regarding the Project site by reason of its performance of the Work at the Project. Client shall hold AllWest harmless from any liabilities or duties with respect to the work or the Project. Client shall further release. Indemnify and hold AllWest harmless from any and all claims, liabilities or damages resulting from AllWest's use of technological or design concepts, or any other concepts or uses which, though acceptable and standard at the time the decision to use them was made, are unacceptable or nonstandard beginning at the time work commences or any time thereafter. If AllWest must incur additional expenses in the work by reason or the need to incorporate new or different technologies into the Work, whether necessitated by new laws, regulations or guidelines, or by the desire of Client, Client agrees to reimburse AllWest for such expenses, as well as provide compensation for AllWest's services at the rates set forth in the Work Authorization.

Client acknowledges that AllWest and its subcontractors have played no part in the creation of any hazardous waste, pollution sources, nuisance, or chemical or an industrial disposal problem, which may exist, and that AllWest has been retained for the sole purpose of assisting the Client in assessing any problem which may exist and in assisting the Client in formulating a remedial program, if such is within the Scope of Work which AllWest has assumed. Client recognizes that while necessary for investigations, commonly used exploration methods may penetrate through contaminated materials and serve as a connecting passageway between the contaminated material and an uncontaminated aquifer or groundwater, possibly inducing cross contamination. While backfilling with grout, or other means, according to a state of practice design, is intended to provide a scal against such passageways, it is recognized that such a scal may be imperfect and that there is an inherent risk in drilling borings of performing other exploration methods in a hazardous waste site.

AllWest shall not be required to sign any documents, no matter by whom requested, that would result in AllWest having to certify, guarantee, warrant or opine on conditions whose existence AllWest cannot ascertain. The CLIENT also agrees not to make resolution of any dispute with AllWest or payment of any amount due to AllWest in any way contingent upon AllWest signing any such documents.

TERMINATION

3. This Agreement may be terminated by either party upon seven (7) days' written notice should the other party substantially fail to perform in accordance with its terms through no fault of the party initiating the termination. In the event of termination which is not the fault of AllWest, AllWest shall be paid no less than eighty percent (80%) of the contract price, provided, however, that if AllWest shall have completed more than eighty percent of the Work at the time of said termination, AllWest shall be compensated as provided in the Work Authorization for all services performed prior to the termination date which falls within the scope of work described in the Work Authorization and may as well, at its sole discretion and in accordance with said Schedule of Fees, charge Client its reasonable costs and labor in winding up its files and removing equipment and other materials from the Project.

AllWest may issue notice to other consultants, contractors, subcontractors and to governing agencies having jurisdiction over the Project and take other actions as are reasonably necessary in order to give notice that AllWest is no longer associated with the Project and to protect AllWest from claims of liability from the work of others.

DOCUMENTS

4. Any documents prepared by AllWest, including but not limited to proposals, project specifications, drawings, calculations, plans and maps, and any ideas and designs incorporated therein, as well as any reproduction of the above are and shall remain the property of AllWest whether or not said documents are actually utilized in connection with the Project. The Client shall be permitted to retain a copy of any documents provided to the Client by AllWest, but said documents may not be used by the Client on other projects or for any other purpose, except the current one, except by agreement in writing with AllWest and with appropriate compensation to AllWest.

Client shall furnish, or cause to be furnished to AllWest, all documents and information known to Client that relate to the identity, location, quantity, nature, or characteristics of any asbestos, PCBs, or any other hazardous materials or waste at, on or under the site. In addition, Client will furnish or cause to be furnished such reports, data, studies, plans, specifications, documents and other information on surface or subsurface site conditions, e.g., underground tanks, pipelines and buried utilities, required by AllWest for proper performance of its services. If CLIENT fails to provide AllWest with all hazardous material subject matter reports including geotechnical assessments in their possession during the period that AllWest is actively providing expertise (30 days post the final invoice), CLIENT shall release AllWest from any and all liability for risks and damages the CLIENT incurs resulting from their reliance on AllWest's professional opinion. AllWest shall be entitled to rely upon Client - provided documents and information in performing the services required in this Agreement; however, AllWest assumes no responsibility or liability for their accuracy or completeness. Client-provided documents will remain the property of the Client.

ACCESS TO PROJECT

5. Client grants to AllWest the right of access and entry to the Project at all times necessary for AllWest to perform the Work. If Client is not the owner of the Project, then Client represents that Client has full authority to grant access and right of entry to AllWest for the purpose of AllWest's performance of the Work. This right of access and entry extends fully to any agents, employees, contractors or subcontractors of AllWest upon reasonable proof of association with AllWest.

CONFIDENTIAL INFORMATION

6. Both Client and AllWest understand that in conjunction with AllWest's performance of the Work on the project, both Client and AllWest may receive or be exposed to Proprietary Information of the other. As used herein, the term "Proprietary Information" refers to any and all information of a confidential, proprietary or secret nature which may either be applicable to, or relate in any way to: (a) the personal, financial or other affairs of the business of each of the Parties, or (b) the research and development or investigations of each of the Parties. Proprietary Information includes, for example and without limitation, trade secrets, processes, formulas, data, know-how, improvements, inventions, techniques, software technical data, developments, research projects, plans for future development, marketing plans and strategies. Each of the Parties agrees that all Proprietary Information of the other party is an shall remain exclusively the property of that other party. The parties further acknowledge that the Proprietary Information of the other party is a special, valuable and a unique asset of that party, and each of the Parties hereto agrees that all times during the terms of this Agreement and thereafter to keep in confidence and trust all Proprietary Information of the other party, whether such Proprietary Information was obtained or developed by the other party before, during or after the term of this Agreement. Each of the Parties agrees not to sell, distribute, disclose or use in any other unauthorized manner the Proprietary Information of the other party. AllWest further agrees that it will not sell, distribute or disclose information or the results of any testing obtained by AllWest during the performance of the Work without the prior written approval of Client unless required to do so by federal, state or local statute, ordinance or regulation.

ADDITIONAL SERVICES

7. In addition to the services to be performed by AllWest as described in the Work Authorization, the following items shall for the purposes of this Agreement be termed "Additional Services": (a) work resulting from changes in scope or magnitude of the Work as described therein, (b) work resulting from changes necessary because of construction cost overruns. (c) work resulting from implementation of alternative or different designs from that first contemplated by the Parties, (d) work resulting from corrections or revisions required because of errors or omissions in construction by the building contractors. (e) work due to extended design or construction time schedules, (f) layout surveys in review of in-place constructed elements, and (g) services as an expert witness in connection with any public hearing, arbitration or proceedings of a court of record with respect to the Work on the Project.

AllWest will be compensated by Client for any Additional Services as provided under the Work Authorization.

DISPOSAL OF CONTAMINATED MATERIAL

8. Client understands and agrees that AllWest is not, and has no responsibility as, a generator, operator, treater, storer, transporter or disposer of hazardous or toxic substances found or identified at the site, including investigation-derived waste. The Client shall undertake or arrange for handling, removal, treatment, storage, treatment of hazardous material shall be the sole responsibility of Client. AllWest's responsibilities shall be limited to recommendations regarding such matters and assistance with appropriate arrangements if authorized by Client.

INDEPENDENT CONTRACTOR

9. Both Client and AllWest agree that AllWest will act as an independent contractor in the performance of the Work under this Agreement. All persons or parties employed by AllWest in connection with the Work are the agents, employees or subcontractors of AllWest and not of Client. Accordingly, AllWest shall be responsible for payment of all taxes arising out of AllWest's activities in performing the Work under this Agreement.

NOTICES

10. (a) All notices, demands or requests provided for or permitted to be given pursuant to this Agreement must be in writing and shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given, or if mailed by first class certified mail, return receipt requested, and properly addressed as follows:

To Client:		
To AllWest:	AllWest Environmental, Inc.	
	530 Howard Street, Suite 300	
	San Francisco, California 94105	

When either (i) the return receipt is signed by the addressee, (ii) the mailing is refused by the addressee, or (iii) the mailing is not delivered because the addresses moved and left no forwarding address.

b) By giving the other party to this Agreement ten (10) days' written notice thereof, the parties hereto and their respective successors and assigns shall have the right from time to time and at any time during the term of this Agreement to change their respective addresses and each shall have the right to specify its address or any other address within the United States of America.

ENTIRE AGREEMENT

11. This Agreement contains the entire agreement between the Parties pertaining to the subject matter contained in it and supersedes all prior and contemporaneous agreements, representations and understandings of the Parties. The terms of this Agreement are contractual and not a mere recital. The undersigned have carefully read and understand the contents of this Agreement and sign their names to the same as their own free act. This Agreement was entered into following negotiations between the Parties.

MODIFICATION / WAIVER / PARTIAL INVALIDITY

12. The terms of this Agreement may be modified only by a writing signed by both Parties. No consent or waiver, express or implied, by either party to or of any breach or default by another in the performance by the other of its obligations hereunder shall be deemed or construed to be a consent or waiver to or of any other breach or default in the performance by such other party of the same or any other obligations of such party hereunder. Failure on the part of either party to complain of any act or failure to act of the other, or to declare the other party in default, shall not constitute a waiver by such party of its rights hereunder. If any provision of this Agreement or the application thereof to any person or circumstances shall be invalid or unenforceable to any extent, the remainder of this Agreement and the application of such provisions to other persons or circumstances shall not be affected thereby and shall be enforced to the greatest extent permitted by law.

INUREMENT / TITLES / ATTORNEYS' FEES

13. Subject to any restrictions on transfers, assignments and encumbrances set forth herein, this Agreement shall inure to the benefit of and be binding upon the undersigned Parties and their respective heirs, executors, legal representatives, successors and assigns. Paragraph titles or captions contained in this Agreement are inserted only as a matter of convenience, and for reference only, and in no way limit, define or extend the provisions of any paragraph. If any legal action or any arbitration or other proceeding is brought for the enforcement of this Agreement, or because of an alleged dispute, breach, default or misrepresentation in connection with any of the provisions of this Agreement, the successful prevailing party shall be entitled to recover reasonable attorneys' fees and other costs incurred in that action or proceeding, in addition to any other relief to which it or they may be entitled. In addition, AllWest and Client shall be entitled to be reimbursed by the other for any attorneys' fees or other costs reasonably incurred in enforcing the terms of this Agreement in the event such fees are incurred without resorting to arbitration or litigation.

INTERPRETATION / ADDITIONAL DOCUMENTS

14. The words "Client" and "AllWest" as used herein shall include the plural as well as the singular. Words used in the neuter gender include the masculine and feminine. Words used in the masculine gender include the feminine and neuter. If there is more than one Client or Consultant, the obligations hereunder imposed on Client or AllWest or Consultant shall be joint and several. Although the printed provisions of this Agreement were drafted by the attorneys for AllWest, the terms of this Agreement were fully negotiated by the Parties and shall not be construed for or against the Client or AllWest but shall be interpreted in accordance with the general meaning of the language herein contained in an effort to reach the intended result. Each of the Parties hereto shall upon request execute and/or acknowledge and/or deliver to each other Party or to its representatives any and all further documents which may now or hereafter be necessary to enable any of the Parties to effectuate any of the provisions of this Agreement.

AUTHORITY

15. Each of the persons executing this Agreement on behalf of a corporation does hereby covenant and warrant that the corporation is duly authorized and existing under the laws of its respective state of incorporation, that the corporation has and is qualified to do business in its respective state of incorporation, that the corporation has the full right and authority to enter into this Agreement, that the Board of Directors if required pursuant to the bylaws or resolution of the corporation approved this Agreement, and that each person signing on behalf of the corporation is authorized to do so. If the Client is a joint venture or a general partnership, the signatories below warrant that said joint venture or general partnership is properly and duly organized and existing under the laws of the respective state of its formation and pursuant to the joint venture agreement or a partnership agreement as well as by virtue of the laws of the respective state of its formation, said signatory is a joint venture or a general partner of said joint venture or general partnership and has the power and authority to bind the joint venture or the general partnership.

COUNTERPARTS / ABSENCE OF PARTNERSHIP OR JOINT VENTURE

16. This Agreement may be signed in counterparts by each of the Parties hereto and, taken together, the signed counterparts shall constitute a single document. It is expressly understood that the Client does not, in any way or for any purpose, become a partner of AllWest in the conduct of its business, or otherwise, or joint venturer or a member of a joint enterprise with AllWest. It is expressly understood that AllWest do not, in any way or for any purpose, become a partner of the Client in the conduct of Client's business, or otherwise, or joint venturer or a member of a joint enterprise with Client.

THIRD PARTY BENEFICIARIES / CONTROLLING LAW

17. There are no intended third party beneficiaries of this Agreement. The services, data & opinions expressed by AllWest are for the sole use of the client, are for a particular project and may not be relied upon by anyone other than the client. This Agreement shall be controlled by the laws of the State of California and any action by either party to enforce this Agreement shall be brought in San Francisco County. California.