

PACCAR Inc
CORPORATE ENVIRONMENTAL

September 7, 2001

Eva Chu
Alameda County
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

SEP 11 2001

Re: 2001 Groundwater Monitoring Results
4240 East 14th Street (High Street), Oakland, CA

Dear Eva:

Enclosed please find one (1) paper copy of the 2001 Annual Groundwater Monitoring Report dated August 27, 2001 which was prepared by AllWest Environmental.

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

Sincerely,



V. L. Zumbrunnen
Project Manager

Enclosure

Cc: B. N. Holliday
L. C. Robbins
Randi Val Morrison – CSK Auto Inc

9/12/01

Do weather cancel sampling event - then
review for closure w/ deed restriction, & no
water wells allowed water.



AllWest Environmental, Inc.

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SEP 11 2001

**ANNUAL GROUNDWATER MONITORING AND
WELL DESTRUCTION 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. 21082.28
August 27, 2001

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TABLE OF CONTENTS

I.	INTRODUCTION	Page 1
II.	PROJECT BACKGROUND	Page 1
	A. Site Setting	Page 1
	B. Site Geology and Hydrology	Page 2
	C. Historical Site Use	Page 3
	D. Historical Use of the Surrounding Area	Page 3
	E. Previous Investigations and Remedial Actions	Page 3
III.	GROUNDWATER SAMPLING AND FIELD OBSERVATIONS	Page 9
	A. Sampling Protocols	Page 9
	B. Well Sampling	Page 10
	C. Groundwater Depth and Gradient	Page 10
	D. Well Destruction	Page 10
IV.	LABORATORY ANALYSES	Page 11
	A. Halogenated Volatile Organic Compounds Results	Page 11
	B. Laboratory QA/QC	Page 11
V.	DISCUSSION OF RESULTS	Page 12
	A. Spatial Distribution of Contaminants	Page 12
	B. Contaminant Trend Analyses	Page 12
VI.	CONCLUSION AND RECOMMENDATIONS	Page 13
VII.	REPORT LIMITATIONS	Page 13
VIII.	REFERENCES	Page 14



AllWest

TABLE OF CONTENTS
(Continued)

TABLES

- Table 1 - Well Construction Details**
- Table 2 - Groundwater Elevation Measurements**
- Table 3 - Summary of Groundwater Analytical Results**

FIGURES

- Figure 1 - Site Location Map**
- Figure 2 - Site Plan with Well Locations**
- Figure 3 - Groundwater Elevation Map**
- Figure 4 - Groundwater Analytical Results Map**

LABORATORY RESULTS

- Analytical Reports and Chain-of-Custody Documents**

APPENDICES

- Appendix A - Groundwater Sampling Logs and Protocols**
- Appendix B - Well Destruction Documentation**
- Appendix C - Request for Reliance and General Conditions**

Annual Groundwater Monitoring and Well Destruction Report

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

I. INTRODUCTION

This report presents the results of a groundwater monitoring event conducted by AllWest Environmental at the former Grand Auto Retail Store #43, Oakland, California, on June 19, 2001. The sampling event involved the monitoring of the four on-site groundwater wells, MW-1, MW-2, MW-3A and MW-4. Also included in this report is an abbreviated site setting and investigation history including the previously completed risk assessment, a description of field activities including the destruction of a fifth groundwater well, HC-1, 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 document the destruction of groundwater well HC-1 and present findings from the recent groundwater sampling of the four on-site groundwater monitoring wells to show that the residual contamination in the site groundwater are naturally attenuating, 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 continuing concurrence for No Further Remediation (NFR) status for the subject property.

II. PROJECT BACKGROUND

A. Site Setting

The approximately 1.2 acre 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 retail merchandise facility. Previously the site also was used for retail gasoline sales and had underground fuel storage tanks 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 its letter to PACCAR dated December 27, 1993, 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 the single groundwater well, HC-1, located on the former Super Tire facility.

B. Site Geology and Hydrology

The site is located on an alluvial plain on the east side of San Francisco Bay. According to the Preliminary Engineering Geologic Information Map, Oakland and Vicinity (1967), the site surface soils are mapped as Qu (Undifferentiated Quaternary deposits) which may include the Qtc (Temescal Formation, dark alluvium) and Qts (alluvial materials derived from the Qsu and Qsl (upper and lower members of the San Antonia Formation, clay, silt sand and gravel mixtures)). In general, these Quaternary alluvial deposits consist of unconsolidated clay, silt, sand, and gravel. Bedrock underlying the alluvium in the area consists primarily of the Mesozoic Franciscan Formation. The depth to bedrock in the area of the site is unknown but is assumed to be over 100 feet below the ground surface.

Several soil borings were completed to depths of up to 46 feet below ground surface (bgs) at the site and adjacent former Super Tire site. The borings indicate that the site is underlain by an irregularly layered sequence of silty to gravelly sand lenses separated by clayey silt. As much as 20 feet of imported fill material has been reported at some areas of the site. However, the site is not in an area mapped as Qf (artificial fill) like those areas by the Oakland Coliseum located approximately 2 miles south of the subject property.

Unconfined groundwater was previously reported to first occur at depths between 25 and 35 feet bgs. However, during the drilling of well MW-1, wet soil was encountered at 8 feet bgs indicating a possible discontinuous zone of perched groundwater. No other wet or perched zones were noted in other borings drilled at the subject property.

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. However, based on San Leandro Bay located approximately 3/4 mile south of the site, the water body that separates the City of Oakland from the main island of the City of Alameda and from Bay Farm Peninsula, the groundwater may have a greater southerly flow component than commonly reported.

Historically, groundwater elevations in well MW-2 located on the northeast side of the site and MW-4 located on the southeasterly side of the site, have consistently been reported to have slightly higher groundwater levels than other on-site wells, which indicates that the local groundwater flow follows the regional flow to the west. Conversely, at the Unocal Station at 4251 East 14th Street, located approximately 300 feet southwest of the subject site, groundwater was reported to fluctuate between the southwest, east-northeast and northeast

directions based on sampling in the early 1990s. A second nearby UST site, U-Haul at 5330 14th Street, notes that groundwater first occurs between 18 and 22 feet bgs and flows to the south and southwest at a gradient of 0.001 feet per foot. In summary, the site groundwater flow direction appears to follow the regional groundwater flow direction to the west but locally, variations in the groundwater flow direction have been reported in this area.

C. Historical Site Use

A detailed description of historical uses of the subject property and surrounding area was compiled in a Phase I Environmental Site Assessment (ESA) by AllWest Environmental (August 10, 1995). In summary, the earliest available recorded use of the property is as a dance hall in 1903. Site use between 1903 and 1946 is unknown. Around 1946, an L-shaped building was constructed on the site. This building was used as office space and for auto repair and painting. The date of demolition of this building is not known.

In 1960 or 1961, the present building was constructed for use as a Safeway grocery store. Grand Auto leased the building from the property owner in 1971 and, in 1971, installed pump islands and three 10,000-gallon underground storage tanks for retail gasoline sales. The tanks were subsequently removed in 1986 and the remaining associated conveyance piping was removed in 1993. Grand Auto also operated a car wash at the site from approximately 1972 to 1986. The drainage sump associated with the car wash was removed in August 1992.

D. Historical Use of the Surrounding Area

In addition to residential housing, numerous commercial operations have existed in the areas immediately adjacent to the site. Various adjacent or nearby parcels have been used as retail gasoline stations, auto repair shops, auto paint shops, auto transmission repair shops, auto dealerships and most notably, retail dry cleaners which commonly use PCE, the target contaminant, as part of their on-site activities. In many cases, these parcels have been used for these purposes since the late 1940's or early 1950's.

E. Previous Investigations and Remedial Actions

Underground Tank Removal

The underground fuel tanks at the site were reportedly 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 5, 1992. The investigation included drilling two borings in the assumed vicinity of the former location of the underground fuel storage tanks (Figure 2). Analyses of soil samples from these borings did not indicate significant petroleum hydrocarbon concentrations (Hart Crowser, 1992b).

Drainage Sump Removal and Installation of MW-1

The car wash drainage sump and surrounding soil were removed on August 7, 1992. Hart Crowser collected a soil sample "S2C" from beneath the sump at the bottom of the excavation, 8.5 feet below ground surface (bgs). Analyses of the sample indicated the presence of petroleum hydrocarbons and low concentrations of PCE in the soil beneath the sump. A groundwater monitoring well, MW-1, was installed approximately 10 feet southwest of the sump, in a down to cross gradient direction. Despite some slightly wet conditions encountered at 8 feet bgs, free groundwater was not encountered until approximately 36 feet bgs. Hart Crowser speculated that the shallow, wet zone may indicate a discontinuous perched zone of groundwater at the site at approximately 8 feet bgs. The results of this phase of the investigation were summarized in the "Preliminary Site Investigation Report" (Hart Crowser, 1992b).

Groundwater Well Installations of MW-2 through MW-4 and HC-1

During April 1993, Hart Crowser drilled five soil borings and converted three of them to underground monitoring wells, MW-2, MW-3 and MW-4 at the Grand Auto Store. A groundwater monitoring well, HC-1, was also installed at this time at the adjacent, former Super Tire Facility. Two of the soil borings were completed in the area of the former car wash sump. Soil samples from these two borings indicated that the total petroleum hydrocarbons (TPH) and PCE detected immediately below the sump in sample "S2C" were neither laterally nor vertically widespread. The wells were developed and sampled in April 1993. The results of this phase of the assessment were summarized in a report, "Supplemental Site Investigation," (Hart Crowser, 1993).

Conveyance Piping Removal

In 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 four locations. Each sample was analyzed for total petroleum hydrocarbons as gasoline (TPH-g) and benzene, toluene, ethylbenzene, and xylenes (BTEX). TPH-g and BTEX were not detected in any of the samples analyzed. Between February 1994 and May 1996, Hart Crowser sampled the five groundwater wells six more times. The groundwater elevations and analytical results from these sampling events are presented in Table 2 and Table 3, respectively.

Facility Closure Report for Super Tire

As previously noted, 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 its letter to PACCAR dated December 27, 1993, 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, ACHCS approved the destruction of the single groundwater well, HC-1, located on the former Super Tire facility.

Facility Closure Report for Grand Auto

Hart Crowser submitted a Facility Closure Report on February 16, 1996 requesting site closure. The request was based on the following:

- Potential onsite sources related to Grand Auto operations (USTs, pump islands, associated piping, and car wash sump) have been investigated and/or successfully remediated, thus are no longer considered to be sources;
- Investigations of these potential onsite sources did not indicate evidence of a source of halogenated VOCs (chlorinated solvents) to the groundwater; and
- Several potential offsite sources of halogenated VOCs (chlorinated solvents) exist.

Hart Crowser recommended case closure for the site since the environmental issues associated with potential onsite sources of chemicals have been addressed. Halogenated VOCs remain in site groundwater, but these are 1) unrelated to the onsite sources that have been addressed; and 2) likely to be the result of releases at one or more of the numerous offsite potential sources located in the immediate vicinity of the site. Hart Crowser recommended abandonment of the remaining groundwater monitoring wells after closure certification approval by ACHCS and RWQCB (Hart Crowser, 1996a).

Hart Crowser 1996 Risk Assessment

In order to obtain site closure for the soil portion of the site, Hart Crowser completed an ASTM, Tier 1, RBCA assessment for the subject property (September 27, 1996). The risk assessment was prepared to meet the closure requirements of the ACHCS and the RWQCB. The risk assessment was conducted in accordance with the framework developed by the American Society of Testing Materials (ASTM), designated the Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites (RBCA) Tier 1 analysis.

The RBCA Tier 1 evaluation is a risk-based analysis to develop non-site-specific values for direct and indirect exposure pathways utilizing conservative exposure assumptions for potential pathways and various property use categories. In Tier 1 analysis, a table of Risk-Based Screening Levels (RBSLs) are derived for standard exposure scenarios using current Reasonable Maximum Exposure (RME) and toxicological parameters as recommended by the EPA. Site conditions are then compared against the appropriate RBSLs to determine whether site conditions satisfy the criteria for regulatory closure or warrant a more site-specific evaluation (ASTM, 1995).

The risk assessment was conducted to evaluate the probability and magnitude of adverse impacts to human health associated with actual or potential exposures to site related

chemicals remaining at the Grand Auto Supply site. Based on an evaluation of existing site data, the exposure pathways that were quantitatively assessed were the inhalation of vapors volatilizing from subsurface soils and the inhalation of vapors volatilizing from groundwater. The compounds considered in the subsurface soils exposure pathway were PCE and benzene, toluene, ethylbenzene, and xylene (BTEX). The compounds considered in the groundwater exposure pathway were chlorinated solvents and excluded BTEX since none have been detected in the groundwater since 1994. The exposure models utilized in this risk assessment assumed that the receptors were on site, at the location of the boring or well with the highest detected concentration for each compound of concern, in accordance with the Tier 1 evaluation guidance (ASTM, 1995). To account for all possible future uses of the site, RBSLs were calculated for both residential and commercial/industrial uses.

These RBSLs correspond to a chemical concentration in the selected environmental media resulting in a non-carcinogenic hazard quotient (HQ) of 1 and a carcinogenic risk level of one in a million (1×10^{-6}). The RBSLs were compared with the maximum concentration of the chemical found in the corresponding media on site. The use of the maximum detected concentration of chemical is a conservative assumption and will overestimate the actual or potential risks associated with current site conditions.

No on-site concentrations were noted above the RBSLs in subsurface soil or from vapors in soil from groundwater under either the residential or industrial exposure scenario. Therefore, Hart Crowser (1996b) concluded that the residual presence of chemicals in subsurface soils does not pose an unacceptable risk to human health under current or potential future use scenarios, and the site satisfies the conditions for regulatory site closure from a human health risk perspective. A copy of the risk assessment is included as Appendix C of this report.

ACHCS 1996 Closure Letter for Site Soils

Based on the Hart Crowser risk assessment (1996b), ACHCS concluded in December 30, 1996 letter to PACCAR that the soils on-site do not pose a threat to public health.

Hart Crowser 1996 Data Gaps

The only pathway not addressed in the Hart Crowser risk assessment (1996b) is the ingestion of groundwater.

AllWest 2000 Site Closure and Groundwater Monitoring Report

In 1999 and 2000 AllWest completed the following tasks at the subject property:

- The redevelopment and sampling of the five on-site groundwater wells to demonstrate that the residual contamination in the groundwater is natural attenuating and likely from off-site source(s),

- An update of the previously completed ASTM Tier 1 risk assessment by discounting the groundwater ingestion pathway by the completion of an 1/2 mile radius well survey; and
- The comparison of the maximum on-site groundwater contamination concentrations to recently developed, Oakland specific, Tier 1 risk based screening levels (RBSLs) to document that this is a low risk case and candidate for "No Further Action" status by the ACHCS, the lead oversight agency, as per regulations and guidelines of the RWQCB, the lead State agency in charge of protecting the groundwater quality of the Greater Oakland Area.

The redevelopment and sampling of the existing five on-site groundwater monitoring wells, MW-1 through MW-4 and HC-1, occurred during the week of November 1, 1999. The groundwater elevations measured during this investigation ranged from a low of 3.09 feet above mean sea level (MSL) from wells HC-1 and MW-3 located along the western side of the investigated area to a high of 3.16 feet above MSL from well MW-4 located along the southeastern side of the subject property. As compared to previous groundwater levels, the measurements conducted during this investigation continued to show a gradual increase in groundwater levels since the California drought years of the late 1980s and early 1990s. Based on groundwater elevations measured during this sampling event, the groundwater flow direction is generally to the west with an extremely flat gradient of 0.002 feet per foot.

Chlorinated solvents were detected in groundwater samples collected during the November 1999 sampling event from all five monitoring wells sampled during this investigation. Concentrations of PCE ranged from a high of 150 parts per billion (ppb) from MW-3 located towards the center of the study area to a low of 7.6 ppb from MW-2 located at the northeast boundary of the subject property. TCE and cis-1,2-DCE followed similar trends as PCE but at lower concentrations. The only other HVOCs reported from this sampling event above their respective laboratory detection limits were dichlorodifluoromethane (Freon 12) and carbon tetrachloride. Freon 12 was reported in all five groundwater wells ranging from a high of 62 ppb from MW-1 to a low of 14 ppb from MW-3. Carbon tetrachloride was only reported in one groundwater sample. Carbon tetrachloride was reported from MW-2 at 1 ppb. Other HVOCs previously reported, including 1,1,1-trichloroethane (1,1,1-TCA), 1,2-dichloroethane (1,2-DCA), vinyl chloride and chloroform were not reported above respective laboratory detection limits from this sampling event.

Total petroleum hydrocarbon as gasoline (TPH-g) was only reported above its laboratory detection limit in one of the five groundwater samples during the November 1999 sampling event. TPH-g was reported at 61 ppb from MW-3. None of the gasoline constituents benzene, toluene, ethylbenzene, and total xylenes (BTEX) compounds or Methyl t-Butyl Ether (MTBE) were reported above their respective laboratory detection limits in any of the groundwater samples. Based on the lack of reportable concentrations

of BTEX and MTBE and only low levels of TPH-g, petroleum hydrocarbons are not considered an unacceptable risk to human health or the environment.

The chlorinated solvent concentrations were noted to generally decrease from the November 1999 sampling as compared to the previous sampling period event conducted in 1996. The maximum concentration of PCE measured in the November 1999 sampling event, 150 ppb, is well below the historic maximum concentration of 340 ppb reported from a 1994 sampling event. Similar decreasing trends were noted for TCE and cis-1,2 DCE.

As part of the 1999/2000 investigation activities, AllWest reviewed and updated the previously completed ASTM, Tier 1 RBCA assessment prepared by Hart Crowser (September 27, 1996) for the subject property. The focus of the update was two-fold. Firstly, the update was performed to document that the groundwater ingestion pathway is incomplete by conducting a well survey of the area. Secondly, the existing site data was compared to published risk based action levels to document that the residual site contaminants are not an unacceptable risk to human health or the environment.

In order to assess if the groundwater in the vicinity of the subject property is being used as a drinking water source, AllWest contacted the County of Alameda, Public Works Agency to locate all permitted wells in the area. The search radius was set at an 1/2 mile radius of the subject property. The radius of 1/2 mile was selected since, based on contaminant data distributions and degradational trends, it is highly unlikely that contaminants from the subject site have migrated significantly (more than 1/8 mile) off the subject property. A total of 34 wells reported to be within the search radius. The majority or 27 of the 34 wells were noted as groundwater monitoring wells. Also noted on the survey were three extraction wells associated with groundwater remediation activities, three soil borings as part of remedial investigation activities and one destroyed well. No groundwater supply wells for industrial, agricultural, municipal or residential uses were identified within 1/2 mile of the subject property.

The maximum site groundwater concentrations were compared to the recently compiled, City of Oakland specific, Tier 1 RBSLs. The Tier 1 carcinogenic RBSL recently developed for the inhalation of PCE vapors being emitted from the groundwater into indoor commercial structures was recently set at 3,300 ppb (Oakland Urban Land Development Program: Guidance Document, City of Oakland Public Works Department, January 1, 2000). This value is well above the maximum on-site concentration of 340 ppb reported in June 1994 and the most recent concentration reported of 120 ppb in November 1999. Similarly, the maximum concentrations of the other contaminants TCE, cis-1,2-DCE, 1,1,1-TCA, 1,2-DCA, chloroform, carbon tetrachloride and vinyl chloride reported from the site groundwater were at least one order of magnitude lower than their respective Oakland Tier 1 RBSLs.

AllWest concluded in their August 2000 report that the results of the November 1999 groundwater sampling event indicated that the shallow groundwater of the subject property is impacted with chlorinated solvents. The spatial distribution of the chlorinated solvents did not indicate a clear source area due to similar contaminant concentrations and the flat hydraulic gradient of the area. However, based on the ratio of PCE to TCE and cis-1,2-DCE, the likely source of the bulk of the chlorinated solvents is the existing or former dry cleaners located southeast of the subject property. Based on site specific results and current health risk based action levels, AllWest concluded that it is unlikely that the residual contamination in the site groundwater poses as an unacceptable risk to human health or the environment. AllWest recommended that ACHCS grant "no further action status" for the residual chlorinated solvents in the groundwater of the subject property and requested approval to abandon the existing five on-site groundwater wells.

ACHCS November 2000 No Further Remediation Letter

ACHCS reviewed AllWest's August 2000 report and noted that they and the RWQCB do not grant closure for sites with groundwater impacted above MCLs. However, ACHCS did state that active remediation for the residual chlorinated solvents in the soil or groundwater is not required and requested the annual sampling of wells MW-1 through MW-4. ACHCS also added that groundwater well, HC-1, located on the former Super Tire facility may be decommissioned at this time.

This report summarizes the sampling of wells MW-1 through MW-4 and the decommissioning of well HC-1.

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 further demonstrate that the chlorinated solvents are naturally attenuating. The sampling of the four wells, MW-1 through MW-4, occurred June 19, 2001.

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 groundwater elevation in each well. A dissolved oxygen reading was then measured in each well prior to the removal of groundwater equal or greater to three well casing volumes. During purging, groundwater field parameters (temperature, pH, oxygen reduction potential (redox) and conductivity) were monitored and recorded on a field log. After purging, samples were collected from each well for chemical analysis. Copies of the groundwater sampling field logs are presented in Appendix A. The purged groundwater was removed from the site on August 17, 2001 by IWM, a State licensed hazardous waste transporter, to

Seaport Environmental in Redwood City, California under appropriate State and local regulations.

B. Well Sampling

The groundwater was observed during purging and sampling to range from a light brown color in wells MW-1, MW-2 and MW-3A to a slight grayish brown color in MW-4. Field parameters measured were all within normal ranges for shallow groundwater in this portion of Oakland. pH measured in the samples ranged 6.39 to 6.61. Conductivity levels were measured between 410 μ S to 634 μ S. Temperatures were measured between 71.8 to 78.3 °F.

C. Groundwater Depth and Gradient

The depth to groundwater ranged between 24.20 feet below ground surface (bgs) in MW-4 to 25.81 feet bgs in MW-3A. As compared to previous groundwater levels, the measurements conducted during this investigation continued to show a gradual increase from 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 were very uniform. As shown on Figure 3, Groundwater elevations ranged from a low of 4.86 feet MSL from MW-1 to a high of 4.89 feet MSL from MW-3A. The groundwater flow direction appeared this sampling event to flow towards MW-1 located near the center of the site from MW-2 in northeast, MW-4 in the south, and from MW-3A in the west. The groundwater gradient calculated from MW-1 to MW-4 is 0.0003 feet per foot to the north.

D. Well Destruction

As per ACHCS approval, the groundwater monitoring well, HC-1, was abandoned by BAE, a licensed C-57 drilling contractor, following State and local regulations on June 18, 2001. A permit, # WO1-438, was issued by Alameda County Public Works Agency (ACPWA) for the well destruction on June 6, 2001.

The well was destroyed by drilling out the well materials (4- inch diameter PVC casing and screen, sand filter pack, bentonite seal, grout and concrete) with 10-inch diameter hollow stem augers down to the base of the well located at 45.5 feet bgs. The well cavity was backfilled with a portland cement/bentonite mixture from the bottom upwards by the use of a tremie pipe. The soil cuttings were removed from the site on August 17, 2001 by IWM, a State licensed hazardous waste transporter, to Soil Public Services in Livermore, California under appropriate State and local regulations.

Copies of the ACPWA well destruction permit, Department of Water Resources (DWR) well completion report and ACHCS well abandonment approval letter are contained in Appendix B of this report.

IV. LABORATORY ANALYSES

The collected groundwater samples were forwarded to STL Chromalab of Pleasanton, California, a state certified analytical laboratory, for chemical analyses. The samples were analyzed to detect the presence halogenated volatile organic compounds (HVOCs) including chlorinated solvents by EPA Method 8010.

A. Halogenated Volatile Organic Compounds Results (HVOCs)

PCE and its common degradational products, TCE and cis-1,2-DCE, were detected in all four groundwater samples collected during this investigation. Concentrations of PCE ranged from a high of 130 parts per billion (ppb) from MW-1 to a low of 9.1 ppb from MW-2. TCE and cis-1,2-DCE followed similar trends as PCE but at lower concentrations. The maximum concentration of TCE was reported from MW-3A at 21 ppb. The maximum concentration of cis-1,2-DCE was reported from MW-1 at 5.3 ppb.

The only other HVOCs reported from this sampling event above their respective laboratory detection limits included dichlorodifluoromethane (Freon 12) and carbon tetrachloride. Freon 12 was reported in all five groundwater wells. The maximum concentration of Freon 12 was reported from MW-2 at 38 ppb which is down from the previous sampling event of 55 ppb. Carbon tetrachloride was only reported in one groundwater sample. Carbon tetrachloride was reported from MW-2 at 0.83 ppb which is down from 2 ppb from the previous sampling event. Other HVOCs previously reported, including 1,1,1-TCA, 1,2-DCA, vinyl chloride and chloroform were not reported above their respective laboratory detection limits from this 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 samples from MW-3A were remarkably similar. No target contaminants were reported above their respective laboratory detection limits in the trip blank. 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 Chromalab 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 Contaminants

The spatial distribution of the chlorinated solvents observed during this and previous groundwater sampling events do not indicate a clear trend due to similar concentrations and the flat hydraulic gradient. However, based on sampling results, it appears that the chlorinated solvents contamination is found up and down gradient of the subject property and may be a regional occurrence. Furthermore, the coarse grained sands and gravels noted in the boring logs of the monitoring wells would generally promote the spread of the contaminants. Conversely, the flat hydraulic gradient would generally impede the migration of contaminants.

B. Contaminant Trend Analyses

The chlorinated solvent concentrations have generally decreased since the last sampling period. The maximum concentration of PCE from this 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 and cis-1,2 DCE. For further details on the contaminant concentrations over time, please see Table 3.

Ratios of the chlorinated solvents are commonly used to assess the likely source and age of contaminant releases. This is based on the assumption that most PCE plumes originate as a pure product of PCE as the result from leakage or spillage from dry cleaning facilities, and through time, the PCE will naturally biodegrade to TCE and cis-1,2-DCE and ultimately vinyl chloride as the plume disperses in the down gradient flow direction.

The ratios of PCE to TCE and cis-1,2-DCE from this investigation coupled with the flat groundwater gradient indicate that this plume likely originated from a dry cleaners located southeast of the subject property since the bulk of the chlorinated solvents are PCE (about 80 percent) with lesser amounts of TCE and cis-1,2-DCE (about 20 percent). That is, by the time the PCE from the dry cleaners has migrated on to the subject property, approximately 20 percent of the PCE has degraded to TCE or cis-1,2-DCE.

This PCE to TCE and cis-1,2-DCE ratio was observed in all of the wells sampled except for MW-2 which currently has about equal amounts of PCE to TCE. Historically, TCE has been reported to be more than 7 times higher than PCE indicating that the TCE from this location is not solely a degradational product of PCE. However, as previously noted, the levels of TCE in this well have significantly decreased from a high of 130 ppb in September 1994 to 5.3 ppb in June 2001, which is only slightly above the drinking water standard (MCL) of 5 ppb.

VI. CONCLUSIONS AND RECOMMENDATIONS

The results of this groundwater sampling event indicate that the shallow groundwater of the subject property is impacted with chlorinated solvents. The spatial distribution of the chlorinated solvents do not indicate a clear source area due to similar contaminant concentrations and the flat hydraulic gradient of the area. However, based on the ratio of PCE to TCE and cis-1,2-DCE, the likely source of the bulk of the chlorinated solvents is the former or existing dry cleaners located southeast of the subject property.

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. AllWest continues to recommend closure for the subject property.

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 an independent laboratories nor for any analyte quantities falling below the recognized standard detection limits for the method utilized by the independent laboratories.

VIII. REFERENCES

- AllWest Environmental, Phase I Environmental Site Assessment, Grand Auto Store No. 43, Oakland, California, 1995.
- AllWest Environmental, Site Closure and Groundwater Monitoring Report, Grand Auto Store No. 43, 4240 East 14th Street, Oakland, California, August 15, 2000.
- ASTM E 1739, Standard Guide for Risk-Based Corrective Action Applied at Petroleum Released Sites, 1995.
- Hart Crowser, Sampling and Analysis Plan, Grand Auto/Super Tire Facilities, 1992a.
- Hart Crowser, Preliminary Site Investigation Report, Grand Auto/Super Tire Facilities, 1992b.
- Hart Crowser, Supplemental Site Investigation Report, Grand Auto/Super Tire Facilities, 1993.
- Hart Crowser, Facility Closure Report, Grand Auto Supply, 1996a.
- Hart Crowser, Risk Assessment, Grand Auto Supply, 1996b.
- Environmental Protection Agency, Region 9, Preliminary Remedial Goals, 1999
- Oakland Urban Land Development Program: Guidance Document, City of Oakland Public Works Department, January 1, 2000

Table 1 - Well Construction Details and Field Parameters

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

AllWest Project Number 21082.28

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)
MW-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

Well Number	Date	pH	Conduc. (uS)	Temp. (oF)
MW-1	19-Jun-01	6.50	560	71.8
MW-2	19-Jun-01	6.61	634	78.3
MW-3A	19-Jun-01	6.39	410	72.4
MW-4	19-Jun-01	6.52	582	72.1
HC-1	19-Jun-01	NM	NM	NM

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

TABLE 2 - Groundwater Elevations
4240 East 14th Street
Oakland, California
Groundwater Elevations

Project Number 21082.28

Well Number	Top of Well Casing Feet above MSL	Depth to Groundwater Feet bgs	Groundwater Elevation Feet above MSL	Date Collected
MW-1	30.53	25.67	4.86	19-Jun-01
MW-1	30.53	27.40	3.13	4-Nov-99
MW-1	30.53	28.18	2.35	10-May-96
MW-1	30.53	29.34	1.19	15-Sep-95
MW-1	30.53	30.63	-0.30	31-Jan-95
MW-1	30.53	32.44	-1.91	20-Sep-94
MW-1	30.53	33.04	-2.51	7-Jun-94
MW-1	30.53	34.60	-4.07	18-Feb-94
MW-1	30.53	35.30	-4.77	17-Nov-93
MW-1	30.53	34.93	-4.40	4-Aug-93
MW-1	30.53	35.45	-4.92	5-May-93
MW-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
MW-2	30.41	34.79	-4.38	4-Aug-93
MW-2	30.41	35.32	-4.91	5-May-93
MW-3A	30.70	25.81	4.89	19-Jun-01
MW-3	30.31	27.22	3.09	4-Nov-99
MW-3	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
MW-3	30.31	35.22	-4.91	5-May-93
MW-4	29.08	24.20	4.88	19-Jun-01
MW-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
MW-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
MW-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 - Groundwater Analytical Results
4240 East 14th Street
Oakland, California

Project Number 21082.28
All results in parts per billion (ppb)

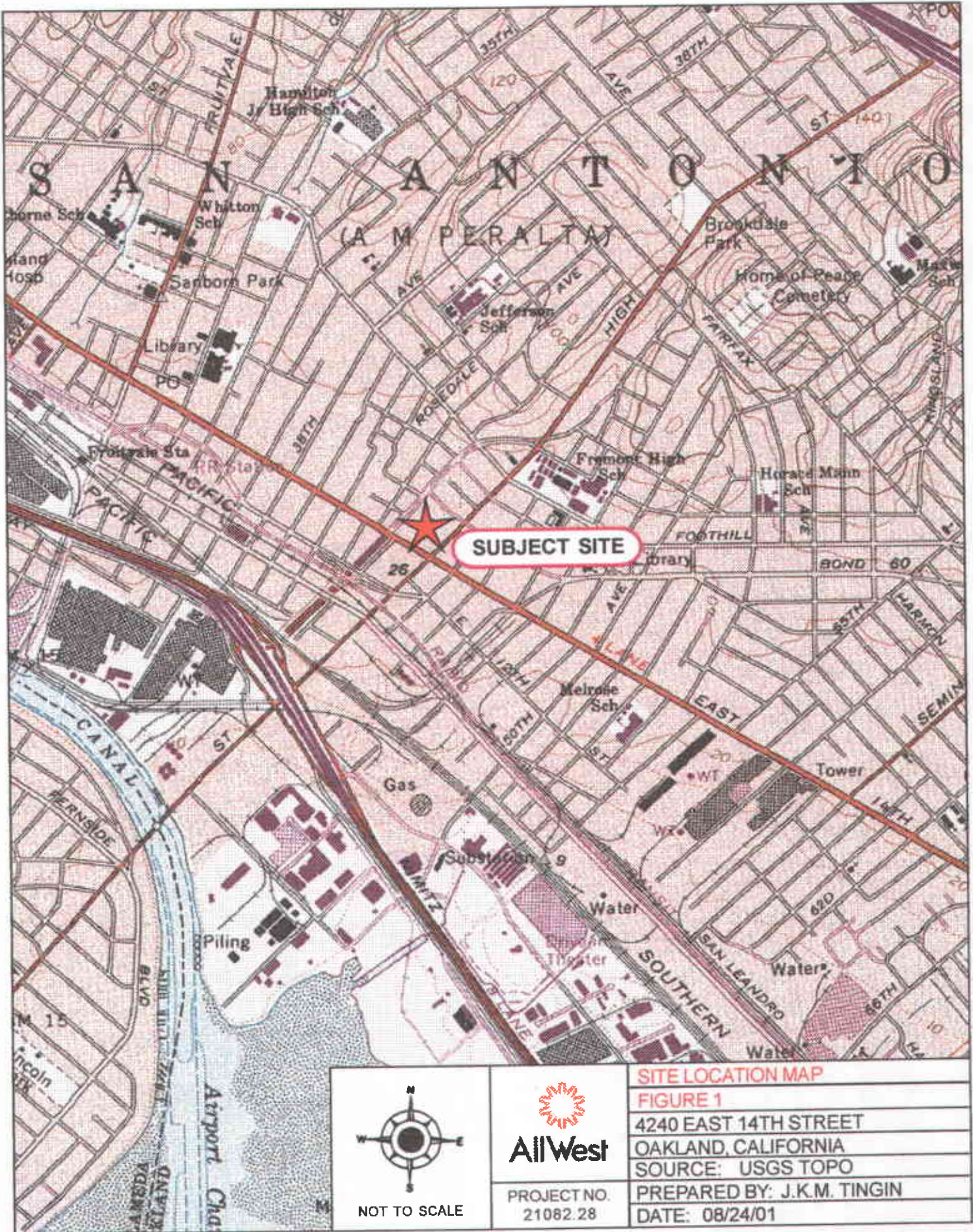
Location	PCE	TCE	cis-1,2 DCE	FREON 12	Chloroform	1,1,1-TCA	1,2-DCA	Vinyl Chloride	Carbon Tetrachloride	All others	Date Collected
MW-1	130	17	5.3	35	ND 5	ND 5	ND 5	ND 5	ND	ND	19-Jun-01
MW-1	120	17	6.6	82	ND	ND	ND	ND	ND	ND	4-Nov-99
MW-1	270	24	4.3	NR	2.6	ND 1.3	ND 1.3	ND 1.3	ND	ND	10-May-96
MW-1	200	25	6.8	NR	1.4	ND 0.5	ND 0.5	ND 0.5	ND	ND	15-Sep-95
MW-1	54	13	9.7	NR	ND 1	ND 1	ND 1	ND 2	ND	ND	31-Jan-95
MW-1	54	13	9.3	NR	ND 1	ND 1	ND 1	ND 2	ND	ND	31-Jan-95
MW-1	270	37	19	NR	ND 5	ND 5	ND 5	ND 5	ND	ND	20-Sep-94
MW-1	270	36	16	NR	ND 5	ND 5	ND 5	ND 5	ND	ND	20-Sep-94
MW-1	200	28	25	NR	1.6	ND 0.5	ND 0.5	ND 0.5	ND	ND	7-Jun-94
MW-1	340	35	22	NR	1.5	ND 0.5	ND 0.5	ND 0.5	ND	ND	7-Jun-94
MW-1	200	25	12	NR	1	ND 0.5	ND 0.5	ND 0.5	ND	ND	16-Feb-94
MW-1	230	26	15	NR	1.8	ND 0.5	ND 0.5	ND 1	ND	ND	17-Nov-93
MW-1	290	23	10	NR	ND 5	ND 5	ND 5	ND 10	ND	ND	4-Aug-93
MW-1	300	22	8.7	37	1	ND 0.5	ND 0.5	ND 1	ND	ND	26-Apr-93
MW-1	300	22	8.7	110	1.1	0.6	ND 0.5	ND 1	ND	ND	26-Apr-93
MW-1	220	28	14	NR	ND 3	ND 3	ND 1	-	ND	ND	19-Jan-93
MW-1	310	26	11	NR	1.1	ND 0.5	ND 0.6	-	ND	ND	10-Sep-92
MW-2	9.1	5.3	1	38	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.83	ND	19-Jun-01
MW-2	7.6	8.1	1.9	55	ND	ND	ND	ND	2	ND	4-Nov-99
MW-2	7.2	51	13	NR	ND 1	ND 1	ND 1	ND 1	ND	ND	10-May-96
MW-2	6.3	52	17	NR	ND 0.5	ND 0.5	ND 0.5	0.8	ND	ND	15-Sep-95
MW-2	6.5	89	17	NR	ND 0.5	ND 0.5	0.9	0.9	ND	ND	15-Sep-95
MW-2	3	60	17	NR	ND 1	ND 1	ND 1	ND 2	ND	ND	31-Jan-95
MW-2	6	130	36	NR	ND 5	ND 5	ND 5	ND 5	ND	ND	20-Sep-94
MW-2	6.9	120	31	NR	ND 0.5	ND 0.5	1.8	ND 0.5	ND	ND	7-Jun-94
MW-2	4.8	75	25	NR	ND 0.5	ND 0.5	1.5	ND 0.5	ND	ND	18-Feb-94
MW-2	6.1	32	8.7	NR	ND 0.5	ND 0.5	ND 0.5	ND 1	ND	ND	17-Nov-93
MW-2	7.2	110	22	NR	ND 1.2	ND 1.2	ND 1.2	ND 2.4	ND	ND	4-Aug-93
MW-2	7.5	32	8.5	31	0.9	0.6	0.6	ND 1	ND	ND	26-Apr-93
MW-3A	120	21	ND 5	ND 10	ND 5	ND 5	ND 5	ND 5	ND 5	ND	19-Jun-01
MW-3	150	24	14	14	ND	ND	ND	ND	ND	ND	4-Nov-99
MW-3	160	25	7.2	NR	ND 1	ND 1	ND 1	ND 1	ND	ND	10-May-96
MW-3	170	25	6.2	NR	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND	ND	15-Sep-95
MW-3	160	34	6.2	NR	ND 1	ND 1	ND 1	ND 5	ND	ND	31-Jan-95
MW-3	240	37	11	NR	ND 5	ND 5	ND 5	ND 5	ND	ND	20-Sep-94
MW-3	160	34	6.3	NR	0.6	0.6	ND 0.5	ND 0.5	ND	ND	7-Jun-94
MW-3	85	19	5	NR	0.7	ND 0.5	ND 0.5	ND 0.5	ND	ND	18-Feb-94
MW-3	170	29	12	NR	1.3	0.8	ND 0.5	ND 1	ND	ND	17-Nov-93
MW-3	170	26	ND 5	NR	ND 5	ND 5	ND 5	ND 10	ND	ND	4-Aug-93
MW-3	79	21	9.7	35	ND 0.5	0.8	ND 0.5	ND 1	ND	ND	26-Apr-93
MW-4	47	7.4	1.2	19	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND	19-Jun-01
MW-4	61	10	2.2	41	ND	ND	ND	ND	ND	ND	4-Nov-99
MW-4	190	22	2.5	NR	ND 1.3	ND 1.3	ND 1.3	ND 1.3	ND	ND	10-May-96
MW-4	160	24	4.4	NR	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND	ND	15-Sep-95
MW-4	140	20	4.7	NR	ND 1	ND 1	ND 1	ND 5	ND	ND	31-Jan-95
MW-4	220	32	5	NR	ND 5	ND 5	ND 5	ND 5	ND	ND	20-Sep-94
MW-4	140	26	7.1	NR	0.9	0.9	ND 0.5	ND 0.5	ND	ND	7-Jun-94
MW-4	120	31	6	NR	1.9	0.7	ND 0.5	ND 0.5	ND	ND	18-Feb-94
MW-4	67	20	6.6	NR	1	ND 0.5	ND 0.5	ND 1	ND	ND	17-Nov-93
MW-4	110	16	ND 5	NR	ND 5	ND 5	ND 5	ND 10	ND	ND	4-Aug-93
MW-4	76	17	3.9	28	0.6	ND 0.5	ND 0.5	ND 1	ND	ND	26-Apr-93
HC-1	100	17	6.7	43	ND	ND	ND	ND	ND	ND	4-Nov-99
HC-1	200	27	13	NR	ND 5	ND 5	ND 5	ND 5	ND	ND	10-May-96
HC-1	170	27	14	NR	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND	ND	15-Sep-95
HC-1	120	27	11	NR	ND 1	ND 1	ND 1	ND 5	ND	ND	31-Jan-95
HC-1	190	37	15	NR	ND 5	ND 5	ND 5	ND 5	ND	ND	20-Sep-94
HC-1	180	42	22	NR	1	ND 0.5	ND 0.5	ND 0.5	ND	ND	7-Jun-94
HC-1	140	30	13	NR	0.7	ND 0.5	ND 0.5	ND 0.5	ND	ND	18-Feb-94
HC-1	150	22	11	NR	0.6	ND 0.5	ND 0.5	ND 0.5	ND	ND	18-Feb-94
HC-1	130	27	16	NR	1.1	0.7	ND 0.6	ND 2	ND	ND	17-Nov-93
HC-1	63	27	15	NR	ND 0.5	ND 0.5	ND 0.5	ND 1	ND	ND	4-Aug-93
HC-1	46	22	13	47	ND 0.5	ND 0.5	ND 0.5	ND 1	ND	ND	26-Apr-93
TRIP BLANK	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND	19-Jun-01
DUP-1 (MW-3A)	140	23	5.1	10	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND 2.5	ND	19-Jun-01
Maximum	340	130	38	110	2.6	0.9	1.8	0.9	2	ND	19-Jun-01
Minimum	3	5.3	1	10	0.6	0.6	0.6	0.8	0.83	ND	19-Jun-01
Oakland Tier 1											
GW Indoor (C)	3,300	11,000	NA	NA	12,000	NA	11,000	59	260	NA	
GW Indoor (H)	>sol	230,000	1,000,000	NA	800,000	> sol	830,000	NA	7,800	NA	
GW Outdoor (C)	51,000	150,000	NA	NA	130,000	NA	69,000	960	4200	NA	
GW Outdoor (H)	>sol	>sol	>sol	NA	>sol	> sol	5,000,000	NA	130,000	NA	

Notes:

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

NR = not reported

The number behind ND is the decion limit



NOT TO SCALE



AllWest

PROJECT NO.
21082.28

SITE LOCATION MAP

FIGURE 1

4240 EAST 14TH STREET

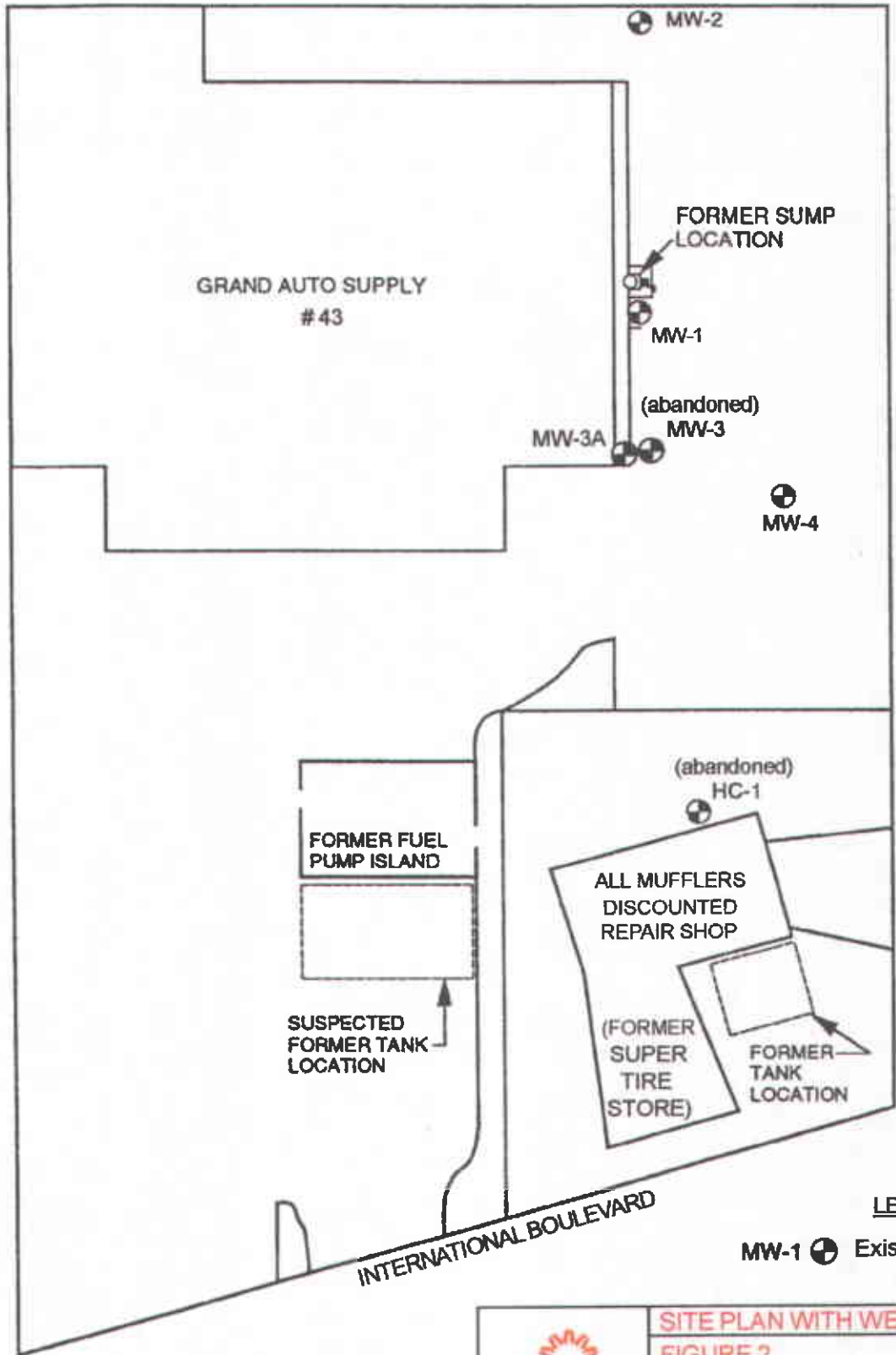
OAKLAND, CALIFORNIA

SOURCE: USGS TOPO

PREPARED BY: J.K.M. TINGIN

DATE: 08/24/01

MISSION AUTOMOTIVE



HIGH STREET
 FORMER DRY CLEANERS
 EXISTING DRY CLEANERS

LEGEND:

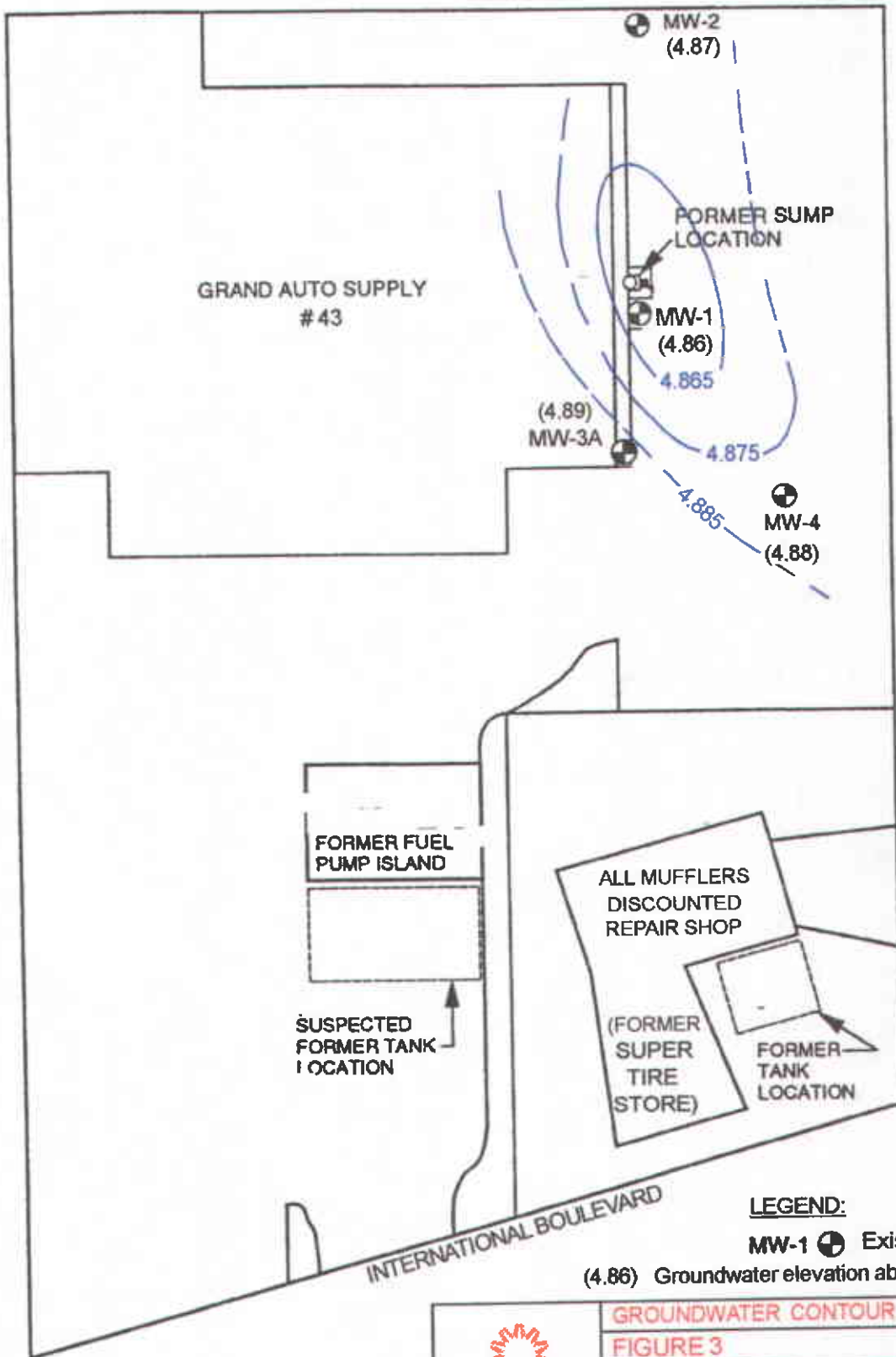
MW-1 Existing Well Location

Note:
 MW-3A replaced MW-3 on 05/25/00 and HC-1 abandoned on 06/18/01.



 AllWest	SITE PLAN WITH WELL LOCATIONS
	FIGURE 2
	4240 EAST 14TH STREET
	OAKLAND, CALIFORNIA
	SOURCE: ALLWEST
PROJECT NO. 21082.28	PREPARED BY: J.K.M. TINGIN
	DATE: 08/24/01

MISSION AUTOMOTIVE

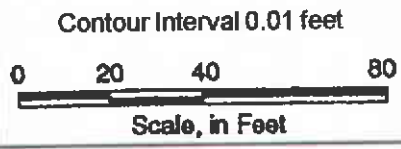


HIGH STREET
 FORMER DRY CLEANERS
 EXISTING DRY CLEANERS

INTERNATIONAL BOULEVARD

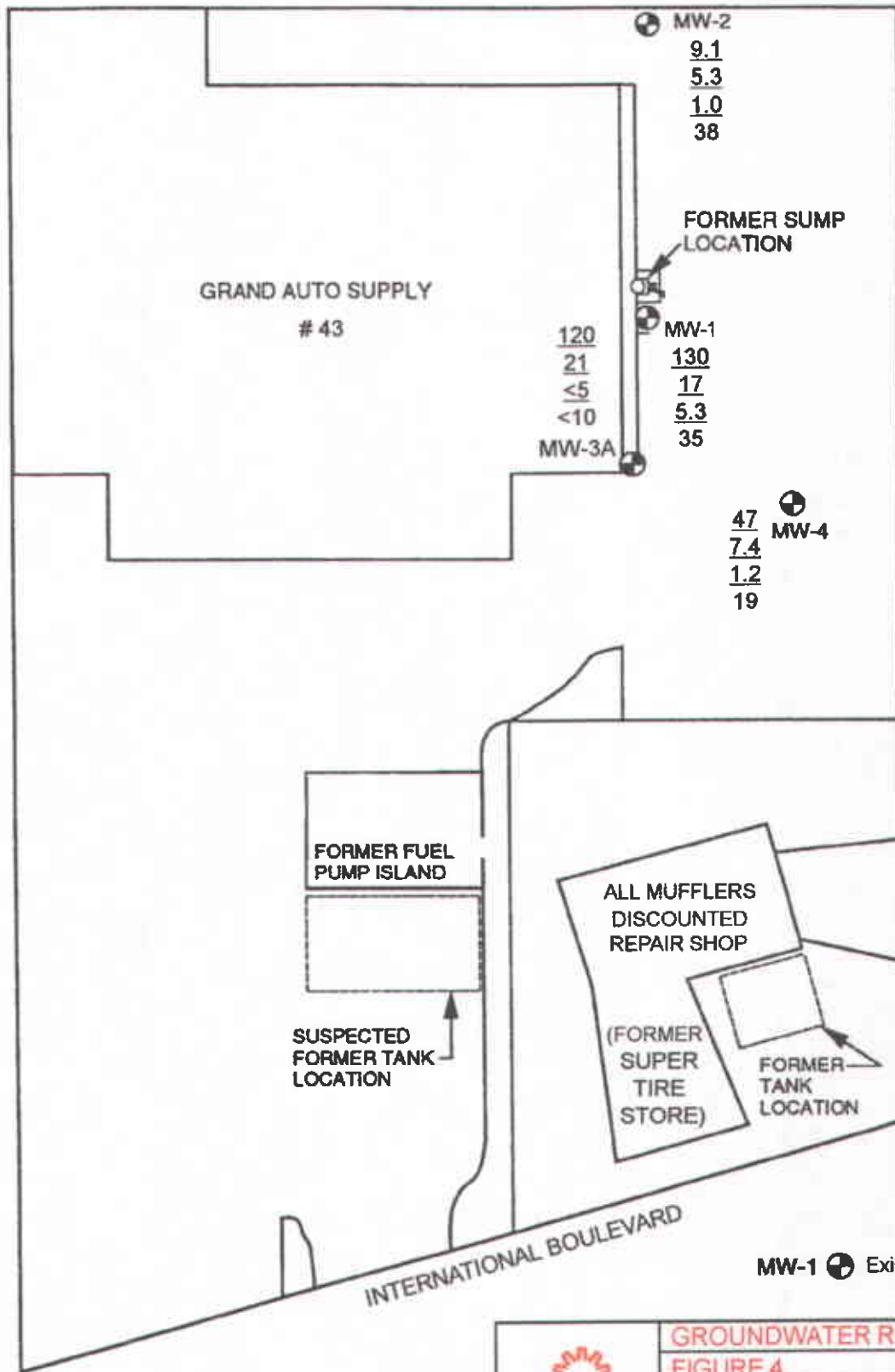
LEGEND:

MW-1 Existing Well Location
 (4.86) Groundwater elevation above mean sea level



	GROUNDWATER CONTOUR ELEVATION MAP
	FIGURE 3
	4240 EAST 14TH STREET
	OAKLAND, CALIFORNIA
	SOURCE: ALLWEST
PROJECT NO.	PREPARED BY: J.K.M. TINGIN
21082.28	DATE: 08/24/01

MISSION AUTOMOTIVE



FORMER DRY CLEANERS

EXISTING DRY CLEANERS

LEGEND:
 9.1 PCE
 5.3 TCE
 1.0 cis-1,2 DCE
 38 Dichlorodifluoromethane (freon 12)
 (Results in ppb)

MW-1 Existing Well Location



	GROUNDWATER RESULTS
	FIGURE 4
	4240 EAST 14TH STREET
	OAKLAND, CALIFORNIA
	SOURCE: ALLWEST
PROJECT NO.	PREPARED BY: J.K.M. TINGIN
21082.28	DATE: 08/24/01

Allwest Environmental
One Sutter Street, Suite 600
San Francisco, CA 94104-4923

Attn.: Mr. Robert Horwath

Project: 21082.28
Pallar 2001

Dear Mr. Horwath,

Attached is our report for your samples received on Tuesday June 19, 2001
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 August 3, 2001
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@chromalab.com

Sincerely,



Vincent Vancil

Halogenated Volatile Organic Compounds

Allwest Environmental	✉ One Sutter Street, Suite 600 San Francisco, CA 94104-4923
Attn: Robert Horwath	Phone: (415) 391-2510 Fax: (415) 391-2008
Project #: 21082.28	Project: Pallar 2001

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
MW-1	Water	06/19/2001	1
MW-2	Water	06/19/2001	2
MW-3A1	Water	06/19/2001	3
MW-3A2	Water	06/19/2001	4
MW-4	Water	06/19/2001	5
TRIP BLANK	Water	06/19/2001	6

To: Allwest Environmental

Test Method: 8010

Attn.: Robert Horwath

Prep Method: 5030

Halogenated Volatile Organic Compounds

Sample ID: MW-1	Lab Sample ID: 2001-06-0365-001
Project: 21082.28 Pallar 2001	Received: 06/19/2001 17:47
Sampled: 06/19/2001	Extracted: 06/21/2001 22:22
Matrix: Water	QC-Batch: 2001/06/21-02.25
Sample/Analysis Flag o (See Legend & Note section)	

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Dichlorodifluoromethane	35	10	ug/L	10.00	06/21/2001 22:22	
Vinyl chloride	ND	5.0	ug/L	10.00	06/21/2001 22:22	
Chloroethane	ND	5.0	ug/L	10.00	06/21/2001 22:22	
Trichlorofluoromethane	ND	5.0	ug/L	10.00	06/21/2001 22:22	
1,1-Dichloroethene	ND	5.0	ug/L	10.00	06/21/2001 22:22	
Methylene chloride	ND	50	ug/L	10.00	06/21/2001 22:22	
trans-1,2-Dichloroethene	ND	5.0	ug/L	10.00	06/21/2001 22:22	
cis-1,2-Dichloroethene	5.3	5.0	ug/L	10.00	06/21/2001 22:22	
1,1-Dichloroethane	ND	5.0	ug/L	10.00	06/21/2001 22:22	
Chloroform	ND	5.0	ug/L	10.00	06/21/2001 22:22	
1,1,1-Trichloroethane	ND	5.0	ug/L	10.00	06/21/2001 22:22	
Carbon tetrachloride	ND	5.0	ug/L	10.00	06/21/2001 22:22	
1,2-Dichloroethane	ND	5.0	ug/L	10.00	06/21/2001 22:22	
Trichloroethene	17	5.0	ug/L	10.00	06/21/2001 22:22	
1,2-Dichloropropane	ND	5.0	ug/L	10.00	06/21/2001 22:22	
Bromodichloromethane	ND	5.0	ug/L	10.00	06/21/2001 22:22	
2-Chloroethylvinyl ether	ND	5.0	ug/L	10.00	06/21/2001 22:22	
trans-1,3-Dichloropropene	ND	5.0	ug/L	10.00	06/21/2001 22:22	
cis-1,3-Dichloropropene	ND	5.0	ug/L	10.00	06/21/2001 22:22	
1,1,2-Trichloroethane	ND	5.0	ug/L	10.00	06/21/2001 22:22	
Tetrachloroethene	130	5.0	ug/L	10.00	06/21/2001 22:22	
Dibromochloromethane	ND	5.0	ug/L	10.00	06/21/2001 22:22	
Chlorobenzene	ND	5.0	ug/L	10.00	06/21/2001 22:22	
Bromoform	ND	20	ug/L	10.00	06/21/2001 22:22	
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	10.00	06/21/2001 22:22	
1,3-Dichlorobenzene	ND	5.0	ug/L	10.00	06/21/2001 22:22	
1,4-Dichlorobenzene	ND	5.0	ug/L	10.00	06/21/2001 22:22	
1,2-Dichlorobenzene	ND	5.0	ug/L	10.00	06/21/2001 22:22	
Trichlorotrifluoroethane	ND	20	ug/L	10.00	06/21/2001 22:22	
Chloromethane	ND	10	ug/L	10.00	06/21/2001 22:22	
Bromomethane	ND	10	ug/L	10.00	06/21/2001 22:22	
Surrogate(s)						
1-Chloro-2-fluorobenzene	96.9	50-150	%	10.00	06/21/2001 22:22	

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0365

To: Allwest Environmental
Attn.: Robert Horwath

Test Method: 8010
Prep Method: 5030

Halogenated Volatile Organic Compounds

Sample ID: MW-2	Lab Sample ID: 2001-06-0365-002
Project: 21082.28 Pallar 2001	Received: 06/19/2001 17:47
Sampled: 06/19/2001	Extracted: 06/21/2001 23:09
Matrix: Water	QC-Batch: 2001/06/21-02.25

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Dichlorodifluoromethane	38	1.0	ug/L	1.00	06/21/2001 23:09	
Vinyl chloride	ND	0.50	ug/L	1.00	06/21/2001 23:09	
Chloroethane	ND	0.50	ug/L	1.00	06/21/2001 23:09	
Trichlorofluoromethane	ND	0.50	ug/L	1.00	06/21/2001 23:09	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	06/21/2001 23:09	
Methylene chloride	ND	5.0	ug/L	1.00	06/21/2001 23:09	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	06/21/2001 23:09	
cis-1,2-Dichloroethene	1.0	0.50	ug/L	1.00	06/21/2001 23:09	
1,1-Dichloroethane	ND	0.50	ug/L	1.00	06/21/2001 23:09	
Chloroform	ND	0.50	ug/L	1.00	06/21/2001 23:09	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	06/21/2001 23:09	
Carbon tetrachloride	0.83	0.50	ug/L	1.00	06/21/2001 23:09	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	06/21/2001 23:09	
Trichloroethene	5.3	0.50	ug/L	1.00	06/21/2001 23:09	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	06/21/2001 23:09	
Bromodichloromethane	ND	0.50	ug/L	1.00	06/21/2001 23:09	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	06/21/2001 23:09	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	06/21/2001 23:09	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	06/21/2001 23:09	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	06/21/2001 23:09	
Tetrachloroethene	9.1	0.50	ug/L	1.00	06/21/2001 23:09	
Dibromochloromethane	ND	0.50	ug/L	1.00	06/21/2001 23:09	
Chlorobenzene	ND	0.50	ug/L	1.00	06/21/2001 23:09	
Bromoform	ND	2.0	ug/L	1.00	06/21/2001 23:09	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	06/21/2001 23:09	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	06/21/2001 23:09	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	06/21/2001 23:09	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	06/21/2001 23:09	
Trichlorotrifluoroethane	ND	2.0	ug/L	1.00	06/21/2001 23:09	
Chloromethane	ND	1.0	ug/L	1.00	06/21/2001 23:09	
Bromomethane	ND	1.0	ug/L	1.00	06/21/2001 23:09	
Surrogate(s)						
1-Chloro-2-fluorobenzene	100.0	50-150	%	1.00	06/21/2001 23:09	

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STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0365

To: Allwest Environmental

Test Method: 8010

Attn.: Robert Horwath

Prep Method: 5030

Halogenated Volatile Organic Compounds

Sample ID: MW-3A1	Lab Sample ID: 2001-06-0365-003
Project: 21082.28 Pallar 2001	Received: 06/19/2001 17:47
Sampled: 06/19/2001	Extracted: 06/22/2001 01:31
Matrix: Water	QC-Batch: 2001/06/21-02.25
Sample/Analysis Flag o (See Legend & Note section)	

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Dichlorodifluoromethane	ND	10	ug/L	10.00	06/22/2001 01:31	
Vinyl chloride	ND	5.0	ug/L	10.00	06/22/2001 01:31	
Chloroethane	ND	5.0	ug/L	10.00	06/22/2001 01:31	
Trichlorofluoromethane	ND	5.0	ug/L	10.00	06/22/2001 01:31	
1,1-Dichloroethene	ND	5.0	ug/L	10.00	06/22/2001 01:31	
Methylene chloride	ND	50	ug/L	10.00	06/22/2001 01:31	
trans-1,2-Dichloroethene	ND	5.0	ug/L	10.00	06/22/2001 01:31	
cis-1,2-Dichloroethene	ND	5.0	ug/L	10.00	06/22/2001 01:31	
1,1-Dichloroethane	ND	5.0	ug/L	10.00	06/22/2001 01:31	
Chloroform	ND	5.0	ug/L	10.00	06/22/2001 01:31	
1,1,1-Trichloroethane	ND	5.0	ug/L	10.00	06/22/2001 01:31	
Carbon tetrachloride	ND	5.0	ug/L	10.00	06/22/2001 01:31	
1,2-Dichloroethane	ND	5.0	ug/L	10.00	06/22/2001 01:31	
Trichloroethene	21	5.0	ug/L	10.00	06/22/2001 01:31	
1,2-Dichloropropane	ND	5.0	ug/L	10.00	06/22/2001 01:31	
Bromodichloromethane	ND	5.0	ug/L	10.00	06/22/2001 01:31	
2-Chloroethylvinyl ether	ND	5.0	ug/L	10.00	06/22/2001 01:31	
trans-1,3-Dichloropropene	ND	5.0	ug/L	10.00	06/22/2001 01:31	
cis-1,3-Dichloropropene	ND	5.0	ug/L	10.00	06/22/2001 01:31	
1,1,2-Trichloroethane	ND	5.0	ug/L	10.00	06/22/2001 01:31	
Tetrachloroethene	120	5.0	ug/L	10.00	06/22/2001 01:31	
Dibromochloromethane	ND	5.0	ug/L	10.00	06/22/2001 01:31	
Chlorobenzene	ND	5.0	ug/L	10.00	06/22/2001 01:31	
Bromoform	ND	20	ug/L	10.00	06/22/2001 01:31	
1,1,2,2-Tetrachloroethane	ND	5.0	ug/L	10.00	06/22/2001 01:31	
1,3-Dichlorobenzene	ND	5.0	ug/L	10.00	06/22/2001 01:31	
1,4-Dichlorobenzene	ND	5.0	ug/L	10.00	06/22/2001 01:31	
1,2-Dichlorobenzene	ND	5.0	ug/L	10.00	06/22/2001 01:31	
Trichlorotrifluoroethane	ND	20	ug/L	10.00	06/22/2001 01:31	
Chloromethane	ND	10	ug/L	10.00	06/22/2001 01:31	
Bromomethane	ND	10	ug/L	10.00	06/22/2001 01:31	
Surrogate(s)						
1-Chloro-2-fluorobenzene	95.1	50-150	%	10.00	06/22/2001 01:31	

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To: Allwest Environmental
 Attn.: Robert Horwath

Test Method: 8010
 Prep Method: 5030

Halogenated Volatile Organic Compounds

Sample ID: MW-3A2	Lab Sample ID: 2001-06-0365-004
Project: 21082.28 Pallar 2001	Received: 06/19/2001 17:47
Sampled: 06/19/2001	Extracted: 06/22/2001 02:18
Matrix: Water	QC-Batch: 2001/06/21-02.25
Sample/Analysis Flag o (See Legend & Note section)	

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Dichlorodifluoromethane	10	5.0	ug/L	5.00	06/22/2001 02:18	
Vinyl chloride	ND	2.5	ug/L	5.00	06/22/2001 02:18	
Chloroethane	ND	2.5	ug/L	5.00	06/22/2001 02:18	
Trichlorofluoromethane	ND	2.5	ug/L	5.00	06/22/2001 02:18	
1,1-Dichloroethene	ND	2.5	ug/L	5.00	06/22/2001 02:18	
Methylene chloride	ND	25	ug/L	5.00	06/22/2001 02:18	
trans-1,2-Dichloroethene	ND	2.5	ug/L	5.00	06/22/2001 02:18	
cis-1,2-Dichloroethene	5.1	2.5	ug/L	5.00	06/22/2001 02:18	
1,1-Dichloroethane	ND	2.5	ug/L	5.00	06/22/2001 02:18	
Chloroform	ND	2.5	ug/L	5.00	06/22/2001 02:18	
1,1,1-Trichloroethane	ND	2.5	ug/L	5.00	06/22/2001 02:18	
Carbon tetrachloride	ND	2.5	ug/L	5.00	06/22/2001 02:18	
1,2-Dichloroethane	ND	2.5	ug/L	5.00	06/22/2001 02:18	
Trichloroethene	23	2.5	ug/L	5.00	06/22/2001 02:18	
1,2-Dichloropropane	ND	2.5	ug/L	5.00	06/22/2001 02:18	
Bromodichloromethane	ND	2.5	ug/L	5.00	06/22/2001 02:18	
2-Chloroethylvinyl ether	ND	2.5	ug/L	5.00	06/22/2001 02:18	
trans-1,3-Dichloropropene	ND	2.5	ug/L	5.00	06/22/2001 02:18	
cis-1,3-Dichloropropene	ND	2.5	ug/L	5.00	06/22/2001 02:18	
1,1,2-Trichloroethane	ND	2.5	ug/L	5.00	06/22/2001 02:18	
Tetrachloroethene	140	2.5	ug/L	5.00	06/22/2001 02:18	
Dibromochloromethane	ND	2.5	ug/L	5.00	06/22/2001 02:18	
Chlorobenzene	ND	2.5	ug/L	5.00	06/22/2001 02:18	
Bromoform	ND	10	ug/L	5.00	06/22/2001 02:18	
1,1,2,2-Tetrachloroethane	ND	2.5	ug/L	5.00	06/22/2001 02:18	
1,3-Dichlorobenzene	ND	2.5	ug/L	5.00	06/22/2001 02:18	
1,4-Dichlorobenzene	ND	2.5	ug/L	5.00	06/22/2001 02:18	
1,2-Dichlorobenzene	ND	2.5	ug/L	5.00	06/22/2001 02:18	
Trichlorotrifluoroethane	ND	10	ug/L	5.00	06/22/2001 02:18	
Chloromethane	ND	5.0	ug/L	5.00	06/22/2001 02:18	
Bromomethane	ND	5.0	ug/L	5.00	06/22/2001 02:18	
Surrogate(s)						
1-Chloro-2-fluorobenzene	93.9	50-150	%	5.00	06/22/2001 02:18	

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-06-0365

To: Allwest Environmental

Test Method: 8010

Attn.: Robert Horwath

Prep Method: 5030

Halogenated Volatile Organic Compounds

Sample ID: MW-4	Lab Sample ID: 2001-06-0365-005
Project: 21082.28 Pallar 2001	Received: 06/19/2001 17:47
Sampled: 06/19/2001	Extracted: 06/21/2001 00:32
Matrix: Water	QC-Batch: 2001/06/20-01.26

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Dichlorodifluoromethane	19	1.0	ug/L	1.00	06/21/2001 00:32	
Vinyl chloride	ND	0.50	ug/L	1.00	06/21/2001 00:32	
Chloroethane	ND	0.50	ug/L	1.00	06/21/2001 00:32	
Trichlorofluoromethane	ND	0.50	ug/L	1.00	06/21/2001 00:32	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	06/21/2001 00:32	
Methylene chloride	ND	5.0	ug/L	1.00	06/21/2001 00:32	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	06/21/2001 00:32	
cis-1,2-Dichloroethene	1.2	0.50	ug/L	1.00	06/21/2001 00:32	
1,1-Dichloroethane	ND	0.50	ug/L	1.00	06/21/2001 00:32	
Chloroform	ND	0.50	ug/L	1.00	06/21/2001 00:32	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	06/21/2001 00:32	
Carbon tetrachloride	ND	0.50	ug/L	1.00	06/21/2001 00:32	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	06/21/2001 00:32	
Trichloroethene	7.4	0.50	ug/L	1.00	06/21/2001 00:32	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	06/21/2001 00:32	
Bromodichloromethane	ND	0.50	ug/L	1.00	06/21/2001 00:32	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	06/21/2001 00:32	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	06/21/2001 00:32	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	06/21/2001 00:32	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	06/21/2001 00:32	
Tetrachloroethene	47	0.50	ug/L	1.00	06/21/2001 00:32	
Dibromochloromethane	ND	0.50	ug/L	1.00	06/21/2001 00:32	
Chlorobenzene	ND	0.50	ug/L	1.00	06/21/2001 00:32	
Bromoform	ND	2.0	ug/L	1.00	06/21/2001 00:32	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	06/21/2001 00:32	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	06/21/2001 00:32	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	06/21/2001 00:32	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	06/21/2001 00:32	
Trichlorotrifluoroethane	ND	2.0	ug/L	1.00	06/21/2001 00:32	
Chloromethane	ND	1.0	ug/L	1.00	06/21/2001 00:32	
Bromomethane	ND	1.0	ug/L	1.00	06/21/2001 00:32	
Surrogate(s)						
1-Chloro-2-fluorobenzene	102.2	50-150	%	1.00	06/21/2001 00:32	

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To: Allwest Environmental
 Attn.: Robert Horwath

Test Method: 8010
 Prep Method: 5030

Halogenated Volatile Organic Compounds

Sample ID: TRIP BLANK	Lab Sample ID: 2001-06-0365-006
Project: 21082.28 Pallar 2001	Received: 06/19/2001 17:47
Sampled: 06/19/2001	Extracted: 06/20/2001 18:45
Matrix: Water	QC-Batch: 2001/06/20-01.26

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Dichlorodifluoromethane	ND	1.0	ug/L	1.00	06/20/2001 18:45	
Vinyl chloride	ND	0.50	ug/L	1.00	06/20/2001 18:45	
Chloroethane	ND	0.50	ug/L	1.00	06/20/2001 18:45	
Trichlorofluoromethane	ND	0.50	ug/L	1.00	06/20/2001 18:45	
1,1-Dichloroethene	ND	0.50	ug/L	1.00	06/20/2001 18:45	
Methylene chloride	ND	5.0	ug/L	1.00	06/20/2001 18:45	
trans-1,2-Dichloroethene	ND	0.50	ug/L	1.00	06/20/2001 18:45	
cis-1,2-Dichloroethene	ND	0.50	ug/L	1.00	06/20/2001 18:45	
1,1-Dichloroethane	ND	0.50	ug/L	1.00	06/20/2001 18:45	
Chloroform	ND	0.50	ug/L	1.00	06/20/2001 18:45	
1,1,1-Trichloroethane	ND	0.50	ug/L	1.00	06/20/2001 18:45	
Carbon tetrachloride	ND	0.50	ug/L	1.00	06/20/2001 18:45	
1,2-Dichloroethane	ND	0.50	ug/L	1.00	06/20/2001 18:45	
Trichloroethene	ND	0.50	ug/L	1.00	06/20/2001 18:45	
1,2-Dichloropropane	ND	0.50	ug/L	1.00	06/20/2001 18:45	
Bromodichloromethane	ND	0.50	ug/L	1.00	06/20/2001 18:45	
2-Chloroethylvinyl ether	ND	0.50	ug/L	1.00	06/20/2001 18:45	
trans-1,3-Dichloropropene	ND	0.50	ug/L	1.00	06/20/2001 18:45	
cis-1,3-Dichloropropene	ND	0.50	ug/L	1.00	06/20/2001 18:45	
1,1,2-Trichloroethane	ND	0.50	ug/L	1.00	06/20/2001 18:45	
Tetrachloroethene	ND	0.50	ug/L	1.00	06/20/2001 18:45	
Dibromochloromethane	ND	0.50	ug/L	1.00	06/20/2001 18:45	
Chlorobenzene	ND	0.50	ug/L	1.00	06/20/2001 18:45	
Bromoform	ND	2.0	ug/L	1.00	06/20/2001 18:45	
1,1,2,2-Tetrachloroethane	ND	0.50	ug/L	1.00	06/20/2001 18:45	
1,3-Dichlorobenzene	ND	0.50	ug/L	1.00	06/20/2001 18:45	
1,4-Dichlorobenzene	ND	0.50	ug/L	1.00	06/20/2001 18:45	
1,2-Dichlorobenzene	ND	0.50	ug/L	1.00	06/20/2001 18:45	
Trichlorotrifluoroethane	ND	2.0	ug/L	1.00	06/20/2001 18:45	
Chloromethane	ND	1.0	ug/L	1.00	06/20/2001 18:45	
Bromomethane	ND	1.0	ug/L	1.00	06/20/2001 18:45	
Surrogate(s)						
1-Chloro-2-fluorobenzene	98.8	50-150	%	1.00	06/20/2001 18:45	

To: Allwest Environmental

Test Method: 8021B

Attn.: Robert Horwath

Prep Method: 5030B

Batch QC Report

Halogenated Volatile Organic Compounds

Method Blank	Water	QC Batch # 2001/06/20-01.26
MB: 2001/06/20-01.26-006		Date Extracted: 06/20/2001 13:45

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Dichlorodifluoromethane	ND	1.0	ug/L	06/20/2001 13:45	
Vinyl chloride	ND	0.5	ug/L	06/20/2001 13:45	
Chloroethane	ND	0.5	ug/L	06/20/2001 13:45	
Trichlorofluoromethane	ND	0.5	ug/L	06/20/2001 13:45	
1,1-Dichloroethene	ND	0.5	ug/L	06/20/2001 13:45	
Methylene chloride	ND	5.0	ug/L	06/20/2001 13:45	
trans-1,2-Dichloroethene	ND	0.5	ug/L	06/20/2001 13:45	
cis-1,2-Dichloroethene	ND	0.5	ug/L	06/20/2001 13:45	
1,1-Dichloroethane	ND	0.5	ug/L	06/20/2001 13:45	
Chloroform	ND	0.5	ug/L	06/20/2001 13:45	
1,1,1-Trichloroethane	ND	0.5	ug/L	06/20/2001 13:45	
Carbon tetrachloride	ND	0.5	ug/L	06/20/2001 13:45	
1,2-Dichloroethane	ND	0.5	ug/L	06/20/2001 13:45	
Trichloroethene	ND	0.5	ug/L	06/20/2001 13:45	
1,2-Dichloropropane	ND	0.5	ug/L	06/20/2001 13:45	
Bromodichloromethane	ND	0.5	ug/L	06/20/2001 13:45	
2-Chloroethylvinyl ether	ND	0.5	ug/L	06/20/2001 13:45	
trans-1,3-Dichloropropene	ND	0.5	ug/L	06/20/2001 13:45	
cis-1,3-Dichloropropene	ND	0.5	ug/L	06/20/2001 13:45	
1,1,2-Trichloroethane	ND	0.5	ug/L	06/20/2001 13:45	
Tetrachloroethene	ND	0.5	ug/L	06/20/2001 13:45	
Dibromochloromethane	ND	0.5	ug/L	06/20/2001 13:45	
Chlorobenzene	ND	0.5	ug/L	06/20/2001 13:45	
Bromoform	ND	2.0	ug/L	06/20/2001 13:45	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	06/20/2001 13:45	
1,3-Dichlorobenzene	ND	0.5	ug/L	06/20/2001 13:45	
1,4-Dichlorobenzene	ND	0.5	ug/L	06/20/2001 13:45	
1,2-Dichlorobenzene	ND	0.5	ug/L	06/20/2001 13:45	
Trichlorotrifluoroethane	ND	2.0	ug/L	06/20/2001 13:45	
Chloromethane	ND	1.0	ug/L	06/20/2001 13:45	
Bromomethane	ND	1.0	ug/L	06/20/2001 13:45	
Surrogate(s)					
1-Chloro-2-fluorobenzene	99.5	50-150	%	06/20/2001 13:45	

To: Allwest Environmental

Test Method: 8010

Attn.: Robert Horwath

Prep Method: 5030

Batch QC Report

Halogenated Volatile Organic Compounds

Method Blank	Water	QC Batch # 2001/06/21-02.25
MB: 2001/06/21-02.25-001		Date Extracted: 06/21/2001 11:15

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Dichlorodifluoromethane	ND	1.0	ug/L	06/21/2001 11:15	
Vinyl chloride	ND	0.5	ug/L	06/21/2001 11:15	
Chloroethane	ND	0.5	ug/L	06/21/2001 11:15	
Trichlorofluoromethane	ND	0.5	ug/L	06/21/2001 11:15	
1,1-Dichloroethene	ND	0.5	ug/L	06/21/2001 11:15	
Methylene chloride	ND	5.0	ug/L	06/21/2001 11:15	
trans-1,2-Dichloroethene	ND	0.5	ug/L	06/21/2001 11:15	
cis-1,2-Dichloroethene	ND	0.5	ug/L	06/21/2001 11:15	
1,1-Dichloroethane	ND	0.5	ug/L	06/21/2001 11:15	
Chloroform	ND	0.5	ug/L	06/21/2001 11:15	
1,1,1-Trichloroethane	ND	0.5	ug/L	06/21/2001 11:15	
Carbon tetrachloride	ND	0.5	ug/L	06/21/2001 11:15	
1,2-Dichloroethane	ND	0.5	ug/L	06/21/2001 11:15	
Trichloroethene	ND	0.5	ug/L	06/21/2001 11:15	
1,2-Dichloropropane	ND	0.5	ug/L	06/21/2001 11:15	
Bromodichloromethane	ND	0.5	ug/L	06/21/2001 11:15	
2-Chloroethylvinyl ether	ND	0.5	ug/L	06/21/2001 11:15	
trans-1,3-Dichloropropene	ND	0.5	ug/L	06/21/2001 11:15	
cis-1,3-Dichloropropene	ND	0.5	ug/L	06/21/2001 11:15	
1,1,2-Trichloroethane	ND	0.5	ug/L	06/21/2001 11:15	
Tetrachloroethene	ND	0.5	ug/L	06/21/2001 11:15	
Dibromochloromethane	ND	0.5	ug/L	06/21/2001 11:15	
Chlorobenzene	ND	0.5	ug/L	06/21/2001 11:15	
Bromoform	ND	2.0	ug/L	06/21/2001 11:15	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	06/21/2001 11:15	
1,3-Dichlorobenzene	ND	0.5	ug/L	06/21/2001 11:15	
1,4-Dichlorobenzene	ND	0.5	ug/L	06/21/2001 11:15	
1,2-Dichlorobenzene	ND	0.5	ug/L	06/21/2001 11:15	
Trichlorotrifluoroethane	ND	2.0	ug/L	06/21/2001 11:15	
Chloromethane	ND	1.0	ug/L	06/21/2001 11:15	
Bromomethane	ND	1.0	ug/L	06/21/2001 11:15	
Surrogate(s)					
1-Chloro-2-fluorobenzene	105.5	50-150	%	06/21/2001 11:15	

To: Allwest Environmental

Test Method: 8021B

Attn: Robert Horwath

Prep Method: 5030B

Batch QC Report

Halogenated Volatile Organic Compounds

Laboratory Control Spike (LCS/LCSD)		Water		QC Batch # 2001/06/20-01.26	
LCS:	2001/06/20-01.26-004	Extracted:	06/20/2001 12:20	Analyzed	06/20/2001 12:20
LCSD:	2001/06/20-01.26-005	Extracted:	06/20/2001 13:02	Analyzed	06/20/2001 13:02

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
1,1-Dichloroethene	19.8	20.8	20.0	20.0	99.0	104.0	4.9	50-140	20		
Trichloroethene	18.7	19.5	20.0	20.0	93.5	97.5	4.2	50-150	20		
Chlorobenzene	18.5	18.7	20.0	20.0	92.5	93.5	1.1	50-150	20		
Surrogate(s)											
1-Chloro-2-fluorobenzene	22.0	21.7	20	20	110.0	108.5		50-150			

To: Allwest Environmental

Test Method: 8010

Attn: Robert Horwath

Prep Method: 5030

Batch QC Report

Halogenated Volatile Organic Compounds

Laboratory Control Spike (LCS/LCSD)	Water	QC Batch # 2001/06/21-02.25
LCS: 2001/06/21-02.25-002	Extracted: 06/21/2001 12:02	Analyzed 06/21/2001 12:02
LCSD: 2001/06/21-02.25-003	Extracted: 06/21/2001 12:49	Analyzed 06/21/2001 12:49

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
1,1-Dichloroethene	21.8	21.6	20.0	20.0	109.0	108.0	0.9	50-140	20		
Trichloroethene	23.1	22.9	20.0	20.0	115.5	114.5	0.9	50-150	20		
Chlorobenzene	23.1	22.8	20.0	20.0	115.5	114.0	1.3	50-150	20		
Surrogate(s)											
1-Chloro-2-fluorobenzene	25.2	24.7	20	20	126.0	123.5		50-150			

To: **Allwest Environmental**
 Attn.: Robert Horwath

Test Method: 8010
 Prep Method: 5030

Batch QC Report

Halogenated Volatile Organic Compounds

Matrix Spike (MS / MSD)

Water

QC Batch # 2001/06/20-01.26

Sample ID: **MW-2**

Lab Sample ID: 2001-06-0365-002

MS: 2001/06/20-01.26-017 Extracted: 06/20/2001 21:38 Analyzed: 06/20/2001 21:38 Dilution: 1.0

MSD: 2001/06/20-01.26-018 Extracted: 06/20/2001 22:21 Analyzed: 06/20/2001 22:21 Dilution: 1.0

Compound	Conc. [ug/L]		Sample	Exp. Conc. [ug/L]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	MS	MSD		MS	MSD	MS	MSD		Recovery	RPD	MS	MSD
1,1-Dichloroethene	20.5	18.2	ND	20.0	20.0	102.5	91.0	11.9	50-140	20		
Trichloroethene	24.3	21.7	4.14	20.0	20.0	100.8	87.8	13.8	50-150	20		
Chlorobenzene	18.9	17.3	ND	20.0	20.0	94.5	86.5	8.8	50-150	20		
Surrogate(s)												
1-Chloro-2-fluorobenzen	110.4	103.6		20	20	110.4	103.6		50-150			

To: Allwest Environmental
Attn: Robert Horwath

Test Method: 8010
Prep Method: 5030

Legend & Notes

Halogenated Volatile Organic Compounds

Analysis Flags

o

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

2001-06-0365

Reference #: 59948

CHROMALAB, INC.

1220 Quarry Lane • Pleasanton, California 94566-4756
 (925) 484-1919 • Fax (925) 484-1096

Chain of Custody

Environmental Services (SDB) (DOHS 1094)

DATE 6/19 PAGE _____ OF _____

PROJECT INFORMATION					ANALYSIS REPORT																	
PROJ. MGR	Robert Horwath				TPH-(EPA 8015,8020)	PURGEABLE AROMATICS	TPH-Diesel (EPA 8015M)	TEPH (EPA 8015M)	PURGEABLE HALOCARBONS, (HVOCs) (EPA 8010)	VOLATILE ORGANICS (VOCs) (EPA 8260)	SEMIVOLATILES (EPA 8270)	TOTAL OIL AND GREASE (SM 5520 B + F, E + F)	PESTICIDES (EPA 8080)	PNA's by	Spec. Cond.	LUFT METALS:	CAM 17 METALS	TOTAL LEAD	D.W.E.T. (STLC)	Hexavalent Chromium	NUMBER OF CONTAINERS	
COMPANY	Allwest				<input type="checkbox"/> Gas w/ <input type="checkbox"/> BTEX <input type="checkbox"/> MTBE	BTEX (EPA 8020)		<input type="checkbox"/> Diesel <input type="checkbox"/> M.O. <input type="checkbox"/> Other				<input type="checkbox"/> PCB'S (EPA 8080)	<input type="checkbox"/> 8270 <input type="checkbox"/> 8310	<input type="checkbox"/> TSS <input type="checkbox"/> TDS	Cd, Cr, Pb, Ni, Zn	(EPA 6010/7470/7471)		<input type="checkbox"/> TCLP	<input type="checkbox"/> pH (24 hr hold time for H2O)			
ADDRESS	530 HOWARD ST #200 S.F., CA																					
SAMPLERS (SIGNATURE)	R. Horwath																					
	1-415-391-2510 (PHONE NO.)																					
	1-415-391-2008 (FAX NO.)																					
SAMPLE ID	DATE	TIME	MATRIX	PRESERV.																		
MW-1	6/19/01		GW	4°C/ML					X													3
MW-2									X													3
MW-3A1									X													3
MW-3A2									X													3
MW-4									X													3
TRIP BULK									X													3
C-1	6/19/01	2:00	SW	4°C																X		1
C-2																				X		1
C-3																				X		1

PROJECT INFORMATION				SAMPLE RECEIPT				RELINQUISHED BY		RELINQUISHED BY		RELINQUISHED BY	
PROJECT NAME:	PALLAR 2001			TOTAL NO OF CONTAINERS				SIGNATURE	(TIME)	SIGNATURE	(TIME)	SIGNATURE	(TIME)
PROJECT NUMBER:	21082.28			HEAD SPACE				(PRINTED NAME)	(DATE)	(PRINTED NAME)	(DATE)	(PRINTED NAME)	(DATE)
P.O. #				TEMPERATURE				ALLWEST	6/19/01			STL-CL	
TAT	STANDARD 5-DAY	24	48	72	OTHER								
SPECIAL INSTRUCTIONS/COMMENTS:				RECEIVED BY		RECEIVED BY		RECEIVED BY		RECEIVED BY (LABORATORY)			
Report: <input type="checkbox"/> Routine <input type="checkbox"/> Level 2 <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/> Electronic Report				SIGNATURE		SIGNATURE		SIGNATURE		SIGNATURE			
4.1°C				(PRINTED NAME)		(PRINTED NAME)		(PRINTED NAME)		(PRINTED NAME)			
				[COMPANY]		[COMPANY]		[COMPANY]		[LAB]			

Groundwater Monitoring Well Sampling Field Log

Proj. No.: 21082.28 Project Name: Paccar 2001

Well No.: MW-1 Well Location: 4240 E. 14th St., Oakland

Well Depth: 43.68 (ft.) Casing Diameter: 4 (in.)

Depth to Water: 25.67 (ft.) Date: 6/19/01 Time: 9:45

Water Column in Well: 18.01 (ft.) Well Volume: 11.5 (gal.)

Odor? No Free Product? No Thickness: _____

Purging Method: Hand Pump _____ Submersible Pump _____ Bailer X Other _____

Time	pH	Conduc. (μ S)	Temp. ($^{\circ}$ F)	Water Level	Volume Removed	Remark
10:06	6.56	440	73.3		0.25	Clear
10:26	6.44	528	72.2		9	Lt. Brown
10:39	6.43	541	73.9		18	Lt. Brown
10:56	6.48	576	73.6		27	Lt. Brown
11:12	6.50	560	71.8		35	Lt. Brown

Purging Start Time: 10:00 Purging Stop Time: 11:12

Total Volume Purged: 35 (gal.) Well Dewater? No

Water Level Prior to Sampling: 25.67 (ft.) Time: 9:45

Sampling Method: Teflon Bailer _____ Disposable Bailer X Sampling Pump _____

Sample Collected: 3x4 ml VOAS Sample No.: MW-1

Remark: _____

Sampler: RMH/JK Date/Time: 6/19/01

Groundwater Monitoring Well Sampling Field Log

Proj. No.: 21082.28 Project Name: Paccar 2001

Well No.: MW-2 Well Location: 4240 E. 14th St., Oakland

Well Depth: 46.16 (ft.) Casing Diameter: 4 (in.)

Depth to Water: 25.54 (ft.) Date: 6/19/01 Time: 11:50

Water Column in Well: 20.62 (ft.) Well Volume: 13.2 (gal.)

Odor? No Free Product? No Thickness: _____

Purging Method: Hand Pump _____ Submersible Pump _____ Bailer X Other _____

Time	pH	Conduc. (μ S)	Temp. ($^{\circ}$ F)	Water Level	Volume Removed	Remark
11:55	6.54	581	74.6		0.25	Clear
12:11	6.54	591	74.9		13	Lt. Brown
12:23	6.55	617	76.4		26	Lt. Brown
12:37	6.61	634	78.3		39	Lt. Brown

Purging Start Time: 11:55 Purging Stop Time: 12:37

Total Volume Purged: 39 (gal.) Well Dewater? No

Water Level Prior to Sampling: _____ (ft.) Time: _____

Sampling Method: Teflon Bailer _____ Disposable Bailer X Sampling Pump _____

Sample Collected: 3x4 ml VOAS Sample No.: MW-2

Remark: _____

Sampler: RMH/JK Date/Time: 6/19/01

Groundwater Monitoring Well Sampling Field Log

Proj. No.: 21082.28 Project Name: Paccar 2001

Well No.: MW-3A Well Location: 4240 E. 14th St., Oakland

Well Depth: 39.71 (ft.) Casing Diameter: 4 (in.)

Depth to Water: 25.81 (ft.) Date: 6/19/01 Time: 9:45

Water Column in Well: 13.90 (ft.) Well Volume: 8.9 (gal.)

Odor? No Free Product? No Thickness: _____

Purging Method: Hand Pump _____ Submersible Pump _____ Bailer X Other _____

Time	pH	Conduc. (μ S)	Temp. ($^{\circ}$ F)	Water Level	Volume Removed	Remark
9:47	6.36	395	73.6		0.25	Clear
10:02	6.31	402	72.2		9	Lt. Brown
10:15	6.29	405	72.0		18	Lt. Brown
10:40	6.39	410	72.4		27	Lt. Brown

Purging Start Time: 9:47 Purging Stop Time: 10:40

Total Volume Purged: 27 (gal.) Well Dewater? No

Water Level Prior to Sampling: _____ (ft.) Time: 10:45

Sampling Method: Teflon Bailer _____ Disposable Bailer X Sampling Pump _____

Sample Collected: 3x4 ml VOAS x 2 Sample No.: MW-3A1/MW-3A2

Remark: MW-3A1 and MW-3A2 are field duplicates of each other

Sampler: RMH/JK Date/Time: 6/19/01

Groundwater Monitoring Well Sampling Field Log

Proj. No.: 21082.28 Project Name: Paccar 2001

Well No.: MW-4 Well Location: 4240 E. 14th St., Oakland

Well Depth: 44.38 (ft.) Casing Diameter: 4 (in.)

Depth to Water: 24.20 (ft.) Date: 6/19/01 Time: 10:55

Water Column in Well: 20.18 (ft.) Well Volume: 12.9 (gal.)

Odor? No Free Product? No Thickness: _____

Purging Method: Hand Pump _____ Submersible Pump _____ Bailer X Other _____

Time	pH	Conduc. (μ S)	Temp. (°F)	Water Level	Volume Removed	Remark
10:58	6.44	428	73.2		0.25	clear
11:23	6.50	583	71.9		13	v. slight grayish brown
11:41	6.52	591	72.8		26	v. slight grayish brown
12:10	6.52	582	72.1		39	v. slight grayish brown

Purging Start Time: 10:58 Purging Stop Time: 12:10

Total Volume Purged: 39 (gal.) Well Dewater? _____

Water Level Prior to Sampling: _____ (ft.) Time: 12:25

Sampling Method: Teflon Bailer _____ Disposable Bailer X Sampling Pump _____

Sample Collected: 3x4 ml VOAS Sample No.: MW-4

Remark: _____

Sampler: RMH/JK

Date/Time: 6/19/01

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.



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION

399 ELMHURST ST. KAYWARD CA. 94544-1393

PHONE (510) 670-8354 FAX (510) 782-1939

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT GRAJA AUTO #43
4240 E 14th Street
OAKLAND, CA

PERMIT NUMBER W01-438
WELL NUMBER _____
AFN _____

PERMIT CONDITIONS Circled Permit Requirements Apply

CLIENT
Name PACCAR INC (Lisa Robbins)
Address PO BOX 151 Phone 425-760-7199
City Bellemead Zip 98009

(A) GENERAL

1. A permit application should be submitted to us to arrive at the ACPWA office five days prior to proposed starting date.
2. Submit to ACPWA within 60 days after completion of permitted work the original Department of Water Resources- Well Completion Report.
3. Permit is void if project not begun within 90 days of approval date.

APPLICANT
Name Robert M. Horvath #45925
Address 500 HOWARD #300 Phone 415-391-2570
City San Francisco Zip 94105

B. WATER SUPPLY WELLS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	<input type="checkbox"/>	General	<input type="checkbox"/>
Water Supply	<input type="checkbox"/>	Contamination	<input type="checkbox"/>
Monitoring	<input type="checkbox"/>	Well Destruction	<input checked="" type="checkbox"/> HC-1

C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

PROPOSED WATER SUPPLY WELL USE

New Domestic	<input type="checkbox"/>	Replacement Domestic	<input type="checkbox"/>
Municipal	<input type="checkbox"/>	Irrigation	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Other	<input type="checkbox"/>

D. GEOTECHNICAL

Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with composted cuttings.

DRILLING METHOD:

Mud Rotary	<input type="checkbox"/>	Air Rotary	<input type="checkbox"/>	Auger	<input checked="" type="checkbox"/>
Cable	<input type="checkbox"/>	Other	<input type="checkbox"/>		

E. CATHODIC

Fill hole above node zone with concrete placed by tremie.

DRILLER'S LICENSE NO. C-57 522125

F. WELL DESTRUCTION

See attached

WELL PROJECTS

Drill Hole Diameter	<u>10</u> in.	Maximum	
Casing Diameter	<u>8</u> in.	Depth	<u>45</u> ft.
Surface Seal Depth	<u>2</u> ft.	Number	<u>1</u>

G. SPECIAL CONDITIONS

> Attached

GEOTECHNICAL PROJECTS

Number of Borings	_____	Maximum	
Hole Diameter	_____ in.	Depth	_____ ft.

ESTIMATED STARTING DATE 6/18/01
ESTIMATED COMPLETION DATE 6/18/01

APPROVED

DATE

I hereby agree to comply with all requirements of this permit and Alameda County Ordinances No. 73-68.

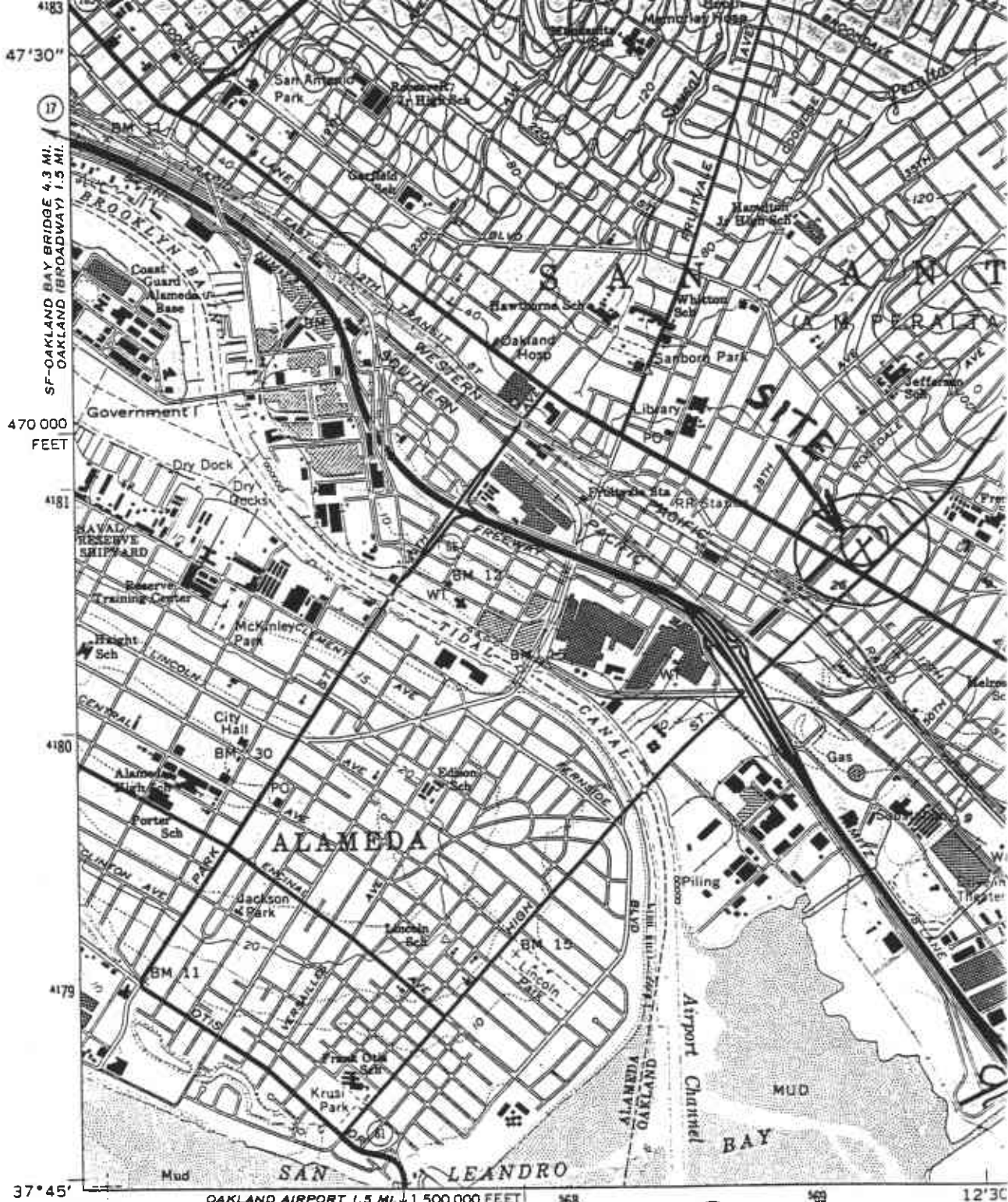
APPLICANT'S SIGNATURE Robert M. Horvath DATE _____
Rev. 4-00

[Handwritten Signature] 6/18/01

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED



T2S ↑
↓

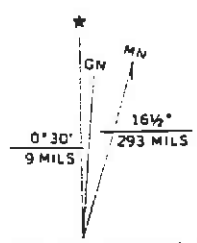
NO
SECTIONS
Noted
on
TOPO
MAP

HUNTERS POINT
1:50,000 NE

Mapped, edited, and published by the Geological Survey
 Control by USGS and NOS/NOAA, and Alameda County
 Topography from aerial photographs by photogrammetric methods
 and by planetable surveys 1947. Revised from aerial photographs
 taken 1958. Field checked 1959
 Hydrography compiled from NOS Chart 5535 (1958)
 Polyconic projection
 10,000-foot grid based on California coordinate system, zone 3
 1000-meter Universal Transverse Mercator grid ticks,
 zone 10, shown in blue. 1927 North American Datum
 To place on the predicted North American Datum 1983
 move the projection lines 14 meters north and
 95 meters east as shown by dashed corner ticks
 Red tint indicates areas in which only landmark buildings are shown
 Dotted land lines were established by private survey
 There may be private inholdings within the boundaries
 of the National or State reservations shown on this map

R3W

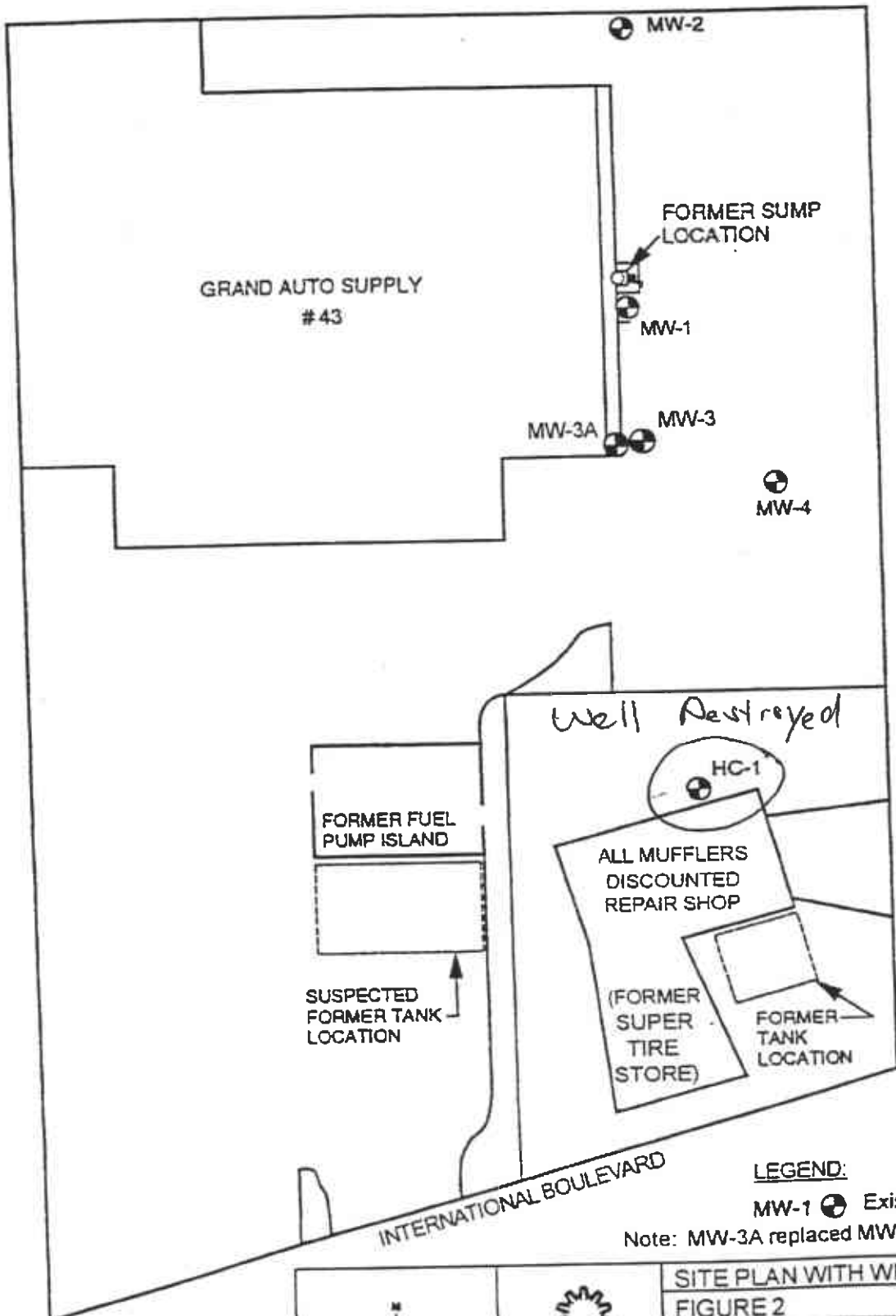
⊗ -site



UTM GRID AND 1980 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

OAKLAND EAST
Quadrangle

MISSION AUTOMOTIVE



HIGH STREET

FORMER DRY CLEANERS

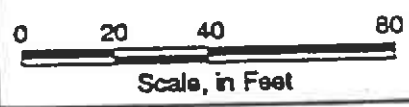
EXISTING DRY CLEANERS

INTERNATIONAL BOULEVARD

LEGEND:

MW-1 Existing Well Location

Note: MW-3A replaced MW-3 on May 25, 2000



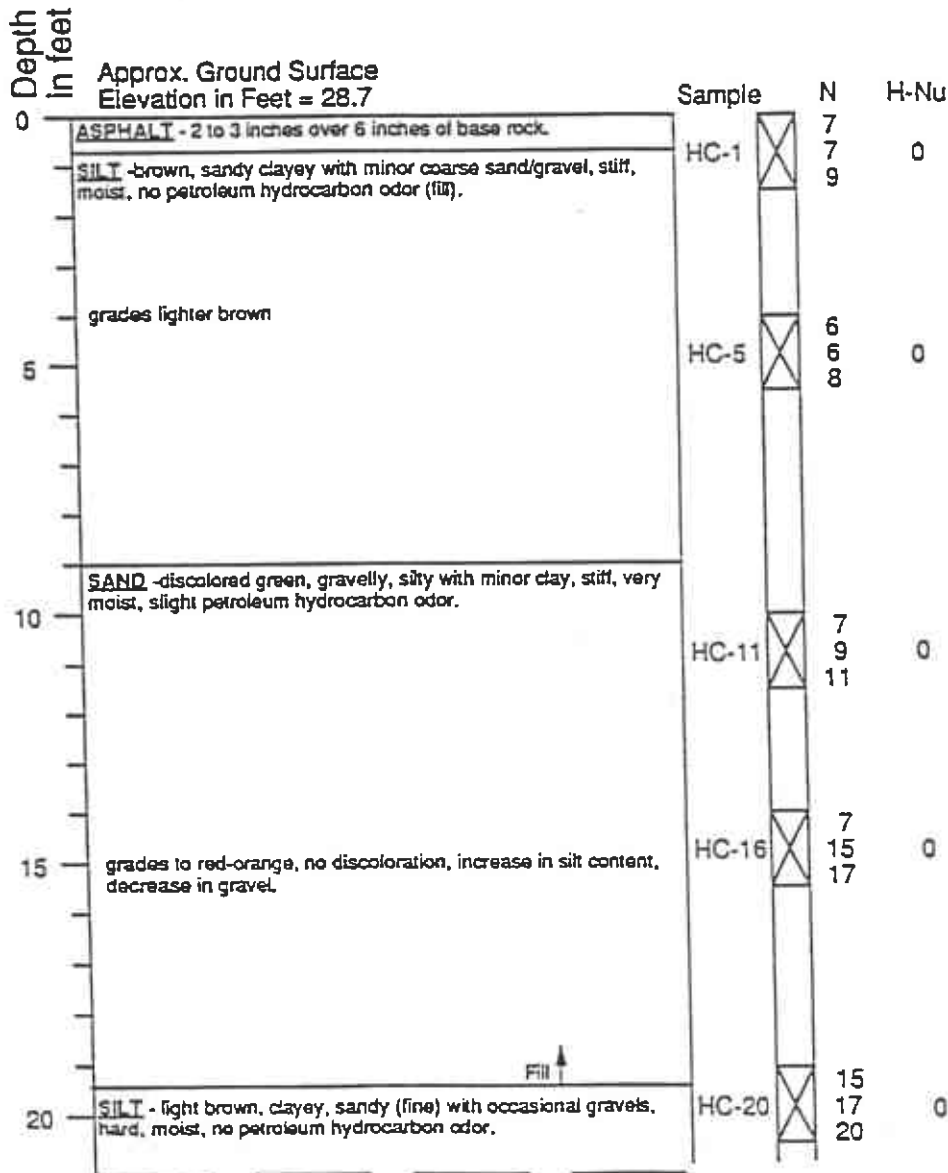
AllWest

PROJECT NO:
99287.25

SITE PLAN WITH WELL LOCATIONS	
FIGURE 2	
4240 EAST 14TH STREET	
OAKLAND, CALIFORNIA	
SOURCE:	ALLWEST
PREPARED BY:	JANE TINGIN
DATE:	07/06/00

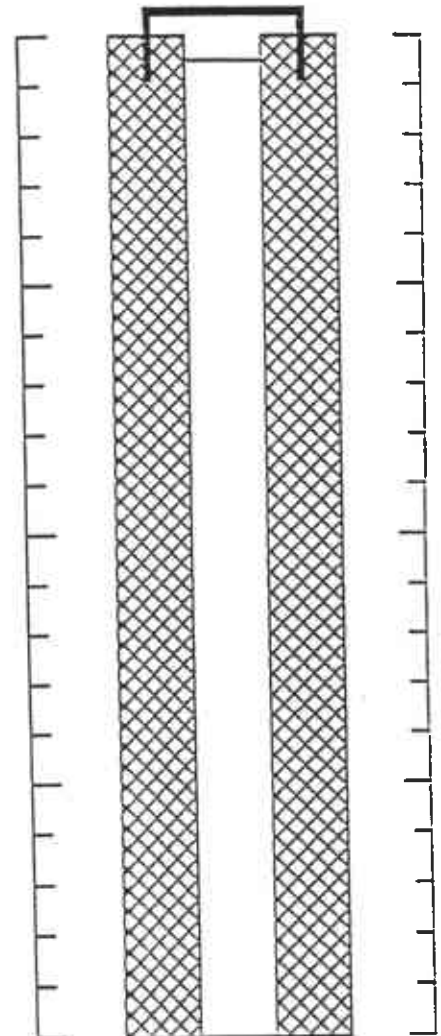
Boring Log and Construction Data for Monitoring Well HC-1

Geologic Log



Monitoring Well Design

Top of PVC in Feet = 28.33



1. Refer to Figure D-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
4. Elevations referenced to the City of Oakland Datum.



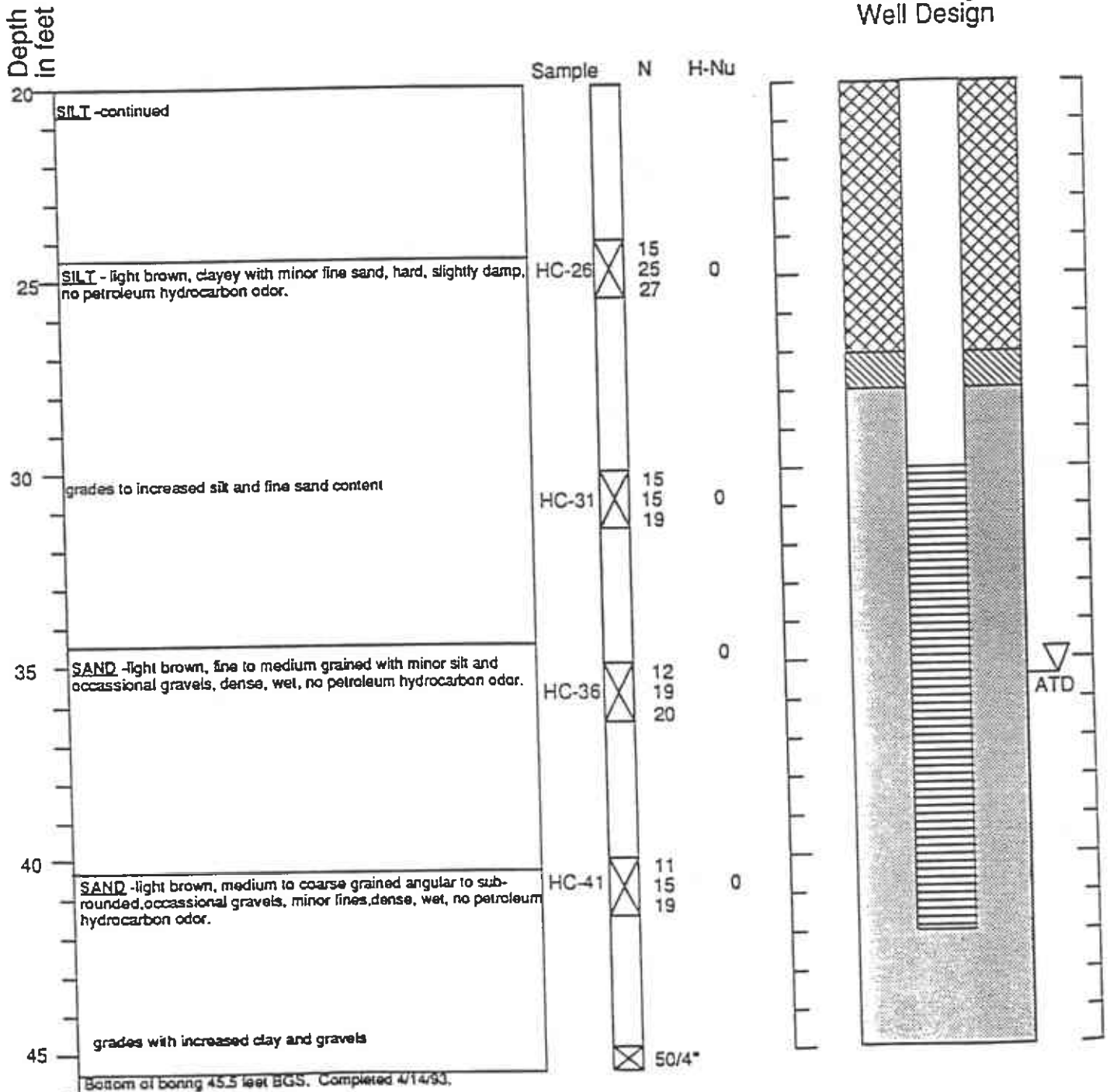
HARTCROWSER

J-6077 6/93
Figure D-4

Boring Log and Construction Data for Monitoring Well HC-1

Geologic Log

Monitoring Well Design



1. Refer to Figure D-1 for explanation of descriptions and symbols.
2. Soil descriptions and stratum lines are interpretive and actual changes may be gradual.
3. Ground water level, if indicated, is at time of drilling (ATD) or for date specified. Level may vary with time.
4. Elevations referenced to the City of Oakland Datum.



HARTCROWSER

J-6077

6/93

Figure D-4

WR-77-01 02-11
STID 839

November 20, 2000

Ms. Lisa Robbins
Paccar Inc.
P.P. Box 1518
Bellevue, WA 98009

RE: No Further Remediation at 4240 East 14th Street, Oakland, CA

Dear Ms. Robbins:

This office has completed review of the case file for the above referenced site. The site is currently used as an auto service facility. Previously, the site was used for retail gasoline sales and had three USTs and a car wash with an associated sump. The USTs were removed in 1986, the drainage sump was removed in August 1992, and the fuel product piping associated with the former USTs were removed in October 1993.

In 1992 and 1993, soil samples were collected from the approximate location of the former USTs, from the product piping trenches, and from beneath the former drainage sump. Unremarkable concentrations of petroleum hydrocarbons were identified by the former USTs and product piping. A soil sample collected beneath the drainage sump, at 8.5 feet bgs, identified low levels of PCE (0.104 mg/kg) and petroleum hydrocarbons (310 mg/kg TPHg, 120 mg/kg TPHd, and ND, 0.64, 0.65, and 1.5 mg/kg BTEX, respectively). Soil samples collected from a soil boring advanced through the former drainage sump contained up to 0.005 mg/kg PCE at 11 feet bgs, and below the detection limit of 0.005 mg/kg at 16 and 21 feet bgs.

A total of four groundwater monitoring wells were installed at the site. Groundwater from each well is impacted by chlorinated solvents (HVOCs) at concentrations above the established drinking water standards (MCLs). However, the maximum detected concentrations of the various HVOCs do not appear to pose a risk to human health, assuming that groundwater at the site is not a source for drinking water.

Currently, this office and the RWQCB do not grant closure to sites with groundwater impacted with HVOCs at concentrations above the MCLs. However, this office will not require active remedial action for the residual HVOCs in soil and groundwater. Groundwater sampling of Wells MW-1 through MW-4 should continue on an annual basis. Groundwater should be sampled in the last quarter of each year. Well HC-1, located at the former Super Tire facility, may be decommissioned at this time.

If you have any questions, I can be reached at (510) 567-6762.

eva chu
Hazardous Materials Specialist

grandauto2



AllWest Environmental, Inc.

Specialists in Physical Due
Diligence and Remedial Services

530 Howard Street, Suite 300
San Francisco, CA 94105
Tel 415.391.2510
Fax 415.391.2008

APPLICATION FOR AUTHORIZATION TO USE

REPORT TITLE:

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

From (Applicant): _____
(Please clearly identify name and address of person/entity applying for
permission to use or copy this document)

Ladies and Gentlemen:

Applicant hereby applies for permission to rely upon *AllWest's* work product, as described above, for the purpose of: (state here the purpose for which you wish to rely upon the work product)

Applicant only can accept and rely upon *AllWest* work product under the strict understanding that Applicant is bound by all provisions in the Terms and Conditions attached to the report. Every report, recommendation, finding, or conclusion issued by *AllWest* shall be subject to the limitations stated in the Agreement and subject report(s). If this is agreeable, please sign below and return one copy of this letter to us along with the applicable fees. Upon receipt and if acceptable, our signed letter will be returned. *AllWest* may withhold permission at its sole discretion or require additional re-use fees or terms.

FEES: A \$500 coordination and reliance fee, payable in advance, will apply. If desired, for an additional \$75 report reproduction fee, we will reissue the report in the name of the Applicant; the report date, however, will remain the same. All checks will be returned if your request for reliance is not approved.

REQUESTED BY

APPROVED BY

Applicant Company

AllWest Environmental, Inc.

Print name and Title

Print Name and Title

Signature and Date

Signature and Date

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 harged 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 seal against such passageways, it is recognized that such a seal 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'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 and 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 at 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 venturer 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.