

Advanced Environmental Concepts, Inc. is pleased to present the following:

Continuing Soil and Groundwater Assessment

for

Former Vogue Tyres Facility 240 West MacArthur Boulevard County of Alameda • Oakland, California

This report has been prepared for:

Mr. Warren Dodson Dodson Ltd. August 1997

. ENVIRONMENTAL CONCEPTS WITH DESIGN IN MIND .

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1.0 INTRODUCTION

This report presents the results of a continuing subsurface soil and groundwater investigation, conducted by **Advanced Environmental Concepts, Inc.** (AEC), to further evaluate the migration of gasoline in the soil and groundwater proximal to the former underground storage tanks located at the northern portion of the property, and dispensing islands west of the former service station.

This additional assessment was conducted on August 7-8, 1997 in accordance with the work plan prepared by AEC and approved by the Alameda County Health Care Services (ACHCS). This additional investigation was authorized by Mr. Warren Dodson and performed under the supervision of Ms. Madhulla Logan, Hazardous Materials Specialist, ACHCS.

The subject site is in a commercially developed, densely populated area of the northern portion of Oakland, California. The property is currently vacant, but was a former Gulf Service Station, then Tire Repair and Resale facility.

Contained in this report is background information regarding existing site characteristics, regional and local hydrogeological profiles, and the project history. Also included in the following sections are the objectives and scope of investigation, detailed investigative procedures, and subsequent findings. Finally, AEC provides an evaluation of said findings and makes related conclusions and recommendations. The report appendices contain project maps and figures (Appendix A), boring logs (Appendix B), groundwater parameters (Appendix C), and Chain-of-Custody documentation/analytical results (Appendix D).

2.0 BACKGROUND

The Gulf Service Station originally operated three 10,000 gallon gasoline underground storage tanks (USTs), and one 350 gallon waste oil UST. Historical records indicate that the service station existed since at least 1950. The current location of the Shell Service Station, located adjacent to, and south of the subject site was a fueling station since at least 1952. The three gasoline USTs were located at the northern portion of the property, (underneath the current building), and the waste oil UST was west of the service bays. The two pump islands were west of the northern portion of the existing building. According to previous historical research there are no records documenting the removal of the three 10,000 gallon gasoline USTs. The 350 gallon waste oil UST was removed in October 1996 by All Environmental, Inc (AEI).

On October 3, 1996, AEI removed the previously identified 350 gallon waste oil UST located west of the service bays. Visual staining of waste oil range hydrocarbons was identified on the floor and sidewalls of the excavation. Confirmation soil samples collected from the excavation indicated that soil beneath the former UST emplacement were impacted with minor concentrations of petroleum hydrocarbons. At the request of ACHCS, AEI expanded the size of the excavation, then collected additional confirmation soil samples which indicated the successful removal of the contamination. Groundwater was not encountered during this excavation phase, however, due to the estimated proximity of the contamination to groundwater, a subsurface investigation was required by the County.

On January 8, 1997 AEI conducted a subsurface investigation consisting of six borings using a Geoprobe. Borings BH-1, BH-2, BH-4, and BH-6 were advanced to 20 feet below grade level (BGL), and BH-3 and BH-5 were probed to 16 feet BGL. Soil samples were collected at intervals of 5 feet, and "grab" groundwater samples were collected from inside the borings. Groundwater was identified at approximately 16 feet BGL.

The soil samples were analyzed in accordance with California Department of Health Services (CA DHS) method for total petroleum hydrocarbons as gasoline and diesel (TPH-g,d) and EPA Method 8020 for volatile

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aromatics (BTXE), and methyl tertiary butyl ether (MTBE). The soil samples were also analyzed for total lead, oil and grease, and poly nuclear aromatics (PNAs). Results of the laboratory analyses are summarized below. Units are in milligrams per kilograms (mg/kg) which are equivalent to parts per million (ppm). Results of these analyses are listed in **Table 1**.

Table 1 Analytical Results of Soil Samples January 10, 1997

Sample I.D.	TPH-d	TPH-g	Benzene	Toluene	Xylenes	Ethylbenzene
BH-1-15'	ND	ND	ND	ND	ND	ND
BH-2-15'	ND	ND	ND	ND	ND	ND
BH-3-15'	ND	ND	ND	ND	ND	ND
BH-4-15'	370	1100	ND	ND	14	4.4
BH-5-15'	1.9	2.1	0.009	0.006	0.016	ND
BH-6-15'	140	190	0.25	0.5	3.6	0.84
Detection Limits	(mg/kg)	1.0	0,005	0.005	0.005	0.005

ND: Non-detected at indicated level of detection.

Total lead concentrations ranged from 4.6 mg/kg to 23 mg/kg which is below the recommended action level of 50 mg/kg. MTBE was non-detect for all samples analyzed, oil and grease was only run on BH-2 and BH-3 and was less than 50 mg/kg, and the PNAs exhibited trace concentrations ranging between 1.1 and 41 mg/kg.

The groundwater samples were analyzed in accordance with California Department of Health Services (CA DHS) method for total petroleum hydrocarbons as gasoline and diesel (TPH-g,d) and EPA Method 8020 for volatile aromatics (BTXE), and methyl tertiary butyl ether (MTBE). Groundwater samples were also analyzed for total lead, oil and grease, and poly nuclear aromatics (PNAs). Results of the laboratory analyses are summarized below. Units are in micrograms per Liter (ug/L) which are equivalent to parts per billion (ppb). Results of these analyses are listed in Table 2.

Table 2 Analytical Results of Groundwater Samples January 10, 1997

Sample I.D.	TPH-d	TPH-g	Benzene	Toluene	Xylenes	Ethylbenzene
BH1W	490	330	2.0	0.72	1.3	ND
BH2W	320	ND	ND	ND	ND	ND
BH4W	NA	6600	58	13	270	110
BH6W	450K	13,000	870	65	570	130
Detection Limits	(mg/kg)	1.0	0.005	0.005	0.005	0.005

ND: Non-detected at indicated level of detection.

NA: Not analyzed

Soluble lead concentrations were below detection limits, MTBE ranged from below detection limits to 320 ug/L in BH6W, oil and grease was only run on BH2W and was less than 5 mg/L, and the PNAs exhibited non detectable concentrations.

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3.0 SITE GEOLOGY and DEPTH TO GROUNDWATER

The subject property is west of the San Francisco Bay in the foothills of Oakland. The foothills of Oakland are composed of alluvial fans and non-marine terraces with elevations from 150 to 500-feet above mean sea level. The area slopes regionally to the southwest with gradients ranging from 25 to 200-feet per mile.

The alluvial deposits of Recent age that comprise the area consist mainly of sands, gravels, silts, and clays. Generally, the coarse grained sediments are deposited near the inland hills as alluvial fans, whereas deposition of progressively finer grained sediments occurs toward the San Francisco Bay and marshlands. The upper fan areas are interpreted as intake areas where recharge of groundwater takes place. Hydraulic continuity may exist between alluvial sediments of the fan areas and certain water-bearing sediments of the central lowlands. Replenishment of groundwater occurs in the intake area by infiltration from major streams within their permeable channels and from precipitation.

The regional stratigraphy is comprised of interbedded silt, clay, and sand that is typical of sediments deposited on alluvial fans and terraces during flood stages. Generally, from grade level to a depth of 19 feet BGL a silty sand (SM) is present, containing lenticular deposits of silt and silty clay. From 19 feet to approximately 22 feet BGL, a coarse grained sand to gravel was logged and is water saturated. This permeable zone is "perched" on a less permeable clayey silt. The sedimentation typifies older, higher energy stream channels (coarse grained sand (SP) to gravel (GC)) and flood stage stream deposits (silt (ML) and clay (CL)) occur.

3.1 Soil Profile

The soil profile at the site, from grade level to approximately 7 feet BGL consists of a tan, moderately compact, silt to clayey silt (ML-SM). From 7 feet to 12 feet BGL an olive, moderately dense, finegrained silty sand (SM) occurs. From 12 to 14-feet BGL an olive-brown, moderately dense, unconsolidated sand (SM-SP) is present. From 14 to 19 feet BGL a tan-brown, moderately compact clayey silt is identified (ML), and is underlain by a multi-colored, unconsolidated coarse-grain sand and gravel (SW-GC) to a depth of 22 feet BGL. This water-bearing sand is "perched" on a less permeable clayey silt.

The current groundwater flow direction is calculated at N58W, and the gradient is 0.48'/100'. The flow direction correlates with the 1992 flow direction calculated by the Pacific Environmental Group for the Shell Station at 230 West MacArthur.

4.0 ASSESSMENT ACTIVITIES

4.1 Decontamination Procedures

Prior to beginning drilling operations, the augers, Geoprobe, and associated equipment were thoroughly cleaned using a high pressure steam cleaner. In addition, the soil sampler was washed in an Alconox solution and rinsed with deionized water (prior to initial use and between each sampling interval) to minimize the possibility of cross-contamination between samples.

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4.2 Soil Boring

On August 7, 1997, three Geoprobe soil borings (BH-7, BH-8, and BH-9), and four groundwater monitoring wells (MW-1, MW-2, MW-3, and MW-4) were drilled proximal to the western dispenser islands, and south, west, and north of the former UST emplacement. The investigative groundwater wells and Geoprobe borings were positioned to assess the vertical and lateral migration of hydrocarbons in the subsurface and to evaluate groundwater quality. The borings were advanced using a limited access, track-mounted mobile drilling rig, equipped with 8-inch O.D. continuous flight, hollow-stem augers. Boring locations are presented on Figure 2.

Soil samples were collected at five (5) foot intervals commencing at 5-feet below grade level (BGL), and at the capillary fringe. Samples were obtained by driving a thin-walled steel sampler, equipped with three 1 1/2-inch x 6-inch brass sleeves, or butyrate plastic sleeves, a minimum of 18-inches into previously undisturbed soil. The sampler was driven ahead of the augers using a percussion hammer. After each sampling interval, the sampler was withdrawn from the borehole and the brass, or butyrate, sleeves were removed. The sleeve retained for laboratory analysis was prepared by placing teflon tape and plastic caps over each end, then securing the caps with duct tape. The samples were labeled, recorded on Chain-of-Custody documents and placed in an ice chest chilled with blue ice. Soil exposed at each end of the sleeves and the cuttings, were examined for lithological descriptions and for any obvious hydrocarbons. Lithology descriptions were logged (**Appendix B**) according to the Unified Soils Classification System (USCS) and Chain-of-Custody documentation was followed to ensure sample integrity and traceability. Upon completion of the above described procedures, the Geoprobe borings were backfilled with bentonite and capped with concrete.

4.3 **Groundwater Monitoring Wells**

On August 7, 1997, four groundwater monitoring wells (MW-1,2,3, and 4) were drilled on the subject property. The wells were positioned to assess the lateral migration of hydrocarbons in the groundwater and advanced using a track-mounted limited-access drill rig, equipped with 8-inch O.D. continuous flight, hollow-stem augers. Well locations are presented on **Figure 2**.

Soil samples were collected using a split-spoon sampler at 5-foot intervals to groundwater at approximately 19 feet BGL. The monitoring wells were constructed of 2-inch diameter, flush-threaded, Schedule 40 PVC casing with the 0.010-inch screened interval positioned between 24.5 feet and 14.5 feet BGL (Appendix A, Figure 3). A 2-inch, flush-threaded, end cap was installed on the bottom of the screen to act as a sediment trap. The annulus around the screened interval was packed with Number 2/16 Monterey sand to approximately 1-2 feet above the screened interval, followed by approximately 7 feet of hydrated bentonite chips. The remaining annular space was backfilled with a cement slurry. A metal, locking traffic box was installed and cemented in place to protect the well head. Well construction details are depicted graphically in the appended boring logs.

4.4 Well Development / Sampling

On August 8, 1997, the newly installed wells were purged by pumping water using a Grundfos 2-inch submersible pump. Approximately 20 gallons of water were removed from each well until the fine sediments were less than 10% by volume. Water bearing zone parameters of pH, temperature and conductivity were obtained using a HYDAC meter, and recorded at 4-gallon intervals. The aquifer was allowed to stabilize to within 10% of its original standard level then sampled. Prior to sampling, the monitoring well was measured for depth to water. Groundwater samples were collected from the well

using a stainless steel bailer. The bailed water was transferred to clean, labeled, VOA vials, and 1 Liter amber jars, and sealed with Teflon-lined septa. Care was exercised to ensure that no air bubbles were present inside the vials. The glass containers were placed in protective padding and stored on Blue lice for shipment to Associated Laboratories, Inc., a California-certified laboratory.

5.0 ANALYTICAL RESULTS

Soil analyses were performed by Associated Laboratories, Inc. to determine the presence and concentrations of hydrocarbons at the subject site by EPA methods and 8015M and 8020. Analytical results for soil samples are presented in **Table 3** and laboratory data sheets and chain-of-custody documents are contained in **Appendix D**. Units are in milligrams per kilogram (mg/kg) which are equivalent to parts per million (ppm).

TABLE 3 Analytical Results - Soil Boring August 7, 1997 (ppm)

Sample I.D.	TPH-d	TPH-g	Benzene	Toluene	Xylenes	Ethlbenzene
BH-7-12'	ND	ND	ND	ND	ND	ND
BH-7-16'	ND	ND	ND	ND	ND	ND
BH-8-8'	ND	ND	ND	ND	ND	ND
BH-8-12'	ND	168	0.02	ND	5.1	0.45
BH-8-16'	ND	21	0.027	0.07	0.75	ND
BH-9-8'	ND	ND	ND	0.032	0.28	0.029
BH-9-12'	ND	ND	ND	0.012	ND	ND
BH-9-16'	ND	ND	ND	ND	ND	ND
MW-1-10'	ND	ND	ND	ND	ND	ND
MW-1-17'	ND	ND	ND	0.031	ND	ND
MW-2-10'	ND	ND	ND	ND	ND	ND
MW-2-17'	ND	16	0.035	0.037	0.15	0.018
MW-3-10'	ND	ND	ND	ND	ND	ND
MW-3-15'	ND	ND	0.027	ND	ND	ND
MW-4-10'	ND	ND	ND	ND	. ND	ND
MW-4-17'	ND	ND	ND	ND	ND	ND
Detection limits (m	ng/kg):5.00		.0050	0.0050	0.0050	0.0050

ND: Non Detected at indicated limit of detection

Water analyses were performed by Associated Laboratories, Inc. to determine the presence and concentrations of hydrocarbons at the subject site by EPA methods and 8015M and 8020. Analytical results for soil samples are presented in **Table 4** and laboratory data sheets and chain-of-custody documents are contained in **Appendix D**. Units are in micrograms per Liter (ug/L) which are equivalent to parts per billion (ppb).

TABLE 4 Analytical Results - Monitoring Wells August 8, 1997 (ppb)

Sample I.D.	TPH-	d TPH-g	Benzene	Toluene	Xylenes	Ethlbenzene
MW-1	ND	1,140	110	16	112	15
MW-2	ND	5,350	108	36	144	33
MW-3	ND	8,500	450	30	106	53
MW-4	ND	ND	ND	ND	ND	ND
Detection limits (n	na/L):	5.00	.0050	0.0050	0.0050	0.0050

ND: Non Detected at indicated limit of detection

TABLE 5 Biological Factors August 8, 1997 (ppb)

Sample I.D.	2580 B	300.0 (Nitrate)	300.0 Sulfate	310.1	3500 FED	360.1
MW-1	311	7.1	92	238	0,10	8.2
MW-2	331	0	43	398	0.50	6.3
MW-3	330	0	56	368	ND	7.9
MW-4	307	19.5	87	140	ND	7.8
Detection Limits	: (mg/kg)	5	5	5.0	0.10	

2580B: Redox Potential @ Temp

300.0: Nitrate As NO3 by Ion Chromatograph

310.1 Alkalinity

3500FED: Ferrous Iron

360.1: Dissolved Oxygen, Membrane Electrode

6.0 EXTENT OF HYDROCARBON MIGRATION

The January 1997 soil and groundwater assessment by AEI, and subsequent soil sampling and groundwater monitoring well installation conducted by AEC in August 1997, indicates a gasoline and diesel plume spanning the northern half of the property (**Appendix A, Figure 2**). The investigation indicate that native soil had a slight to strong gasoline odor that varied with depth and permeability of the soil matrix, but was consistently identified in the unconsolidated sand identified at 12 feet BGL. PID readings indicated elevated concentrations of hydrocarbon vapors coinciding with the malodorous intervals.

The hydrocarbon concentrations have established a pattern consistent with multiple release points of smaller volumes over a long period of time. For example, elevated gasoline concentrations are identified in the soil and groundwater adjacent the western most dispenser (BH-4, BH-8, MW-3). The hydrocarbon concentrations are trace to non detect in BH-5 and BH-7 which are located approximately 20 feet away. Apparently, gasoline and diesel-range hydrocarbons have been released proximal to the former gasoline UST emplacement, the waste oil UST emplacement, and the western island location however, lateral migration has been limited. The releases are probably due to a combination of overspill while filling the 10,000 gallon USTs (or waste oil

removal) and the fittings manifolding the plumbing from the USTs to the islands. The absence of any significantly elevated soil contamination again indicates small volume type of releases over long time periods versus a large volume release associated with corrosion holes in the USTs and/or pressurized piping. Also, the age of the former station indicates that it first operated under a vacuum dispensing system (pumps lose prime if there is a problem and therefore won't dispense gasoline), and was later converted to a pressurized dispensing system. The conversion process should have identified potential points where leakage may have occurred and remedied the situation.

6.1 **Bio-Remediation Factors**

Biological factors that were measured in the groundwater are Redox Potential, Nitrate, Sulfate, Alkalinity, Iron, and Dissolved Oxygen. The results indicate that dissolved oxygen and nitrate are present in the groundwater, an adequate Redox Potential exists, and no negative conditions (i.e. high iron content) exist that would impede passive bio-remediation.

7.0 CONCLUSIONS

- Three Geoprobe soil borings were advanced and four groundwater monitoring wells were advanced at the subject site.
- Soil samples from BH-7, BH-9, MW-1, MW-3, and MW-4 were below detectable for all constituents analyzed. All other soil samples submitted for analysis recorded detectable concentrations of at least one constituent.
- Only groundwater from MW-4 was below detectable limits for all constituents analyzed.
- Groundwater gradient was calculated to be 0.48'/100' to the northwest.
- Physical and chemical factors that control native/passive remediation in the groundwater were measured analytically. Recorded results indicate that the groundwater is suitable for passive remedation and no negative conditions exist.

8.0 RECOMMENDATIONS

AEC recommends continued quarterly sampling of the groundwater monitoring wells for a period of one year to demonstrate plurne stability and natural attenuation. Since the sources of continued contamination (USTs and dispensers) have been removed it does not appear that this site requires proactive remediation. Analysis of natural attenuation parameters will continue to be measured, primarily dissolved oxygen and oxidation-reduction potential. After one year, if the hydrocarbon concentrations indicate an increasing trend in concentrations, or greater lateral migration AEC will recommend a site specific treatment option.

9.0 LIMITATIONS

This work has been performed in accordance with generally accepted environmental science and engineering practices. Conclusions and recommendations are based upon information collected and compiled during this investigation. No other warranty, expressed or implied, is given.

Advanced Environmental Concepts, Inc.

10.0 CLOSING

Advanced Environmental Concepts, Inc. appreciates the opportunity to be of service to Mr. Warren Dodson, of Dodson Ltd. on this project. If there should be any questions or additional information required regarding this report, please do not hesitate to contact our office at (805) 831-1646.

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This Environmental Site Assessment has been prepared by:

Advanced Environmental Concepts, Inc.

Buck

Jonathan L. Buck Project Hydro geologist California Registered Environmental Assessor #1508



This report has been technically reviewed by:

JOSEPH A. DUNWOODY II bseph A. Dùnwoody III Registered Geologist #5504 5504 Certified Hydrogeologist #156 DOC34BA C_{ij}

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. ENVIRONMENTAL CONCEPTS WITH DESIGN IN MIND .



HOWE STREET





WELL DETAIL	DEPTH	PID (ppm)	SAMPLE ID INTERVAL BLOWCOUNT	U.S.C.S. LOG	LITHOLOGIC DESCRIPTION
				. · · · · · · · · · · · · · · · · · · ·	
	—				
	—		29.2	sw	SAND (SW): Olive-tan, rust staining, moderately dense, un-
	- 5 -				consolidated, fine-grained, conguneratic, some silt, slightly moist, no apparent gasoline odor.
	—				
	—		18.4	SM	SAND (SM): Olive, moderately dense, loosely consolidated,
					fine-grained, silty, increasing clay, moderately moist, no apparent gasoline odor.
•	10				
			22.1		
				1	
	15				
			7.80	SP	SAND (SP): Olive, moderately dense, loosely consolidated,
			1.64		fine-grained, slightly to moderately moist, strong gasoline odor.
	20				
				 !	
		ĺ	1		
	_ 25				
	<u> </u>	1			
AEC ADVA	NČED ENVIRO BOX 40672 BJ	DI NMENTAL	CONCEPTS	· · · · · · · · · · · · · · · · · · ·	WELL/BORING LOG
PROJECT Pre	stige-Vogue Tym	85	LOCATIO	N 240 W. MacArth	nur Blvd., Oakland, California
WELL/BORING	NO. <u>BH-7</u>	4	SURFACE ELEV		
DATE DRILLED DRILLING COMI	08/07/97 PANYGregg	Drilling	LOGGED BY	DRILLER	METHOD GeoProbe
BORE HOLE DIA	METER _8"		AL DEPTH		DEPTH TO WATER: INITIAL STATICA
SCREEN TYPE		DIAMETE	R	SLOT SIZE	
FILTER PACK T					
NOTES					

WELL	DEPTH	PID (ppm)	SAMPLE ID INTERVAL BLOWCOUNT	U.S.C.S. LOG	LITHOLOGIC DESCRIPTION
				<u></u>	
	5		22	ЗМ	SIL1 (SM): Olive-tan, moderately compact, still, sandy-dayey in part, moderately moist, slight gasoline odor.
				· · ·	
	—				
	—		704	SM	SAND (SM): Olive moderately dense, loosely consolidated.
			/21		fine-grained, some rock fragments, silty-clayey, moderately
					SAND (SM): Olive-tan, moderately dense, loosely
	-		451	SW	consolidated, fine to medium grained, confifdifif, sility moderately moist, strong gasoline odor.
	-	ł			'HOT" Sand (>2000 ppm), might be water sand, now only very
	—	1			moist.
	- 15 -	4			
			01.3	sw	SAND (SW): Tan-olive, moderately dense, loosely consolidated
			31.5		fine-grained, sility-clayey, conglomeratic, moderately moist, stron gasoline odor.
	20 -	1		2	
	25	4			
	_	1			
		1			
	-				
	<u> </u> − 30 −	1			
			00000078		
AEC ADV.	ANCED ENVIRG BOX 40672 B	ONMENTAL AKERSFIE	L CONCEPTS LD, CA 93384		WELL/BORING LOG
PROJECT_Pre	stige-Vogue Tyr	es	LOCATIO	N 240 W. MacArl	thur Blvd., Oakland, California
WELL/BORING	NO. <u>BH-8</u>		SURFACE ELEV	ATION	
DATE DRILLED		Drilling	LOGGED BY		METHOD GeoProbe
BORE HOLE DI	AMETER 8"	то		16'	
CASING TYPE SCREEN TYPE		DIAMETE	R \$	SCHEDULE	
FILTER PACK					
SURFACE SEA					

WELL DETAIL	DEPTH	PID (ppm)	SAMPLE ID INTERVAL BLOWCOUNT	U.S.C.S. LOG	LITHOLOGIC DESCRIPTION
	1				
	—				CLAV (CL). Tag compact stiff maderately maint sity in part
	- 5 -				weathered, moerately moist, no apparent hydrocarbon odor.
		1			
	—		68	SM	SAND (SM): Olive, moderately dense, loosely consolidated,
	—				fine-grained, silty, increasing clay, moderately moist, no apparent gasoline odor.
	- 10				
	_		292	SM	SAND (SM): Olive-brown, gray staining, loosely consolidated, fine-grained, silty-clayey, moderately moist, moderate gasoline
		ļ			odor.
	_				
	L 15 _	1			
				MI	SILT (ML): Buff-tan, moderately compact, stiff, clayey in part,
			590	IVIC .	moderately to very moist, moderate gasoline odor.
		Į			
	25 -	1			
	—				
	—				
	<u> </u>	4			
AEC ADV	ANCED ENVIRO BOX 40672 BJ	ONMENTAL AKERSFIEL	LCONCEPTS LD, CA 93384		WELL/BORING LOG
PROJECT Pre	stige-Vogue Tyr	es	LOCATIO	N 240 W. MacArth	nur Blvd., Oakland, California
WELL/BORING I	NO BH-9	:	SURFACE ELEV	ATION	WELLHEAD ELEVATION N/A BEVIEWED BY J. DUNWOODY
DATE DRILLED	PANY Gregg	Drilling		DRILLER	METHOD GeoProbe
BORE HOLE DI	Ameter <u>8"</u>		FAL DEPTH	16' SCHEDUI E	DEPTH TO WATER: INITIAL STATICA
SCREEN TYPE		DIAMETE	R 8		
FILTER PACK 1			<u> </u>		INTERVAL
NOTES	••••••••••••••••••••••••••••••••••••••				

	WELL	-	DEPTH	PID (ppm)	SAMPLE ID INTERVAL BLOWCOUNT	U.S.C.S. LOG	LITHOLOGIC DESCRIPTION
CEMENT	NC	CEMENT	5				
BENTONITE	BLANK	BENTONITE	10 		486	SM	SAND (SM): Tan-brown, moderately dense, loosely consolidated, silty in part, moderately moist, moderate gasoline odor.
SAND	SCREENED PVC	SAND	15 20 		318	SM	SAND (SM): Tan-brown, moderately dense, loosely consolidated, sitty/clayey in part, moderatly moist, strong gasoline odor. GRAVEL (GC): Multi-colored, unconsolidated, saturated, slight gasoline odor.
			25 — — — 30 —		CONCEPTS		
A Pf Di BC SC Fi	EC ROJECT ELL/BO ATE DR RILLING ORE HO ASING CREEN ILTER F URFAC	ADV P.O. RING N ILLED COMI DLE DI/ TYPE TYPE PACK T E SEAI	ANCED ENVIRG BOX 40672 B stige-Vogue Tyr NO. MW-1 08/07/97 PANY Gregg AMETER 8" PVC PVC YPE Sand TYPE Net	onmenta AKERSFIE es Drilling Drilling Doministre DIAMETE DIAMETE	L CONCEPTS 1.D, CA 93384 SURFACE ELEV/ LOGGED BY I TAL DEPTH FR4" S wer bentonite	N 240 W. MacArt ATION Buck DRILLER 25' CHEDULE CHEDULE	WELL/BORING LOG hur Blvd., Oakland, California WELLHEAD ELEVATION N/A REVIEWED BY J. DUNWOODY METHOD GeoProbe DEPTH TO WATER: INITIAL 19' STATIC N/A 40 INTERVAL 14.5 TO 0.010 INTERVAL 10 INTERVAL 13' TO Surface

WELL DETAIL			DEPTH	PID (ppm)	SAMPLE ID INTERVAL BLOWCOUNT	U.S.C.S. LOG	LITHOLOGIC DESCRIPTION
CEMENT		CEMENT					
TONITE	BLANK PVC	TONITE				SM	SAND (SM): Tan-brown, moderately dense, loosely consoli- dated, fine-grained, silty-clayey, slightly moist, no apparent gasoline odor. SAND (SM): Tan, moderately dense, loosely consolidated, fine-
BENT		BEN	15			5M	grained, silty-clayey, moderately moist, slight gasoline odor.
SAND	SCREENED PVC	SAND	20 			5P —	GRAVEL (GC): Multi-colored, unconsolidated, saturated, slight gasoline odor.
			25 30				
A PF W(DA DF BC	EC ROJECT ELL/BO ATE DR RILLING DRE HO	ADVA P.O.	I ANCED ENVIR BOX 40672 B stige-Vogue Tyr NO. MW-2 08/07/97 PANY Gregg AMETER 8	Drilling	L CONCEPTS LD, CA 93384 LOCATION SURFACE ELEV LOGGED BY	N _ 240 W. MacArt ATION Buck DRILLER 25'	WELL/BORING LOG thur Blvd., Oakland, California WELLHEAD ELEVATION N/A REVIEWED BY J. DUNWOODY METHOD GeoProbe DEPTH TO WATER: INITIAL STATIC N/A 40 INTERVAL 14.5 TO
DF BC C/ SC FI SU	RILLING DRE HO ASING ⁻ CREEN ILTER F JRFACI	COMP ILE DIA ITYPE TYPE ACK T E SEAL	PANY <u>Gregg</u> METER <u>8"</u> <u>PVC</u> <u>PVC</u> YPE <u>Sand</u> TYPE <u>Ne</u>	Drilling TO DIAMETE DIAMETE	TAL DEPTH	DRILLER25' 25' CHEDULE SLOT SIZE(METHOD Geoprope DEPTH TO WATER: INITIAL STATIC N/A 40 INTERVAL 14.5 TO Grade 0.010 INTERVAL 24.5' TO 14.5' INTERVAL 24.5' TO 14.5' INTERVAL 24.5' TO 13' INTERVAL 13' TO Surface

CEMENT				
BLANK PVC	5	14.3	SM	SAND (SM): Yellow-tan, moderately dense, loosely con- solidated, silty matrix, rock fragments, slightly to moderatly moist, no gasoline odor.
BENTONITE	10 	64.8	ML	SILT (ML): Tan-brown, moderately compact, stiff, clayey in part, moderately moist, increasing gasoline odor.
		148	SM	SAND (SM): Olive, moderately dense, loosely consolidated, fine- grained, silty moderately moist, moderate gasoline odor.
SAND SCREENED PVC SAND	20 	343	Y	GRAVEL LENS (GC) at 20' water olive, moderately dense, unconsolidated, strong gasoline odor.
	25 			
AFC AD		DINMENTAL CONCEPTS		WELL/BORING LOG
PROJECT P.O. PROJECT Provide the PROJECT Providence of the Provide	BOX 40672 B astige-Vogue Tyre NO. MW-3 08/07/97 PANY Gregg AMETER 8' 	AKERSFIELD, CA 93384 BS LOCATIO SURFACE ELEV LOGGED BY Drilling TOTAL DEPTH DIAMETER 4"	ATION J. Buck DRILLER 25' SCHEDULE SLOT SIZE	Mur Blvd., Oakland, California WELLHEAD ELEVATION N/A REVIEWED BY J. DUNWOODY METHOD GeoProbe DEPTH TO WATER: INITIAL 19' STATIC N/A 40 INTERVAL 14.5 TO Grade 0.010 INTERVAL 24.5' TO 14.5' INTERVAL 24.5' TO 13'

Ε	WELL	Ĺ	DEPTH	PID (ppm)	SAMPLE ID INTERVAL BLOWCOUNT	U.S.C.S. LOG	LITHOLOGIC DESCRIPTION
CEMENT		CEMENT					
			موسور المالية				
	0		5			SM	SAND (SM): Tan. moderately dense, loosely consolidated.
	NK PV				12.4	UNI	silty matrix, slightly moist, no apparent gasoline odor.
	BLA		_				:
ONITE		ONITE		ĺ			CAND (SB). The mederative dense increase consolidated sittle in
BENT		BENT	10	1	13.9	SP	part, slightly moist, no apparent gasoline odor.
				;			
			— 15 —	-			
					148	SM	SAND (SM): Tan, moderately dense, loosely consolidated, silty matrix, moderately moist, no apparent gasoline odor.
0	PVC						
SAN	RENEC	SAND	20				
	SCF						
			- 25 -	1			
A	ĒC	ADVA P.O. I	NCED ENVIRO BOX 40672 B	ONMENTAL AKERSFIEL	CONCEPTS LD, CA 93384	 ,	WELL/BORING LOG
PF WF	ROJECT	Pre:	stige-Vogue Tyr 10. MW-4	es	LOCATION	N 240 W. MacArth	ur Blvd., Oskland, California WELLHEAD ELEVATION N/A
DA DF	ATE DR	ILLED COMF	08/07/97 ANY <u>Gregg</u>	Drilling		. Buck DRILLER	REVIEWED BY J. DUNWOODY METHOD GeoProbe
BC CA SC	DRE HO Asing 1 Dreen	ILE DIA L'YPE TYPE	METER 8" PVC PVC	DIAMETE	R4"S R4"S	CHEDULE	40 INTERVAL 14.5 TO Grade .010 INTERVAL 24.5' TO 14.5'
FI	LTER P	ACK T E SEAL	YPE <u>Sand</u> . TYPE <u>Nea</u>	at cement ov	er bentonite		INTERVAL 24.5° TO <u>12'</u> INTERVAL <u>12'</u> TO Surface
N	OTES _						

Groundwater Parameters

Site Name:	Vogue Tyres	AEC P.O. #:	
Location:	240 West MacArthur	Project #	
	Oakland, CA	Date:	August 8, 1997

TIME	GALLONS PURGED	CONDUCTIVITY TEMPERATURE		pН
		MONITORING	WEL <u>L #1_</u>	
10:02	4 gallons	2170	68.9	7.22
10:07	8 gallons	1880	68.7	7.08
10:11	12 gallons	1790	68.5	7.12
10:17	15 gallons	1760	68.8	7.16
			n	
		MONITORING	WELL #	.
09:00	4 gallons	1310	69.5	7.14
09:05	8 gallons	1260	68.8	7.01
09:08	12 gallons	1140	68.7	6.99
	15 gallons	1010	68.8	6.96
		······································		
		MONITORING	WELL # <u>3</u>	
08:25	4 gallons	1820	68.6	8.22
08:28	8 gallons	1780	69.2	8.33
08:31	12 gallons	1760	69	8.39

3 Casing Volumes

4" Screen = (.6	6 gal/ft) (ft) =	2" Screen = (.17 gal/ft) (ft) =
MW # _1_	Depth to Groundwater = <u>11.83'</u>	Corrected Depth: <u>16.83</u>	Survey: <u>4.39'</u>
MW # _2_	Depth to Groundwater = <u>16.32'</u>	Corrected Depth: <u>17.02'</u>	Survey: <u>5.09'</u>
MW # <u>3</u>	Depth to Groundwater = <u>15.36'</u>	Corrected Depth: <u>16.91</u>	Survey: <u>5.94'</u>

Groundwater Parameters

e Name:	Vogue Tyres	AEC P.O. #:		
cation:	240 West MacArthur	Project #:		
	Oakland, CA	Date:	August 8, 1997	
TIME	GALLONS PURGED	CONDUCTIVITY	TEMPERATURE	 рН
		MONITORING	WELL # 4	
07:10	4 gallons	2820	69.3	8.22
07:14	8 gallons	1860	69.1	8.33
07:19	12 gallons	1810	68.9	8.39
		MONITORING	WELL #	
		· · · · · · · · · · · · · · · · · · ·		
		MONITORING	WELL #	
Casing Volu " Screen = (.(//W # _4	mes 56 gal/ft) (ft) = Depth to Groundwater =15.36	<u>MONITORING</u> 2" Screen = (.17Corrected Depth:		72'
/W #	Depth to Groundwater =	Corrected Depth:	Survey:	
	Depth to Groundwater =	Corrected Depth:	Survey:	



ASSOCIATED LABORATORIES

806 North Batavia - Orange, California 92868 - 714/771-6900

FAX 714/538-1209

CLIENT	AEC	(7139)	LAB REQUEST 13066
	ATTN: Jon Buck 4400 Ashe Road		REPORTED 9/ 4/97
	#206 Bakersfield, CA 93313		RECEIVED 8/11/97

PROJECT Prestige Vogue Tyres

SUBMITTER Client

COMMENTS

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods as indicated on the report. This cover letter is an integral part of the final report.

Order No.	Client Sample Identification
34971	BH-7 @ 4'
34972	BH-7 @ 8'
34973	BH-7 @ 12'
34974	BH-7 @ 16'
34975	BH-8 @ 4'
34976	BH-8 @ 8'
34977	BH-8 @ 12'
34978	BH-8 @ 16'
34979	BH-9 @ 4'
34980	вн-9 @ 8'
34981	вн-9 @ 12'
34982	BH-9 @ 16'
34983	MW-1 @ 10'
34984	MW-1 @ 17'

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

ASSOCIATED LABORATORIES by,

Michael G. Chapman

Director Environmental Services

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 30 days from date reported.

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TESTING & CONSULTING Chemical Microbiological

Environmental

Lab request 13066 cover, page 1 of 2

09/04/97 15:20

CLIENT	AEC		(7139)	LAB REQUE	ST 13066
	ATTN: Jon Buck 4400 Ashe Road			REPORTED	9/ 4/97
	#206 Bakersfield, CA	93313		RECEIVED	8/11/97

PROJECT Prestige Vogue Tyres

SUBMITTER Client

COMMENTS

This laboratory request covers the following listed samples which were analyzed for the parameters indicated on the attached Analytical Result Report. All analyses were conducted using the appropriate methods as indicated on the report. This cover letter is an integral part of the final report.

Order No.	Client Sample Identification
34985	MW-2 @ 5'
34986	MW-2 @ 10'
34987	MW-2 @ 17'
34988	MW-3 @ 5'
34989	MW-3 @ 10'
34990	MW-3 @ 15'
34991	MW-4 @ 5'
34992	MW-4 @ 10'
34993	MW-4 @ 17'
34994	MW-4
34995	MW-2
34996	MW-3
34997	MW-1
34998	Bailer Blank

Thank you for the opportunity to be of service to your company. Please feel free to call if there are any questions regarding this report or if we can be of further service.

ASSOCIATED LABORATORIES by,

Michael G. Chapman Director Environmental Services

NOTE: Unless notified in writing, all samples will be discarded by appropriate disposal protocol 30 days from date reported.

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Lab request 13066 cover, page 2 of 2

TESTING & CONSULTING Chemical Microbiological

Environmental

Order #: 34973 Matrix: SOLID Date Sampled: 8/ 7/97

	Analyte	Result		DLR	Units	Date/Analyst		
<u>8020A</u>	<u>BTEX + MTBE</u>							
	Benzene]	ומא	0.005	mg/Kg	8/12/97	WR
	Ethyl benzene	11		ND	0.005	mg/Kg	8/12/97	WR
	Methyl t - butyl ether		[ND	0.05	mg/Kg	8/12/97	WR
	Toluenc			ND	0.005	mg/Kg	8/12/97	WR
	Xylene (total)			ND	0.015	mg/Kg	8/12/97	WR
<u>8015 - '</u>	Total Petroleum Hydrocarbon	<u>s</u>						
	Diesel		}	ND	10	mg/Kg	8/13/97	DC
	Gasoline		1	ND	5	mg/Kg	8/12/97	WR

Client Sample ID: BH-7 @ 12'

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit



ASSOCIATED LABORATORIES Analytical Results Report Lab Request 13066 results, page 1 of 20

Order #: 34974 Matrix: SOLID Date Sampled: 8/ 7/97

Analyte	Result	DLR	Units	Date/Analyst	
8020A BTEX + MTBE					
Benzene	ND	0.005	mg/Kg	8/12/97 WR	
Ethyl benzene	ן מא	0.005	mg/Kg	8/12/97 WR	
Methyl t - butyl ether	ND	0.05	mg/Kg	8/12/97 WR	
Toluene	ND	0.005	mg/Kg	8/12/97 WR	
Xylene (total)	ןסא ן	0.015	mg/Kg	8/12/97 WR	
<u> 8015 - Total Petroleum Hydrocarbons</u>					
	ND	10	mg/Kg	8/13/97 DC	
Gasoline	ND	5	mg/Kg	8/12/97 WR	

Client Sample 1D: BH-7 @ 16'

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit



ASSOCIATED LABORATORIES Analytical Results Report Lab Request 13066 results, page 2 of 20

Order #: 34976 Matrix: SOLID Date Sampled: 8/ 7/97

Client Sample ID: BH-8 @ 8'

Analyte	Result		Units	Date/Analyst	
<u>8020A BTEX + MTBE</u>					
Benzene	ND]	0.005	mg/Kg	8/14/97 WR	
Ethyl benzene	ND	0.005	mg/Kg	8/14/97 WR	
Methyl t - butyl ether	ND	0.05	mg/Kg	8/14/97 WR	
Toluene	ND	0.005	m g /Kg	8/14/97 WR	
Xylene (total)	ND	0.015	mg/Kg	8/14/97 WR	
<u> 8015 - Total Petroleum Hydrocarbons</u>					
Diesel	ן סא[10	mg/Kg	8/13/97 DC	
Gasoline	ן סא	5	mg/Kg	8/14/97 WR	

Gasoline

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit



ASSOCIATED LABORATORIES Analytical Results Report Lab Request 13066 results, page 3 of 20

Order #: 34977 Matrix: WATER Date Sampled: 8/ 7/97

Client Sample ID: BH-8 @ 12'

Analyte	Result		Units	Date/Analyst	
6010 ICP Metals - Solid/Liquid					
Lead	12.8	0.20	mg/Kg	8/2 <i>5/</i> 97 NK	
<u>8020a btex + mtbe</u>					
Benzene	0.02	0.005	mg/Kg	8/13/97 WR	
Ethyl benzene	0.45	0.005	nig/Kg	8/13/97 WR	
Methyl t - butyl ether	ND	0.05	mg/Kg	8/13/97 WR	
Toluene	ND	0.005	ing/Kg	8/13/97 WR	
Xylene (total)	5.1	0.015	mg/Kg	8/13/97 WR	
8015 - Total Petroleum Hydrocarbons					
Diesel	ND	10	mg/Kg	8/13/97 DC	
Gasoline	168	5	mg/Kg	8/13/97 WR	

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit



ASSOCIATED LABORATORIES Analytical Results Report Lab Request 13066 results, page 4 of 20

Client Sample ID: BH-8 @ 16'

Order #: 34978 Matrix: SOLID Date Sampled: 8/ 7/97

Analyte	Result	DLR Units		Date/Analyst
6010 ICP Metals - Solid/Liquid				
Lead	47.8	0.20	mg/Kg	8/25/97 NK
8020A_BTEX + MTBE				
Benzene	0.027	0.005	mg/Kg	8/13/97 WR
Ethyl benzene	ND	0.005	mg/Kg	8/13/97 WR
Methyl t - butyl ether	ן אסן	0.05	mg/Kg	8/13/97 WR
Toluene	0.070	0.005	mg/Kg	8/13/97 WR
Xylene (total)	0.75	0.015	mg/Kg	8/13/97 WR
8015 - Total Petroleum Hydrocarbons				
Diesel	ND	10	mg/Kg	8/13/97 DC
Gasoline	21]	5	mg/Kg	8/13/79 WR

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit



ASSOCIATED LABORATORIES Analytical Results Report Lab Request 13066 results, page 5 of 20

Order #: 34980 Matrix: SOLID Date Sampled: 8/ 7/97

	Analyte	Result		sult DLR Unit		Inits Date/Analys	
<u>8020</u> 4	A BTEX + MTBE						
	Benzene		ND	0.005	mg/Kg	8/14/97	WR
	Ethyl benzene	1	0.029	0.005	mg/Kg	8/14/97	WR
	Methyl 1 - buryl ether	1	ND	0.05	mg/Kg	8/14/97	WR
	Toluene	1	0.032	0.005	mg/Kg	8/14/97	WR
	Xylene (total)	1	0.28	0.015	mg/Kg	8/14/97	WR
<u>8015 -</u>	<u>- Total Petroleum Hydrocarbons</u>						
	Diesel	·]	ND	10	mg/Kg	8/13/97	DC
	Gasoline	1	ND	5	mg/Kg	8/14/97	WR

Client Sample ID: BH-9 @ 8'

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit



ASSOCIATED LABORATORIES Analytical Results Report Lab Request 13066 results, page 6 of 20

Order #: 34981 Matrix: SOLID Date Sampled: 8/ 7/97

Client Sample ID: BH-9 @ 12'

	e Result		Units	Date/Analyst	
BTEX + MTBE					
Benzene	ן אטן	0.005	mg/Kg	8/12/97 WR	
Ethyl benzene	J ND	0.005	mg/Kg	8/12/97 WR	
Methyl t - butyl ether	ן סא	0.05	mg/Kg	8/12/97 WR	
Toluene	0.012	0.005	mg/Kg	8/12/97 WR	
Xylene (total)	ND	0.015	mg/Kg	8/12/97 WR	

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit



ASSOCIATED LABORATORIES Analytical Results Report Lab Request 13066 results, page 7 of 20

Order #: 34982 Matrix: SOLID Date Sampled: 8/ 7/97

Client Sample 1D: BH-9 @ 16'

Analyte	Result		DLR	Units	Date/Analyst		
8020A BTEX + MTBE							
Benzene]	ND	0.005	mg/Kg	8/12/97	WR	
Ethyl benzene	. 1	ND	0.005	mg/Kg	8/12/97	WR	
Methyl t - butyl other		ND	0.05	mg/Kg	8/12/97	WR	
Toluene		ND	0.005	mg/Kg	8/12/97	WR	
Xylene (total)	1	ND	0.015	mg/Kg	8/12/97	WR	
8015 - Total Petroleum Hydrocarbons							
Diesel	,	ND	10	mg/Kg	8/13/97	DC	
Gasoline		ND	5	m g /Kg	8/12/97	WR	

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit



ASSOCIATED LABORATORIES Analytical Results Report Lab Request 13066 results, page 8 of 20

Order #: 34983 Matrix: SOLID Date Sampled: 8/ 7/97

Client Sample I	D: MW-1 @ 10'
-----------------	----------------------

Analyte	Result		Result DLR		Date/Analyst	
8020A BTEX + MTBE						
Benzene	1	NDI	0.005	me/Kg	8/12/97	WR
Ethyl benzene	1	NDI	0.005	mg/Kg	8/12/97	WR
Methyl t - butyl eiher	1	ND]	0.05	mg/Kg	8/12/97	WR
Toluene	,	ND	0.005	mg/Kg	8/12/97	WR
Xylene (total)	i	ND	0.015	mg/Kg	8/12/97	WR
<u> 8015 - Total Petroleum Hydrocarbons</u>						
					6/10/07	50
Diesel	ľ	ND	10	mg/Kg	8/13/97	DC
Gasoline	I	וסא	5	mg/Kg	8/12/97	WR

DLR = Detection limit for reporting purposes. ND = Not Detected below indicated detection limit

ASSOCIATED LABORATORIES Analytical Results Report

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Order #: 34984 Matrix: SOLID Date Sampled: 8/ 7/97

Client Sample ID: MW-1 @ 17'

Analyte	Result		DLR Units		Date/Analyst	
8020A BTEX + MTBE						
Benzene		ND	0.005	mg/Kg	8/12/97 WR	
Ethyl benzene	1	ND	0.005	mg/Kg	8/12/97 WR	
Methyl t - butyl ether	1	ND	0.05	mg/Kg	8/12/97 WR	
Toluene	.1 .	0.031	0.005	mg/Kg	8/12/97 WR	
Xylene (total)	ł	ND	0.015	mg/Kg	8/12/97 WR	
8015 - Total Petroleum Hydrocarbons						
Diesel		ND	10	mg/Kg	8/13/97 DC	
Gasoline	1	ND	5	mg/Kg	8/12/97 WR	

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit



ASSOCIATED LABORATORIES Analytical Results Report Lab Request 13066 results, page 10 of 20

Order #: 34986 Matrix: SOLID Date Sampled: 8/ 7/97

Client Sample ID: MW-2 @ 10'

Units Result DLR Date/Analyst Analyte 8020A BTEX + MTBE ND 0.005 mg/Kg 8/12/97 WR Benzene 8/12/97 WR ND 0.005 mg/Kg Ethyl benzene ND 8/12/97 WR 0.05 mg/Kg Methyl t - butyl ether WR 8/12/97 0.005 mg/Kg Toluene ND WR ND 0.015 mg/Kg 8/12/97 Xylene (total) 8015 - Total Petroleum Hydrocarbons DИ 10 mg/Kg 8/13/97 DĊ Diesel 5 DN 8/12/97 WR mg/Kg Gasoline Ì

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit



ASSOCIATED LABORATORIES Analytical Results Report

Lab Request 13066 results, page 11 of 20

Order #: 34987 Matrix: WATER Date Sampled: 8/ 7/97

Client Sample ID: MW-2 @ 17'

DLR Units Date/Analyst Result Analyte 8020A BTEX + MTBE mg/Kg 8/14/97 WR 0.035 0.005 Benzene 0.018 0.005 mg/Kg 8/14/97 WR Ethyl benzene I . . . 0.05 mg/Kg 8/14/97 WR Methyl t - butyl ether ND 1_ WR Toluene 0.037 0.005 mg/Kg 8/14/97 -----8/14/97 WR Xylene (total) 0.15 0.015 mg/Kg -8015 - Total Petroleum Hydrocarbons -- -- Diesel ND 10 mg/Kg 8/13/97 DÇ 16] 5 WR Gasoline mg/Kg 8/14/97 1

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit



TED LABORATORIES Analytical Results Report ASSO Lab Request 13066 results, page 12 of 20

Order #: 34989 Matrix: SOLID Date Sampled: 8/ 7/97

Client Sample ID: MW-3 @ 10'

Analyte	Result		DLR Unit		Date/Analyst
<u>8020A BTEX + MTBE</u>					
Benzene		NDJ	0.005	mg/Kg	8/13/97 WR
Ethyl benzene]	ND	0.005	mg/Kg	8/13/97 WR
Methyl t - butyl ether		ND	0.05	mg/Kg	8/13/97 WR
Toluene		ND	0.005	mg/Kg	8/13/97 WR
Xylene (total)]	ND	0.015	mg/Kg	8/13/97 WR
8015 - Total Petroleum Hydrocarbons					
Diesel	1	וסא	10	mg/Kg	8/13/97 DC
Gasoline		ND	5	mg/Kg	8/13/97 WR

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit



ASSOCIATED LABORATORIES Analytical Results Report Lab Request 13066 results, page 13 of 20

Order #: 34990 Matrix: SOLID Date Sampled: \$/ 7/97

Client Sample ID: MW-3 @ 15'

Analyte	Result	DLR	Units	Date/Analyst	
8020A BTEX + MTBE					
Benzene	0.027	0.005	mg/Kg	8/12/97 WR	
Ethyl benzene	ן מא	0.005	mg/Kg	8/12/97 WR	
Methyl t - butyl ether	ND ND	0.05	mg/Kg	8/12/97 WR	
Toluene	ND	0.005	mg/Kg	8/12/97 WR	
Xylene (total)	ND	0.015	mg/Kg	8/12/97 WR	
8015 - Total Petroleum Hydrocarbons					
Diesel	ND ND	10	mg/Kg	8/13/97 DC	
Gasoline	I ND	5	mg/Kg	8/12/97 WR	

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit



ASSOCIATED LABORATORIES Analytical Results Report Lab Request 13066 results, page 14 of 20

Order #: 34992 Matrix: SOLID Date Sampled: 8/ 7/97

Client Sample ID: MW-4 @ 10'

Analyte	Result	DLR	Units	Date/Analyst	
8020A BTEX + MTBE					
Benzene	ND	0.005	mg/Kg	8/13/97 WR	
Ethyl benzene	ND	0.005	mg/Kg	8/13/97 WR	
Methyl t - butyl ether	ND	0.05	mg/Kg	8/13/97 WR	
Toluene	ND	0.005	mg/Kg	8/13/97 WR	
Xylene (total)	ND	0.015	mg/Kg	8/13/97 WR	
8015 - Total Petroleum Hydrocarbons					
Diesel	ND	10	mg/Kg	8/13/97 DC	
Gasoline	ND ND	5	mg/Kg	8/13/97 WR	

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit



ASSOCIATED LABORATORIES Analytical Results Report Lab Request 13066 results, page 15 of 20

Order #: 34993 Matrix: SOLID Date Sampled: 8/ 7/97

Client Sample ID: MW-4 @ 17'

Units Result DLR Date/Analyst Analyte <u>8020A BTEX + MTBE</u> ND 0.005 mg/Kg 8/13/97 DC Benzene ND 0.005 mg/Kg 8/13/97 DC Ethyl benzene ND 0.05 mg/Kg 8/13/97 DC Methyl t - butyl ether ND 0.005 mg/Kg 8/13/97 DC Toluene ND DC 0.015 mg/Kg 8/13/97 Xylene (total) 8015 - Total Petroleum Hydrocarbons . . . 10 mg/Kg 8/13/97 DC Diesel ND ND 5 mg/Kg 8/13/97 DC Gasoline

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit



ASSOCIATED LABORATORIES Analytical Results Report Lab Request 13066 results, page 16 of 20

Order #: 34994 Matrix: WATER Date Sampled: 8/ 8/97

Analyte

Client Sample ID: MW-4

Date/Analyst

Units

DLR

Redox Potential @Temp	307		mv	8/15/97	JA
trate as NO3 by Ion Chromatograph	<u>1Y</u>				
Nitrate (as NO3)	19.5	5	mg/L	8/20/97	SR
Suifate	87	5	mg/L	8/20/97	SR
kalinity					
Alkalinity as Calcium Carbonate	140	5.0	mg/L	8/20/97	SF
D <u>Ferrous Iron (Fe+2)</u>					
Ferrous Iron	ND ND	0.10	mg/L	8/15/97	N
ssolved Oxygen, Membrane Electrod	le				
issolved Oxygen, Membrane Electrod Dissolved Oxygen	<u>le</u> 		mg/L	8/19/97	HI
Dissolved Oxygen, Membrane Electrod Dissolved Oxygen	<u>le</u> 7.8		mg/L	8/19/97	н
issolved Oxygen, Membrane Electroc Dissolved Oxygen <u>STEX + MTBE</u> Benzene	<u>le</u> 7.8[0.5	mg/L ug/L	8/19/97 8/12/97	ні QI
issolved Oxygen, Membrane Electroc Dissolved Oxygen STEX + MTBE Benzenc Ethyl benzene	<u>le</u> 7.8[ND] ND]	0.5 0.5	mg/L ug/L ug/L	8/19/97 8/12/97 8/12/97	H Q Q
issolved Oxygen, Membrane Electroc Dissolved Oxygen STEX + MTBE Benzenc Ethyl benzene Methyl t - butyl ether	<u>ie</u> 7.8 ND] ND]	0.5 0.5 20	mg/L ug/L ug/L ug/L	8/19/97 8/12/97 8/12/97 8/12/97	H Q Q Q
issolved Oxygen, Membrane Electroc Dissolved Oxygen <u>STEX + MTBE</u> Benzenc Ethyl benzene Methyl t - butyl ether Toluene	<u>le</u> 7.8 ND] ND] ND] ND]	0.5 0.5 20 0.5	mg/L ug/L ug/L ug/L ug/L	8/19/97 8/12/97 8/12/97 8/12/97 8/12/97	H Q Q Q Q
issolved Oxygen, Membrane Electroc Dissolved Oxygen <u>STEX + MTBE</u> Benzenc Ethyl benzene Methyl t - butyl ether Toluene Xylene (total)	<u>le</u> 7.8 ND] ND] ND] ND] ND]	0.5 0.5 20 0.5 1.5	mg/L ug/L ug/L ug/L ug/L ug/L	8/19/97 8/12/97 8/12/97 8/12/97 8/12/97 8/12/97	H Q Q Q Q Q Q Q
issolved Oxygen, Membrane Electroc Dissolved Oxygen <u>STEX + MTBE</u> Benzenc Ethyl benzene Methyl t - butyl ether Toluene Xylene (total) <u>'otal Petroleum Hydrocarbons</u>	<u>le</u> 7.8 ND] ND] ND] ND]	0.5 0.5 20 0.5 1.5	mg/L ug/L ug/L ug/L ug/L ug/L	8/19/97 8/12/97 8/12/97 8/12/97 8/12/97 8/12/97	H Q Q Q Q Q Q Q Q
Dissolved Oxygen, Membrane Electroc Dissolved Oxygen <u>STEX + MTBE</u> Benzenc Ethyl benzene Methyl t - butyl ether Toluene Xylene (total) <u>'otal Petroleum Hydrocarbons</u> Diesel	<u>le</u> 7.8 ND] ND] ND] ND] ND]	0.5 0.5 20 0.5 1.5	mg/L ug/L ug/L ug/L ug/L ug/L	8/19/97 8/12/97 8/12/97 8/12/97 8/12/97 8/12/97 8/12/97	

Result

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit



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Order #: 34995 Matrix: WATER Date Sampled: 8/ 8/97

Client Sample ID: MW-2

Analyte	Result	-	DLR	Units	Date/Analyst
3 Redox Potential					
Redox Potential @Temp	l	331		mv	8/15/97 JA
Nitrate as NO3 by Ion Chromatography					
Nitrate (as NO3)		0]	1.0	mg/L	8/20/97 SR
Sulfate	• · · · •	43]	1.0	mg/L	8/20/97 SR
Alkalinity					
Alkalinity as Calcium Carbonate	_	298	5.0	mg/L	8/20/97 SR
FED Ferrous Iron (Fe+2)					
Ferrous Iron		0.50	0.10	mg/L	8/15/97 NK
Di Lui Annu Manuar				.24,44€//	
Dissolved Oxygen, Memorane Electrode	2	7 91		mg/L	8/19/97 HK
Dissolved Oxygen		· · · []		<u> </u>	
A BTEX + MTBE					
Benzene		108	0.5	ug/L	8/12/97 QD
Ethyl benzene		33]	0.5	ug/L	8/12/97 QD
Methyl t - buryl ether	······	925]	20	ug/L	8/12/97 QD
Toluene		36]	0.5	ug/L	8/12/97 QD
Xylene (total)		[44]	1.5	ug/L	8/12/97 QD
- Total Petroleum Hydrocarbons					
Diesel		ND	1000	ug/L	8/13/97 DC
	1 5	3501	500	me/L	8/12/97 OD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit



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Order #: 34996 Matrix: WATER Client Sample ID: MW-3

Date Sampled: 8/ 8/97

Analyte	Result	DLR	Units	Date/Analyst
1580B Redox Potential				
Redox Potential @Temp	330		mv	8/15/97 JA
300.0 Nitrate as NO3 by Ion Chromatography				
Nitrate (as NO3)	0]	10	mg/L	8/20/97 SR
Sulfate	56]	10	mg/L	8/20/97 SR
310.1 Alkalinity				
Alkalinity as Calcium Carbonate	368	5.0	mg/L	8/20/97 SR
<u>З500FED Ferrous Iron (Fe+2)</u>				
Ferrous Iron	ן מא	0.10	mg/L	8/15/97 NK
360.1 Dissolved Oxygen, Membrane Electrode				
Dissolved Oxygen	6.3		mg/L	8/19/97 HK
<u> 8020A BTEX + MTBE</u>				
Benzene	450	0.5	ug/L	8/12/97 QD
Ethyl benzene	53	0.5	ug/L	8/12/97 QD
Methyl t - butyl ether	1,080	20	u g /L	8/12/97 QD
Toluene	30	0.5	ug/L	8/12/97 QD
Xylene (total)	106	1.5	ug/L	8/12/97 QD
8015 - Total Petroleum Hydrocarbons				
Diesel) ND	1000	ug/L	8/13/97 DC

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit



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Order #: 34997 Matrix: WATER Date Sampled: 8/ 8/97

Client Sample ID: MW-1

Analyte	Result	DLR	Units	Date/Analyst
580B Redox Potential				
Redox Potential @Temp	311		mv.	8/15/97 JA
00.0 Nitrate as NO3 by Ion Chromatograp	bhy			
Nitrate (as NO3)	1 7.1	1.0	mg/L	8/20/97 SR
Sulfate	92	1.0	mg/L	8/20/97 SR
10,1 Alkalinity				
Alkalinity as Calcium Carbonate	238	5.0	mg/L	8/20/97 SR
500FED Ferrous Iron (Fe+2)				
Ferrous Iron	0.10	0.10	mg/L	8/15/97 NK
60.1 Dissolved Oxygen, Membrane Electro	<u>ode</u>			
Dissolved Oxygen	8.2	·····	mg/L	8/19/97 HK
020A BTEX + MTBE				
Benzene	110	0.5	ug/L	8/12/97 QD
Ethyl benzene	15	0.5	ug/L	8/12/97 QD
Methyl t - butyl ether	43	20	ug/L	8/12/97 QD
Toluene	16	0.5	ug/L	8/12/97 QD
Xylene (total)	112	1.5	ug/L	8/12/97 QD
015 - Total Petroleum Hydrocarbons				
Diesel	ND	1000	ug/L	8/13/97 DC
Gasoline	1,140	500	ug/L	8/12/97 QD

DLR = Detection limit for reporting purposes, ND = Not Detected below indicated detection limit



ASSOCIATED LABORATORIES Analytical Results Report

Lab Request 13066 results, page 20 of 20

CHAIN-OF-CUSTODY RECORD

Client	Date 8/7/	97			Analysis Req	quested		LAB Project #
Project Name Freitige - Voque Tyres	Client Project	¥		S.			:	Page of 3
Project Address 240 W. MAR Arthur DAK And A Sampler's Signature Amath Bud	Turn Around 24-Hour 48-Hour Normal Mobile	-Requested: -Rush ⊡Rush Lab	ratory ber	ale Matrix: Soli(S) Be(SL), Aqueous(A)			ber of Containers	Lab Use Only. Sample Condition as received: Chilled Yes No Sealed Yes No
Sample Sample Location	Date	Time	Labo Samj Num	Sam			Num	Container / Comments
BH-TUH	8/7/67			5			l	Hul
BH-7e8				5			(HUN
BH-7e12				51			ı	
Bt-7elb				51			1	
BH-8241		٥		5			1	ILI D
"CH-808"				51				4057
BH-80121				51				
BH-8 0/6				51			1	
BH-924 7.				5				1429_
BH-9281	\$1767			51			1	
• Relinquished by: (Signatura)	Date	Received	by: (Signature)			Date 9-11-97	10	Total Number of Containers
Company: AFC	Time	Company:	ated	1 ak	,5	Time 1236		
Relinquished by: (Signature)	Date	C Received	by Laboratory:	(Signature)	<u>~</u>	Date 8-11-47	#AD	VANCED ENVIRONMENTAL CONCEPTS INC.
Company:	Time	Company:	ic ia	bs			805 / 8 FAX 8	831-1646 4400 ASHE ROAD #206 105 / 831-1771 BAKERSFIELD, CA 93313

CHAIN-OF-CUSTODY RECORD

13.662

Client Date 7/67 Project Name Client Project# Project Address Client Project#	<u>7</u> л. хл №о №о
Project Name Vest de Vogue gres Project Address 240 W. MARAWAW Lab Use Only Sample Condition 24-Hour-Rush Client Project# Page Z of Lab Use Only Sample Condition as received:	 ,, ,, ,,,,,,,,,,,,,,,,,,,,,,,,,
Project Address 240 W. MALAVIMUV 10 24-Hour-Rush 10 50 50 50 50 50 50 50 50 50 50 50 50 50	r. Sn No No
24-Hour-Rush	No No
UAKLANX, A 48-HOUR-RUSH ZE	No No
Sampler's Signature Mun Sealed Yes /	
Sample Location Date Time Sample Location Date Time	nments
BH-941 51	
15H-916 5/11	
MW-10151 (
MWIEIFI SI	
Mu.285 S I $Hu(0-$	
hw.2elo 5/ 1	
MW-2el7' S/	
1 4 Q -	
MWBelor 5/ 1	•
MW-3CLF, RUN AS SAMPLE MARKED HW-3017, MW-3CIS, PIER DEBETE 8767	
Received by: (Signature) Date Date	ontainers
Company: ACC Time Company: ACC Time 26 ASSACIONARY 1036	
Relinquished by: (Signature) Date Date Date Date Date Date Date ADVANCED ENVIRONMENTAL C	ONCEPTS INC.
Company: Time Company; Time 805 / 831-1646 4400 /1550/1550/1550/1500 /1600 FAX 805 / 831-1771 BAKEF	ASHE ROAD #206 SFIELD, CA 93313

CHAIN-OF-CUSTODY RECORD

Client	Date GIZ	7				Analysis Re	equested		LAB Project #
Project Name Vreshae - Veque Tyres	Client Project	¥ .			2E			-	Page 3 of 3
Project Address 2 TD W MALANTMUN	Turn Around	Requested:		l(S) s(A)	trat			_ بو	Lab Use Only.
PATICUR (A	24-Hour	-Rush -Rush		x: Soil queou	ŽE			ntainei	Sample Condition as received:
Sampler's Signature	Normal	_ab	y Y	e Matri (SL), A	the second			r of Co	Chilled Yes No Sealed Yes / No
Sample Sample Location	Date	Time	Labora Sample Numbe	Sample	HUL			Numbe	Container / Comments
Murges	57497			5	·			1	HUL
MW-4eld (5	/			1	- N
MW-4 er7'				Š	/			1	
MW-4	88997			A	/			3	
MW.2		a		4	/			3	
MW.3				A	/			3	
Mu-l				A	/			3	
BALLER				A	/			2	HUL
Relinquished by: (Signature)	Date	Received I	by: (Signature,)		I	Date	17	Total Number of Containers
Combany:	Time	Company:	ocia	tec	1 6	65	Time 36		
Relinquished by: (Signature)	Date	O Received,	by Laboratory:	(Signa	ature)		Date	- #AD	VANCED ENVIRONMENTAL CONCEPTS INC.
Company:	Time	Company:	<u>556_</u> (_ah	5_			805 / I FAX 8	831-1646 4400 ASHE ROAD #206 805 / 831-1771 BAKERSFIELD, CA 93313