## JOSLIN GEOTECHNICAL



CIVIL, SOIL, GEOLOGICAL & MINING ENGINEERING CONSULTANTS MATERIALS TESTING SERVICES

924 Stockton Street P O Box 193 Dutch Flat, California 95714 916-389-2581 Fax 916-389-8833

November 30, 1998 Project 220 o

Mr. Harold Turner Snow Cleaners 2678 Coolidge Avenue Oakland, California

#12

RE: Snow Cleaners, Transmittal of Test Results

Dear Mr. Turner:

This letter accompanies the results of testing at the 2678 Coolidge Avenue site. We apologize for this document being later than the County- requested submittal date of November 24, but we needed the additional time to assess the results and internally discuss options.

As you will see, test results still show high levels of contaminants. In addition to stoddard solvent, there are also traces of compounds not normally associated with dry cleaning operations - toluene, benzene, and xylene (TBX). We used new and clean samplers at the site, so there is an exceedingly low risk of these being the source of the TBX compounds. Because of presence of these compounds, we considered resampling the site, and this was the source of delay.

In the time since drilling the two holes at your property, a small track-mounted drill has become available for well drilling. This equipment could possibly access the upslope portion of the property without trespassing on the adjacent property. A third hole near or at the uphill property line could serve to better define the hydraulic gradient across the site, and also might help clarify the source of the TBX and similar compounds.

At this time, we submit these documents only to you, for your distribution as necessary. We will await further direction from you or the county.

Very truly yours,

JOSLIN GEOTECHNICAL

Robert D. Joslin, P.E. Civil/Geological Engineer CE 37716

ROBERT D

CIVIL

STATE OF CALIFORNIA

### C. M. Chambers and Assoc.

Training and Environmental Services

March 5, 1991

Harold Turner Snow Cleaners 2678 Coolidge Ave. Oakland, CA

Dear Mr. Turner:

This report presents the final laboratory reports and disposition of the excavated soil from the tank removal project that occurred on your property in 1990.

History

In the summer of 1990, six underground tanks were removed from the site. Two of these tanks, with capacities of about 1000 gallons each, were in use up to the time of the tank field removal. These two tanks were visually examined by C.M. Chambers and Associates at the time of removal and were noted to be intact. Four additional tanks of differing sizes, from about 100 to 400 gallon capacity, were also removed. Holes were observed in two of these tanks. These four tanks had not been used by Mr. Turner during his operation of the site.

Contents and use of the additional four tanks was not determined at time of removal. Date stamps on one of the tanks indicated a manufacturing date of 1927.

Methods

Soil samples were grab samples from the excalated soil as directed by Alameda County employees. The samples were placed in glass containers, placed in coolers and transported to the laboratory.

The final sample was taken from the approximate center of the soil, which was placed on plastic tarps. The sample was placed in a glass container, placed in coolers and transported to the laboratory.

Results

The results of the sampling are presented in the table below. The current analytical results of the monitoring wells indicated the presence of petroleum hydrocarbons in the groundwater. By copy of this report, the results are being submitted to the Alameda County Health Care Services, Department of Environmental Health, and San Francisco Regional Water Quality Control Board.

### Results from Monitoring Well Installation

#### Soil Samples

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
1-4-94	B1;113	ND	ND	ND	ND	ND
	B1;123	ND	ND	ND	ND	ND
	B1;133	ND	ND	ND	ND	ND
	B1;142	ND	ND	ND	ND	ND
	B1;153	ND	ND	ND	ND	ND
	B1;163	ND	ND	ND	ND	ND
	B1:172	ND	ND	ND	ND	ND
	B1;182	ND	ND	ND	ND	ND
	B1;193	ND	ND	ND	ND	ND
	B1;1102	ND	ND	ND	ND	ND
	B1:1113	ND	ND	ND	ND	ND
	B2;212	ND	ND	ND	ND	ND
	B2;222	440	ND	ND	.36	5.5
	B2;233	2000	ND	.59	1.0	28
	B2;241	2100	ND	.60	ND	25
	B2;253	ND	ND	ND	ND	ND

#### NOTE: LEVELS IN PARTS PER MILLION

Sample number B2;241 was sampled for Volatile Halocarbons and was non-detect.

ND = Non Detected

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
1-23-98	191010A	ND	13ppb	ND	ND	ND

#### Conclusions

Soil and water contamination was discovered at your site. The soil contamination was small in volume and found in a localized area of the excavation. The clean soil was separated at the storage location(the contaminated soil was easily determined by odor and color). The contaminated soil amounted to approx. 25 yards and was located bottom and north east side of the excavation.

The soil sampling taken during the placement of the monitoring wells indicated that the contaminated soil was limited to a level of approx. 22 feet to 24 feet.

The final soil sample taken on January 23, 1991 indicated that the soil was safe to release. The final sample was taken near the lower center of the pile of contaminated soil. The material had been spread out on plastic to a depth of 4-6 inches to dry. Black plastic was placed on top to assist in the heating and drying the soil. The level of benzene at 13 ppb with a non-detect level of 10-ppb (soil) was considered safe for use in parking lot fill (the intended use of the soil by the individuals receiving the soil).

and sit vok ambightional sand have received an approved prior to reuse

The soil was released in the spring/summer of 1991.

Very truly yours, C.M. Chambers and Assoc.

Charle M. Charles

Charles M. Chambers

Order No.: 91-01-195 EUREKA LABORATORIES, INC. 6790 Florin Perkins Road Hazardous Waste Testing Sacramento, CA 95828 Certification No.: E765 (916)381 - 7953CLIENT: C M CHAMBERS & ASSOC DATE SAMPLED: 01/23/91 DATE RECEIVED: 01/23/91 REPORT UNIT: ppm (mg/Kg) SAMPLE LOCATION: DATE EXTRACTED: 01/23/91 SAMPLE ID: 1-91-010A DATE COMPLETED: 01/24/91 aerated Sports DILUTION FACTOR: 1.00 PETROLEUM HYDROCARBONS RESULT DETECTION LIMIT Gasoline Range 5 <5 Diesel Range 10 <10 Motor Oil Range 25 31 Total Petroleum Hydrocarbons 31 CARBON NO. RANGE Gasoline Range Diesel Range Motor Oil Range C18-C30 PEAK CARBON NO. Gasoline Range Diesel Range

C24

Chemist

Motor Oil Range

Mark Shih, Ph.D.

01/24/91

EUREKA LABORATORIES, INC. 6790 Florin Perkins Road Sacramento, CA 95828 (916)381-7953		Order No.: 91-01-195 Hazardous Waste Testing Certification No.: E765
CLIENT: C M CHAMBERS & ASSOC REPORT UNIT: ppm (mg/Kg) SAMPLE LOCATION: SAMPLE ID: METHOD BLANK		DATE SAMPLED: DATE RECEIVED: 01/23/91 DATE EXTRACTED: 01/23/91 DATE COMPLETED: 01/24/91 DILUTION FACTOR: 1.00
PETROLEUM HYDROCARBONS	RESULT	DETECTION LIMIT
Gasoline Range Diesel Range Motor Oil Range Total Petroleum Hydrocarbons	<5 <10 <25	5 10 25
CARBON NO. RANGE		
Gasoline Range Diesel Range Motor Oil Range	- - -	
PEAK CARBON NO.		
Gasoline Range Diesel Range Motor Oil Range	- - -	

Chemist Mark Hun

Mark Shih, Ph.D.

01/24/91

EUREKA LABORATORIES, INC. 6790 Florin Perkins Road Sacramento, CA 95828 (916)381-7953

Order No.: 91-01-195 Hazardous Waste Testing Certification No.: E765

CLIENT: C M CHAMBERS & ASSOC

Motor Oil Range

REPORT UNIT: % SAMPLE LOCATION:

SAMPLE ID: SPIKE RECOVERY

DATE SAMPLED:

DATE RECEIVED: 01/23/91 DATE EXTRACTED: 01/23/91 DATE COMPLETED: 01/24/91

PETROLEUM HYDROCA	ARBONS	RESULT
Gasoline	Range	NA
Diesel	Range	109%
Motor Oil	Range	NA
Total Petr	<del>-</del>	
Hydroca	rbons	
CARBON NO.	RANGE	
Gasoline	Range	_
Diesel	Range	-
Motor Oil	Range	-
PEAK CARBO	ON NO.	
Gasoline	Range	_
Diesel		-

This set of matrix spike is from another sample of the same matrix & of the same analytical batch.

Chemist Mark

Mark Shih, Ph.D.

01/24/91

EUREKA LABORATORIES, INC.

6790 Florin Perkins Road
Sacramento, CA 95828
(916)381-7953

Cert

Order No.: 91-01-195
Hazardous Waste Testing
Certification No.: E765

CLIENT: C M CHAMBERS & ASSOC

REPORT UNIT: % SAMPLE LOCATION:

SAMPLE ID: SPIKE RECOVERY DUPLICATE

DATE SAMPLED:

DATE RECEIVED: 01/23/91 DATE EXTRACTED: 01/23/91 DATE COMPLETED: 01/24/91

PETROLEUM HYDROCARBONS	RESULT
Gasoline Range Diesel Range Motor Oil Range Total Petroleum Hydrocarbons	NA 99% NA
CARBON NO. RANGE	
Gasoline Range Diesel Range Motor Oil Range	- - -
PEAK CARBON NO.	
Gasoline Range	-

Diesel Range Motor Oil Range

This set of matrix spike is from another sample of the same matrix & of the same analytical batch.

Chemiet

Mark Shih, Ph.D.

01/24/91

#### ORGANIC ANALYSIS REPORT Aromatic Volatile Organics, EPA Method 8020

EUREKA LABORATORIES, INC. 6790 Florin-Perkins Road Sacramento, CA 95828 (916) 381-7953

Order No: 91-01-195 Hazardous Waste Testing Certification: E765

CLIENT: CM CHAMBERS AND ASSOCIATES PROJECT: ALLEN SAMPLE ID: BLANK

DATE RECEIVED: 01/23/1991 DATE EXTRACTED: 01/23/1991 DATE ANALYZED: 01/24/1991

COMP.	COMPOUND	ug/Kg	DETECTION
NO.		(ppb)	LIMIT
			ug/Kg (ppb)_
	Benzene	<b> &lt;</b> 1	1
٧2	Chlorobenzene	<1	1
٧3	1,2-Dichlorobenzene	<b> </b> <1	1
٧4	1,3-Dichlorobenzene	<1	1
٧5	1,4-Dichlorobenzene	<b> </b> <1	1
۷6	Ethyl benzene	<b> &lt;1</b>	1
٧7	Toluene	<b> &lt;1</b>	1
<b>V</b> 8	Xylenes (Dimethyl benzenes)	ļ<1	1

Huey then Chow Date 1991

Chemist

Horated Spoils

#### ORGANIC ANALYSIS REPORT Aromatic Volatile Organics, EPA Method 8020

EUREKA LABORATORIES, INC. 6790 Florin-Perkins Road Sacramento, CA 95828 (916) 381-7953

Order No: 91-01-195 Hazardous Waste Testing Certification: E765

CLIENT: CM CHAMBERS AND ASSOCIATES PROJECT: ALLEN

SAMPLE ID: 1-91-010A

DATE RECEIVED: 01/23/1991 DATE EXTRACTED: 01/23/1991 DATE ANALYZED: 01/24/1991 DATE SAMPLED: 01/23/1991

COMP.	COMPOUND	ug/Kg	DETECTION
NO.		(ppb)	LIMIT
		1	ug/Kg (ppb)
٧1	Benzene	13	1
٧2	Chlorobenzene	<b> </b> <1	1
٧3	1,2-Dichlorobenzene	<b> </b> <1	1
٧4	1,3-Dichlorobenzene	<b> </b> <1	1
٧5	1,4-Dichlorobenzene	<b> </b> <1	1
٧6	Ethyl benzene	j<1	1 1
٧7	Toluene	<b> </b> <1	1
٧8	Xylenes (Dimethyl benzenes)	<b> </b> <1	1 1

Note:

All positively identified compounds were second column confirmed.

Huey-Chen Chow Date
Chemyst

#### ORGANIC ANALYSIS REPORT Aromatic Volatile Organics, EPA Method 8020

EUREKA LABORATORIES, INC. 6790 Florin-Perkins Road Sacramento, CA 95828

(916) 381-7953

Order No: 91-01-195 Hazardous Waste Testing

Certification: E765

CLIENT: CM CHAMBERS AND ASSOCIATES

PROJECT: ALLEN

SAMPLE ID: MATRIX SPIKE RECOVERY \*

DATE RECEIVED: 01/23/1991

DATE EXTRACTED: 01/23/1991

DATE ANALYZED: 01/24/1991

COMP NO.	<u>. COMPOUND</u>	SPIKE RECOVERY	
٧1	Benzene	97%	
٧2	Chlorobenzene	100%	
٧3	[1,2-Dichlorobenzene	92%	
٧4	[1,3-Dichlorobenzene	91%	
٧5	1,4-Dichlorobenzene	100%	
٧6	Ethyl benzene	98%	
٧7	Toluene	101%	
٧8	Xylenes (Dimethyl benzenes)	110%	

<sup>\*</sup> This set of matrix spike is from another sample of the same matrix and of the same analytical batch.

Huey Chen Chow Chemist

January 29, 1991 Date

#### ORGANIC ANALYSIS REPORT Aromatic Volatile Organics, EPA Method 8020

EUREKA LABORATORIES, INC. 6790 Florin-Perkins Road Sacramento, CA 95828 (916) 381-7953

Order No: 91-01-195 Hazardous Waste Testing Certification: E765

CLIENT: CM CHAMBERS AND ASSOCIATES PROJECT: ALLEN

SAMPLE ID: MATRIX SPIKE RECOVERY DUP. \*

DATE RECEIVED: 01/23/1991 DATE EXTRACTED: 01/23/1991 DATE ANALYZED: 01/24/1991

COMP NO.	. COMPOUND	SPIKE RECOVERY	
V1	Benzene	92%	
٧2	Chlorobenzene	96%	
٧3	1,2-Dichlorobenzene	96%	
	1,3-Dichlorobenzene	94%	
٧5	1,4-Dichlorobenzene	86%	
٧6	Ethyl benzene	94%	
٧7	Toluene	91%	
٧8	Xylenes (Dimethyl benzenes)	104%	

<sup>\*</sup> This set of matrix spike is from another sample of the same matrix and of the same analytical batch.

Huey-Chen Chow Chemist

January 29, 1991 Date



2-85

## EUREKA LABORATORIES, INC.

6790 FLORIN PERKINS ROAD SACRAMENTO, CA 95828 TEL: (916) 381-7953

LAB: (916) 381-9357 FAX: (916) 381-4013 CLIENT: (LEWIS HELEN)

CONTACT: MIKE CHAMBERS

TELEPHONE: PAGE FFF - 4002

AUBURN, CA 95603

PROJECT REF. #	ELI ORDER #	PROJECT NA										ANA	LYSIS	REQUI	RED	•		•		CO	MENTS	3
ALLEN	7101.195	ALL	EL	Ĵ					. 5 9	/	L	//		7	7	7	$\overline{}$	7	7	//	_	—
SAMPLERS (Signature)	<i>i</i>						ا العما	10	. ۳۰ کړ <u>ا</u>	<u> </u>	/,	//	//	//	/		/		//	//	//	
ALLEN (SAMPLERS (Signature)	Emble						Da	-24	39. 191 94	<i>(</i> ,	//	//	//			/			//	//	JATH	<u>ś</u>
CLIENT SAMPLE ID	SAMPLE LOCAT		GRAB	DATE/TIME	CONTAINER	RTYPE	/	B	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\											A SECO	SERVICIO	APPET A
1-91-0/04	- 570123		X	13.9	CLASS	2.	Y	2	1	1		$\perp$										
								-		$\dashv$	_		+			_						<u> </u>
										· · ·												
									64		. (a) 		<u> </u>									
.,						***		7	-													
		1					V	<b>L</b>										-				
			<u> </u>							$\overrightarrow{A}$		,			,				. •			
			<b>-</b>	<del> </del>						)(	$\mathfrak{a}$	te	1			79		5	5 1			
			+	<del>                                     </del>						d		#_	11	50								
			+							4	=1-1	4				_				+		
			+						+	+	+	<del></del>	1 .			V				+	-	<del>                                     </del>
			+	<u> </u>					-+	+	+	+2	# 9	6	$\forall$	$\mathbb{Y}$				-+		<del>                                     </del>
			-						-	-			11				<u> </u>					<del> </del>
	DATE	-TU-45 050				RECEIVED B						DAT	E/TIMI		BEC	FIVED	BY	Signature	<u> </u>			<u> </u>
RELINQUISHED BY: (Signature)	1-25-91		,EI4E0 E	BY: (Signature)		HECEIVED B	i. (Sigre	sure)							,,							
RELINQUISHED BY: (Signature)	DATE		EIVED 6	BY: (Signature)		RECEIVED B	Y: (Signa	sture)	•			DAT	E/TIMI	E	REC	EIVED	) BY: (	Signature	))			
RELINQUISHED BY: (Signature)	DATE	/TIME REC	EIVED F	OR LABORA	TORY BY: (Significan	Den	1 h	1	//	•	E/TIME	,	<u> </u>	<u>!</u> ,			<u>.</u>			E	ELI SM	I-01

## JOSLIN GEOTECHNICAL



CIVIL, SOIL, GEOLOGICAL & MINING ENGINEERING CONSULTANTS MATERIALS TESTING SERVICES



924 Stockton Street P. O. Box 193 Dutch Flat, California 95714 916-389-2581 Fax 916-389-8833

January 20, 1994

Harold Turner Snow Cleaners 2678 Coolidge Ave, Oakland, CA

Dear Mr. Turner:

This report contains the test results from the installation of monitoring wells at your site.

History

In the summer of 1990, six underground tanks were removed from the site. Two of these tanks, with capacities of about 1000 gallons each, were in use up to the time of the tank field removal. These two tanks were visually examined by C.M. Chambers and Associates at the time of removal and were noted to be intact. Four additional tanks of differing sizes, from about 100 to 400 gallon capacity, were also removed. Holes were observed in two of these tanks. These four tanks had not been used by Mr. Turner during his operation of the site.

Contents and use of the additional four tanks was not determined at time of removal. Date stamps on one of the tanks indicated a manufacturing date of 1927.

Methods

Water samples were acquired by first purging the well (removal of 2 to 4 well volumes) with a precleaned PVC bailer, then sampling the well water with a precleaned bailer unless otherwise noted. Bailer cleaning was performed by first washing with tap water mixed with trisodium phosphate, then rinsing with tap water. Upon recovery, water samples were promptly poured into laboratory supplied 40 ml septa-capped vials (without head space) and 1000 ml amber bottles. Samples were then labeled, put on ice and transported to McCampbell Analytical Laboratory under EPA protocol (see chain-of-custody forms, attached).

#### Results

The results of the sampling are presented in the table below. The current analytical results of the monitoring wells indicated the presence of petroleum hydrocarbons in the groundwater. By copy of this report, the results are being submitted to the Alameda County Health Care Services, Department of Environmental Health, and San Francisco Regional Water Quality Control Board.

#### Results from Monitoring Well Installation

#### Soil Samples

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
1-4-94	B1;113	ND	ND	ND	ND	ND
	B1;123	ND	ND	ND	ND	ND
	B1;133	ND	ND	ND	ND	ND
	B1;142	ND	ND	ND	ND	ND
	B1;153	ND	ND	ND	ND	ND
	B1;163	ND	ND	ND	ND	ND
	B1:172	ND	ND	ND	ND	ND
	B1;182	ND	ND	ND	ND	ND
	B1;193	ND	ND	ND	ND	ND
	B1;1102	ND	ND	ND	ND	ND
	B1:1113	ND	ND	ND	ND	ND
	B2;212	ND	ND	ND	ND	ND
	B2;222	440	ND	ND	.36	5,5
	B2;233	2000	ND	.59	1.0	28
	B2;241	2100	ND	.60	ND	25
	B2;253	ND	ND	ND	ND	ND

NOTE: LEVELS IN PARTS PER MILLION

Sample number B2;241 was sampled for Volatile Halocarbons and was non-detect.

#### WATER SAMPLES

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes	
1-26-94	MW1A MW2A	ND 20,000	ND 15	ND 180	ND	ND 200	

NOTES: LEVELS IN PARTS PER BILLION

ND = Non Detected

#### Conclusions

Soil and water contamination was discovered at your site. The soil contamination was small in volume and found in a localized area of the excavation.

Monitoring well sampling will continue on a quarterly basis to review contamination levels of the groundwater at the site.

Additional monitoring wells and soil investigation are necessary to determine the limits of the contamination area. We are currently waiting for a date for a soil probe survey of the area of the site with the Richards Corporation. We hope to complete the soil probe survey as soon as possible.

Very truly yours,
JOSLIN GEOTECHNICAL

Robert D. Joslin, PE

Robert D. Joslin

Civil/Geological Engineer

CE 37716

Joslin Geote	chnical	Client Pro	oject ID:# 22	0; Snow Cle	aners I	Date Sample	d: 01/03-01	/04/94
P.O. Box 793					Ī	Date Receiv	ed: 01/04/94	ļ
Dutch Flat, C	CA 95714	Client Co	ntact: Bob Jo	oslin	I	Date Extract	ed: 01/04/9	4
		Client P.C	D:		I	Date Analyz	ed: 01/04-01	1/05/94
	Idard Solvent Ran 030, modified 8015, and							X*
Lab ID	Client ID	Matrix	TPH(ss) <sup>+</sup>	Benzene	Toluene	Ethylben- zene	Xylenes	% Rec. Surrogate
33708	B-1;113	s	ND	ND	ND	ND	ND	101
33709	B-1;123	S	ND	ND	ND	ND	ND	101
33710	B-1;133	S	ND	ND	ND	ND	ND	103
33711	B-1;142	S	ND	ND	ND	ND	ND	102
33712	B-1;153	S	ND	ND	ND	ND	ND	105
33713	B-1;163	S	ND	ND	ND	ND	ND	101
33714	B-1;172	S	ND	ND	ND	ND	ND	98
33715	B-1;182	S	ND	ND	ND	ND	ND	100
33716	B-1;193	S	ND	ND	ND	ND	ND	102
33717	B-1;1102	S	ND	ND	ND	ND	ND	103
33718	B-4;1113	S	ND	ND	ND	ND	ND	105
33719	B-2;212	S	ND	ND	ND	ND	ND	105
33720	B-2;222	S	440,e	ND< 0.05	ND< 0.05	0.36	5.5	100
33721	B-2;233	s	2000,e	ND< 0.05	0.59	1.0	28	102
33722	B-2;241	s	2100,e	ND< 0.05	0.60	ND< 0.05	25	102
33723	B-2;253	s	ND	ND	ND	ND	ND	95
	imit unless other-	w	50 ug/L	0,5	0.5	0.5	0.5	
	; ND means Not etected	S	1.0 mg/kg	0.005	0.005	0.005	0.005	

<sup>\*</sup>water samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

<sup>#</sup> cluttered chromatogram; sample peak co-elutes with surrogate peak

<sup>&</sup>lt;sup>†</sup> The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds are significant; no recognizable pattern; e) TPH pattern that does not appear to be derived from gasoline (Stoddard solvent?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible phase is present.

Joslin Geotechnical	Client Project ID:#	220; Snow Cleaners	Date Sampled:	01/03-01/04/94
P.O. Box 793			Date Received:	01/04/94
Dutch Flat, CA 95714	Client Contact: Bol	b Joslin	Date Extracted	: 01/09/94
	Client P.O:		Date Analyzed:	01/09/94
	Volati	le Halocarbons		
EPA method 601 or 8010	·			
Lab ID	33722			
Client ID	B-2;241			
Matrix	S			
Compound <sup>(1)</sup>	Concentration*	Concentration*	Concentration*	Concentration*
Bromodichloromethane	ND			
Bromoform <sup>(2)</sup>	ND			
Bromomethane	ND			
Carbon Tetrachloride <sup>(3)</sup>	ND			
Chlorobenzene	ND			
Chloroethane	ND		<u>.</u>	
2-Chloroethyl Viny l Ether (4) Chloroform (5)	ND			
Chloroform (5)	ND			
Chloromethane	ND			
Dibromochloromethane	ND			
1,2-Dichlorobenzene	ND			
1,3-Dichlorobenzene	ND			
1,4-Dichlorobenzene	ND			
1,1-Dichloroethane	ND			
1,2-Dichloroethane	ND			
1,1-Dichloroethene	ND			
cis 1,2-Dichloroethene	ND			
trans 1,2-Dichloroethene	ND			
1,2-Dichloropropane	ND			
cis 1,3-Dichloropropene	ND			
trans 1,3-Dichloropropene	ND .		<del></del>	
Methylene Chloride <sup>(6)</sup>	ND			
1,1,2,2-Tetrachloroethane	ND			
Tetrachloroethene (7)	ND			
1,1,1-Trichloroethane	ND			
1,1,2-Trichloroethane	ND			
Trichloroethene	ND			
Trichlorofluoromethane	ND			
Vinyl Chloride <sup>(8)</sup>	ND			
% Recovery Surrogate	89			
Comments	97	· · · · · · · · · · · · · · · · · · ·		
COMMONS	<u> </u>			

Detection limit unless otherwise stated: water, ND< 0.5ug/L; soil, ND< 100ug/kg.

<sup>\*</sup> water samples are reported in ug/L, soil samples in ug/kg and all TCLP extracts in ug/L

<sup>(1)</sup> IUPAC allows "ylene" or "ene"; ex. ethylene or ethene; (2) tribromomethane; (3) tetrachloromethane; (4) (2-chloroethoxy) ethene; (5) trichlormethane; (6) dichloromethane; (7) perchlorethylene, PCE or perclor; (8) chloroethene; (9) unidentified peak(s) present.

#### QC REPORT FOR HYDROCARBON ANALYSES

Date:

01/04-01/05/94

Matrix: Soil

	Concent	ration	(mg/kg)		% Reco	very	
Analyte	Sample	MS	MSD	Amount Spiked	MS	MSD	RPD
TPH (gas)	0.000	2.230	2.046	2.03	110	101	8.6 2.1
Benzene Toluene	0.000	0.194	0.190 0.192	0.2	97 98	95 96	2.1
Ethylbenzene	0.000	0.196	0.192	0.2	98	96	2.1
Xylenes	0.000	0.596	0.584	0.6	99	97	2.0
TPH (diesel)	0	294	301	300	98	100	2.4
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD)  $\times$  2  $\times$  100

#### QC REPORT FOR EPA 8010/8020/EDB

Date: 01/09/94

Matrix: Soil

	Conce	entrati	on (ug/k	g)	% Reco	very	
Analyte	Sample	MS	MSD	Amount Spiked	MS	MSD	RPD
1,1-DCE	0	78	90	100	78	90	14.3
Trichloroethene EDB	O N/A	86 N/A	96 N/A	100 N/A	86 N/A	96 N/A	11.0 N/A
Chlorobenzene	0	94	100	100	94	100	6.2
Benzene	o o	90	108	100	90	108	18.2
Toluene	0	92	104	100	92	104	12.2
Chlorobz (PID)	0	90	98	100	90	98	8.5

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD)  $\times 2 \times 100$ 

1954 ASOS76

		MPBE				CA	Լ							С	H	ΛI	N	C	F	_(	Ü	S'	ŗc	D	Y	RI	EC.	ORD	
(510) 798-1	1620	РАСИЕС	CO, CA	945	553	FA	X (5	10)	79	8-10	822	าบ	RN	۸R	OUN	ID 1	IME	[1	R	LJ USF	1	21	1 1 I	) JUR	4	8 HD		<b>3</b> DA	Y
REPORT TO	Bob Jose	LIN	BILL T	ے بت	2. 1	η.	d	am	, 2.	2,	s	匚				ÁN/	\LY:	212	ŔĔ	QUE	12					THER	Ï		<del>`</del>
	TOSLIN G						<del></del>							\$															
0	1 Por	197								-		9015)															-		
Du	TILL ELAT	CA	0	151	14					•		ام ا		5	<b>a</b>						1								
TELE: (916)	389-2581	<u> </u>	FAX N/C	7/6)	389	7-8	83	3				908		ន្ត	(418.1)					ł	Ŋ				1 1				
PROJECT NU	IMBERI 220	i	PROJEC	AN T	ME: 5	No	w	de	an	سون 1	ŗ	(602/8020		9	500				l		Hetals						-		
PROJECT LE	ICATION: Coolidge t; Oaklan	12 +	SAMPLE	R SI	GNAJI	UPE:	L	(				) E		Greece (5520 28F/5520	-0CB			हे			150	239.2/60102	ĺ					COMMEN	21
Davis 3	~ Jan Jan	SAMP					MATI		- 1	ME TE	₩ RVED		(800.5)	8	Total Petroleum Hydrogarbons EPA Solvann			- PC3s	9260		Pallut	1/239.							
SAMPLE				i i	Ž	$\vdash$	<del>-  </del>	П		1			6	§	2 5	ន្ត្រី	8	暴	3	8270	ŧ	Š	2						
ID	LOCATION	DATE	TIME	CONTAINERS	TYPE CONTAINERS	g		اپر	اي		0,	F	ä	Petroleun	A Petrol	602/8020	08/80	9/80	624/8240/8260	623/8270	- Priority	(72.46	1 CE						
		DATE	1150	#	TYPE	VATE	SOFL	3	불	朝	5 B	Ĭ	ر الح	Total	Total		EPA 608/8080	v √ď3	EPA 6	8 3	£P.	3	MCAN	ij				Ĺ	3
B-1: 1/3 B-1: 123 B-1: 133		1-3-94			Maria.		1		1	1	<del>                                     </del>	7		+	7				_	T		-	Ī					Ų.	
B1:123		11			11		1	П	_ -			Z		1		$\top$				十	1-	1				1.		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
B-1:133		11			Ħ		7		_ _		<del>                                     </del>	И	_	_			Ì			1	T	厂							
B-1; 142		11			K		7		1			M		_[		T			_	1								U.	
B-1: 153		11			ĮÝ.		7		_[_			7					П			1						4. J.	l d		
B-1, 163 B-1, 172		11			II.							A	T			Ţ		ز	2011					_			k/	id .	
B-1:172		14			1(							И						3.11.5					79 25	7 E			4	La face of the	
8-1:182	· · · · · · · · · · · · · · · · · · ·	19			ł,		1					$\overline{A}$						1	<u>.</u>	£.	U.	18.					10.00		
15-1:193		17			Ų		<u> </u>					И				1				3	7		i de la comoción de l						
8-1-1102		11			F														12) T							# 4 B			
134:1113		11			11							Z								٠.٠ ح.د	74	1.3	as si			N. Paragraphy	37 (		
						$\vdash$		Ш	_			4				L		_機					= 2		even se	1 1	i i		
B-2; 212		1-4-94					1		_ _			1		$\perp$	_ _					3	A.	40							
B-2 222	_	"					1		_L	$\perp$				_L				12.90								17.7	<b>7</b> / 5		
B-Z		1/					<u> </u>									<u></u>								R				Contraction of the	
RELINGUISHED BY	9 0-	DATE	TIME		VED I	BYı	/	,	/		ŕ		RE	MAI	RKS	ì								_				//	
Robert J	oslin	1-4-94	1625	ہے	d	_/_	· <u>/</u>	4							Te	31		6	19	يعها	37	1	7	P	//	15%	<del>0</del>	Jan	′ <b>1</b>
RELINQUISHER BY	<b>(1</b>	DATE	TIME	RECE!	IVED I	9Yı		•				Lim	do		GIM	_		_				-	•		•				
RELINQUISHED BY	fe .	DATE	TICE	R. F.	<b>North</b>	Y LA	RDP/	ORY	RE.	SERV	AHV	E	0	Vδ	V III	EIAL	NO K	HER											
<del> </del>	····		HEA	D SPA	NUTTE ICE AE	∪M' <del>}3FM</del>					HATE ERS					-	<b>!</b> -												
								Z V	UIY	11/11/1	und.																		

454 ASOS76

		MPBE				CA	L		_						C	H	Λ	IN	(												ORD	
	1820	<del></del>	CO, CA	945	553		AX (				-182	22_	TU	JRN	۸F	SOU		TIP			L RU:	2H_ ]	į	21		) Ju <u>r</u>	}4	48 I	֖֖֖֖֖֖֖֖֖֖֖֖֖֖֞֞֝֝֝֝ װַםט	JR_	5 DA	۱۲
REPORT TO	Bob JOSL.	لبرا	BILL T	ت ت								_				<del></del>	Al	NAL'	127	S R	EQL	JES	Ī	_	_			OTH	ΕŖ	1		
CUMPANY! -	- 11 is Co	A. Jak	لدنيم	,		,									£										`							
P. C	). Box 193	,											301.53		8																	
Du	2. Box 193 Auf Flot, 389-2581 UMBERI 220 DCATION Codilor	CA	9571	14			_						J		-38	G																
TELE: (916) =	389-2581		FAX # (C	7/6)	38	9-	88	3.	3				(602/9020		520	.₹							N.									
PROJECT NU	JMBERI 220	, ,	PROJEC	T NA	ME: 5,	No	w	U	lea	ag 49	rś	l	502		8	gon					1		Hetals	٩								
PROJECT LO	DCATION Coolings	1	SAMPLE	R SIC	NAT!	JRE!	20	26	2m	·			Sasoline (		* Grease (5520 E8F/5520 34F)	rocar			25				Pallutant	9.27601							COMMEN	112
		1	PLING	1 1	TYPE CONTAINERS		MAT			l M	ETHO!	D VED	s Gas	(8015)	Total Petroleun (21 Grease (5520 EBF	LA H			- PC3s	100		als		LEAD (7240/7421/239.2/6010)								
SAMPLE	,			Nic			$\Box$	T	1		П		£	2 2	roleu	rale	919	Page PAge		35	9270	2	ign	10.7	E 20							
ID	LOCATION	DATE	TIME	CONTAINERS	<b>9</b>	rg		وا	j (%)			α		as Diesel	t d	2	9/10	502/g	8	15	625/9270	[-]	- Priority	(72,	ပ္မ							
<i>l</i> '		, Divice	'"'-	=	YPE	\$	SOFIL	֓֞֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓		ᇦ	割	OTHER	3TEX		0 504	otal	¥ d	EPA 602/8020	EPA 608/8080	<u>4</u>	EPA 6	CAM - 17 Metals	EPA	8	ORGANGC	ij						ļ
B-2-233		1-4-94	<b>_</b>		اردين وردين		才	+	+-	-	1		H	$\exists$	┧	7	+	<u> </u>	+	1 5	<b>3</b>	Ť		-		-					<b>E</b>	1
B-2, 233 B-2, 241 B-2, 253		11			11		7	1		<u> </u> -		_1		-1	-1			_	1-	1-		_					<b>V</b>	5100		4		
R-2: 253		11			,,		Z	1					V		$\top$		T	1	1	+										賽		
								1	1		П	_1							1	1												
																			1									• •				
												$\rfloor$																		No.		
			ļ'					_ _						$\perp$	$\perp$	$\perp$												$\perp$				
J		<u> </u>	<u> </u> '					$\perp$	/			_		_	_	_ _	_	$\perp$	$\perp$	L			_									
J			<u> </u>					_ _						_	_	$\perp$	_ _		L									$\perp$				
			<u> </u>				_==	-	10	7	~		न्त्रं क	<b>₹7 18 8</b>	_	_ _	_		$\perp$	$oldsymbol{\perp}$			_				$\perp$	$\perp$				
j	ICE/T		 		PRES	ET	<u>'', T</u>	<u>,   "</u>	75	Va	32		7	HAH	1	_	_ _	$\perp$	$oldsymbol{\perp}$	$oldsymbol{ol}}}}}}}}}}}}}}}}}}$	Ш	Щ	_		Ц	Ц	$\dashv$	$\perp$		1_		
j!	GGOT	CONOR	CM		PRES APPE	DPF	HATE		+"		┝═ <u></u> ┞┼	=	<u> -  </u>	<u>-</u> +	4	_	4		$\bot$	$oldsymbol{\perp}$	igsqcup	$\sqcup$	4	$\square$	Щ			_ _		.		
	HEAD!	SPACE A	BSENT!	1	CONT	ΔίΝ	ER	•				_		_	_	+	- -	_		↓		<b> </b>	_		<u> </u>		$\bot$	$\bot$	<u> </u>	$oldsymbol{\perp}$		1
	<u> </u>	<b></b>	ļ!			<b> </b> - -	- -		-	-				_		+	+	_	+	╀	$\sqcup$		$\dashv$	$\vdash$	$\sqcup$	$\square$	+	_	-	<b>_</b>		
	<u> </u>	DATE	TIME	acce.	I∨ED B	<u></u>	ㅗ		لــــــــــــــــــــــــــــــــــــــ	Ш		}	<b>  </b> -	_ <u>_</u>		<u>_</u>					لـــا		_						<u> </u>	<u></u>		
RELINDUISHED BY	Joslin 1	1-4-94	1 , 1	1 -	) )	" /	/,	. /						RE	MA	<b>IRK</b>	.Sı															
RELINQUISHED B	7	DATE	TIME		IVED B	KY!							ĺ																			
	~		'		·	•	٠						Í																			
RELINGUISHED B	Υ·	DATE	TIME	RECEI	IVED B	3Y L/	ABUR!	NIOR	Υı																							
	/	1	<u> </u>	Ĺ									i																			]

## JOSLIN GEOTECHNICAL

CIVIL, SOIL, GEOLOGICAL & MINING ENGINEERING CONSULTANTS MATERIALS TESTING SERVICES



924 Stockton Street P. O. Box 193 Dutch Flat, California 95714 916-389-2581 Fax 916-389-8833

July 25, 1994

where a site map? 1st ome

Harold Turner Snow Cleaners 2678 Coolidge Ave. Oakland, CA

Dear Mr. Turner:

This report contains the latest test results in our quarterly monitoring program for the monitoring wells located on your site. Included in this report are all monitoring well results taken from the wells since installation.

History

In the summer of 1990, six underground tanks were removed from the site. Two of these tanks, with capacities of about 1000 gallons each, were in use up to the time of the tank field removal. These two tanks were visually examined by C.M. Chambers and Associates at the time of removal and were noted to be intact. Four additional tanks of differing sizes, from about 100 to 400 gallon capacity, were also removed. Holes were observed in two of these tanks. These four tanks had not been used by Mr. Turner during his operation of the site.

Contents and use of the additional four tanks was not determined at time of removal. Date stamps on one of the tanks indicated a manufacturing date of 1927.

Methods

Water samples were acquired by first purging the well (removal of 2 to 4 well volumes) with a precleaned PVC bailer, then sampling the well water with a precleaned bailer unless otherwise noted. Bailer cleaning was performed by first washing with tap water mixed with trisodium phosphate, then rinsing with tap water. Upon recovery, water samples were promptly poured into laboratory supplied 40 ml septa-capped vials (without head space) and 1000 ml amber bottles. Samples were then labeled, put on ice and transported to McCampbell Analytical Laboratory under EPA protocol (see chain-of-custody forms, attached).

#### Results

The results of the sampling are presented in the table below. The current analytical results of the monitoring wells indicated the presence of petroleum hydrocarbons in the groundwater. By copy of this report, the results are being submitted to the Alameda County Health Care Services, Department of Environmental Health, and San Francisco Regional Water Quality Control Board.

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
<b>B</b> AL-M	MW1A,B	ND 6400	ND - 15	ND 100	ND 43	ND 120 /

### Results from Monitoring Well Installation

#### Soil Samples

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
1-4-94	B1;113	ND	ND	ND	ND	ND
	B1;123	ND	ND	ND	ND	ND
	B1;133	ND	ND	ND	ND	ND
	B1;142	ND	ND	ND	ND	ND
	B1;153	ND	ND	ND	ND	ND
	B1;163	ND	ND	ND	ND	ND
	B1:172	ND	ND	ND	ND	ND
	B1;182	NĐ	ND	ND	ND	ND
	B1;193	ND	ND	ND	ND	ND
	B1;1102	ND	ND	ND	ND	ND
	B1:1113	ND	ND	ND	ND	ND
	B2;212	ND	ND	ND	ND	ND
	B2;222	440	ND	ND	.36	5.5
	B2;233	2000	ND	.59	1.0	28
	B2;241	2100	ND	.60	ND	25
	B2;253	ND	ND	ND	ND	ND

NOTE: LEVELS IN PARTS PER MILLION

Sample number B2;241 was sampled for Volatile Halocarbons and was non-detect.

#### WATER SAMPLES

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
1-26-94	MW1A	ND	ND	ND	ND	ND
	MW2A	20,000	15	180	39	200

NOTES: LEVELS IN PARTS PER BILLION

ND = Non Detected

#### Conclusions

Soil and water contamination was discovered at your site. The soil contamination was small in volume and found in a localized area of the excavation.

Monitoring well sampling will continue on a quarterly basis to review contamination levels of the groundwater at the site.

Additional monitoring wells and soil investigation are necessary to determine the limits of the contamination area. We are currently waiting for a date for a soil probe survey of the area of the site with the Richards Corporation. We hope to complete the soil probe survey as soon as possible.

Snow Cleaners, Inc.

July 27, 1994

Project 220

Very truly yours,
JOSLIN GEOTECHNICAL

Robert D. Joslin, PE

Civil/Geological Engineer

CE 37716

Copies: Alameda County

San Francisco RQCB

110 2nd Avenue South, #D7, Pacheco, CA 94553 Tele: 510-798-1620 Fax: 510-798-1622

Joslin Geotec	hnical	Client Pr	oject ID: Sno	)W		Date San	npled: 05/31	1/94
P.O. Box 793		İ				Date Rec	eived: 05/3	31/94
Dutch Flat, C	A 95714	Client Co	ntact: Mike	Chambers /	Bob Joslin	Date Ext	racted: 06/	/02-06/03/94
		Client P.(	O:			Date Ana	ılyzed: 06/	/02-06/03/94
EPA methods 50	Gasoline Ran 30, modified 8015, an	i <b>ge (C6-C1</b> d 8020 or 602	2) Volatile F	<b>lydrocarbo</b> r /QCB (SF Bay	18 as Gasoli Region) meth	ne*, with B'	TEX*	
Lab ID	Client ID	Matrix	TPH(g)	Benzene	Toluene	Ethylben- zene	Xylenes	% Rec. Surrogate
35807	MW1 A,B	W	ND	ND	ND	ND	ND	101
35808	MW2 A,B	w	6400,e	15	100	43	220	92
	7.3							1
							<del></del>	
								<del>  · · · · · · · · · · · · · · · · · · ·</del>
	h- <sup>44</sup>							
	·							
							·············	
	· · · · · · · · · · · · · · · · · · ·							
Detection Li	mit unless other-	w	50 ug/L	0.5	0.5	0.5	0.5	
wise stated; De	ND means Not tected	S	1.0 mg/kg	0.005	0.005	0.005	0.005	

<sup>\*</sup>water samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

<sup>#</sup> cluttered chromatogram; sample peak co-elutes with surrogate peak

<sup>&</sup>lt;sup>+</sup> The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds are significant; no recognizable pattern; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible phase is present.

#### QC REPORT FOR HYDROCARBON ANALYSES

Date:

06/02/94

Matrix: Water

	Concent	ration	(ug/L)		% Reco	very	
Analyte	Sample	MS	MSD	Amount Spiked	MS	MSD	RPO
TPH (gas)	0.0	97.7	98.6	100	97.7	98.6	0.9
Benzene Toluene	0	9.4 9.3	9.9 10	10 10	94.0 93.0	99.0 100.0	5.2 7.3
Ethyl Benzene	0	9.7	10.3	10	97.0	103.0	6.0
Xylenes	O	29.3	31	30	97.7	103.3	5.6
TPH (diesel)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD)  $\times$  2  $\times$  100

#### QC REPORT FOR HYDROCARBON ANALYSES

Date: 06/03-06/04/94 Matrix: Water

	Concent	ration	(ug/L)		% Reco	very	· · · · · · · · · · · · · · · · · · ·
Analyte	Sample	MS	MSD	Amount Spiked	MS	MSD	RPD
TPH (gas) Benzene	0.0	100.3	101.1	100	100.3	101.1	0.7
Toluene	0	9.7 9.6	10 9.9	10 10	97.0 96.0		3.0 3.1
Ethyl Benzene Xylenes	0	9.8 29.8	10.2 30.9	10 30	98.0 99.3	102.0 103.0	4.0 3.6
TPH (diesel)	0	169	169	150	112	113	0.3
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD)  $\times$  2  $\times$  100

2441 CHAIN OF CUSTODY RECORD McCAMPBELL ANALYTICAL 110 2nd AVENUE, # D7 TURN AROUND TIME: PACHECO, CA 94553 (510) 798-1820 FAX (510) 798-1822 RUSH 24 HOUR 48 HOUR 5 DAY REPORT TO RUB JOSEM BILL TO JUSKIAI ANALYSIS REQUEST CLIMPANY TUSALA CEOTECHAICAL Total Petroleum III & Grease (5520 EBF/5520 (602/8020 & 8015) Total Petroleun Hydrocarbons (4181) TELE (9/C) 359-2581 - Priority Pollutant Metals PROJECT NAME: Swall PROJECT NUMBER LEAD (7240/7421/239.2/6010) PROJECT LOCATION BAKLAND SAMPLER SIGNATURE COM COMMENTS EPA 624/8240/8260 METHOD PRESERVED MATRIX SAMPLING CONTAINERS CAM - 17 hetais BTEX & TPH as EPA 608/8080 EPA 625/8270 EPA 602/8020 EPA 608/8080 EPA 601/8010 SAMPLE LUCATION 12 MER HD SLUDGE OTHER HCL HND<sub>3</sub> DATE TIME SOIL AAR 5/31/4 1220 4601 CAKLAND 414.0 MWIA 1225 40 49 B B D 7 116011 1225 40 11412 12160 4000 11202A 35808 +1 MLJ2B 1245 yu PRESTRUCTIVE WAS IN B ME IS OTHER CEFT! GOOD CONDITION APPROPRIATE HEAD SPACE ABSENT \_\_\_\_ CONTAINERS RELINQUISHED BY DATE RECEIVED BY TIHE REMARKS DATE 1400 TIME RECEIVED BY RELINQUISHED BY DATE RECEIVED BY LABORATORY

RELINQUISHED BY:

## JOSLIN GEOTECHNICAL

CIVIL, SOIL, GEOLOGICAL & MINING ENGINEERING CONSULTANTS MATERIALS TESTING SERVICES



924 Stockton Street • P. O. Box 193 • Dutch Flat, California 95714 • 916-389-2581 • Fax 916-389-8833

August 20, 1994

Harold Turner Snow Cleaners 2678 Coolidge Ave. Oakland, CA

Dear Mr. Turner:

This report contains the latest test results in our quarterly monitoring program for the monitoring wells located on your site. Included in this report are all monitoring well results taken from the wells since installation.

History

In the summer of 1990, six underground tanks were removed from the site. Two of these tanks, with capacities of about 1000 gallons each, were in use up to the time of the tank field removal. These two tanks were visually examined by C.M. Chambers and Associates at the time of removal and were noted to be intact. Four additional tanks of differing sizes, from about 100 to 400 gallon capacity, were also removed. Holes were observed in two of these tanks. These four tanks had not been used by Mr. Turner during his operation of the site.

Contents and use of the additional four tanks was not determined at time of removal. Date stamps on one of the tanks indicated a manufacturing date of 1927.

Methods

Water samples were acquired by first purging the well (removal of 2 to 4 well volumes) with a precleaned PVC bailer, then sampling the well water with a precleaned bailer unless otherwise noted. Bailer cleaning was performed by first washing with tap water mixed with trisodium phosphate, then rinsing with tap water. Upon recovery, water samples were promptly poured into laboratory supplied 40 ml septa-capped vials (without head space) and 1000 ml amber bottles. Samples were then labeled, put on ice and transported to McCampbell Analytical Laboratory under EPA protocol (see chain-of-custody forms, attached).

## **JOSLIN GEOTECHNICAL**

Snow Cleaners, Inc.

CIVIL, SOIL, GEOLOGICAL & MINING ENGINEERING CONSULTANTS MATERIALS THE TIME SERVICES

Project 220



924 Stockton Street P. O. Box 193 Dutch Flat, California 95714 916-389-2581 Fax 916-389-8833

#### Results

The results of the sampling are presented in the table below. The current analytical results of the monitoring wells indicated the presence of petroleum hydrocarbons in the groundwater. By copy of this report, the results are being submitted to the Alameda County Health Care Services, Department of Environmental Health, and San Francisco Regional Water Quality Control Board.

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
7-29-94	MW1A	ND	ND	ND	ND	ND
	MW2A	21000	21	150	53	150
5-31-94	MW1A,B	ND	ND	ND	ND	ND
	MW2A,B	6400	15	100	43	220

### Results from Monitoring Well Installation

#### Soil Samples

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
1-4-94	B1;113	ND	ND	ND	ND	ND
	B1;123	ND	ND	ND	ND	ND
	B1;133	ND	ND	ND	ND	ND
	B1;142	ND	ND	ND	ND	ND
	B1;153	ND	ND	ND	ND	ND
	B1;163	ND	ND	ND	ND	ND
	B1:172	ND	ND	ND	ND	ND
	B1;182	ND	ND	ND	ND	ND
	B1;193	ND	ND	ND	ND	ND
	B1;1102	ND	ND	ND	ND	ND
	B1:1113	ND	ND	ND	ND	ND
	B2;212	ND	ND	ND	ND	ND
	B2;222	440	ND	ND	.36	5.5
	B2;233	2000	ND	.59	1.0	28
	B2;241	2100	ND	.60	ND	25
	B2;253	ND	ND	ND	ND	ND

NOTE: LEVELS IN PARTS PER MILLION

Sample number B2;241 was sampled for Volatile Halocarbons and was non-detect.

#### WATER SAMPLES

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
1-26-94	MW1A	ND	ND	ND	ND	ND
	MW2A	20,000	15	180	39	200

NOTES: LEVELS IN PARTS PER BILLION

ND = Non Detected

#### Conclusions

Soil and water contamination was discovered at your site. The soil contamination was small in volume and found in a localized area of the excavation.

Monitoring well sampling will continue on a quarterly basis to review contamination levels of the groundwater at the site.

Additional monitoring wells and soil investigation are necessary to determine the limits of the contamination area. I suggest that you continue your efforts in trying to convince the up-gradient property owner to allow us to place an additional monitoring well. The well will be on your property, but we will need access across his property. We believe the information received from a monitoring well placed in an up-gradient location will help measure the background contamination in your area and well as flow direction.

Very truly yours,
JOSLIN GEOTECHNICAL

Robert D. Joslin, PE

Robert O Joslin

Civil/Geological Engineer

CE 37716

Copies: Alameda County

San Francisco RQCB

Joslin Geotechnical

P.O. Box 793

Date Sampled: 07/29/94

Date Received: 07/29/94

Client Contact: Mike Chambers/Bob Joslin

Date Extracted: 07/29/94

Client P.O:

Date Analyzed: 07/29/94

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline\*, with BTEX\* EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID (5030) % Rec. Ethylben-**Xylenes** TPH(g)<sup>+</sup> Benzene Toluene Surrogate Client ID Matrix zene Lab ID ND 93 ND ND W ND ND **MW1A** 40081 90 150 53 150 W 21,000,e,a,h 21 MW2A 40082 0.5 0.5 0.5 0,5 50 ug/L Detection Limit unless other-W wise stated; ND means Not 0.005 0.005 0.005 0.005 Detected S 1.0 mg/kg

<sup>\*</sup>water samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

<sup>#</sup> cluttered chromatogram; sample peak co-elutes with surrogate peak

<sup>&</sup>lt;sup>+</sup> The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds are significant; no recognizable pattern; e) TPH pattern that does not appear to be derived from gasoline (Stoddards solvent?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present.

#### QC REPORT FOR HYDROCARBON ANALYSES

Date: 07/28-07/29/94

Matrix: Water

	Concentration (ug/L)			% Recovery			222
Analyte	Sample	MS	MSD	Amount Spiked	MS	MSD	RPD
TPH (gas)	0.0	83.8	82.1	100	83.8	82.1	2.0
Benzene	0	10.2	10.3	10	102.0	103.0	1.0
Toluene	o	10.2	9.9	10	102.0	99.0	3.0
Ethyl Benzene	o	10.2	10	10	102.0	100.0	2.0
Xylenes	0	32.6	32	30	108.7	106.7	1.9
TPH (diesel)	o	157	157	150	105	105	0.2
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD)  $\times 2 \times 100$ 

2705 AJO3 L

		MPBE				IC/	\L			•						C	CH	A	II	1	O	F		C٦	U	5"	[(						0]	RD	•
(510) 798-I	1620	110 2nd PACHE	CO, CA	ув, 94	# D7 553	F	'AX	(5	10)	78	98 –	-182	22	π	JRN	ΑF	RUU	IND	TI	ME	ľ	R	 2U	Н	ŕ	۶4	Н	] 11.15	₹	48	НО	HR		5 DA	7.A
REPORT TO	MINE CHA	MRERS	BILL T	<b>U</b> . ,	JOS	7 X	) /	$\overline{\vee}$										Ā	ŇĂ	YS	ĪŜ	RE	QU	3	Ē				İ		HER				•
	V/ \ \ 2 0 T													ا ا		(4)3E (E																			
		<del></del>												8015)		X,					İ											-			
TELE: 9/6	387-2581	<u> </u>	FAX #											8020 &		Grease (5520 648/5520	(418.1)								<b>50</b>										
PROJECT NU	IMBER 220		PROJEC	T N	AME:	5	V a	w	,					(602/8		9	Suoc						1		Mertals	<u> </u>									
PROJECT LO	CATION OAK	んかんり	SAMPLE	R S	IGNAT	URE	' (	2 (	VA.	on	len		_	Oline (6			gradari				S Orly				Pollutant >	9.2/601							CD	MME	112
		SAMP	LING	ERS	INERS		M	ATR	XIX			ETHO: SER\		as Gas	4 (800.5)	20 5	eun Hy			- 1	- PCBs	0/8260	ا	tals	ty Pollt	421/23	_								
SAMPLE ID	LOCATION	DATE	TIME	# CONTAINERS	TYPE CONTAINERS	VATER	SOIL	AIR	SLUDGE	DTHER	HCL	HNO3	<b>GTHER</b>	BTEX & TPH	THP as Diose	Total Petraleun Ol 3	Total Petroleun Hydrocarbons	EPA 601/8010	EPA 502/8020	EPA 508/8080	EPA 608/8080	EPA 624/8240/8260	PA 625/927	CAM - 17 Netals	PA - Priority	LEAD (7240/7421/239.2/6010)	DRGANGC LEAD	<b>g</b>							į
MWIA	OAKLAND	7/29/94	89/0	1	40	X						-		χ			†			-			_	7		_			$\vdash$			4 6		4	
hwlB	C <sub>E</sub>		09/0		40	4	-								T					$\neg$	1	7		1	寸					) <u>}</u>		4 (	109	<u>'l</u>	
MWZA		H	0940	,	40	Y								Ø																		Λ¢	08	Ò	
MW2B	£ 1	ł	0946	<u> </u>	40	7									_					$\perp$											-	7,	, 00	L	
<del></del>					<u> </u>	Ľ				_		_			_	_	_	_	_	_	_ .		_	_							_				
						_	-	_	_	_	_				4	_	_	_			4	-	_ -	4	4	_	_				_ _	_ <b> </b> _			
		<b> </b>				$\vdash$					-	-				_	$\dashv$	+	$\dashv$			-	4		4	$\dashv$		_		$\vdash \vdash$	_ _	- -			
		ļ			├	<del> </del> -									$\dashv$	$\dashv$	-	$\dashv$	-	-	$\dashv$	+		4	$\dashv$	_	_				-	- -			
	·				<del>                                     </del>	$\vdash$	$\dashv$			-	-	$\dashv$				$\dashv$	$\dashv$	+	-		+	+	-	$\dashv$	$\dashv$	$\dashv$	$\dashv$	_							
		<del> </del>				H	$\dashv$	$\dashv$	$\dashv$	$\dashv$	-	$\dashv$			$\dashv$	$\dashv$	-+.	$\dashv$	$\dashv$	+	+	+	-	+	╁	-	$\dashv$		$\vdash \vdash$	$\dashv$		- -			
					-	┨┈				ᅦ	1	$\dashv$				-	-	$\dashv$	-	+	+	╅	+	- -	$\dashv$	$\dashv$	-	-	$\vdash$	$\dashv$	$\dashv$	- -			
					<del> </del>		$\dashv$			7	_	$\dashv$			$\dashv$	十	$\dashv$	+	_	+	$^{+}$	+	$\dashv$	1	+	$\dashv$	$\dashv$	-	H	-		- -	·		
					<del> </del>				1	1		$\dashv$			$\dashv$	-	$\top$	$\dashv$		$\top$	$\top$	$\dagger$	+	+	+	-	$\dashv$			-	+	- -			
																$\neg$	_	+			1	$\top$	Ť	寸	7	7	7				_	╁			
RELINGUISMED BY	<b>(•</b>	DATE	TIME	RECE	INED	BYı	1	)							RE	МΔ	RK	Sı			-														
( Camber		7/29/14			reich	11	140	ca										_	ı									. 1	Hal	دء الع	ទូក្ខា	RIT	 Ye, nda	<b>//</b>	
RELINGUISHED BY	/ı	DATE	TEME	RECE	IVED	BYı									ICE	П	9				4	,	Ţ	RF	SEI	ij	Jiv	, F. T	۳	用量	<b>6</b> b	献		THER	
RELINQUISHED BY: DATE TIME RECEIVED BY LABORATORY								G0	00	001 St'A				iT		,	PP	RO	Pfil	ATI	Ĕ	_	e, es	- Jugo											

### JOSLIN GEOTECHNICAL

CIVIL, SOIL, GEOLOGICAL & MINING ENGINEERING CONSULTANTS MATERIALS TESTING SERVICES



924 Stockton Street P. O. Box 193 Dutch Flat, California 95714 916-389-2581 Fax 916-389-8833

October 5, 1994

Harold Turner Snow Cleaners 2678 Coolidge Ave. Oakland, CA

Dear Mr. Turner:

This report contains the latest test results in our quarterly monitoring program for the monitoring wells located on your site. Included in this report are all monitoring well results taken from the wells since installation.

History

In the summer of 1990, six underground tanks were removed from the site. Two of these tanks, with capacities of about 1000 gallons each, were in use up to the time of the tank field removal. These two tanks were visually examined by C.M. Chambers and Associates at the time of removal and were noted to be intact. Four additional tanks of differing sizes, from about 100 to 400 gallon capacity, were also removed. Holes were observed in two of these tanks. These four tanks had not been used by Mr. Turner during his operation of the site.

Contents and use of the additional four tanks was not determined at time of removal. Date stamps on one of the tanks indicated a manufacturing date of 1927.

Methods

Water samples were acquired by first purging the well (removal of 2 to 4 well volumes) with a precleaned PVC bailer, then sampling the well water with a precleaned bailer unless otherwise noted. Bailer cleaning was performed by first washing with tap water mixed with trisodium phosphate, then rinsing with tap water. Upon recovery, water samples were promptly poured into laboratory supplied 40 ml septa-capped vials (without head space) and 1000 ml amber bottles. Samples were then labeled, put on ice and transported to McCampbell Analytical Laboratory under EPA protocol (see chain-of-custody forms, attached).

#### Results

The results of the sampling are presented in the table below. The current analytical results of the monitoring wells indicated the presence of petroleum hydrocarbons in the groundwater. By copy of this report, the results are being submitted to the Alameda County Health Care Services, Department of Environmental Health, and San Francisco Regional Water Quality Control Board.

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
9-14-94	MW1	ND	ND	ND	ND	ND
	MW2	200,000	ND	170	400	2600 <u>- [-P.</u>
7-29-94	MW1A	ND	ND	ND	ND	ND
	MW2A	21,000	21	150	53	150
5-31-94	MW1A,B	ND	NĐ	ND	ND	ND
	MW2A,B	6400	15	100	43	220

#### Results from Monitoring Well Installation

#### Soil Samples

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
1-4-94	B1;113	ND	ND	ND	ND	ND
	B1;123	ND	ND	ND	ND	ND
	B1;133	ND	ND	ND	ND	ND
	B1;142	ND	ND	ND	ND	ND
	B1;153	ND	ND	ND	ND	ND
	B1;163	ND	ND	ND	ND	ND
	B1:172	ND	ND	ND	ND	ND
	B1;182	ND	ND	ND	ND	ND
	B1;193	ND	ND	ND	ND	ND
	B1;1102	ND	ND	ND	ND	ND
	B1:1113	ND	ND	ND	ND	ND
	B2;212	ND	ND	ND	ND	ND
	B2;222	440	ND	ND	.36	5.5
	B2;233	2000	ND	.59	1.0	28

Snow Cleaners, Inc.	October 5, 1994	Project 220
---------------------	-----------------	-------------

B2;241	2100	ND	.60	ND	25
B2;253	ND	ND	ND	ND	ND

#### NOTE: LEVELS IN PARTS PER MILLION

Sample number B2;241 was sampled for Volatile Halocarbons and was non-detect.

#### WATER SAMPLES

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
1-26-94	MW1A	ND	ND	ND	ND	ND
	MW2A	20,000	15	180	39	200

NOTES: LEVELS IN PARTS PER BILLION

ND = Non Detected

#### Conclusions

Monitoring well sampling will continue on a quarterly basis to review contamination levels of the groundwater at the site.

Additional monitoring wells are necessary to determine the limits of the contamination area. Another consideration for an additional monitoring well on the up gradient side is the continuing presence of product more consistent with gasoline than Stoddard solvent. We may be dealing with off site contamination. We are prepared to continue the investigation when you are able.

Attempts to purge well #2 were unsuccessful due to minimal water flow. Floating product was recovered and placed in 55 gallon drums to be distilled at the site with equipment

designed to recover Stoddard solvent from water. Attempts to purge the well casing will continue.

Very truly yours, JOSLIN GEOTECHNICAL

Robert D. Joslin, PE

Civil/Geological Engineer

CE 37716

Copies: Alameda County

San Francisco RQCB

Joslin Geote		Client Pr	oject ID: Sno	w		Date Sam	pled: 09/14/	94			
P.O. Box 793	3				_	Date Rece	eived: 09/15	/94			
Dutch Flat,	CA 95714	Client Co	ontact: Mike	Chambers /	Bob Joslin	Date Extra	acted: 09/18	3-09/19/94			
		Client P.	0:			Date Anal	yzed: 09/18	-09/19/94			
EPA methods	Gasoline Ran 5030, modified 8015, an	ige (C6-C) d 8020 or 60	l 2) Volatile H 2; California RW	ydrocarbo QCB (SF Bay	ns as Gasoli Region) meth	ne*, with B	TEX*				
Lab ID	Client ID	Matrix	TPH(g) <sup>+</sup>	Benzene	Toluene	Ethylben- zene	Xylenes	% Rec. Surrogate			
41009	MWI	w	ND,f	ND	ND	ND	ND	95			
41010	MW2	w	200,000,e,h	ND< 15	170	400	2600	105			
							· · ·				
						-					
							<del></del>				
					-						
<del></del> · ,							,,,,,				
		<del>                                     </del>									
Detection L	imit unless other-	w	50 ug/L	0.5	0.5	0.5	0.5				
Wise stated De	; ND means Not etected	S 1.0 mg/kg 0.005 0.005 0.005									

<sup>\*</sup>water samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

<sup>#</sup> cluttered chromatogram; sample peak co-elutes with surrogate peak

<sup>+</sup> The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds are significant; no recognizable pattern; e) TPH pattern that does not appear to be derived from gasoline (Stoddards solvent?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible phase is present.

#### QC REPORT FOR HYDROCARBON ANALYSES

Date: 09/19-09/20/94 Matrix: Water

	Concent	ration	(ug/L)		% Reco	very	
Analyte	Sample	MS	MSD	Amount Spiked	MS	MSD	RPD
TPH (gas) Benzene	0.0	97.5	95.0	100	97.5	95.0	2.6
Toluene	0	10.2 10.4	10 10	10 10	102.0	100.0	2.0 3.9
Ethyl Benzene	0	10.1	9.8	10		98.0	3.9
Xylenes	0	31.3	30.7	30	104.3		1.9
TPH (diesel)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TRPH (oil & grease)	0	22900	22800	23700	97	96	0.4

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD)  $\times 2 \times 100$ 

# CHROMALAB, INC.

Environmental Services (SDB)

September 26, 1994

Submission #: 9409260

2917

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton Project: J/SNOW

Received: September 14, 1994

re: One sample for Volatile Organic Compounds analysis.

Sample ID: MW2A

Spl#: 63152

Sampled: September 19, 1994

Method: EPA 8240/8260

Matrix: WATER

Run#: 3981

Project#:

Analyzed: September 25, 1994

		REPORTING	BLANK	
ANALYTE	RESULT	LIMIT	RESULT	RESULT
ACETONE	(ug/L )	(ug/L )	(ug/L )	(%)
BENZENE	120	25	N.D.	
BROMODICHLOROMETHANE	24_	10	N.D.	117
BROMOFORM	N.D.	10	Ŋ.D.	
BROMOMETHANE	Ŋ.D.	10	N.D.	
METHYL ETHYL KETONE	N.D.	10	N.D.	
CARBON TETRACHLORIDE	N.D.	10	N.D.	
CHLOROBENZENE	N.D.	10	N.D.	<del></del>
CHLOROETHANE	N.D.	10	N.D.	107
2-CHLOROETHYLVINYL ETHER	N.D.	10	N.D.	
CHLOROFORM	N.D.	10	N.D.	
CHLOROMETHANE	<u>(8</u> 2),	10	N.D.	<del></del>
DIBROMOCHLOROMETHANE	ŊŢD.	10 、	N.D.	
1,1-DICHLOROETHANE	и.D.	10	Ŋ.D.	
1,2-DICHLOROETHANE	N.D.	10	Ŋ.D.	
1,1-DICHLOROETHENE	N.D.	10	N.D.	
CIS-1,2-DICHLOROETHENE	N_D.	10	Ŋ.D.	120
TRANS-1,2-DICHLOROETHENE	N.D.	10	N.D.	
1,2-DICHLOROPROPANE	N.D. N.D.	10	N.D.	
CIS-1,3-DICHLOROPROPENE	N.D.	10	N.D.	
TRANS-1,3-DICHLOROPROPENE	N.D.	10	N.D.	
ETHYLBENZENE	(300)	10	N.D.	
2-HEXANONE	N.D.	10 10	Ŋ.D.	
METHYLENE CHLORIDE	N.D.	25	N.D. N.D.	
METHYL ISOBUTYL KETONE	N.D.	10		
STYRENE	N.D.	10	N.D.	
1,1,2,2-TETRACHLOROETHANE	N.D.	10	N.D. N.D.	
TETRACHLOROETHENE	N-D	10	N.D.	<b></b>
TOLUENE	40	10	N.D.	103
1,1,1-TRICHLOROETHANE	N.D.	10	N.D.	103
1,1,2-TRICHLOROETHANE	Ń.D.	10	N.D.	
TRICHLOROETHENE	N.D.	10	N.D.	105
TRICHLOROFLUOROMETHANE	N.D.	10	N.D.	105
VINYL ACETATE	N.D.	10	N.D.	
VINYL CHLORIDE	N.D.	10	N.D.	 
XYDENES	433	10	N.D.	<del></del>
1 0	モノ	<del></del> -	41 1 47 I	

Aaron McMichael

Chemist

Ali Kharrazi Organic Manager

	M.C		~~ ·		rer	~ ~ ~							5UBI					50										()/(	€ 2 1	3157
1	MCU	AMPBI					\L						CLI		į: i	MCC	MAC	/O.4										RI	<u> 3</u> (	CORD
(510) MOD	1.000	110 2nd PACHE											DUE REF					/94												
(910) (80-	1620	1 ACIE	DILL T	19 to	000 727	7 F	AX	(510	<u>0) 7</u>	<u> 198</u> -	-16	2	KEF	47	. 10	40.				<u></u> .								<u> </u>		R 5 DAY
VEL PIVI 10	Ed Ham	GON	BILL	n. \	1150	4	m	UK	<u>e</u> 1	<u> </u>			十		ا م		AI	VAL.	(S1:	S R	EQL T	JES T	T	Τ	Τ_		0	THER	$\dashv$	
COMPANY	MAT_											~~			38														-	
h	***************************************												8015)		88														Ī	
TELE:	700 1/20		FAY H.		- I								ات [		ERF	18.15														
PROJECT N	798-1620 UMBERI 200		ם ובנ	<i>₹7</i> ≀	<u>5-16</u>	20	<u> </u>	/_					(602/8020		5520	2 2							임						- [	
PROJECT L	UMBERI 291	<u> </u>	T KUUL	- 1 IN	417E.	<u> </u>	/	<u>S</u>	NC	$\mathcal{N}$	<u>N</u>		99		Greuse (5520 E&F/5520 B&F)	Total Petroleum Hydrocarbons (418.1)			 				EPA - Priority Pollutant Metals	- Ort				1		
FRUJECI L	LICATIUN!		SAMPLE	.R S.	IGNA I	URE	1 /						Gasoline		3	000			S DILY				tant	LEAD (7240/7421/239.2/6010)		Į			ļ	COMMENTS
		SAME	PL ING	ĘĮ.	82		МА	TRI		۲	ESER'	<b>D</b>	ŝ	THP as Diese! (8035)	ă	Ť			PCBs	98		.	뒿	/235					ĺ	
SAMPLE			T	CONTAINERS	TYPE CONTAINERS		T	<b>—</b>	_	PRI	TZEK.	VEB	Sp	يو د	5	) ec		.   a	- 8	EPA 624/8240/8260	20	CAM - 17 Metals	ity.	7423	9				Ī	
ID	LOCATION	l		¥	S S			],	الد				Ŧ	Dies	etro	etre	8	EPA 608/8080	EPA 608/8080	4/82	EPA 625/8270	17 H	rior.	240,	DRGANIC LEAD	1			ł	
		DATE	TIME	#	J <sub>E</sub>	ATES	벍	AIR	킬불		I D S	OTHER	ŭ	P QS	E E	直	9	3   3 4   4	4 60	28	59	1	1	9	NA.					
MWZA	- ALC 1 - 1	Guia	1-7	<del>                                     </del>	<u> </u>		В	₹   ₹	<u> 15</u>			5	Ä	Ŧ	١	Ď	<u> </u>		8		Ğ	₹	£	É	ğ	ខ្ល	$\perp$	Ш	_	
MUNCH	OAKLAND	9-14.94	1751	-	VOA	X	+	$\dashv$	+	X	$\vdash \vdash$				_	4			_	X		-	4	_	_	_ _	$\perp$	<del>                                     </del>	_ 2	41010
		<del> </del>	<u> </u>		<del> </del>	-		+	+	<del> </del>	├╌┤	$\square$	-	$\dashv$	$\dashv$	+	- -		┼-		-	4			4	<b>_ </b>  -		<del>  -</del>	_ .	
					<del>                                     </del>	╂─┼		+	+	<del> </del>			┞─┼		-	+	+		<del> </del>	-	$\dashv$		-	$\dashv$	$\dashv$	-		- -	-	
			<del> </del>				+	+	+	<b> </b>	<del>  </del>		$\vdash$	$\dashv$	+		╁		-		$\dashv$		-	-	$\dashv$			╀		
I		·	<del>                                     </del>	<b> </b>	-			1	+					+				+	-		$\dashv$	-			+	-1-	-	<del> </del>	- -	
								-	+				<del>                                     </del>	$\top$	1	+	_	+	-		$\dashv$	$\dashv$	-	$\dashv$	_		-		- -	
											П			7			1	1			_	$\exists$	7		+	+	+	<del>                                     </del>	- -	
																					_		$\dashv$		$\top$	1	$\top$		- -	
								$\perp$													_				7		1		1	
						_		$\bot$			$\square$	_		_			_												-	
	····		ļ				_ _				$\dashv$		_	$\perp$	1	_ .	_	1_				1	_							
							_	_	-		$\dashv$		_	_	$\perp$		_ _	ļ			_	_	_	.	_					
						<b> -</b> -		+	+					- -	-	+	- -	-		$\dashv$	$\perp$	-	$\perp$	_	_	_ _	_	<u> </u>		<del></del>
RELIMOVIELE B	Y' Ricia	DATE	TIME	RECE	[∨ED B	RYı	L_		ليل			-+					Щ.									上			上	
Maril.	Mici.	9/19												RŁ.	MAI	RK:	Sı .	4.	5 2	117	Æ	4	, E 5	-	1	01	- J	01/2	. /	
RELINQUISHED B	Yi	DATE	TIME	RECE	IVED E	BY:						_		(	(1)	d	·	, ,,	,	90	ر ما <sup>12</sup> د	0	(	Cir	1	, ,		. 4	ے بے رام	[ 19. 94
																								•	• /	' /	0.7		- 1000 C	y. 88
RELINOUISHED B	Υι	DATE	TIME	RECEI	VED B	JY LA	BOR	ATOR	<u> </u>			7																~ / .		
		<u> 91/8/99</u>	1139	1	-4				<u> </u>	_																				
		ľ					(./																							

291725053 McCAMPBELL ANALYTICAL CHAIN OF CUSTODY RECORD 110 2nd AVENUE, # D7 PACHECO, CA 94553 (510) 798-1620 TURN AROUND TIME: FAX (510) 798-1822 RUSH 24 HOUR 48 HOUR 5 DAY REPORT TO HINE CHAMBERS BILL TO JOSZIN ANALYSIS REQUEST COMPANY JOSLIN REOTECHNICAL Grease (5520 E&F/5520 TELE 9/6 389-2581 FAX # PROJECT NUMBER: - Priority Pollutant Metals PROJECT NAME: SNOW SAMPLER SIGNATURE PROJECT LOCATION: COMMENTS OAKLAND CONTAINERS METHOD SAMPLING MATRIX CONTAINERS PRESERVED EPA 601/8010 EPA 602/8020 SAMPLE EPA 608/8080 LOCATION ID DATE TIME BTEX 렃 SA. OAKNAND 9/14 441 1910 40 AWIA 1911 40 MW2 15 1750 40 MW2A ٩L 1751 40 PRESERVATIVE
APPROPRIATE
CONTAINERS JCE/T GOOD CONDITION HEAD SPACE ABSENT RELINQUISHED BY DATE TIME RECEIVED BY REMARKS 9/5/9 17:43 TIME STODDARD SOLVENT RELINQUISHED BY RECEIVED BY DATE RELINQUISHED BY TIME RECEIVED BY LABORATORY

### **JOSLIN GEOTECHNICAL**



CIVIL, SOIL, GEOLOGICAL & MINING ENGINEERING CONSULTANTS MATERIALS TESTING SERVICES



924 Stockton Street P. O. Box 193 Dutch Flat, California 95714 916-389-2581 Fax 916-389-8833

Signatury 20, 1995

Harold Turner Snow Cleaners 2678 Coolidge Ave. Oakland, CA

Dear Mr. Turner:

This report contains the latest test results in our quarterly monitoring program for the monitoring wells located on your site. Included in this report are all monitoring well results taken from the wells since installation.

History

In the summer of 1990, six underground tanks were removed from the site. Two of these tanks, with capacities of about 1000 gallons each, were in use up to the time of the tank field removal. These two tanks were visually examined by C.M. Chambers and Associates at the time of removal and were noted to be intact. Four additional tanks of differing sizes, from about 100 to 400 gallon capacity, were also removed. Holes were observed in two of these tanks. These four tanks had not been used by Mr. Turner during his operation of the site.

Contents and use of the additional four tanks was not determined at time of removal. Date stamps on one of the tanks indicated a manufacturing date of 1927.

Methods

Water samples were acquired by first purging the well (removal of 2 to 4 well volumes) with a precleaned PVC bailer, then sampling the well water with a precleaned bailer unless otherwise noted. Bailer cleaning was performed by first washing with tap water mixed with trisodium phosphate, then rinsing with tap water. Upon recovery, water samples were promptly poured into laboratory supplied 40 ml septa-capped vials (without head space) and 1000 ml amber bottles. Samples were then labeled, put on ice and transported to McCampbell Analytical Laboratory under EPA protocol (see chain-of-custody forms, attached).

#### Results

The results of the sampling are presented in the table below. The current analytical results of the monitoring wells indicated the presence of petroleum hydrocarbons in the groundwater. By copy of this report, the results are being submitted to the Alameda County Health Care Services, Department of Environmental Health, and San Francisco Regional Water Quality Control Board.

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
12-22-94	MW-1	NĐ	ND	ND	ND	ND
	MW-2	20,000	22	170	89	470
9-14-94	MW1	ND	ND	NĐ	ND	ND
	MW2	200,000	ND	170	400	2600
7-29-94	MW1A	ND	ND	ND	ND	ND
	MW2A	21,000	21	150	53	150
5-31-94	MW1A,B	ND	ND	ND	ND	ND
	MW2A,B	6400	15	100	43	220

### Results from Monitoring Well Installation

#### Soil Samples

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
1-4-94	B1;113	ND	ND	ND	ND	ND
	B1;123	ND	ND	ND	ND	ND
	B1:133	ND	ND	ND	ND	ND
	B1;142	ND	ND	ND	ND	ND
	B1;153	ND	ND	ND	ND	ND
	B1;163	ND	ND	ND	ND	ND
	B1:172	ND	ND	ND	ND	ND
	B1;182	ND	ND	ND	ND	ND
	B1;193	ND	ND	ND	ND	ND
	B1;1102	ND	ND	ND	ND	ND
	B1:1113	ND	ND	ND	ND	ND

B2;212	ND	ND	ND	ND	ND
B2;222	440	ND	ND	.36	5.5
B2;233	2000	ND	.59	1.0	28
B2;241	2100	ND	.60	ND	25
B2:253	ND	ND	NĐ	ND	ND

Project 220

#### NOTE: LEVELS IN PARTS PER MILLION

Sample number B2;241 was sampled for Volatile Halocarbons and was non-detect.

#### WATER SAMPLES

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
1-26-94	MW1A	ND	ND	ND	ND	ND
	MW2A	20,000	15	180	39	200

NOTES: LEVELS IN PARTS PER BILLION

ND = Non Detected

#### Conclusions

Monitoring well sampling will continue upon request to review contamination levels of the groundwater at the site.

Additional monitoring wells are necessary to determine the limits of the contamination area. We are prepared to continue the investigation when we can.

Per our discussion with you, we are going forward with plans Could be to remove product from monitoring well #2 and explore your capability to remove the solvent from the water with your distilling process at your facility. We hope to introduce the preliminary plan for your consideration and review within 4 weeks.

Additional monitoring wells and soil investigation are necessary to determine the limits of the contamination area.

Very truly yours, JOSLIN GEOTECHNICAL

Robert D. Joslin, PE

Civil/Geological Engineer

CE 37716

Copies: Alameda County

San Francisco RQCB

Joslin Geotechnical		Client Pr	oject ID: Sno	)W	Date San	Date Sampled: 12/22/94					
P.O. Box 793						Date Rec	Date Received: 12/22/94				
Dutch Flat, C	A 95714	Client Co	ntact: Bob J	oslin / Mike	Chambers	Date Exti	Date Extracted: 12/22-12/3/94				
		Client P.	0:			Date Ana	lyzed: 12/2:	2-12/3/94			
EPA methods 50	Gasoline Rai 30, modified 8015, an	<b>ige (C6-C</b> 1 d 8020 or 602	l <b>2) Volatile F</b> 2; California RV	<b>lydrocarb</b> or /QCB (SF Bay	ns as Gasol Region) meth	ne*, with B	ne*, with BTEX*				
Lab ID	Client ID	Matrix	TPH(g) <sup>+</sup>	Benzene	Toluene	Ethylben- zene	Xylenes	% Rec. Surrogate			
43275	MW-1	W	ND	ND	ND	ND	ND	102			
43276	MW-2	w	20,000,e,f	22	170	89	470	104			
	<u> </u>										
	1-										
					i						
Data di Ti		w									
wise stated;	Detection Limit unless other- wise stated; ND means Not		50 ug/L	0.5	0.5	0.5	0.5				
Det	ected	S	1.0 mg/kg	0.005	0.005	0.005	0.005				

<sup>\*</sup>water samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

<sup>#</sup> cluttered chromatogram; sample peak co-elutes with surrogate peak

<sup>&</sup>lt;sup>+</sup> The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds are significant; no recognizable pattern; e) TPH pattern that does not appear to be derived from gasoline (Stoddards solvent?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible phase is present.

#### QC REPORT FOR HYDROCARBON ANALYSES

Date: 12/22-12/24/94 Matrix: Water

_	Concent	ration	(ug/L)		% Reco	very	
Analyte	Sample	MS	MSD	Amount Spiked	мѕ	MSD	RPD
TPH (gas) Benzene	0.0	102.9	103.6	100	102.9	103.6	0.6
Toluene	0	10.5 10.7	10.3 10.5	10 10	105.0	103.0 105.0	1.9 1.9
Ethyl Benzene · Xylenes	0	10.8 33.4	10.5 32.6	10 30	108.0	105.0 108.7	2.8
-					•••	100.7	2.4
TPH (diesel)	0	151	153	150	101	102	0.8
TRPH (Oil & grease)	0	25800	25700	23700	109	108	0.4

% Rec. = (MS - Sample) / amount spiked  $\times$  100

RPD = (MS - MSD) / (MS + MSD)  $\times$  2  $\times$  100

**Environmental Services (SDB)** 

December 30, 1994

Submission #: 9412330

MCCAMPBELL ANALYTICAL, INC.

Atten: Ed Hamilton

Project: JG/S
Received: December 23, 1994
re: One sample for Volatile Organic Compounds anal

Sample ID: MW-2

Sp1#: 73729 (4)

Matrix: WATER

Sampled: December 22, 1994 Method SEPA 8240/8260

Analyzed: December

		REPORTIN	G BLANK	BLANK SPIKE
	RESULT	LIMIT	RESUL'	r Result
ANALYTE	(ug/L)	(uσ/L )	(ug/L	(%)
ACETONE ACETONE	N.D.	5.0	Stable N.D. 9	The Control of the Co
BENZENE	21	ಾಗಳು 2.0 💥	ND	118
BROMODICHLOROMETHANE	N.D	าง เรื่องก็ก	ND	
BROMOFORM ***	PONID AND	**************************************	ND	的数据 1995年,2015年2月1日 - 1995年 - 1995年 - 1995年 - 1995年 - 1995年 - 1995年 - 1995年 - 1995年 - 1995年 - 1995年 - 1995年 -
BROMOMETHANE	N.D	20 1	N D	
METHYL ETHYL KETONE	N.D.	2 0	N D	
CARBON TETRACHLORIDE	N.D	ACTION TO A STREET	ND	
CHLOROBENZENE	N.D	2 0	N D	<b>建筑</b> 105 数系
CHLOROETHANE	6.7		ND	<b>建设是在基础工工工业的</b> 第二
2-CHLOROETHYLVINYL ETHER	N D	2 0	ND	
CHLOROFORM	ים א	2.0	N D	
CHLOROMETHANE	ND	ว็ก	N D	2000
DIBROMOCHLOROMETHANE	ND	יוֹיי יוֹייי יוֹייייייייייייייייייייייי	ND	
1.1-DICHLOROETHANE	2 8	วิก	ND	
1.2-DICHLOROETHANE	พื <sup>้</sup> ก	2.0	ND	
1.1-DICHLOROETHENE	ND	2 n	N D	127
CIS-1.2-DICHLOROETHENE	ำ ว่ากัก	ร์ก	N D	하고 그리는 그들은 것이다.
TRANS-1.2-DICHLOROETHENE	15	2 n	и Б	
1,2-DICHLOROPROPANE	ี้ N D	2.0	N D	
CIS-1,3-DICHLOROPROPENE	ND	ž 0	ND	
TRANS-1,3-DICHLOROPROPENE	N.D	2.0	ת א	
ETHYLBENZENE	48	2 0	ND	
2-HEXANONE	ΝĎ	2.0	ND	
METHYLENE CHLORIDE	N.D.	ร์ อี๋ อั๋	N.D.	· · · · · · · · · · · · · · · · · · ·
METHYL ISOBUTYL KETONE	N.D.	2.0	N.D.	1, 20 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
STYRENE SECTION AND A SECTION	N.D.	2.0	$\widetilde{\mathbf{N}}.\widetilde{\mathbf{D}}$	
1,1,2,2-TETRACHLOROETHANE	N.D.	2.0	N.D.	
TETRACHLOROETHENE	N.D.	2.0	N.D.	; <u>-</u> -
TOLUENE	170	$\bar{2}$ , $\hat{0}$	N.D.	101
1,1,1-TRICHLOROETHANE	N.D.	$-\frac{1}{2},0$	N.D.	
1,1,2-TRICHLOROETHANE	N.D.	$\frac{1}{2}$ 0	N.D.	
TRICHLOROETHENE	N.D.	2.0	N.D.	103
TRICHLOROFLUOROMETHANE	N.D.	2.0	N.D.	— 
VINYL ACETATE	N.D.	2.0	N.D.	
VINYL CHLORIDE	N.D.	$\bar{2},\bar{0}$	N.D.	
ANALYTE  ACETONE  BENZENE  BROMODICHLOROMETHANE  BROMOMETHANE  BROMOMETHANE  METHYL ETHYL KETONE  CARBON TETRACHLORIDE  CHLOROBENZENE  CHLOROETHANE  2-CHLOROETHYLVINYL ETHER  CHLOROMETHANE  DIBROMOCHLOROMETHANE  1,1-DICHLOROETHANE  1,2-DICHLOROETHANE  1,2-DICHLOROETHENE  TRANS-1,2-DICHLOROETHENE  TRANS-1,2-DICHLOROPROPENE  TRANS-1,3-DICHLOROPROPENE  TRANS-1,3-DICHLOROPROPENE  ETHYLBENZENE  2-HEXANONE  METHYLENE CHLORIDE  METHYLENE CHLORIDE  METHYLENE  1,1,2,2-TETRACHLOROETHANE  TOLUENE  1,1,1-TRICHLOROETHANE  TOLUENE  1,1,2-TRICHLOROETHANE  TRICHLOROETHENE  TRICHLOROFLUOROMETHANE  TRICHLOROFLUOROMETHANE  TRICHLOROFLUOROMETHANE  VINYL ACETATE  VINYL CHLORIDE  TOTAL XYLENES	180	2.0	N.D.	

win Mc Michael Aaron McMichael

Ali Khatrazi Organic Manager

Chemist

19913

		MPBE				CA	L		•												0	-	_				•		I	₹ŀ	C	ORD
(510) 798-	1620	PACHEO	CO, CA	94	553	F.	AX.	(51	(0)	79	8-	162	22	Τl	JRN	A	ROU		TI			RU.	_ <u>SH</u>		24	HC	JUR		48 48		UR	5 DAY
	5. Hamil	/ Lun	BILL T	D: "	14 Z									<b> </b>		٠,		A	NAL	YŠI	S	REQ	JES	T	1	_	$\overline{}$		וודם	<u>E</u>	SHR	m #: 941233
COMPANY	MIT				_											Č.			İ										1			ENT: MCCAM
														8015)		(\$520 ENF/3520					-					1					OUE	
										,				3		/382	2			ľ			1							J	REF	#:19913
TELE			FAX #											620		520	15)		- 1	1				<u> </u>		1				1	ı	
PROJECT NU	JMBERI	I	PROJEC	CT NA	ME	57	, ,	15						(602/8020		9	noon							I I	8							
PROJECT LO	CATION		SAMPLE											coline (		ريده	drocar				PLUS UNIX			Pollutant Hetals	9.2/60							COMMENTS
		SAMP	LING	ERS	INERS		MA	4TR	ΙX			OHT 3 SERY		as Gas		5	Pun Hy					200	tols		421/23							
SAMPLE ID	LOCATION	DATE	TIME	# CONTAINERS	TYPE CONTAINERS	VATER	STILL	AIR	SLUDGE	OTHER	HCL.	HNO <sub>3</sub>	OTHER	BTEX & TPH	THP as Besei	Total Petraleun	Total Petruleun Hydrocarbons (418.1)	EPA 601/8010	EPA 602/8029	CTA SUB/SUB	ברא פשפי פניפון - דיני	EPA 625/8270	CAM - 17 Netals	EPA - Priority	LEAD (7240/7421/239.2/6010)	DRGANGC LEAD	<b>FC1</b>				, e	
NW-Z	· · · · · · · · · · · · · · · · · · ·	12-27-9	2501	17	V04	++			ᅦ	_	×					-		┪	<del>- </del> -		Ţ,	-	†	┌	Ē	Ī		$\Box$	$\dashv$	$\top$	١,	4327G
		-															7		_	T	+	1							_ -	_	7	
													_								1		Τ	Τ	Γ				_	_	_ -	
																_				T			Γ							_		
																															_ _	
					<u>                                     </u>																										_[_	
	I						_																									
	, <u> </u>			<b> </b>	<u> </u>			_	_	_					_	_		_		$\perp$	$\perp$		<u> </u>	L.	L					$\perp$	_ _	
			<u> </u>	<u> </u>			_	_	_	_					_	$\Box$			_ _	_	_ _		L	<u> </u>	_		_			_ _	_ _	
			ļ	<b> </b>			_	_	_	_	_	_			_		_	_	_ _		_		<u> </u>	,	_		_			_ _	_ _	
			ļ	ļ	ļ	<b> </b>	_	_	$\dashv$	_			_		_	_	_	_	_	_	_		<u> </u>	<u> </u>	_				_ _	-	_ -	
	· · · · · · · · · · · · · · · · · · ·			ļ	<del> </del>	╂╌┤		_	_	_	_	_	_		_	_	_		$\bot$	_	_	-	-	-	_	_		_	_	_ -	_ _	
-			<del> </del>	<del> </del>	<del> </del>	<b> </b>		-	$\dashv$	-	_						_	-	_ -		- -		-	-	_		_	-	_ _	- -	_	<del></del>
					<del> </del>	┨╼┤				-	_	-					-	_		-	- -	- -	╄	<u> </u>	_	<del> </del>	_	-	_ -	-	_ -	
RELINGUISHED B		DATE 2-23-9	1	i .	IVED :	BY:				_1					RE	I	ARK	(2)	l_		1 170	- - - -	 ر م	نے من	000							
RELINQUISHED B		DATE	TIME	RECE	IVED.	BYı					•									4	01	? C } • d	•	/2	. 1	3.	PY	ŕ				
RELINGUISHED B	Yı	DATES	11HE 1634	RECE	IVED	BY L	ABO	RATI	ORY:		_	•																				

McCAMPBELL ANALYTICAL 3443A5057 CHAIN OF CUSTODY RECOR. 110 2nd AVENUE, # D7 (510) 700-1620 PACHECO, CA 94563 RUSH TURN AROUND TIME! REPORT TO MIKE CHAMBERS BILL TO JOSLIN FAX (610) 790-1622 24 HOUR 48 HUUR ANALYSIS REQUES COMPANY JOSLIN GEOTECHNICAC UTILER Po. Box 5.196 DUTCH FLAT PROJECT NUMBER PROJECT NAME: SOURCE PROJECT LOCATION SAMPLER SIGNATURE OAKLAND Š CUMF SAMPLING TYPE CONTAINERS EPA 468/8080 - PC3; EPA 424/8240/8240 HE 11410 CONTAINERS HATRIX PRESERVED SAMPLE LUCATION CPA GOL/BOLD ID SLUBS. OTHER DATE THE NATE . Ş 덫 1 MW-1 OAKLAND 12/24/9 4:500 HWI ALB lı. 40 MW-2 4 5.450 4: MW-2 ATB 46 624 RELEMOUISHED BY DATE RECEIVED BY TIME 14224 REMARKS 1820 RELINQUISHED BY DATE RECEIVED BY TIME VOAS IDLAG INTENSI OTHER PRESERVATIVE \_> RELINQUISHED BY **GOOD CONDITION** DATE **APPROPRIATE** TIME RECEIVED BY LABORATORY HEAD SPACE ABSENT\_\_\_\_ CONTAINERS \*

### **JOSLIN GEOTECHNICAL**

CIVIL, SOIL, GEOLOGICAL & MINING ENGINEERING CONSULTANTS MATERIALS TESTING SERVICES



924 Stockton Street • P. O. Box 193 • Dutch Flat, California 95714 • 916-389-2581 • Fax 916-389-8833

June 10, 1995

Harold Turner Snow Cleaners 2678 Coolidge Ave. Oakland, CA

Dear Mr. Turner:

This report contains the latest test results in our quarterly monitoring program for the monitoring wells located on your site. Included in this report are all monitoring well results taken from the wells since installation.

History

In the summer of 1990, six underground tanks were removed from the site. Two of these tanks, with capacities of about 1000 gallons each, were in use up to the time of the tank field removal. These two tanks were visually examined by C.M. Chambers and Associates at the time of removal and were noted to be intact. Four additional tanks of differing sizes, from about 100 to 400 gallon capacity, were also removed. Holes were observed in two of these tanks. These four tanks had not been used by Mr. Turner during his operation of the site.

Contents and use of the additional four tanks was not determined at time of removal. Date stamps on one of the tanks indicated a manufacturing date of 1927.

Methods

Water samples were acquired by first purging the well (removal of 2 to 4 well volumes) with a precleaned PVC bailer, then sampling the well water with a precleaned bailer unless otherwise noted. Bailer cleaning was performed by first washing with tap water mixed with trisodium phosphate, then rinsing with tap water. Upon recovery, water samples were promptly poured into laboratory supplied 40 ml septa-capped vials (without head space) and 1000 ml amber bottles. Samples were then labeled, put on ice and transported to McCampbell Analytical Laboratory under EPA protocol (see chain-of-custody forms, attached).

#### Results

The results of the sampling are presented in the table below. The current analytical results of the monitoring wells indicated the presence of petroleum hydrocarbons in the groundwater. By copy of this report, the results are being submitted to the Alameda County Health Care Services, Department of Environmental Health, and San Francisco Regional Water Quality Control Board.

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
5-15-95	MW1	ND	ND	ND	ND	ND
	MW2	12000	17	96	50	200
12-22-94	MW-1	ND	ND	ND	ND	ND
	MW-2	20,000	22	170	89	470
9-14-94	MW1	ND	ND	ND	ND	ND
	MW2	200,000	ND	170	400	2600
7-29-94	MW1A	ND	ND	ND	ND	ND
	MW2A	21,000	21	150	53	150
5-31-94	MW1A,B	ND	ND	ND	ND	ND
	MW2A,B	6400	15	100	43	220

#### Results from Monitoring Well Installation

#### Soil Samples

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
1-4-94	B1;113	ND	ND	ND	ND	ND
	B1;123	ND	ND	ND	ND	ND
	B1;133	ND	ND	ND	ND	ND
	B1;142	ND	ND	ND	ND	ND
	B1;153	ND	ND	ND	ND	ND
	B1;163	ND	ND	ND	ND ·	ND
	B1:172	ND	ND	ND	ND	ND
	B1;182	ND	ND	ND	ND	ND

Snow Cleaners, Inc.	June 10, 1995	Project 220
---------------------	---------------	-------------

B1;193	ND	ND	ND	ND	ND
B1;1102	ND	ND	ND	ND	ND
B1:1113	ND	ND	ND	ND	ND
B2;212	ND	ND	ND	ND	ND
B2;222	440	ND	ND	.36	5.5
B2;233	2000	ND	.59	1.0	28
B2;241	2100	ND	.60	ND	25
B2;253	ND	ND	ND	ND	ND

#### NOTE: LEVELS IN PARTS PER MILLION

Sample number B2;241 was sampled for Volatile Halocarbons and was non-detect.

#### WATER SAMPLES

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
1-26-94	MW1A	ND	ND	ND	ND	ND
	MW2A	20,000	15	180	39	200

NOTES: LEVELS IN PARTS PER BILLION

ND = Non Detected

#### Conclusions

Monitoring well sampling will continue to review contamination levels of the groundwater at the site.

Monitoring well #2 continues to have very low water flow at this time.

Per our discussion with you, we are going to continue with efforts to remove product from monitoring well #2 and continue with your capability to remove the solvent from the water with your distilling process at your facility.

Monitoring well sampling will continue upon request to review contamination levels of the groundwater at the site.

Additional monitoring wells and soil investigation are necessary to determine the limits of the contamination area.

Very truly yours, JOSLIN GEOTECHNICAL

Robert D. Joslin, PE

Civil/Geological Engineer

CE 37716

Copies: Alameda County

San Francisco RQCB

110 2nd Avenue South, #D7, Pacheco, CA 94553 Tele: 510-798-1620 Fax: 510-798-1622

Joslin Geote	echnical	Client Proje	ct ID: # 220;	Snow	Date Sampled: 05/15/95				
P.O. Box 19	3					Date Receive	ed: 05/15/9	5	
Dutch Flat,	CA 95714	Client Conta	ıct: Bob Josli	n / Mike Cl	nambers	Date Extracted: 05/15-05/17/95			
		Client P.O:			Date Analyz	ed: 05/15-0	5/17/95		
EPA methods	Gasoline Ra 5030, modified 8015, a	nge (C6-C12) nd 8020 or 602;	Volatile Hy	drocarbons CB (SF Bay R	as Gaso legion) met	line*, with BT	EX*	_ · · · ·	
Lab ID	Client ID	Matrix	TPH(g) <sup>+</sup>	Benzene	Toluen	Etherlhon	Xylenes	% Rec. Surrogate	
52462	MW1	w	ND	ND	ND	ND	ND	106	
52463	MW2	w	12,000,e,a	17	96	50	200	94	
·									
							-		
<del></del>									
<del></del>									
	-	-							
				- <u></u>					
·									
					· · · · · · · · · · · · · · · · · · ·				
					<del></del>				
wise stated;	Limit unless other ND means not de	}- <del>  </del>	50 ug/L	0.5	0.5	0.5	0,5		
wise stated; ND means not dected above the reporting lin		ut S	1.0 mg/kg	0.005	0.005	0.005	0.005	,	

Edward Hamilton, Lab Director

<sup>\*</sup> water and vapor samples are reported in ug/L, soil samples in mg/kg, and all TCLP extracts in mg/L

<sup>#</sup> cluttered chromatogram; sample peak coelutes with surrogate peak

<sup>+</sup> The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant (aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (Stoddard's Solvent?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~ 5 vol. % sediment; j) no recognizable pattern.

⁺.

### QC REPORT FOR HYDROCARBON ANALYSES

Date: 05/15-05/16/95 Matrix: Water

Analyte	Concent	ration	(ug/L)		% Reco		
	Sample	MS	MSD	Amount Spiked	MS	MSD	RPD
TPH (gas) Benzene Toluene Ethyl Benzene Xylenes	0.0	102.4 9.5 9.7 9.7 29.9	102.3 9.8 10.2 10.1 31.5	100 10 10 10 30	102.4 95.0 97.0 97.0	102.3 98.0 102.0 101.0	0.0 3.1 5.0 4.0 5.2
TPH (diesel)	0	194	195	200	97	97	0.4
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD)  $\times 2 \times 100$ 

4123 ASOSX10 McCAMPBELL ANALYTICAL CHAIN OF CUSTODY RECORD 110 2nd AVENUE, # D7 (510) 798-1620 PACHECO, CA 94553 RUSH 24 HOUR 48 HOUR REPORT TO MIKE CHAMBERS BILL TO JUSCIN TURN ARDUND TIME: FAX (510) 798-1622 COMPANY, JOSLIN GEOTECHNICAL ANALYSIS REQUEST Total Petroleun DI & Grosse 1550 E&F/550 9&5) PROJECT NUMBER: 220 Total Petroleum Hydrocarbons (418.1) PROJECT NAME: SNOW EPA - Priority Pollutant Metais PROJECT LOCATION DAKLAND SAMPLER SIGNATURE Viters. There LEAD (72+0/7+21/239.2/6010) COMMENTS SAMPLING EPA 608/8080 - PC3s EPA 624/8240/8260 EPA 625/8270 MATRIX SAMPLE EPA 602/8020 EPA 608/8080 LOCATION STEX & TPH EPA 601/8010 ID SLUDGE OTHER HCL HND<sub>3</sub> VATER SOIL AIR DATE TIME Mar 1 CAKLAND 1/28A MNIA MW Z 52462 MN ZA 52463 RELINQUISHED BY CHILLY RELINQUISHED BY RECEIVED BY REMARKSI ICE/T VOAS DAG VIET CHER
GOOD CONDITION
HEAD SPACE ABSENT
CONTAINERS RELINQUISHED BY DATE TIME RECEIVED BY LABORATORY

### JOSLIN GEOTECHNICAL

CIVIL, SOIL, GEOLOGICAL & MINING ENGINEERING CONSULTANTS MATERIALS TESTING SERVICES



924 Stockton Street P. O. Box 193 Dutch Flat, California 95714 916-389-2581 Fax 916-389-8833

November 20, 1998

Harold Turner Snow Cleaners 2678 Coolidge Ave. Oakland, CA

Dear Mr. Turner:

This report contains the latest test results in our monitoring program for the monitoring wells located on your site. Included in this report are all monitoring well results taken from the wells since installation.

#### History

In the summer of 1990, six underground tanks were removed from the site. Two of these tanks, with capacities of about 1000 gallons each, were in use up to the time of the tank field removal. These two tanks were visually examined by C.M. Chambers and Associates at the time of removal and were noted to be intact. Four additional tanks of differing sizes, from about 100 to 400 gallon capacity, were also removed. Holes were observed in two of these tanks. These four tanks had not been used by Mr. Turner during his operation of the site.

Contents and use of the additional four tanks was not determined at time of removal. Date stamps on one of the tanks indicated a manufacturing date of 1927.

#### Methods

Water samples were acquired by first purging the well (removal of 2 to 4 well volumes) with a precleaned PVC bailer, then sampling the well water with a precleaned bailer unless otherwise noted. Bailer cleaning was performed by first washing with tap water mixed with trisodium phosphate, then rinsing with tap water. Upon recovery, water samples were promptly poured into laboratory supplied 40 ml septa-capped vials (without head space) and 1000 ml amber bottles. Samples were then labeled, put on ice and transported to McCampbell Analytical Laboratory under EPA protocol (see chain-of-custody forms, attached).

#### Results

The results of the sampling are presented in the table below. The current analytical results of the monitoring wells indicated the presence of petroleum hydrocarbons in the groundwater. By copy of this report, the results are being submitted to the Alameda County Health Care Services, Department of Environmental Health, and San Francisco Regional Water Quality Control Board.

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
11-3-98	MW-1	ND	ND	ND	ND	ND
	MW-2	7800	11	110	41	230
5-15-95	MW1	ND	ND	ND	ND	ND
	MW2	12000	17	96	50	200
12-22-94	MW-1	ND	ND	ND	ND	ND
	MW-2	20,000	22	170	89	470
9-14-94	MW1	ND	ND	ND	ND	ND
, , , , ,	MW2	200,000	ND	170	400	2600
7-29-94	MW1A	ND	ND	ND	ND	ND
,, , .	MW2A	21,000	21	150	53	150
5-31-94	MW1A,B	ND	ND	ND	ND	ND
	MW2A,B	6400	15	100	43	220

#### Results from Monitoring Well Installation

#### Soil Samples

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
1-4-94	B1;113	ND	ND	ND	ND	ND
	B1;123	ND	ND	ND	ND	ND
	B1;133	ND	ND	ND	ND	ND
	B1;142	ND	ND	ND	ND	ND
	B1;153	ND	ND	ND	ND	ND

ъ .		222
Prot	iect.	220
110	OCL	440

November 2	20, 1998	8
------------	----------	---

Snow	Cleaners,	Inc.
------	-----------	------

B1;163	ND	ND	ND	ND	ND
B1:172	ND	ND	ND	ND	ND
B1;182	ND	ND	ND	ND	ND
B1;193	ND	ND	ND	ND	ND
B1;1102	ND	ND	ND	ND	ND
B1:1113	ND	ND	ND	ND	ND
B2;212	ND	ND	ND	ND	ND
B2;222	440	ND	ND	.36	5.5
B2;233	2000	ND	.59	1.0	28
B2;241	2100	ND	.60	ND	25
B2;253	ND	ND	ND	ND	ND

#### NOTE: LEVELS IN PARTS PER MILLION

Sample number B2;241 was sampled for Volatile Halocarbons and was non-detect.

#### WATER SAMPLES

Date	Sample Number	TPH (Diesel)	Benzene	Toluene	Ethyl Benzene	Xylenes
1-26-94	MW1A	ND	ND	ND	ND	ND
	MW2A	20,000	15	180	39	200

#### NOTES: LEVELS IN PARTS PER BILLION

ND = Non Detected

#### Conclusions

Monitoring well #2 continues to have very low water flow at this time. Purging and recharge are slow.

The lab reports now include MTBE testing and it was reported as non-detectable.

Per our discussion with you, we are going to continue with efforts to remove product from monitoring well #2 and

continue with your capability to remove the solvent from the water with your distilling process at your facility. This process continues to be ineffective with the low water flow at the site of monitoring well #2.

Additional monitoring wells and soil investigation are necessary to determine the limits of the contamination area.

Very truly yours, JOSLIN GEOTECHNICAL

Robert D. Joslin, PE

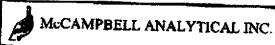
Robert D. Joslin

Civil/Geological Engineer

CE 37716

Copies: Alameda County

San Francisco RQCB



110 Second Avenue South, #D7, Pacheco, CA 94553 Telephone: 925-798-1620 Fax: 925-798-1622 http://www.mccamobell.com E-mail: main@mccampbell.com

Joslin (h	entechnical		Client Projec	t ID: #27(	); Snow	;	Date Samp	oled: 11/03	/98	
P.O. Box 193								ived: 11/03	/98	
Dutchfla	t, CA 95714		Client Contact: Mike Chambers				Date Extra	Date Extracted: 11/06-11/09/98		
			Chent P.O:			i	Date Analy	/zed: 1 [/06	-11/09/98	
Gasolin EPA mells	e Range (Cé da 5030, medifi	-C12) Vo	o <b>lutile Hydro</b> đ 8020 or 602; C	cerbons s	s Gasoline	, with Me	thyi tert-B	utyl Ether	· & BTEX+	
(Ab IE)	Client ID	Matrix		МТВЕ	Benzene	Toluene	Ethylben- zonc	Xylenes	% Recovery Surrogate	
98090	MW-2	W	7800,c,f,h	ND	11	110	41	230	98	
16086	MW-1	W	ND	ND	ND	ND	ND	ND	92	
	/									
	<del>««</del>									
	***************************************									
	<del> </del>	1								
					· n		***************************************			
									···	
		· ·····								
				-~-						
									<del>-</del>	
									<del></del>	
									, , , , , , , , , , , , , , , , , , ,	
Reporting I	int unless	w	50 ug/L	5.0	0.5	0.5	0.5	0.5	<u> </u>	
reimis not de	tosted above	s	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005		

<sup>&</sup>quot; water and vapor samples are reported in ug/L, wipe samples in ug/wips, sail and studge asouples in mg/kg, and all TCLP and SPLP extracts in ug/l.

<sup>&</sup>quot; cluttered chromatogram; sample peak coelutes with surrogate peak

The following descriptions of the TPH chromotogram are curriery in nature and McCompbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the must mobile fraction) are significant; d) gasoline range compounds having broad charmatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvont?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sectiment; j) no recognizable pattern.



## McCAMPBELL ANALYTICAL INC.

110 Second Avenue South, #D7, Pacheco, CA 94553 Telephone: 925-798-1620 Fax: 925-798-1622 http://www.mccamphall.com E-mail: main@mccampbell.com

Client Pro	Date Sampled		l: 11/03/98	
		Date Received:	Received: 11/03/98	
Client Con	taot: Mike Chambers	Date Extracted:	1 1/08/98	
Client P.O:		Date Analyzed	1//R/QR	
Volat	ile Organics By GC/MS			
	98001		· · · · · · · · · · · · · · · · · · ·	
	w	· · · · · · · · · · · · · · · · · · ·		
Concentration*	Compound		Commence of the Co	
ND		*	Concentration*	
ND			ND	
ND			ND ND	
ND			ND ND	
ND			ND ND	
ND			ND	
ND	7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	· · · · · · · · · · · · · · · · · · ·	ND	
ND			ND ND	
ND	7		ND	
ND			ND	
ND			ND	
ND	The state of the s		ND	
ND		Recoveries (%)	1 74 P	
ND			93	
ND	Tokuene-d8		100	
ND	4-Bromofluorobenzene		108	
	Cilent Con  Client P.O.  Volat  Conventration*  ND  ND  ND  ND  ND  ND  ND  ND  ND  N	Conventration* Compound  ND cis-1,3-Dichloropropene  ND trans-1,3-Dichloropropene  ND Bthylbenzene  ND Methyl butyl ketone (6)  ND Methyl ethyl ketone (7)  ND Methyl isobutyl ketone (8)  ND Methyl isobutyl ketone (8)  ND Styrene (8)  ND Tetrachloroethane  ND Toluene (8)  ND Toluene (8)  ND 1,1,2,2-Totrachloroethane  ND Toluene (8)  ND Trichloroethane  ND Trichloroethane  ND Trichloroethane  ND Trichloroethane  ND Trichloroffuoromethane  ND Trichloroffuoromethane  ND Vinyl Acctate (60)  ND Xylenes, total (7)  ND Dibromoffuoromethane  ND Dibromoffuoromethane  ND Dibromoffuoromethane	Client Contact: Mike Chambers  Client P.O:  Date Extracted:  Volatile Organics By GC/MS	

water and vapor samples are reported in ug/L, soil and sludge samples in ug/kg, wipes in ug/wipe and all TCLF / SPLP extracts in ug/L Reporting limits unless otherwise stated: water samples 1 ug/L; vapor samples 0.5 ug/L; solid and sludge samples 5 ug/kg; wipes 0.2 ug/wipe ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

<sup>(</sup>b) 2-preparation or dimetryl lestone; (c) (2-chloroothoxy) others; (d) 2-hesianone; (e) dichloromestrate; (f) 2-butasone; (g) 4-methyl-2-pentanone or isopropylacetone; (h) lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content; (k) athenylbonzene; (l) methylbonzene; (m) acetic soid otheryl enter; (n) chloroethone; (o) dimethylbonzenes.



### McCAMPBELL ANALYTICAL INC.

110 Second Avenue South, #D7, Pacheco, CA 94553
Telephone: 925-798-1620 Fax: 925-798-1622
http://www.mccsmpbell.com B-mail: main@mccsmpbell.com

Joslin Geotechnical	Chient Proje	Project ID: #270; Snow		1/03/98
P.O. Box 193	Oncid 110j	ωι ID: π2/0, 3μ0W	Date Received: 1	1/03/98
Dutchflat, CA 95714	Client Cont	act: Mike Chambers	Date Extracted:	1/08-11/09/98
	Client P.O:		Date Analyzed: 1	1/08-11/09/98
EPA method 624 or 8240	Volati	le Organics By GC/MS		
Lab ID		98090		
Client ID		MW2	· <del>· · · · · · · · · · · · · · · · · · </del>	
Matrix	1	W	· <del></del>	
Compound	Concentration*	Compound	Concentration*	
Acctone (b)	ND<35	cis-1,3-Dichloropropene		ND<10
Renzone	11	trans-1,3-Dichloropropene		ND<10
Bromodichloromethane	ND<10	Ethylbenzene		40
Bromoform	ND<10	Methyl butyl kctone (4)		ND<10
Bromomethane	ND <io< td=""><td colspan="2">Methylene Chloride<sup>(a)</sup></td><td>ND&lt;10</td></io<>	Methylene Chloride <sup>(a)</sup>		ND<10
Carbon Disulfide	ND<10	Mothyl ethyl ketone (f)		ND<10
Carbon Tetrachloride	ND<10	Methyl isobutyl ketone (a)		ND<10
Chlorobcazene	ND<10	Styrene (k)	<u> </u>	ND<10
Chloroethane	ND<10	1,1,2,2-Tetrachlorocthane		ND<10
2-Chloroethyl Vinyl Bther(6)	ND<10	Tetrachloroethens		ND<10
Chloroform	ND<10	Toluene (1)		130
Chloromethane	ND<10	1,1,1-Trichlorosthane		ND:10
Dibromochloromethane	ND<10	1,1,2-Trichloroethane		ND<10
1,2-Dichlorobenzene	ND<10	Trichlorocthene		ND≺10
1,3-Dichlorobenzene	ND<10	Trichlorofluoromethane		ND<10
1,4-Dichlorobenzene	ND<10	Viny! Acetate (M)		ND<10
i, I-Dichloroethane	ND<10	Vinyl Chloride **		18
,2-Dichloroethane	ND<10	Xylunes, total (9)		160
, I-Dichloroethene	ND<10	Serroeste	Recoveries (%)	
ris-1,2-Dichlosoothene	480	Dibromofluoromethane		99
rans-1,2-Dichloroethene	28	Tologne-d8	<del></del>	102
.2-Dichloropropane	ND<10	4-Bromofhiorobenzene		101

water and vapor samples are reported in ug/L, soil and sludge samples in ug/kg, wipes in ug/wipe and all TCLP / SPLP extracts in ug/L

Reporting limits unless otherwise stated: water samples 1 ug/L; vapor samples 0.5 ug/L; solid and sludge samples 5 ug/kg; wipes 0.2ug/wipe

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

(b) 2-propanene or dimethyl ketone; (c) (2-chlorosthoxy) ethone; (d) 2-bassanone; (e) dichloromethane; (f) 2-bassanone; (g) 4-methyl-2-pertamone or isopropylacatione; (h) lighter than water immiscible sheen is present; (i) liquid sample that contains greater than -5 vol. % addiment; (j) sample dilitated due to high urganic content; (k) ethenythonzene; (l) methylbenzene; (m) acetic acid ethenyt ester; (n) chlorosthone; (o) dimethylbenzene;

19884 × 202 x =2 McCAMPBELL ANALYTICAL INC. CHAIN OF CUSTODY RECORD 110 2" AVENUE SOUTH, #07 PACHECO, CA 94553-5560 TURN AROUND TIME EL. 0 RUSH 24 HOUR 48 HOUR 5 DAY Telephone: (925) 798-1620 Fax: (925) 798-1622 Report to MIKE CHAMBERS Bill To: 704 L/M Analysis Request Ober Сорилеры JOSLIN GEOTECHMICAL Company: PER ASSOCIATION + EPA 625/8270/4310 384-807Y Tele: 530 Fax: 530 389-8834 Project Name: Swaw Project #: 270 Project Location: OAKLANG EPA 408 / 8080 PCB's ONLY Sampler Signature: (\* M METHOD STEX & TPH is Gas (40) SAMPLING TPH as Dissel (8015) MATRIX EN CONT. EDW. PAH's/PNA's by EPA 601 / 8010 CAM-17 Memb SAMPLE ID LOCATION EPA 608/ Date Time Water 98090 U COPPEL BYES 1119P 1350 40 MW ) 16 MNO 98091 40 40 MEZERACION YOUS OBST WEDLS OTHER Time: Remarks: Time. PROPRIATE CONTINUES Retinguishes By. Date: Time: Received By: