# **GARLOW ASSOCIATES**

**ENVIRONMENTAL AND GEOLOGICAL CONSULTANTS** 

568 Sunnymount Avenue Sunnyvale, CA 94087

Phone: (408) 245-2897 Fax: (408) 245-8007

November 4, 1998

Mr. Michael Karvelot Director of Environmental Affairs Quik Stop Markets, Inc. 4567 Enterprise Street Fremont, CA 94538

Reference:

Quik Stop Market No. 51

3130 35th Avenue, Oakland, California

Subject:

**Underground Storage Tank Removal Report** 

Dear Mr. Karvelot:

Enclosed is a copy of the Underground Storage Tank Removal Report at the above-referenced facility. Please note that the name of the regulatory agency receiving the report is provided in the distribution section of the report.

The report submitted to regulatory agencies on your behalf is accompanied with the cover letter signed by you which states: "I declare under penalty of perjury that the information and/or recommendations contained in the attached report are true and correct to the best of my knowledge."

Should you have any questions after reviewing this report please call.

Sincerely for,

**GARLOW ASSOCIATES** 

Richard A. Garlow

President

Enclosures

## UNDERGROUND STORAGE TANK REMOVAL REPORT

Quik Stop Market No. 51 3130 35th Avenue Oakland, California

Prepared for:

Quik Stop Markets, Inc. 4567 Enterprise Street Fremont, California 94538

Prepared by:

**GARLOW ASSOCIATES** 

568 Sunnymount Avenue Sunnyvale, California 94087

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## UNDERGROUND STORAGE TANK REMOVAL REPORT

Quik Stop Market No. 51 3130 35th Avenue Oakland, California

November 4, 1998

#### 1.0 INTRODUCTION

At Quik Stop Market No. 51, the underground storage tank (UST) replacement plan was to place the new USTs in a slightly different location than the original USTs. It was the desire of Quik Stop Markets, Inc. (Quik Stop) to put the soil from the new excavation into a portion of the existing excavation. To evaluate the condition of the replacement soil, on June 17, 1998, four soil samples were collected from the approximate location of the new USTs. With the aid of an excavator, soil samples were collected at depths of 5 feet, 9 feet, 13 feet and 16 feet below the ground surface (bgs). The sample was delivered to a certified laboratory where it was combined into a single composite for analyses. Analytical results indicated that this soil was impacted with gasoline related compounds and not suitable for fill.

On June 18, 1998, two 10,000 gallon steel USTs, and associated product lines were removed from Quik Stop Market No. 51, located at 3130 35th Avenue, Oakland, California (see Figure 1). Dan Brenton Construction, Inc. (Brenton Construction) removed the USTs and associated piping. On-Site Technologies (OST) provided environmental oversight and collected soil samples and transported the samples to an analytical laboratory licensed by the state of California to perform the requested analyses. [Please note that in October 1998, Garlow Associates took over the management of this project.] This report describes the sample collection and analytical results and related activities.

#### 2.0 SITE DESCRIPTION

The site is occupied by a business engaged in the retail sale of groceries and gasoline. As described above the site contained two USTs, which contained unleaded gasoline. It is our understanding that these USTs were replaced with two 12,000 gallon, double walled, fiberglass USTs at a location

Quik Stop No. 51 November 4, 1998

slightly to the west of the location of the removed USTs. Figure 2 illustrates pertinent site features including the locations of the former USTs.

#### 3.0 SCOPE OF WORK

The scope of work for this project was to provide environmental oversight, regulatory communication, UST excavation verification sampling and preparation of an underground storage tank removal report. Soil sampling for excavated soil characterization was not a part of this project. All excavated soil was transported to the Forward Incorporated facility in Stockton, California for profiling, treatment and reuse (Certificate of Beneficial Reuse is included in Appendix A).

#### 3.1 UST Removal

According to the Uniform Hazardous Waste Manifest, on Wednesday, June 17, 1998, approximately 400 gallons of gasoline was pumped out of the 2 USTs into a holding tank operated by Ecology Control Industries for delivery and disposal at Romic Chemical Corporation. The Uniform Hazardous Waste Manifest for this material is included in Appendix B.

At time of our arrival at the site on Thursday June 18, 1998, the USTs were exposed, the remaining product had been pumped out and the tops of the two USTs were at a depth of approximately 3 feet below ground surface (bgs). During the excavation activities it was noted that from appearance and odors, the granular backfill appeared to have been impacted by gasoline.

Following the pumping out of the USTs they were inerted by placing at least 15 pounds of dry ice per 1,000 gallons capacity into each UST. After the explosive vapors had been sufficiently displaced by the dry ice Mr. Leroy Griffin of the City of Oakland, Fire Services Agency, approved the USTs for removal. Also present during the UST removal were Mr. Michael Karvelot of Quik Stop, Mr. Kerry Brenton and his crew from Brenton Construction, and Mr. Larry Pavick of OST. After removal from the excavation the USTs were lowered to the ground surface for inspection. An inspection of the USTs indicated that there were no apparent leaks or holes. Following inspection, the USTs were approved for transportation and loaded on a truck operated by Trident Truck Lines for delivery and disposal at Erickson, Inc. The 10,000-gallon UST closest to 35th Avenue, identified as T-1, was removed first and labeled with the inventory number 23008. Next to be removed was the, 10,000 gallon UST closest to the Quik Stop Market, identified as T-2, and labeled with the inventory number 23009. The Uniform Hazardous Waste Manifests are included in Appendix B.

## 3.2 Soil Sampling

After the USTs were removed, the excavation was inspected. The bottom of the tanks were at a depth of approximately 12 feet bgs and groundwater was not observed.

Under the direction of Mr. Leroy Griffin of the City of Oakland, Fire Services Agency, an excavator was used to obtain samples from the bottom of the excavation. Soil samples were collected from

Quik Stop No. 51 November 4, 1998

a depth of approximately one to two feet below the bottom of the USTs from beneath each end of each UST and beneath the middle of each UST. After the soil was brought to the surface the soil was inspected and sampled using the methods described in Appendix C. As shown in Figure 2 soil samples collected from beneath UST T-1 were identified as T1-1, T1-2 and T1-3. In a similar manner, the soil samples collected from beneath UST T-2 were identified as T2-1, T2-2 and T2-3.

Analytical results indicated the presence of relatively high concentrations of gasoline-related constituents in soil immediately beneath the tanks. The excavation was continued vertically in an effort to remove as much hydrocarbon impacted soil as practical. Vertical excavation was terminated at 16 feet below grade, the maximum reach of the excavator. Native soil was then resampled below the former sample locations designated T1-1, T1-2, T2-1 and T2-2. These deeper samples taken at 16 feet were designated T1-1@16', T1-2@16', T2-1@16', and T2-2@16', respectively. Analytical results from the deeper samples suggest an overall decrease in contamination with depth. No further vertical excavation was attempted because of equipment limitations, although lateral excavation was conducted in order to position the larger replacement tanks.

The product dispensers were located very close to the USTs and in part juxtaposed over the UST basin. Due to the short distance, piping trench and dispenser samples were not required.

## 4.0 SAMPLE ANALYSES AND ANALYTICAL RESULTS

All soil samples were analyzed at Entech Analytical Labs, Inc. (Entech), a laboratory certified by the California Department of Health Services to perform the specified analyses. Soil and groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-g) using Environmental Protection Agency (EPA) Method 8015M, the gasoline constituents benzene, toluene, ethylbenzene and total xylenes (BTEX) and the oxygenating compound methyl tertiary butyl ether (MTBE) using EPA Method 8020. The certified analytical reports and chains of custody are provided in Appendix D.

# 4.1 UST Excavation Bottom Samples and Excavated Soil

A total of ten samples (T1-1 through T2-3 and T1-1@16' through T2-2@16') were collected from the bottom of the excavation beneath the USTs. As shown in Table 1, analytical results indicted that with the exception of samples collected from location T1-2, the concentration of gasoline related compounds showed an overall decrease with increasing depth. At location T1-2 a small increase was indicated.

After the analytical results were received additional excavation was completed to fit the excavation to the size and location of the new fiberglass tanks. Garlow Associates was not present during the excavation and removal of soil, however shipping records indicate that 973.13 tons of soil were treated for reuse. This weight of soil would represent approximately 660 to 800 cubic yards. All of the excavated soil was transported for profiling and reuse at Forward Incorporated, at their Stockton facility. The Certificate of Beneficial Reuse is included as Appendix E.

#### 5.0 DISCUSSION AND CONCLUSION

During the UST excavation, removal and sampling there was a gasoline like odor and a visible discoloration of the soil. Prior to over excavation analytical results indicated that TPH-g concentrations ranged from 1,100 parts per million (ppm) to 170 ppm and benzene concentration ranged from 5.2 ppm to 0.35 ppm. After over excavation to 16 feet the gasoline odor appeared to decrease and discoloration of the soil was not observed. After over excavation analytical results indicated that TPH-g concentrations ranged from 360 ppm to 2.4 ppm and benzene concentration ranged from 1.5 ppm to 0.017 ppm. This represented a decrease in the detected concentrations at the limit of the excavation equipment reach.

#### 6.0 CERTIFICATION

We certify that, to the best of our knowledge, the information provided in this report is true and correct.

Richard A. Garlow

President

Christopher M. Palmer

Certified Engineering Geologist (C.E.G. #1262)

#### 7.0 DISTRIBUTION

Mr. Michael Karvelot Director of Environmental Affairs Quik Stop Markets, Inc 4567 Enterprise Street Fremont, CA 94538 Mr. Leroy Griffin
Hazardous Materials Supervisor
Fire Services Agency
City of Oakland
505 14th Street, 7th Floor
Oakland, CA 94612

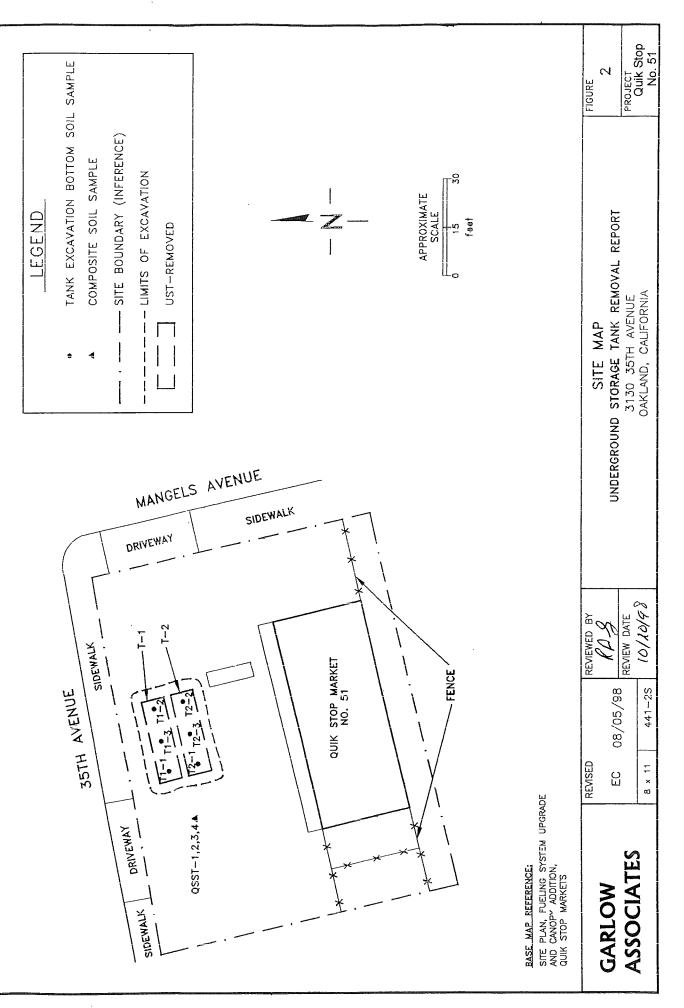


**TABLES** 

	UST	EXCAVA	<b>FION SOI</b> Quik Stop	ABLE 1 L - ANALY Market No d, Californ	o. 51	SULTS		
Sample Number	Sample Date	Sample Depth (feet)	TPH-g (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl- benzene (ppm)	Total Xylenes (ppm)	MTBE (ppm)
QSST-1,2,3,4 T1-1 T1-2 T1-3 T2-1 T2-2 T2-3 T1-1@16' T1-2@16' T2-1@16'	6/17/98 6/18/98 6/18/98 6/18/98 6/18/98 6/18/98 6/19/98 6/19/98 6/19/98	~5-16 ~13-14 ~13-14 ~13-14 ~13-14 ~13-14 ~15-16 ~15-16 ~15-16 ~15-16	100 360 170 1,000 530 1,100 430 350 360 240 2.4	0.71 0.9 0.35 2.1 5.2 1.8 1 1.1 0.6 1.5 0.017	<0.005 <0.625 <0.155 <0.625 <1.25 <0.31 <0.625 <0.31 <0.31 <0.31 <0.005	0.7 3.9 2.2 15 7.5 14 4.7 3.3 3.3 4 0.041	1.7 20 14 20 30 32 6.7 17 15 12 0.049	1.5 8 2.6 12 13 7 <6.25 5.5 <3.1 5
TPH-g MTBE ppm		Total petro Methyl ter Parts per i	t-butyl eth million (m	er				

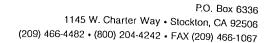
**FIGURES** 





# APPENDIX A

Certificate of Beneficial Reuse





Sent Via Fax (510) 637-1564

July 9, 1998

Quik Stop Markets Attn.: Mr. Mike Karvelot Post Office Box 5745 Fremont, CA 94537

RE:

Certificate of Beneficial Reuse of
Petroleum Impacted Soils from
FORWARD, INC. Acceptance No. 710912
3130 35<sup>th</sup> Avenue, Oakland, California Q.S.# 57

Dear Mike:

FORWARD, INC. is pleased to confirm the beneficial reuse of 973.13 tons of the petroleum impacted soil from the referenced site. The material was received at our facility on 6/16/98, 6/17/98, 6/18/98, 6/19/98, 6/20/98, and 6/22/98 and was utilized as Beneficial Reuse.

Acceptance of this material was based upon the information provided on the *FORWARD*, *INC*. Waste Profile Form and associated materials submitted by Quik Stop Market (Generator) and is subject to the "Terms and Conditions" agreed to and signed by the Generator on the *FORWARD*, *INC*. Waste Profile Form.

Thank you for the opportunity to be of service. Should you have any questions, please do not hesitate to contact me or Customer Service at (800)204-4242.

Sincerely,

FORWARD, INC.

Brael Bonne Ka

Brad Bonner Sales Manager

BB/xh

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# APPENDIX B

Uniform Hazardous Waste Manifest

#### See Instructions on back of page 6.

Department of Toxic Substances Contro

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THE CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802: WITHIN CALIFORNIA, CALL 1-800-852-7550

44 )4 CALIFORNIA, CALL 1-800-852-7550

CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802: WITHIN

## See Instructions on back of page 6.

Department of Toxic Substances Contro Sacramento, California

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# APPENDIX C

**Excavation Verification Sampling Procedures** 

#### APPENDIX C

# EXCAVATION VERIFICATION SAMPLING PROCEDURES

Verification samples were collected from vadose zone soil within the Underground Storage Tank excavation. The following procedures were used to obtain soil samples for laboratory analysis.

- Soil obtained from the excavation pit was brought to the surface using an excavator. Samples were collected by driving a brass or stainless steel sample tube into the soil contained in the backhoe bucket. If necessary, the sample tube will be hand packed to minimize headspace.
- Each end of the full sample tube was covered with a sheet of aluminum foil and then sealed with plastic end caps.
- The sample was labeled with the project number, a unique sample identification number and the date.
- Soil sample containers were then placed in airtight bags and immediately cooled in a refrigerated ice chest. The samples were maintained at a low temperature until delivery to a state certified laboratory.
- Chain-of-custody documentation was maintained.

# APPENDIX D

Certified Analytical Reports and Chains of Custody

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Attn: Rich Garlow On-Site Technologies 20949 Cabot Blvd. Hayward, CA 94545

Date:	6/18/98
Date Received:	6/17/98
Date Analyzed:	6/18/98
Project:	441-2.1
P.O.#:	Quik Stop 51
Sampled By:	Client

# Certified Analytical Report

# Soil Sample Analysis:

Test	QSST-	Units	PQL	EPA
Test	1,2,3,4		2	Method #
Sample Matrix	Soil			
Sample Date	6/17/98			
Sample Time	8:30			
Lab#	E11646			
DF-Gas/BTEX	25			
TPH-Gas	100	mg/kg	1.0 mg/kg	8015M
MTBE	1.5	mg/kg	0.05 mg/kg	8020
Benzene	0.71	mg/kg	0.005 mg/kg	8020
Toluene	ND	mg/kg	0.005 mg/kg	8020
Ethyl Benzene	0.70	mg/kg	0.005 mg/kg	8020
Xylenes	1.7	mg/kg	0.005 mg/kg	8020

1. DLR=DF x PQL (DF=1 unless noted)

2. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #2224)

Michael N. Golden, Lab Director

DF=Dilution Factor
DLR=Detection Reporting Limit

# QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG4980618

Matrix: Soil

Date Analyzed: 06/18/98

Quality Control Sample: E11399

Units:	ug/kg										
PARAMETER	Method #	MB ug/kg	SA ug/kg	SR ug/kg	SP ug/kg	SP % R	SPD ug/kg	SPD %R	RPD	QC RPD i	LIMITS %R
Dongono	8020	<5.0 i	80	ND	72	90	72	90	0.3	i 25 i	76-117
Benzene	8020	<5.0	80	ND	71	88	70	88	0.8	25	76-117
Toluene	8020	<5.0	80	ND	72	90	71	89	0.6	25	74-119
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IXylenes Gasoline	8020	<1000.00	1000	ND I	1110	111	1010	101	9.4	25	58-120

Note: LCS and LCSD results reported for the following Parameters:

Gasoline

Acceptable LCS and LCSD results are reported when matrix interferences cause MS and MSD results to fall outside established QC limits.

## Definition of Terms:

na: Not Analyzed in QC batch

MB: Method Blank SA: Spike Added SR: Sample Result

RPD(%): Duplicate Analysis - Relative Percent Difference

SP: Spike Result

SP (%R): Spike % Recovery

SPD: Spike Duplicate Result

SPD (%R): Spike % Recovery

NC: Not Calculated

75. バルーもこれ

(Laboratory Name)

Report Attn: Rich Garlow

# CHAIN OF CUSTODY RECORD

ON-SITE

TECHNOLOGIES, INC. 20949 Cabot Boulevard Hayward, California 94545 (510) 784-1384 telephone (510) 784-1375 facsimile

Project No.:	Site	Na	me	& Ad	Site Name & Address: QUIL STOP SI			₹	MALYS	ANALYSES REQUESTED	GUES	STED	TUT	TURNAROUND TIME
1-5-144	_\	1			330 35th Ave	iners	bn			01	<u> </u>			~ /
SAMPLERS: (signature)	1		,		P.O. 13tu Number: Guit Sid	L f Conta	EX oline) s	leseib) l	BE	08 bodł				24 t.i.v.: C 48 HR.:  Standard
I.D. Date NO. Sampled	Time	lio2 ,	Water		SAMPLING LOCATION	O .0N	268) H9T T8	-ldT	TM	ePA Me				Æ
8x1-1,2,34 6/17/58	93°	7	+	0.1	SLIT Trench Comprising	7	×		X		1) ]	1646	12	Fax resuggto
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Relinquished By: (signalure)		<u>E</u>	Date ////	Date/Time	Received By? Alfani (signature)	Date/Time / 0.30a 6/77/9名			ll sample I any sa ere sam	es remair mples rei ples in ap	refrige ceived f propria	rated until anal or analyses ha te containers a	Will samples remain refrigerated until analyzed? ☑ Yes □ No Did any samples received for analyses have head space? □ Yes Were samples in appropriate containers and properly packaged? Ĕ	Will samples remain refrigerated until analyzed? $\square$ Yes $\square$ No Did any samples received for analyses have head space? $\square$ Yes $\square$ No ${}^{\!$
Relinquished By: (signature)			Date	Date/Time	Received By: (signature)	Date/Time	<u>e</u>	5. C	iain of C	ustody s	ly seal intac がんれか	Chain of Custody seal intact? ば Yes ロ No VTV MAN	ON U	6/17/98
		4					1		"	Signature			Title	/ Date/

Signature

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

On-Site Technologies 20949 Cabot Boulevard Hayward, CA 94545 Attn: Rich Garlow

Date: 6/19/98

Date Received: 6/18/98

Project: 441-2.1

PO#: Invoice Quick Stop

Sampled By: Client

# **Certified Analytical Report**

Soil Sample Analysis: (All results in mg/kg)

Soil Sample Analysis:	(Ali results	III IIIg/	ng)								.
Sample ID	T1-1			T1-2			T1-3				
Sample Date	6/18/98			6/18/98			6/18/98				
Sample Time	11:30			11:30			11:30	<u></u>			
	E11756			E11757			E11758				
Lab #	Result	DF	DLR	Result	DF	DLR	Result	DF	DLR	PQL	Method
	6/18/98			6/18/98			6/18/98	ļ			
Analysis Date				170	31	31	1000	125	125	1	8015M
TPH-Gas	360	125	125					125	6.25	0.05	8020
MTBE	8	125	6.25	2.6	31	1.55	12				8020
	0.9	125	0.625	0.35	31	0.155	2.1	125	0.625	0.005	
Benzene	ND	125	0.625	ND	31	0.155	ND	125	0.625	0.005	8020
Toluene					31	0.155	15	125	0.625	0.005	8020
Ethyl Benzene	3.9	125	0.625						0.625	0.005	8020
Xylenes	20	125			31		titation Limit	125			ting Limit

DF=Dilution Factor

ND= None Detected above DLR

PQL=Practical Quantitation Limit

M. Golden, Lab Director

<sup>·</sup> Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2224)

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

On-Site Technologies 20949 Cabot Boulevard Hayward, CA 94545 Attn: Rich Garlow Date: 6/19/98

Date Received: 6/18/98

Project: 441-2.1

PO#: Invoice Quick Stop

Sampled By: Client

# Certified Analytical Report

Soil Sample Analysis: (All results in mg/kg)

Sample ID	T2-1			T2-2			T2-3				
Sample Depth											
Sample Date	6/18/98			6/18/98			6/18/98				
Sample Time	11:30			11:30			11:30				
 Lab #	E11759			E11760			E11761				
	Result	DF	DLR	Result	DF	DLR	Result	DF	DLR	PQL	Method
Analysis Date	6/18/98	-		6/18/98			6/18/98				
TPH-Gas	530	250	250	1100	62	62	430	125	125	1	8015M
MTBE	13	250	12.5	7	62	3.1	ND	125	6.25	0.05	8020
Benzene	5.2	250	1.25	1.8	62	0.31	1	125	0.625	0.005	8020
Toluene	ND	250	1.25	ND	62	0.31	ND	125	0.625	0.005	8020
Ethyl Benzene	7.5	250	1.25	14	62	0.31	4.7	125	0.625	0.005	8020
Xylenes	30	250	1.25	. 32	62	0.31	6.7	125	0.625	0.005	8020

DF=Dilution Factor

ND= None Detected above DLR

PQL=Practical Quantitation Limit

DLR=Detection Reporting Limit

· Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2224)

M. Golden, Lab Director

#### QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG4980618

Date Analyzed: 06/18/98

Matrix: Soil

Quality Control Sample: E11399

Units: 1	ug/kg
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PARAMETER	Method #	MB ug/kg	SA ug/kg	SR ug/kg	SP ug/kg	SP % R	SPD ug/kg	SPD %R	RPD	QC RPD i	LIMITS %R
Benzene	8020	<5.0	80	i ND i	72	90	72	90	0.3	25 i	76-117
Toluene	8020	<5.0	80	ND	71	88	70	88	0.8	25	76-117
Ethyl Benzene	8020	<5.0	80	ND	72	90	71	89	0.6	25	74-119
Xylenes	8020	<5.0 i	240	i ND i	216	90	214	89	0.8	25	75-120
Gasoline	8015	<1000.00	1000	¦ND¦	1110	111	1010	101	9.4	25	58-120

Note: LCS and LCSD results reported for the following Parameters:

Gasoline

Acceptable LCS and LCSD results are reported when matrix interferences cause MS and MSD results to fall outside established QC limits.

#### Definition of Terms:

na: Not Analyzed in QC batch

MB: Method Blank SA: Spike Added SR: Sample Result

RPD(%): Duplicate Analysis - Relative Percent Difference

SP: Spike Result

SP (%R): Spike % Recovery

SPD: Spike Duplicate Result

SPD (%R): Spike % Recovery

NC: Not Calculated

nited ю<u>.</u>

(Laboratory Name)

Rich Granton

Report Attn:

# CHAIN OF CUSTODY RECORD

TECHNOLOGIES, INC. Hayward, California 94545 (510) 784-1384 telephone (510) 784-1375 facsimile 20949 Cabot Boulevard ON-SITE 180

ON XX Were samples in appropriate containers and properly packaged? 27 Yes 🗖 No TURNAROUND TIME FOR ANALYSES Standard REMARKS 24 HR. 48 HR. Other. The following MUST be completed by the laboratory accepting samples for analyses. Please check YES or NO: Did any samples received for analyses have head space?  $\ \square \$  Yes Have all samples received been stored on ice? 🗹 Yes Will samples remain refrigerated until analyzed? 🖰 Yes Chain of Custody seal intact? Drives D ANALYSES REQUESTED Signature EPA Method 8010 4 4 X **BETM** 4. 3. (leseib) H9T 4 TPH (gasoline) and 1 X Date/Time Date/Time Date/Time 81/9 No. Of Containers 191118 E11760 21178 51112 P.O. BUCK Shop カニカナ E11756 Site Name & Address: Quik STOP 45 SAMPLING LOCATION 3130 STR, AVR Received By: (signature) / mm OPPOSIN End Oakloued Official con Received By: (signature) Received By: न्ता हम्द (signature) Weekster Date/Time Date/Time Date/Time Water lio2 23 Sampled <u>E</u> Time 6/2/20 SAMPLERS: (signature) Date Sampled Ď Relinguished By: (signature) Relinquished By: (signalure) Relinquisked By: 1-2-11-2-1 Project No.: (signalure) 9.00 4.57 12-> (1-) 政 ーカラ 1-

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525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

On-Site Technologies 20949 Cabot Boulevard Hayward, CA 94545 Attn: Rich Garlow

Date: 6/26/98

Date Received: 6/19/98

Project: 441-2.1

PO#: Quik Stop

Sampled By: Client

# Certified Analytical Report

Soil Sample Analysis: (Ail results in mg/kg)

Soil Sample Analysis:	(All result	s in mg					T2 1 (2 1()				
Sample ID	T1-1 @ 16'			T1-2 @ 16'			T2-1 @ 16'				
Sample Date	6/19/98			6/19/98			6/19/98				
	9:00			9:00			9:00				
Sample Time	E11853			E11854			E11855				
Lab #	Result	DF	DLR	Result	DF	DLR	Result	DF	DLR	PQL	Method
			101111	6/23/98			6/23/98			ļ	
Analysis Date	6/23/98					62		62	62	1	8015M
TPH-Gas	350	62	62	<del>                                     </del>	62				3.1	0.05	8020
MTBE	5.5	62	3.1	ND	62	3.1	5.0	62			
	1,1	62	0.31	0.60	62	0.31	1.5	62	0.31	0.005	
Benzene		62	0.31	ND	62	0.31	ND	62	0.31	0.005	8020
Toluene	ND			<del></del>	62	<del>                                     </del>	4.0	62	0.31	0.005	8020
Ethyl Benzene	3.3	62	0.31				<del></del>	62	<b> </b>	0.005	8020
Xylenes	17	62	0.31	15	62		12		R=Detecti		

DF=Dilution Factor

ND= None Detected above DLR

PQL=Practical Quantitation Limit

DLR=Detection Reporting Limit

· Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2224)

M. Golden, Lab Director

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

On-Site Technologies 20949 Cabot Boulevard Hayward, CA 94545

Attn: Rich Garlow

Date: 6/26/98 Date Received: 6/19/98

Project: 441-2.1 PO #: Quik Stop

Sampled By: Client

# **Certified Analytical Report**

Soil Sample Analysis: (All results in mg/kg)

Son Sumbic trumilars	. (1222 2 00 0202			 		 	 	
Sample ID	T2-2 @ 16'			 			 	
Sample Date	6/19/98			 			 	
Sample Time	9:00						 	
Lab#	E11856						 	
	Result	DF	DLR		٠.		PQL	Method
Analysis Date	6/24/98						 	
TPH-Gas	2.4	1.0	1			<u> </u>	1	8015M
MTBE	0.13	1.0	0.05				0.05	
Benzene	0.017	1.0	0.005				0.005	8020
Toluene	ND	1.0	0.005				 0.005	8020
Ethyl Benzene	0.041	1.0	0.005				0.005	8020
Xylenes	0.049	1.0	0.005				0.005	8020

DF=Dilution Factor

ND= None Detected above DLR

PQL=Practical Quantitation Limit

DLR=Detection Reporting Limit

M. Golden, Lab Director

<sup>·</sup> Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2224)

# QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG4980623

Matrix: Soil

Date Analyzed: 06/23/98

Quality Control Sample: E11811

Units:	ug/kg									T	
PARAMETER	Method #	:	SA	SR ug/kg	SP ug/kg	SP % R	SPD ug/kg	SPD %R	RPD	QC RPD i	LIMITS %R
	<u> </u>	ug/kg	ug/kg			98	81	102	3.9	i 25 i	76-117
Benzene	i 8020	<5.0	80	ND I	78 70	99	83	103	3.9	25	76-117
Toluene	8020	<5.0	80	ND	79		1 86	107	5.0	25	74-119
Ethyl Benzene	8020	<5.0 l	80	ND	82	1 102	1	1 106	1 5.1	25	75-120
Xylenes	8020	<5.0	240	ND !	242	101	255		6.6	25	58-120
Gasoline	8015	<1000.00	1000	ND	1090	i 109	1020	102	1 0.0	43	30 120

Note: LCS and LCSD results reported for the following Parameters:

Gasoline

Acceptable LCS and LCSD results are reported when matrix interferences cause MS and MSD results to fall outside established QC limits.

## Definition of Terms:

na: Not Analyzed in QC batch

MB: Method Blank SA: Spike Added

SR: Sample Result

RPD(%): Duplicate Analysis - Relative Percent Difference

SP: Spike Result

SP (%R): Spike % Recovery

SPD: Spike Duplicate Result

SPD (%R): Spike % Recovery

NC: Not Calculated

#### QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography

QC Batch #: GBG4980624

Matrix: Soil

Date Analyzed: 06/24/98

Quality Control Sample: E11905

Units: ug/kg

Omw.	ug/Kg									: T	
PARAMETER	Method #	MB ug/kg	SA ug/kg	SR ug/kg	SP ug/kg_	SP % R	SPD ug/kg	SPD %R	RPD	QC RPD i	LIMITS %R
Benzene	i 8020	<5.0 i	80	i ND i	83	104	100	125	18.3	25 i	76-117
Toluene	8020	<5.0	80	ND	84	105	84	105	0.3	¦ 25 ¦	76-117
Ethyl Benzene	8020	<5.0	80	ND	84	105	82	102	2.7	25	74-119
1Xylenes	8020	I <5.0 I	240	ND	252	105	239	100	5.2	25 i	75-120
Gasoline	8015	1 <1000.00	1000	I ND I	1210	121	1120	112	7.7	25	58-120

Note: LCS and LCSD results reported for the following Parameters:

Gasoline

Acceptable LCS and LCSD results are reported when matrix interferences cause MS and MSD results to fall outside established QC limits.

#### Definition of Terms:

na: Not Analyzed in QC batch

MB: Method Blank SA: Spike Added

SR: Sample Result

RPD(%): Duplicate Analysis - Relative Percent Difference

SP: Spike Result

SP (%R): Spike % Recovery

SPD: Spike Duplicate Result

SPD (%R): Spike % Recovery

NC: Not Calculated

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(Laboratory Name)

Report Attn: Rich

CHAIN OF CUSTODY RECORD

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ON-SITE
TECHNOLOGIES, INC.
20949 Cabot Boulevard
Hayward, California 94545
(510) 784-1384 telephone
(510) 784-1375 facsimile

TURNAROUND TIME	FOR ANALYSES  24 HR.  48 HR.  Standard	ZEI	Fax merring o	(406) 427 -CHB1	J. 70	Michael Karuton	·				ccepting samples for	D Yes □ No Ispace? □ Yes □ No /J/A erly packaged? 4 Tes □ No	6/19/98	I'lle Oale
ANALYSES REQUESTED	(dieselb)	ITM	W 8/1/853	X 0/1857	X 6-1/84T	5 W 1862				-	The following MUST be completed by the laboratory accepting samples for analyses. Please check YES or NO:  1. Have all samples received been stored on ice?  Yes  No		5. Chain of Custody seal intact? 区 Yes □ No ハアルタング	Signature
	No. Of Containers TPH (gasoline) and BTEX		*	*	j 1.56.	· /· .					Date/Time	Date/Time   19198  /:30 Air	Date/Time	
QUIL STOP	3130 3574 AVV.	SAMPLING LOCATION	Fil end	opposite end	fill eout	Oplia, Te end					Received By: (signature)	Received By: , & Light 6	Received By: (signature)	
Site Name & Address:		Soil Soil Aster	2	3	1	3					Date/Time	Date/Time	Date/Time	
Project No.:	441-2·1 SAMPLERS:(signature)	I.D. Date Time NO. Sampled	1-1016 WASHER 9200	1	2-18/10/10/10/10	22016 1 9:00			-	350	Relinquished By: (signature)	Relingalshed By: (signature)	Relinquished By: (signature)	111

# APPENDIX E

Transmittal Letter

# Quik Stop Markets, Inc.

4567 Enterprise Street ● Fremont, CA 94538 ● (510) 657-8500 ● Fax: (510) 657-1544

November 4, 1998

Mr. Leroy Griffin Hazardous Materials Supervisor City of Oakland Fire Services Agency 505 14<sup>th</sup> Street, 7<sup>th</sup> Floor Oakland, CA 94612

Re: Underground Storage Tank Removal Report Quik Stop Market #51 3130 35<sup>th</sup> Avenue, Oakland, California 94619

Dear Mr. Griffin:

Enclosed please find the Underground Storage Tank Removal Report prepared by Garlow Associates for the above-referenced facility.

I declare under penalty of perjury that the information and/or recommendations contained in the attached report are true and correct to the best of my knowledge.

Sincerely,

QUIK STOP MARKETS, INC.

Mike Karvelot

Director of Environmental Affairs

Enc.