RM Associates Environmental Consultants

July 2, 2008

Mr. Jerry Wickham Hazard Materials Specialist Alameda County Health Care Services Agency Environmental Health Services 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

Reference: Rotten Robbie No 64 (Formerly East Avenue Services) 4186 East Avenue, Livermore, California Fuel Leak Case No. RO0002881

Subject: Groundwater Monitoring Report No. 3 - 2nd Quarter 2008 June 26, 2008

Dear Mr. Wickham:

Enclosed is a copy of the subject report for the referenced site. The report was prepared and is submitted by RMA Associates, Inc, on behalf of Robinson Oil Corporation (ROC). Your attention is directed to Section 5.0 of the report (Summary, Conclusions, and Recommendation).

The report and this cover letter will be submitted electronically according to your requirements for electronic submission and has also been uploaded to GeoTracker.

RMA hereby certifies under the penalty of perjury, that to the best of our knowledge, all information and data presented in the report are true and correct. Mr. Robinson has reviewed the report and has authorized its transmittal. Mr. Robinson's transmittal letter is included in Appendix D of the report.

Should you have any questions regarding this report, please contact Thomas Robinson of Robinson Oil Corporation at (408) 257-2222, or the undersigned at (209) 295-6218.

Sincerely,

RM ASSOCIATES

w Michel

Ronald W. Michelson, RG (CA 3875) Principal Geologist

Cc: Tom Robinson, Robinson Oil Corporation

Enclosures:

Office: 209-295-6218 Fax: 209-295-3974 16401 Meadow Vista Drive, Suite 102 - Pioneer CA 95666 E-Mail: RMichelson@volcano.net

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Alameda County Environmental Health

GROUNDWATER MONITORING REPORT NO. 3 – 2ND QUARTER 2008

Rotten Robbie No. 64 4186 East Avenue Livermore, California Fuel Leak Case No. RO0002881

Prepared for: Robinson Oil Corporation 4250 Williams Road San Jose, California 95129

Prepared by: RM Associates 16401 Meadow Vista Drive, Suite 102 Pioneer, California 95666

Project No. 101-6404

June 26, 2008



16401 Meadow Vista Drive, Suite 102 Pioneer, CA 95666 (209) 295-6218 FAX: (209) 295-3974

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- **APPENDIX B** Purge and Sampling Worksheets
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GROUNDWATER MONITORING REPORT NO. 3 – 2ND QUARTER 2008

Rotten Robbie No. 64 (Formerly East Avenue Services) 4186 East Avenue, Livermore, California

June 26, 2008

1.0 INTRODUCTION

This "Groundwater Monitoring Report No. 3, 2nd Quarter 2008" has been prepared by RM Associates, Inc. (RMA) on behalf of Robinson Oil Corporation (ROC), San Jose, California. The report presents the results of field measurements and groundwater analytical results conducted during the 1st quarter 2008. The results presented herein should be considered in context with the data and information presented in two previous reports:

"Report of Phase II Environmental Assessment," by RMA, dated May 13, 2005 "Report of Preliminary Site Investigation Including UST Removal," by RMA dated May 30, 2007

2.0 SITE DESCRIPTION AND BACKGROUND

Site Location

4186 East AvenueLivermore, CaliforniaContact: Mr. Thomas L. Robinson (408) 257-2222

Figure 1 is a generalized street map showing the general vicinity of the site. The site had been operated until July 2005 as East Avenue Services, a retail automotive fueling and service station facility that had five underground storage tanks (USTs) and two dispenser islands. The former USTs consisted of four 4,000-gallon tanks and one 6,000-gallon tank all containing gasoline.

2.1 Phase II Environmental Assessment

In April 2005, preliminary to a property transaction, RMA conducted a routine Phase II Environmental Assessment (P2EA) that involved the installation of seven shallow soil borings and the collection and analysis of eleven soil samples and five groundwater grab samples. The results of this assessment are presented in the May 13, 2005 report cited above.

Figure 2 is a site diagram showing the location of the former building structure on the property, the former USTs and fuel dispensing islands, the locations of the soil sample and groundwater grab sample collection, and the locations of the three monitoring wells that have been installed on the site. The description and results of this activity are presented in the May 30, 2007 report cited above.

Fuel Leak Case No. RO0002881 Groundwater Monitoring Report No. 3 – 2nd Quarter 2008

2.2 UST Removal

During the week of March 26, 2007 the building structure and fuel dispensing facilities were demolished and removed from the site. On April 3, 2007 the five USTs, the product lines, and dispensers were removed from the site. During the removal activities, 10 soil samples were collected from the native soil beneath the USTs, and five samples were collected from the native soil beneath the USTs sampling was performed under the oversight of Ms. Danielle Stefani of the Livermore - Pleasanton Fire Department. There were no hydrocarbons detected in any of the 10 soil samples. The description and results of this activity are presented in the May 30, 2007 report cited above.

2.3 Monitoring Well Installations

On May 2, 2007, three monitoring wells MW-1, MW-2, and MW-3 were installed on the site at the locations illustrated on Figure 2. The well installation activity, soil boring logs, and soil analytical results are presented in the May 30, 2007 report cited above. The well construction details are presented herein as Table 1.

2.4 Initial Groundwater Sampling and Results

The groundwater monitoring wells MW-1, MW-2, and MW-3 were sampled on May 7, 2007. Although the depth to water was measured in each of the wells, the groundwater elevations with respect to mean sea level (MSL) could not be determined because, since the site was undergoing extensive renovation, the well vaults could not be set and therefore, the well casing elevations could not be surveyed. The field measurements, observations and analytical results for the initial monitoring well samples, presented in the May 2007 report cited above and are also included in Tables 2 through 6 of this groundwater monitoring report.

3.0 GROUNDWATER MONITORING

3.1 Groundwater Elevation Measurements and Sampling

On May 21, 2008, sampling subcontractor GeoRestoration, Inc. collected groundwater samples from the three on-site monitoring wells, MW-1, MW-2, and MW-3. Prior to sampling, the wells were developed by purging at least 3 well volumes from each well using a 12 volt submersible pump. The purge data for the monitoring event is presented in Table 2.

Prior to groundwater sampling, depths to groundwater were measured in each of the three wells. The depth to water measurements and groundwater elevation calculation for each well are presented in Table 3. The groundwater elevation contours, groundwater gradient, and groundwater flow direction are illustrated in Figure 3. The average groundwater elevation has remained relatively steady since the previous (February 2008) monitoring event, declining only 0.43 feet. During this period, the groundwater gradient has flattened out from 0.015 ft./ft. to approximately 0.008 ft./ft. The flow direction has remained relatively steady to the southwest.

Fuel Leak Case No. RO0002881 Groundwater Monitoring Report No. 3 – 2nd Quarter 2008

3.2 Field Measurements and Groundwater Analytical

Field measurements made during purging and sampling are presented in Table 4 and also on the purge and sampling worksheets provided in Appendix B.

Groundwater samples obtained from monitoring wells MW-1 and MW-3 were submitted to Entech Analytical Laboratory (Entech), California DHS certified, to perform the requisite chemical analyses. The groundwater samples were analyzed for benzene, toluene, ethylbenzene, total xylenes, methyl tert-butyl ether (MTBE), tert-butanol (TBA), diisopropyl ether (DIPE), ethyl-tert-butyl ether (ETBE), tert-amyl methyl ether (TAME), 1,2-dichloroethane (1,2-DCA) and 1,2-dibromoethane (EDB), all by EPA method 8260B. They were also analyzed for total petroleum hydrocarbons as gasoline (TPHg) by a GC-MS variation of EPA method 8260.

4.0 DISCUSSION OF ANALYTICAL RESULTS

The analytical results for the groundwater samples are presented in Tables 5 and 6. Copies of the signed laboratory analytical reports and chain-of-custody forms are provided in Appendix C.

During this monitoring event, significant concentrations of petroleum hydrocarbon concentrations were again detected only in the groundwater sample from monitoring well MW-1 with TPHg, benzene, and MTBE concentrations at 2,500 μ g/L, 55 μ g/L, and 150 μ g/L, respectively. These concentrations are significantly lower that either the previous February 2008 results or the May 2007 results but are higher than the results reported for November 2007 monitoring event. A distribution of groundwater analytical results, showing the results for the last (or only) samples from each sampling point is presented in Figure 4. Based on the same information, iso-concentration contours for the distribution of TPHg, benzene, and MTBE concentrations are presented in Figures 5, 6, and 7, respectively.

5.0 SUMMARY, CONCLUSIONS, AND RECOMMENDATION

The results presented in this groundwater monitoring report and from previous investigations show a relatively small area of hydrocarbon impacted groundwater in an area in the general vicinity of former soil boring W-1 and monitoring well MW-1. The analytical results for the groundwater sampled from monitoring well MW-1, are likely far more representative of the shallow groundwater condition in this area, than are the results for the grab sample collected at the top of the water table from soil boring W1. The results also indicate that no appreciable amount of contaminant migration has occurred.

It is RMA's opinion, after four quarterly monitoring events, that the petroleum hydrocarbon condition at this site does not pose any perceivable hazard to either public health or safety or to the underlying groundwater resources.

The former product lines believed to have been associated with a gasoline release were removed several years in the past, prior to the installation of the 1st generation of double-contained product piping.

Currently all of the fuel USTs and associated product lines have been removed from the impacted area of the property. Analysis of soil samples collected in conjunction with the removals, from the native soil beneath the USTs and product lines, did not detect the presence of any petroleum hydrocarbons above their respective laboratory detection limits.

Although the groundwater in the vicinity of monitoring well MW-1 remains moderately impacted by the presence of gasoline hydrocarbons, the monitoring record shows that the impacted plume has not migrated far from the source.

RMA does not believe that continued quarterly groundwater monitoring at this site is warranted. It is therefore recommended that groundwater samples at the site be next collected and analyzed in April 2009, when it is certain that the water table will be above the bottoms of each of the three monitoring wells. If at that time, the hydrocarbon concentrations in monitoring well MW-1 are at their present level or lower and the concentrations in monitoring well MW-2 remain at or near non-detect, RMA will recommend that the site be considered for closure. Unless otherwise advised, this recommendation will be implemented

As shown on Table 7, the next groundwater monitoring event is currently scheduled for April 2009.

6.0 **CERTIFICATION**

We certify that, to the best of our knowledge all statements above and data provided herein are true and correct. This report has been reviewed and approved by ROC. A copy of their transmittal letter is presented as Appendix D.

RM Associates

uchelie.

Ronald W. Michelson Principal Geologist



Fuel Leak Case No. RO0002881 Groundwater Monitoring Report No. 3 – 2nd Quarter 2008

7.0 **DISTRIBUTION**

Mr. Tom Robinson Robinson Oil Corporation 4250 Williams Road San Jose, CA 95129

Mr. Jerry Wickham Hazard Materials Specialist Alameda County Health Care Services Agency Environmental Health Services 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

Mr. Wyman Hong Zone 7 Water District 100 N. Canyon Parkway Livermore, CA 94551 TABLES

RM Assoicia	M Assoiciates									
	TABLE 1- WELL CONSTRUCTION DETAILS									
Rotten Robbie 64, 4186 East Avemie. Livermore, California										
Monitoring	Drilling	Borehole	Depth of	Casing	Screened	Filter Pack	Bentonite Seal	Cement/		
Well	Date	Diameter	Borehole	Diameter	Interval	Interval	Interval	Bentonite Seal		
		(inches)	(feet)	(inches)	(feet)	(feet)	(feet)	Interval		
		· · ·			. ,	· · ·	· · ·	(feet)		
MW-1	05/02/01	8	30	2	15-30	13-30	10-13	0-10		
MW-2	05/02/01	8	29	2	14-29	5-22	9-12	0-9		
MW-3	05/02/01	8	30	2	15-30	13-15	10-13	0-10		
Notes:	MW- denotes mo	onitoring well								
		C C								

RM Assoiciates								
TABLE 2 - PURGE DATA Dation Database Dation Database								
Rotten Robbie 64, 4186 East Avenue, Livermore, California								
	Reporting	Method of	Casing-Volumes					
Well ID	Period	Purging	Purged					
MW-1	05/07/07	12 V. PUMP	13					
	11/30/07	SS Bailer	4					
	02/29/08	12 V. PUMP	4					
	05/21/08	12 V. PUMP	3					
MW-2	05/07/07	12 V. PUMP	16					
	11/30/07	Well Dry	3					
	02/29/08	12 V. PUMP	3					
	05/21/08	12 V. PUMP	3					
MW-3	05/07/07	12 V. PUMP	13					
	11/30/07	SS Bailer	3					
	02/29/08	12 V. PUMP	3					
	5/21/2008	12 V. PUMP	3					

RM Associates									
	-	186 East Avenue,	-	-					
Well		Well Head	Depth to	Groundwater					
Number		Elevation	Groundwater	Elevation					
Number	Sample Date	(feet MSL)	(feet)	(feet MSL)					
MW-1	05/07/07	NS	21.11	NC					
	11/30/07	NS	28.95	NC					
	01/15/08	539.50	23.03	516.47					
	02/29/08	539.50	18.74	520.76					
	05/21/08	539.50	19.12	520.38					
MW-2	05/07/07	NS	22.45	NC					
	11/30/07	NS	>29.0	NC					
	01/15/08	539.15	23.33	515.82					
	02/29/08	539.15	18.86	520.29					
	05/21/08	539.15	19.12	520.03					
MW-3	05/07/07	NS	21.00	NC					
	11/30/07	NS	27.83	NC					
	01/15/08	539.76	22.70	517.06					
	02/29/08	539.76	18.67	521.09					
	05/21/08	539.76	19.31	520.45					
Notes:	MSL =	Mean Sea Level		-0.43					
	MW =	Monitoring Well							
	NYS =	Not Yet Surveyed	d						
	NC =	Not Calculated							
	Bold =	Not Previously I	Reported						
	Wellhead surve	y completed by Lid	censed Engineeri	ng					
		Coast Engineers	•	Č					

RM Assoid	RM Assoiciates									
	TABLE 4 - FIELD MEASUREMENTS									
		Rotten Robbi	ie 64, 4186 Ea	st Avenue, Liv	vermore, Californ	ia				
							Oxygen			
						Dissolved	Reduction			
	Sample	рН	Conductivity	Temp	Turbidity	Oxygen	Potential			
Well No.	Date	(Units)	(umhos/cm)	(C)	(NTU)	(mg/L)	(mV)			
MW-1	05/07/07	7.7	986	21	NM(Clearing)	0.2	38			
	11/30/07	7.5	825	20	NM(Clearing)	3.4	29			
	02/29/08	7.5	1173	19.9	Clear	1.2	122			
	05/21/08	7.7	803	19.5	Clearing	1.6	65			
MW-2	05/07/07	7.7	979	21	NM(Clearing)	1.3	137			
	11/30/07	NS	NS	NS	NS	NS	NS			
	02/29/08	7.7	1031	19.9	Clear	0.9	118.0			
	05/21/08	7.7	865	20.1	Clearing	2.2	68.0			
MW-3	05/07/07	7.8	938	21	NM(Clearing)	1.60	121			
	11/30/07	7.6	810	21	NM(Clearing)	3.50	-20			
	02/29/08	7.7	1095	19.7	Clear	5.20	120			
	05/21/08	7.9	854	19.1	Clearing	3.70	67			
Notes:	C =	Degrees Cent	tigrade							
	mg/L =	milligrams per	r liter							
	mV =	millivolts								
	MW=	Monitoring We	ell							
	NM =	Not Measured	ł							
	NTU =	Nephelometr	ic Turbidity Un	its						
	umhos/cm	Micromhos pe	er centimeter							
	NS =	Not Sampled	• • •							
	Bold =	Not Previous	ly Reported							

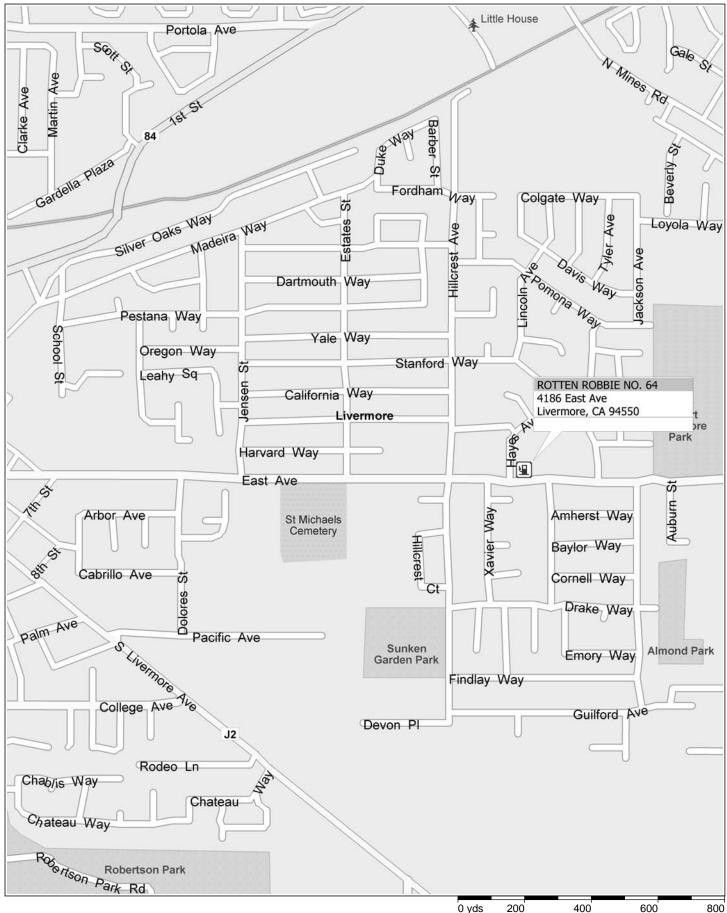
RM Associa	otas									
TABLE 5 - GROUNDWATER ANALYTICAL RESULTS Rotten Robbie 64, 4186 East Avenue, Livermore, California										
	Kotten K	oddie 64, 4160	East Avenue			TDU				
		_	- .	Ethyl	Total	TPH as				
		Benzene	Toluene	benzene	Xylenes	Gasoline				
Well No.	Sample Date	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)				
Analytica	al Method	8260B	8260B	8260B	8260B	GC-MS				
MW-1	05/07/07	150	7.0	620	160	4,800				
	11/30/07	30	1.2	130	1.9	600				
	02/29/08	190	<10	1,100	130	4,800				
	05/21/08	55	<2.5	460	21	2,500				
MW-2	05/07/07	<0.5	<0.5	<0.5	<0.5	<50				
	11/30/07	NS(DRY)	NS(DRY)	NS(DRY)	NS(DRY)	NS(DRY)				
	02/29/08	<0.5	<0.5	<0.5	<0.5	31				
	05/21/08	<0.5	<0.5	<0.5	<0.5	<25				
MW-3	05/07/07	<0.5	<0.5	<0.5	<0.5	<50				
	11/30/07	<0.5	<0.5	<0.5	<0.5	<25				
	02/29/08	<0.5	<0.5	<0.5	<0.5	<25				
	05/21/08	<0.5	<0.5	<0.5	<0.5	<25				
Notes:										
MW =	Monitoring Wel	I								
TPH =	Total Petroleur		5							
ug/L =	Micrograms pe	•								
NS =	Not Sampled o									
Bold =	Not Previousl	•								

RM Asso	ociates									
		ABLE 6- GF	ROUNDWA	TER ANAL		ESULTS				
	Oxygenates and Chlorinated Hydrocarbons									
	Rotten Robbie 64, 4186 East Avenue, Livermore, California									
Well No.	Sample Date	TBA	MTBE	DIPE	ETBE	TAME	1,2 DCA	EDB		
		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)		
Analytical I	Vethod	8260B	8260B	8260B	8260B	8260B	8260B	8260B		
MW-1	05/07/07	<100	310	<50	<50	<50	<5	<5		
	11/30/07	<20	180	<10	<10	<10	<1	<1		
	02/29/08	<200	330	<100	<100	<100	<10	<10		
	05/21/08	<50	150	<25	<25	<25	<25	<25		
MW-2	05/07/07	<10	<1	<5	<5	<5	<0.5	<0.5		
	11/30/07	NS(DRY)	NS(DRY)	NS(DRY)	NS(DRY)	NS(DRY)	NS(DRY)	NS(DRY)		
	02/29/08	<10	<1	<5	<5	<5	<0.5	<0.5		
	05/21/08	<10	<1	<5	<5	<5	<0.5	<0.5		
MW-3	05/07/07	<10	<1	<5	<5	<5	<0.5	<0.5		
	11/30/07	<10	<1	<5	<5	<5	<0.5	<0.5		
	02/29/08	<10	<1	<5	<5	<5	<0.5	<0.5		
	05/21/08	<10	<1	<5	<5	<5	<0.5	<0.5		
Notes:	1,2 DCA =	1, 2 Dichlo	roethane							
	DIPE =	Di-Isoprop	<i>,</i>							
	EDB =	Ethylene D	ibromide							
	ETBE =	Ethyl tert-E	Butyl Ether							
	MTBE =	Methyl tert	-Butyl Ether	ſ						
	MW =	Monitoring	Well							
	TAME =	tert-Amyl N	lethyl Ethe	ſ						
	TBA =	tert-Butyl A	Icohol (tert	-Butanol)						
	ug/L =	Microgram	s per liter (p	opb)						
	NS=	Not Sampl	ed or Analy	zed						
	Bold =	Not Previo	ously Repo	rted						

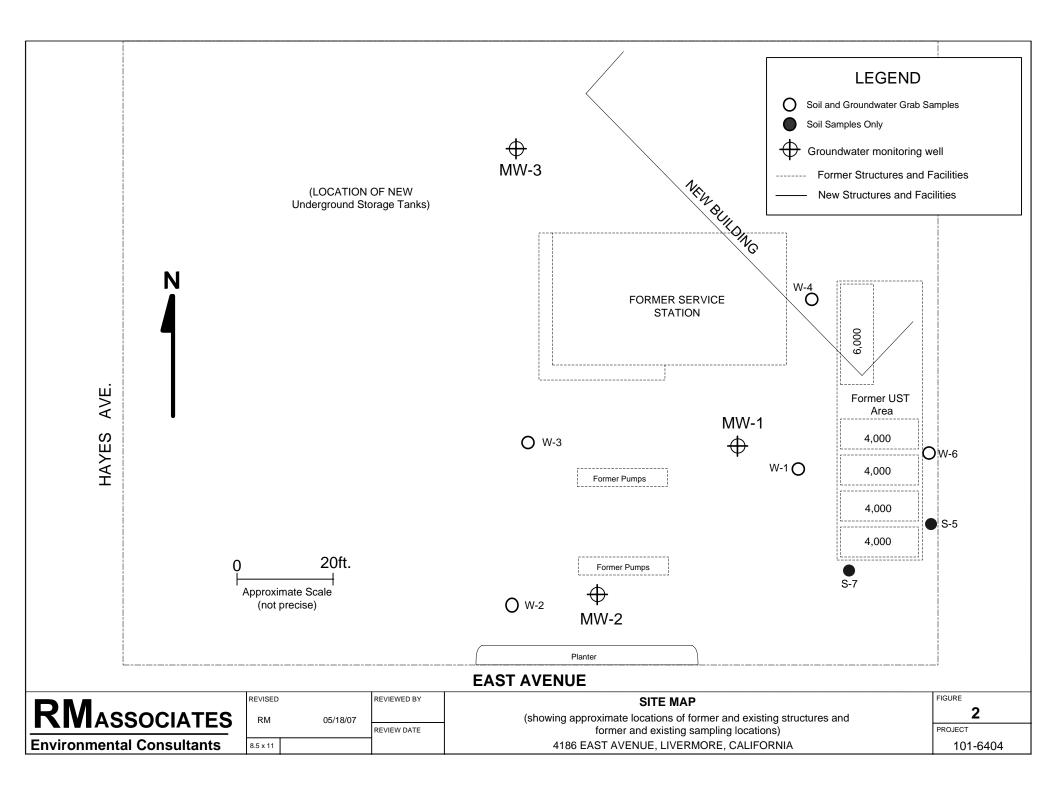
RM Associates TABLE 7 - GROUNDWATER MONITORING SCHEDULE Botten Bobbie 64, 4186 East Avenue, Livermore, California												
Rotten Robbie 64, 4186 East Avenue, Livermore, California												
Activity	Jan	Feb	Mar	April 09	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Water Level Measurement				Х								
Water Sampling & Analysis				Х								
Self-Monitoring Report					Х							

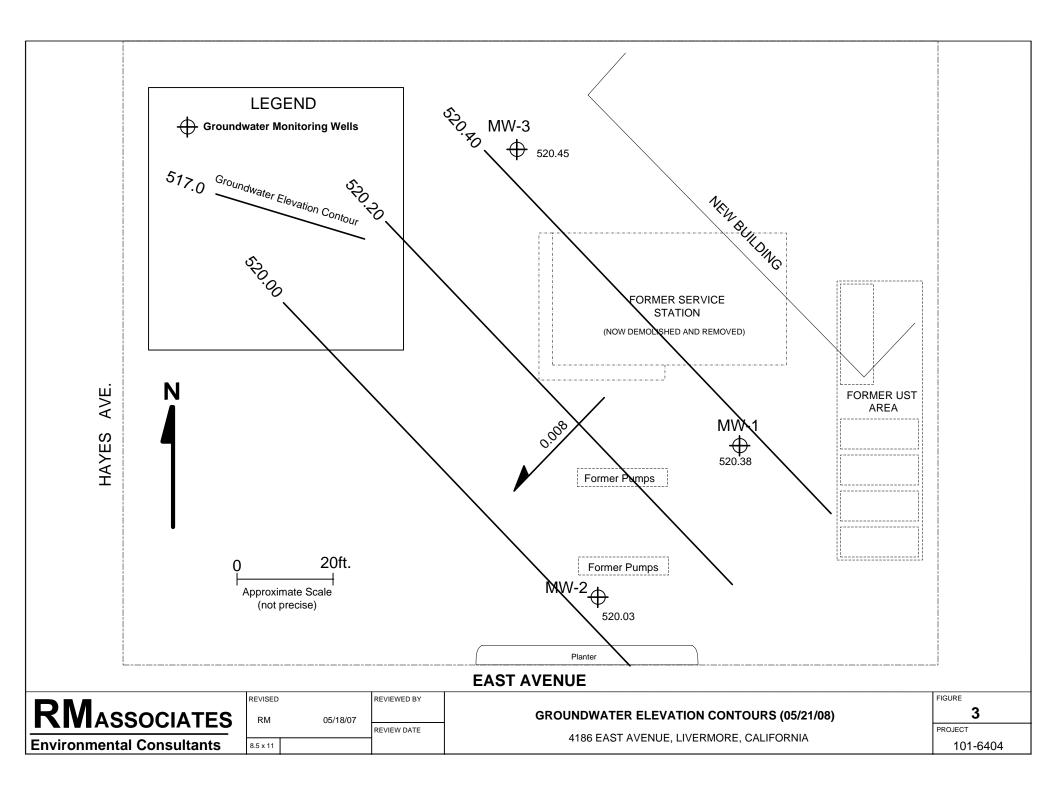
FIGURES

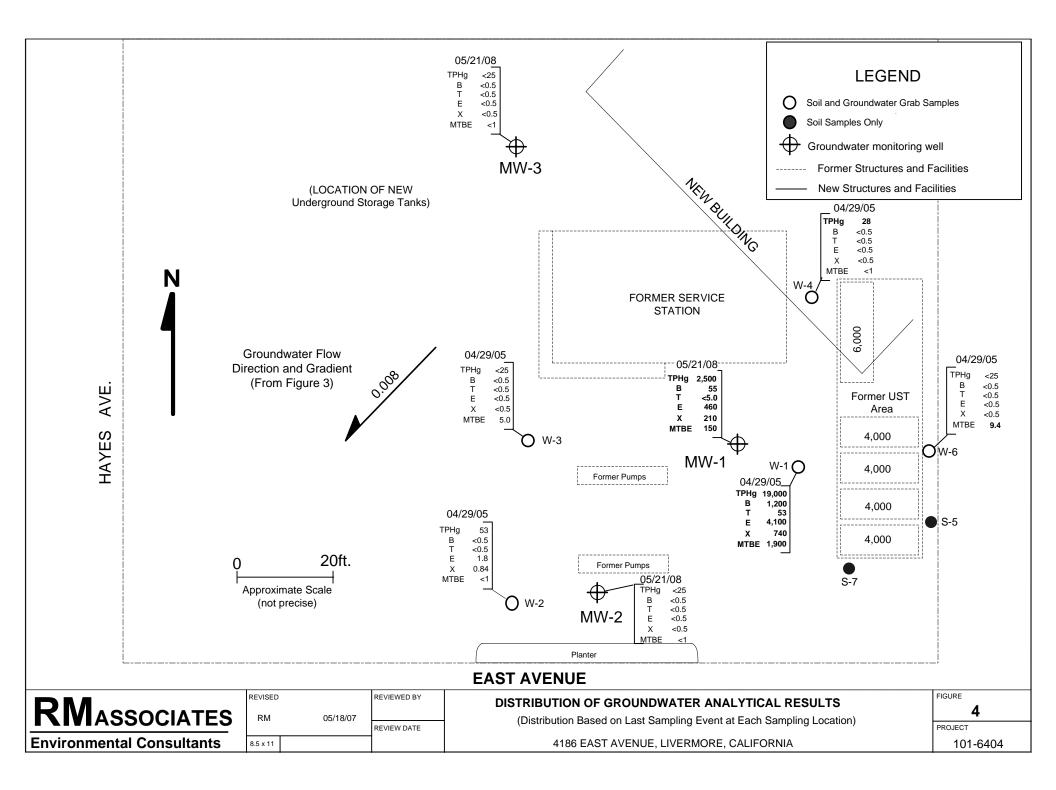
FIGURE 1 - VICINITY MAP

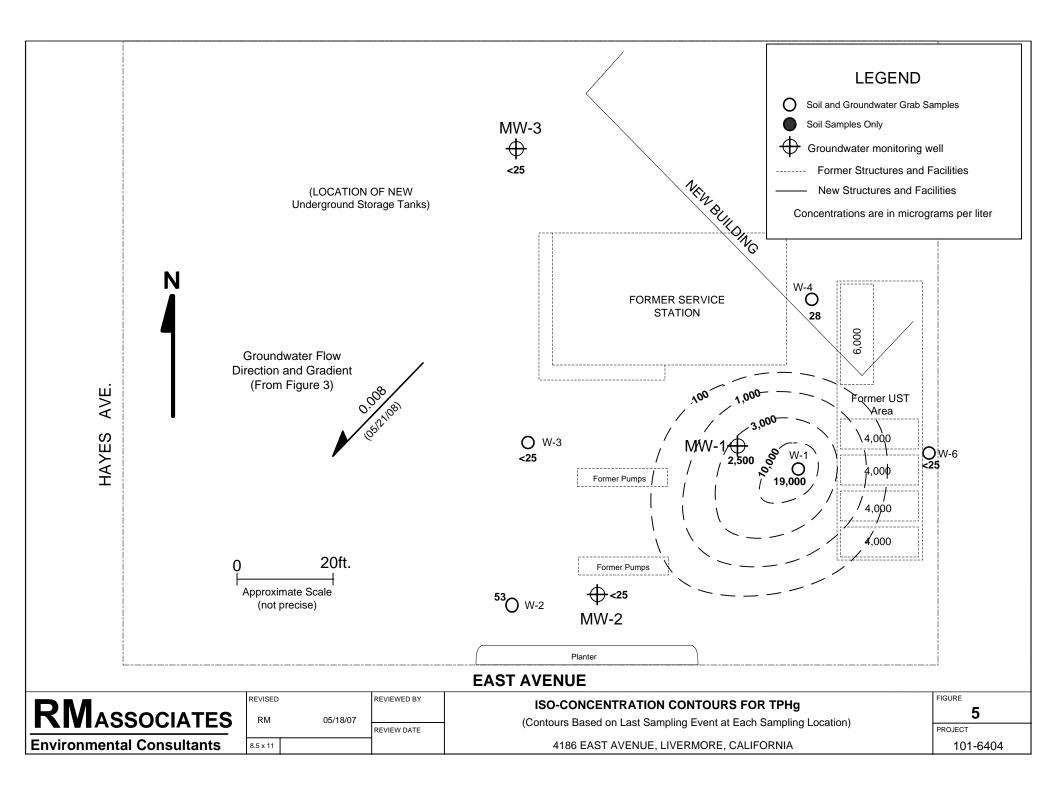


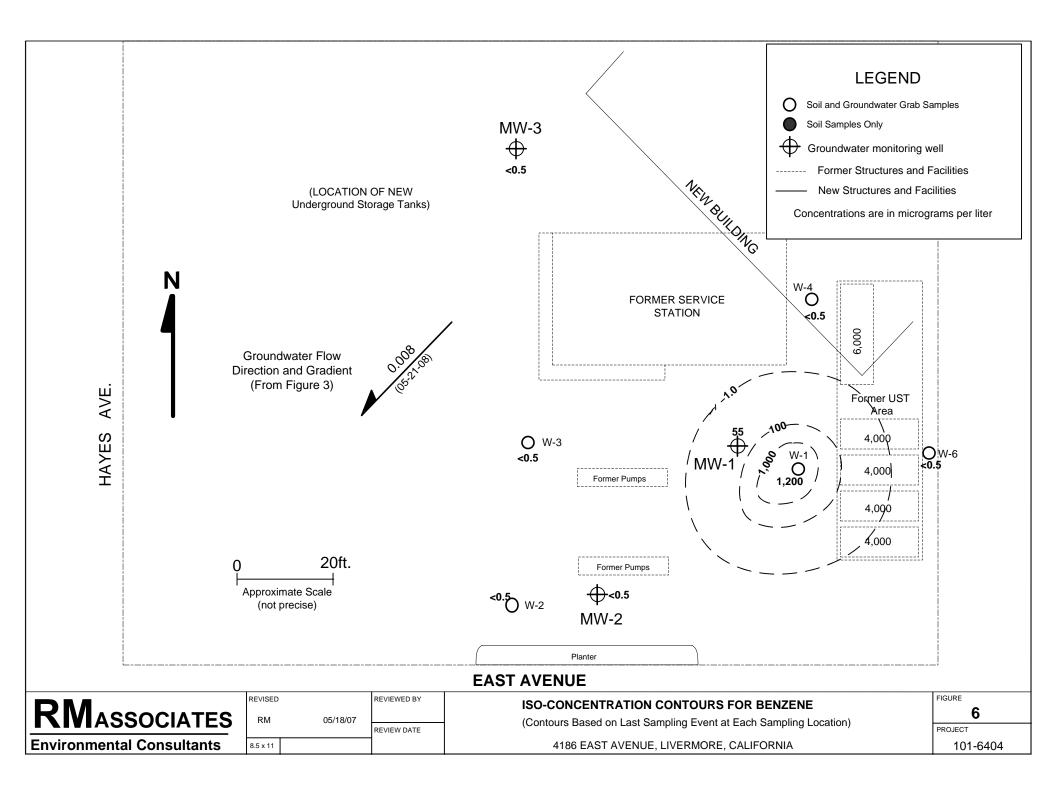
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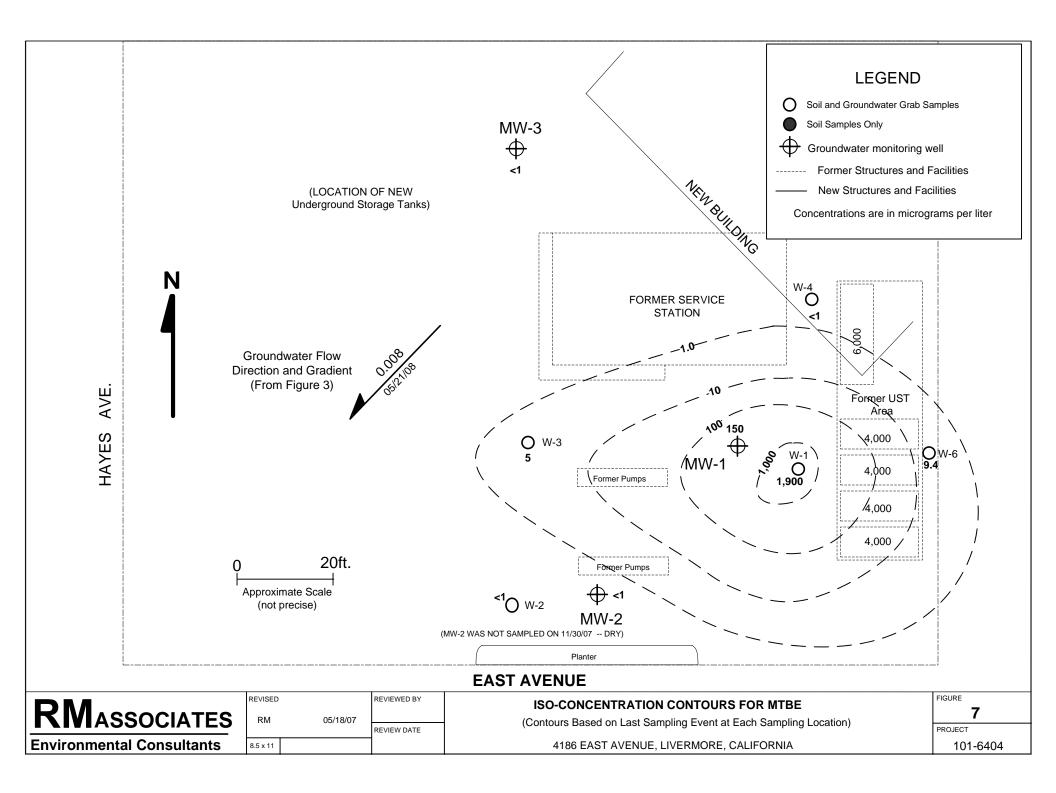












APPENDICES

APPENDIX A

GROUNDWATER SAMPLING PROCEDURES

APPENDIX A GROUNDWATER SAMPLING PROCEDURES

Field sampling procedures include a daily log of project activities, sample collection logs, and proper chainof-custody records. Procedures for sample collection are described in the following sections.

The static water level in each well and the depth to the bottom of each well will be measured and a water sample collected. The water level will be measured using an electronic water level indicator. Prior to collection of the water sample, each well will be purged utilizing Teflon, disposable, or stainless steel bailer or an air diaphragm pump. If possible, three to four well volumes of standing water will be removed to draw a representative groundwater sample into the well from the surrounding soil. Temperature, pH, and specific conductance measurements will be obtained from each well after the removal of each well volume. When evacuation is completed, water samples will be collected.

If the recharge rate in the well is slower than the purging rate, the well will be purged dry. The well will be allowed to recharge and groundwater samples will be collected when the water has recharged to approximately 80 percent of its original level prior to purging. If the well is slow to recover, a water sample will be collected when enough water has collected to allow for sampling.

A disposable or clean Teflon bailer will be used to collect the water sample. Water samples will be placed in appropriate containers with appropriate preservative. Sample containers will be filled to the top, capped, and sealed.

The purged groundwater will be placed in sealed and labeled 55-gallon steel drums and stored on-site.

Equipment Decontamination Procedures

Rigorous cleaning procedures will be followed during sample collection to prevent cross-contamination. Sampling devices will be washed with a non-phosphate detergent, rinsed with distilled water, and rinsed again with distilled water before use and between sample collection points. Otherwise, disposable sampling bailers will be used. The sampling devices to be cleaned in this manner will include pumps and the bailers. Proper protective gloves will be worn while collecting samples.

Field Quality Control Samples

Quality control samples will be used to determine the integrity of the sampling activities, the impact of sample matrices and ambient field conditions, and to demonstrate that laboratories are operating within the prescribed requirements for precision and accuracy. The frequency and procedures for field-generated quality control samples to be utilized in this project are as follows:

Trip Blank - A trip blank, prepared by the laboratory, will be carried into the field and transported along with field samples. Quality control sampling will be documented in field log sheets by the sampler.

Sample Preservation, Identification, and Custody Control

Sample Preservation - All samples will be sealed in airtight plastic bags and placed in a refrigerated chest for preservation immediately after collection.

Sample Identification - The field geologist or sampling technician will identify all samples taken in the field by using a pre-printed sample label attached to the sample container. The sample label will include the following information:

Project name and number; A unique sample identification number; The date, time, and location of sample collection; The initials of the sampler.

Chain-of-Custody Record and Shipment of Samples to the Laboratory

All samples will be documented using standard chain-of-custody procedure, packed in a refrigerated chest, and delivered to a state-certified laboratory for testing.

APPENDIX B

PURGE/SAMPLING WORKSHEETS

		GROUNDW	ATER MONITOR	RING WE	LL PURGE/SAMPLIN	IG WORKSHEET	
- Project Nem	<u> </u>	otten R	while 64		Prolect	Number	
Address:	4/86 (Zast A	va, Liver	more	- Co Reg. Ag	ency:	
		•	· _ ·		Olbert P	eq s 2 pe	
Well Numbs Sampler(a):	r <u>M</u> n Jin	Parici	Date: 5	-/21/0	C Well Lov	ck Number	
Slagnant	Well C	eelng l <u>er (Inches)</u> 2	Total Well		initial Depth to <u>Groundwater (It.)</u>	<u>(gal.)</u>	
Carcuston	··· 6	χ ΄΄ '	30		14.12	1.84	•
Stagnent Vo		ulation	: ·				
S Wall			Gallons	<: . 		urface inspection (bail	
Contract		<u> </u>	Unear () Ebel ef al a	Stannant	Mum	Peating Product (ft.)	(iu [,])
eler	Litie M	Feet of	Ground-	🤇 Volume 🗤	a	iheen/Iridescence	
	Grown	STATE OF STATE			<u> </u>	Door 0121	15
	Ceptr (t).	GW (ft.)			Hernarks <u>20</u>		<u>· _ µ </u>
6			0,58 = 1.5 =	Strander Strander T	Date: 574	108 Time	1230
Groundwate Purging		Method Use				Water Containment	•
	{	Stainless Ste	el Bailer;	Submersi		gala stored in	
•		12	U. Jump		Ariy pre	avious drums?	Capacity
Volumes	Volume Purged (gell)	Time	Tamp C	٥H	Conductivity umhosys	Color/Turbidily (oliter)	
a			202	7.9	8,64	Brachill	
1	<u></u>	11:39	197 -	-<u>,</u>	940	Chowin	
-	<u> </u>	11.41	19.5	<u></u>	804		
2	<u> </u>	11:43	125	<u>–</u> ,–	803	- //	
ב י						_	
4	_						
5			- -				· · · ·
6 7	_		~ _		<u> </u>		<u> </u>
, B							
	<u> </u>						
9					·		
1 0					- *		
Groundwatt Sampling	er <u>W</u>	later Level R	_	Sa	mpie Containers	How	-
		•	to GW (ft)	-			/atives? リカルビ
	(P) After (23.60		liter, amber glass		
	(I) Initially		<u></u>		i mi, VOA		- j #
		e sempling d ()	11.20	50	0 ml, polypropylena	<u> </u>	
(P-S) / (P-			Total Recovery			~	
	80% Rec	overv: S =	<u>P - 0.8 x (P-I)</u>		· .	2	

:

GROUNDWATER MONITORING WELL PURGE/SAMPLING WORKSHEET

Project Name	Rotten Ri	the 64	Project (Number:
Address:	1/86 East A	Viz, Livermore		BUCAT
//doi/030	· · ·			ag's.:
Well Number	<u>2</u>	Date: 5/21/0	0	k Number
Sempler(s)	Jim Pavick			· · · · · · · · · · · · · · · · · · ·
Stegnant Voiume Calculation	Well Casing <u>Diameter (inches)</u>	Total Well	Initial Depth to <u>Groundwater (ft.)</u> パラッユ	Slagnant Volume <u>(oal.)</u> ルデ名
Stannant Vol	ume Calculation			
Well Casing Diam- ster (inches)	Unieer Feet of <u>Groundweter</u>) Totel Well Depth to Depth (ft.) GW (ft.)	Galions par Linean Foot of Biagnan Ground+ Volume water 0:17 0.88 1.5	Norra s	: 2.2 ORP: 68
G <i>r</i> oundwater Purging	Stainless Ste	el Baller: Submar		<u>Water Containment</u> gals stored in 55 get drum(s)
	Other: 2	U. Ping	Any pre	vious drums? Capacity
Volumes	Volume Purged (gal) Time <u>-0- ` 3</u> <u> ` 4</u> <u>-1.4</u> <u>-1.14</u>	Temp. <u>0 °C</u> pH <u>21.1 B.1</u> <u>203 79</u> 200 7.7	Conductivity umhos_us <u>880</u> 078 860	Color/Turbidity (other)
3 4	<u>5.0 ICIL</u>	201 7.7	865	<u> </u>
5 6		<u> </u>		
, 7 8				
0 10	<u> </u>	<u> </u>		
Groundwate Sampling	Depti	1 to GW (fl.)	ample Containers	How Many? Preservatives? ハックバル
	(P) After purging (i) Initially (P) Refere complian	19.12	l liter, amber glass 40 ml, VOA 500 ml, polygropydene	4 Hel PHZ
(a.e.) / (a.)	(9) Before sampling	Total Recovery	500 mi, polypropylena	
(P-5) / (P-1	80% Recovery: S =	-		•*

GROUNDWATER MONITORING WELL PURGE/SAMPLING WORKSHEET

Address: 4/66 East AVE, Livermort Cr. Reg. Agency: Well Number: MW-3 Oate: 5/21/08 Well Number: Jim Parict Oate: 5/21/08 Sampler(s): Jim Parict Oate: 5/21/08 Stagnant Well Cooling Total Well Initial Depth to Stagnant Volume Volume Diameter (Inches) Depth Ift.) Groundwater (It.) (gal.) Calculation 2 30 14-31 1.01 Stagnant Volume Calculation Gallons Groundwater Surface Inspection (bailer check Origing Color Weil Gallons Foot of Stagnant Volume Weil Groundwater Surface Inspection (bailer check Origing Product (ft.) (in.) Mor/E Odam: Groundwater Stagnant Volume Mean Groundwater Stagnant Origina Check Origina C	Project Nem	B: Rotten Ru	White 64	Project	Number	· ·
Oher Rags.: Weil Number: Sampler(s): Jim Parict Sampler(s): Jim Parict Sampler(s): Jim Parict Signant: Weil Casing Date: Signant: Weil Casing Calculation Groundwater Surface Inspection (beiler check per final colspan="2">One of the surface Inspection (beiler check per final colspan="2">Meil Look Number: Signant: Weil Casing Product (ft.) (in.) Signant: Oute: Signant: Signant: Weil Casing Product (ft.) (in.) Signant: Weil Casing Product (ft.) (in.) Method Mate: Groundwater Surface Inspection (beiler check per final colspan="2">Method Mate: Signant: Weil Groundwater Surface Inspection (beiler check per final colspan="2">Method Mate: Calculation Groundwater Surface Inspection (beiler check per final colspan="2">Signant: Method Mate: Calculation Groundwater Surface Inspection (beiler check per final colspan="2">Method	Adriress:	1/06 East AL	15, Lovermore	r 🖋	,	
Weil Number: $Mw - 3$ Date: $5/21/08$ Weil Look Number: Sampler(s): $1.m$ $Parrich$ $0ate:$ $5/21/08$ Weil Look Number: Stagnant: Weil Cealing Diameter (lipches) Digits (n.) Groundwater (lip Galons Calculation: 2 30 $i9.31$ $i.61$ Galons Stagnant: Volume: Calculation: Galons $i.9.31$ $i.61$ Stagnant: Univer Calculation: Galons Groundwater Surface Inspection (beiler check from the frame the check from the ch		·				
Stagnant Volume Calculation Well Casing Diameter (inches) Total Well Depth (fi.) Initial Depth to Groundwater (fi.) Stagnant Volume (gal.) Stagnant Volume Calculation 30 $i 4.31$ $i, 61$ Stagnant Volume Calculation Gailons Footor $i 4.31$ $i, 61$ Weil Calculation Gailons Footor Groundwater Surface Inspection (beiler check footor $i 6.21$ Calculation Gailons Footor Footor Flagsant Groundwater $i 6.21$ 2 Total Weil Staff Groundwater Gailons Footor $i 6.21$ 2 Total Weil Staff Gailons Footor Flagsant Groundwater $ND/7E$ Sheen/Indescence 2 Total Weil Staff Depth to 0.17 0.17 Flagsant 0.07E Dofor 3 Groundwater Footor Europe Method Used Formation Funce (fi.) 0.17 $0.07E$ 4 Stagnant Groundwater Purged Formation Staff footor 0.17 $0.07E$ $0.07E$ 0.07 4 Groundwater Funce 0.17 $0.07E$ $0.07E$ $0.07E$ 5 Groundwater Funce 0.17	Well Number Sampler(s):	Jim Pariet	Oate: 5/21/1	n 9	•	
Weil Chains Dame Dame Ster Gailons per Linear Ster Gailons per Linear Dame Dame Ster Gailons per Linear Poot of Gailond Poot of Gailond Gailons Poot of Gailond Gailons Poot of Gailond Gailons Feating Product (ft.) (in.) Adame State Context State Stat	Slegnant (Volume	Well Cealng Diameter (Inches)	Total Well Depth (ft.)	Groundwater (it.)	<u>(gel)</u>	÷
Weil Chain: Chain: Man: Meri Man: Meri Man: Man: Meri Man: Man: Man: Man: Man: Man: Man: Man:	; Chamanat Mai	Lume Colorian				
Groundwater Purge Method Used Purged Water Containment Purging Stainlese Steel Baller; Submersible Pump gala stored in 55 gal Other: 2 Urged Submersible Pump gala stored in 55 gal Other: 2 Urged Submersible Pump gala stored in 55 gal Other: 2 Urged Conductivity Color/Turbidity Volumes Purged Temp. Conductivity Color/Turbidity 0 -0 11:25 14:7 6:0 661 Brown 13k 1 7 11:27 14:4 7:4 4:57 1: 2 4 11:28 14:1 7:4 4:57 1: 3 16 11:30 11:1 7:4 8:57 1: 4	Weil Casing Oldra- stef	Unear Feet of Groundwater Total Well Depth to Depth (ft.)	per Linear Foot of Stagnar Grounds Volume water (Qal.) 0.17 0.68	Remarks: DO	Tosting Product (tt.) (ii Sheen/Iridescence Odor) <u>3.ネ. の</u> 沢丹	n) <u>`</u> 67
Stagnant Volumes Volume Temp. of $^{\circ}$ C Conductivity umbos Color/Turbidity (other) 0 $_{-9-}$ 11:25 14.7 8.0 861 Brown (sk) 1 $\frac{7}{2}$ $11:27$ 14.4 7.4 7.4 257 11 2 -4 $11:28$ 14.1 7.4 457 11 3 6 $11:30$ 111 7.4 859 11 4 $$		r <u>Purce Method Usec</u> Stainlese Stee	l Baller; Submer	<u>Puraed</u> sible Pump	<u>Water Containment</u> gala stored in	55 gal drum(s)
g	Volumes <u>Purped</u> 0 1 2 3 4 5 6 7 8	Volume Time fgeelinged Time -0 - 1125 2 - 1127 4 - 1127 4 - 1127 4 - 1127 1130 1130 $$	$ \begin{array}{cccc} Temp. \\ $	ConductMity umhosus OOI GST	Color/Turbldity (other) 	,
10 Groundwater Water Level Recovery Sample Containers Sampling Depth to GW (it.) How (P) After purging $2 \cdot \cdot 4 \cdot 1$ 1 liter, amber glass $1 \cdot 4 \cdot 1 \cdot 1 \cdot 1 \cdot 1$ (f) Initially $1 \cdot 4 \cdot 1 \cdot 1 \cdot 1$ 40 ml, VOA $4 \cdot 4 \cdot 1 \cdot 1 \cdot 1 \cdot 1 \cdot 1 \cdot 1$ (S) Before sampling $1 \cdot 4 \cdot 3 \cdot 1 \cdot 1$ 500 ml, polypropylene $4 \cdot 4 \cdot 1 \cdot $	Groundwate Sampling	Depth (P) After purging (i) Initiatly (S) Before sampling (S) $x = -\frac{160}{3}$	lo GW (it.) 19.31 9.31 9.31	i liter, amber glass 40 ml, VOA	Many? Preserva	ME

Rotten Robbie # 64 Water Levels 05/21/08

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<u>MW-1</u>	19.12
MW-2	19.12
MW-3	19.31

APPENDIX C

CERTIFIED ANALYTICAL RESULTS



3334 Victor Court Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201 www.accutest.com

Ron Michelson RM Associates 16401 Meadow Vista Drive, Suite 102 Pioneer, CA 95666 Lab Order Number: C0983 Issued: 06/03/2008

Global ID: T0600152516

Project Number: 101-6404 Project Name: Rotten Robbie No. 64 Project Location: 4186 East Avenue, Livermore, California

Certificate of Analysis - Final Report

On May 21, 2008, samples were received under chain of custody for analysis. Accutest-Northern California analyzes samples "as received" unless otherwise noted. The following results are included:

 Matrix
 Test / Comments

 Liquid
 VOCs: EPA 5030B / EPA 8260B for Groundwater and Water - EPA 624 for Wastewater

 Electronic Deliverables for Geotracker
 TPH-Purgeable - GC/MS: EPA 5030B / GC/MS

 TPH-Extractable: EPA 3510C / EPA 8015B(M)

Accutest-Northern California is certified for environmental analyses by the State of California (#2346). Subcontracted work is the responsibility of the subcontract laboratory, this includes turn-around-time and data quality. If you have any questions regarding this report, please call us at 408-588-0200 ext. 225.

Sincerely,

Laurie Stort Hughy

Laurie Glantz-Murphy Laboratory Director



Northern California

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

RM Associates 16401 Meadow Vista Drive, Suite 102 Pioneer, CA 95666 Attn: Ron Michelson

Project Number: 101-6404 Project Name: Rotten Robbie No. 64 Project Location: 4186 East Avenue, Livermore, California GlobalID: T0600152516

Certificate of Analysis - Data Report

Samples Received: 05/21/2008 Sample Collected by: Client

Lab # : C0983-001	Sample ID: MW-	1]	Matrix: Liq	uid	Sample Date: 05/	21/2008 12:3
TPH-Extractable: EPA 351	IOC / EPA 8015B(M)								
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	520		1.0	50	μg/L	5/23/2008	WDA080523	05/28/2008	WDA080523
Not a typical pattern. I	Higher boiling gasoline c	ompoun	ds in the	Diesel range (C10-C	C16).				
Surrogate	Surrogate Recovery	C	Control 1	Limits (%)				Analyzed by: JHsian	g
n-Hexacosane	79.2		50 -	- 150				Reviewed by: mtran	
VOCs: EPA 5030B / EPA 8	260B for Groundwater	and Wa	ater - 1	EPA 624 for Waster	water				
Parameter	Result	Qual	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	55		5.0	2.5	μg/L	N/A	N/A	05/30/2008	WM2080530
Toluene	ND		5.0	2.5	μg/L	N/A	N/A	05/30/2008	WM2080530
Ethyl Benzene	460		5.0	2.5	μg/L	N/A	N/A	05/30/2008	WM2080530
Xylenes, Total	21		5.0	5.0	μg/L	N/A	N/A	05/30/2008	WM2080530
Methyl-t-butyl Ether	150		5.0	5.0	μg/L	N/A	N/A	05/30/2008	WM2080530
tert-Butyl Ethyl Ether	ND		5.0	25	μg/L	N/A	N/A	05/30/2008	WM2080530
tert-Butanol (TBA)	ND		5.0	50	μg/L	N/A	N/A	05/30/2008	WM2080530
Diisopropyl Ether	ND		5.0	25	μg/L	N/A	N/A	05/30/2008	WM2080530
tert-Amyl Methyl Ether	ND		5.0	25	μg/L	N/A	N/A	05/30/2008	WM2080530
1,2-Dichloroethane	ND		5.0	2.5	μg/L	N/A	N/A	05/30/2008	WM2080530
1,2-Dibromoethane (EDB)	ND		5.0	2.5	μg/L	N/A	N/A	05/30/2008	WM2080530
Surrogate	Surrogate Recovery	C	Control 1	Limits (%)				Analyzed by: TAF	
4-Bromofluorobenzene	95.5		60 -	- 130				Reviewed by: MaiCl	niTu
Dibromofluoromethane	101		60 -	- 130					
Toluene-d8	102		60 -	- 130					

TPH-Purgeable - GC/MS: EPA 5030B / GC/MS

Parameter	Result Q	ual D	/ P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	2500		5.0	120	μg/L	N/A	N/A	05/30/2008	WM2080530
Surrogate	Surrogate Recovery	Co	ntrol I	Limits (%)				Analyzed by: TAF	
4-Bromofluorobenzene	102	e	50 -	130				Reviewed by: MaiCl	niTu
Dibromofluoromethane	108	e	50 -	130					
Toluene-d8	105	6	50 -	130					
	-								

*** pH of sample VOA ~7.



Northern California

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

RM Associates 16401 Meadow Vista Drive, Suite 102 Pioneer, CA 95666 Attn: Ron Michelson

Project Number: 101-6404 Project Name: Rotten Robbie No. 64 Project Location: 4186 East Avenue, Livermore, California GlobalID: T0600152516

Certificate of Analysis - Data Report

Samples Received: 05/21/2008 Sample Collected by: Client

Lab # : C0983-002	Sample ID: MW-2	2			Matrix: Liquid			Sample Date: 05/21/2008 12:05		
TPH-Extractable: EPA 351	OC / EPA 8015B(M)									
Parameter	Result (Qual D	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch	
TPH as Diesel	ND		1.0	50	μg/L	5/23/2008	WDA080523	05/28/2008	WDA080523	
Surrogate	Surrogate Recovery	Co	ontrol l	Limits (%)				Analyzed by: JHsiang	3	
n-Hexacosane	89.6		50 -	150				Reviewed by: mtran		
VOCs: EPA 5030B / EPA 8	260B for Groundwater	and Wat	ter - 1	EPA 624 for Waste	water					
Parameter	Result (Qual D	D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch	
Benzene	ND		1.0	0.50	μg/L	N/A	N/A	05/29/2008	WM2080529	
Toluene	ND		1.0	0.50	μg/L	N/A	N/A	05/29/2008	WM2080529	
Ethyl Benzene	ND		1.0	0.50	μg/L	N/A	N/A	05/29/2008	WM2080529	
Xylenes, Total	ND		1.0	1.0	μg/L	N/A	N/A	05/29/2008	WM2080529	
Methyl-t-butyl Ether	ND		1.0	1.0	μg/L	N/A	N/A	05/29/2008	WM2080529	
tert-Butyl Ethyl Ether	ND		1.0	5.0	μg/L	N/A	N/A	05/29/2008	WM2080529	
tert-Butanol (TBA)	ND		1.0	10	μg/L	N/A	N/A	05/29/2008	WM2080529	
Diisopropyl Ether	ND		1.0	5.0	μg/L	N/A	N/A	05/29/2008	WM2080529	
tert-Amyl Methyl Ether	ND		1.0	5.0	μg/L	N/A	N/A	05/29/2008	WM2080529	
1,2-Dichloroethane	ND		1.0	0.50	μg/L	N/A	N/A	05/29/2008	WM2080529	
1,2-Dibromoethane (EDB)	ND		1.0	0.50	μg/L	N/A	N/A	05/29/2008	WM2080529	
Surrogate	Surrogate Recovery	Co	ontrol l	Limits (%)				Analyzed by: TAF		
4-Bromofluorobenzene	92.3		60 -	130				Reviewed by: MaiCh	iTu	
Dibromofluoromethane	99.8		60 -	130						
Toluene-d8	100		60 -	130						
TPH-Purgeable - GC/MS:]	EPA 5030B / GC/MS									
Parameter	Result (Qual D)/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch	
TPH as Gasoline	ND		1.0	25	uø/L	N/A	N/A	05/29/2008	WM2080529	

TPH as Gasoline	ND	1.0	25	μg/L	N/A	N/A	05/29/2008	WM2080529
Surrogate	Surrogate Recovery	Control Lim	its (%)				Analyzed by: TAF	
4-Bromofluorobenzene	98.0	60 - 1	30				Reviewed by: MaiC	hiTu
Dibromofluoromethane	107	60 - 1	30					
Toluene-d8	104	60 - 1	30					

*** pH of sample = 6.0



Northern California

3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

RM Associates 16401 Meadow Vista Drive, Suite 102 Pioneer, CA 95666 Attn: Ron Michelson

Project Number: 101-6404 Project Name: Rotten Robbie No. 64 Project Location: 4186 East Avenue, Livermore, California GlobalID: T0600152516

Certificate of Analysis - Data Report

Samples Received: 05/21/2008 Sample Collected by: Client

Lab # : C0983-003	Sample ID: MW-3]	Matrix: Liq	luid	Sample Date: 05/2	21/2008 12:20
TPH-Extractable: EPA 35	10C / EPA 8015B(M)							
Parameter	Result Qu	ual D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Diesel	ND	1.0	50	μg/L	5/23/2008	WDA080523	05/28/2008	WDA080523
Surrogate	Surrogate Recovery	Control	Limits (%)				Analyzed by: JHsian	g
n-Hexacosane	87.0	50	- 150				Reviewed by: mtran	
VOCs: EPA 5030B / EPA 8	8260B for Groundwater a	nd Water -	EPA 624 for Waste	water				
Parameter	Result Qu	al D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
Benzene	ND	1.0	0.50	μg/L	N/A	N/A	05/29/2008	WM2080529
Toluene	ND	1.0	0.50	μg/L	N/A	N/A	05/29/2008	WM2080529
Ethyl Benzene	ND	1.0	0.50	μg/L	N/A	N/A	05/29/2008	WM2080529
Xylenes, Total	ND	1.0	1.0	μg/L	N/A	N/A	05/29/2008	WM2080529
Methyl-t-butyl Ether	ND	1.0	1.0	μg/L	N/A	N/A	05/29/2008	WM2080529
tert-Butyl Ethyl Ether	ND	1.0	5.0	μg/L	N/A	N/A	05/29/2008	WM2080529
tert-Butanol (TBA)	ND	1.0	10	μg/L	N/A	N/A	05/29/2008	WM2080529
Diisopropyl Ether	ND	1.0	5.0	μg/L	N/A	N/A	05/29/2008	WM2080529
tert-Amyl Methyl Ether	ND	1.0	5.0	μg/L	N/A	N/A	05/29/2008	WM2080529
1,2-Dichloroethane	ND	1.0	0.50	μg/L	N/A	N/A	05/29/2008	WM2080529
1,2-Dibromoethane (EDB)	ND	1.0	0.50	$\mu g/L$	N/A	N/A	05/29/2008	WM2080529
Surrogate	Surrogate Recovery	Control	Limits (%)				Analyzed by: TAF	
4-Bromofluorobenzene	91.2	60	- 130				Reviewed by: MaiCh	niTu
Dibromofluoromethane	98.7	60	- 130					
Toluene-d8	100	60	- 130					
TPH-Purgeable - GC/MS:	EPA 5030B / GC/MS							
Parameter	Result Qu	al D/P-F	Detection Limit	Units	Prep Date	Prep Batch	Analysis Date	QC Batch
TPH as Gasoline	ND	1.0	25	μg/L	N/A	N/A	05/29/2008	WM2080529

TPH as Gasoline	ND	1.0	25	µg/L	N/A	N/A	05/29/2008	W
Surrogate	Surrogate Recovery	Control Limits	(%)				Analyzed by: TAF	
4-Bromofluorobenzene	96.9	60 - 130	1				Reviewed by: MaiChi	Tu
Dibromofluoromethane	106	60 - 130	1					
Toluene-d8	104	60 - 130	1					



Method Blank - Liquid - TPH-Extractable: EPA 3510C / EPA 8015B(M)

QC/Prep Batch ID: WDA080523	
QC/Prep Date: 5/23/2008	

Validated by: mtran - 05/27/08

Parameter			Result	DF	PQLR	Units
TPH as Diesel			ND	1	50	µg/L
Surrogate for Blank	% Recovery	Control Limits				
n-Hexacosane	80.4	50 - 150				



Method Blank - Liquid - VOCs: EPA 5030B / EPA 8260B for Groundwater and Water - EPA 624 for

Wastewater QC Batch ID: WM2080529

Validated by: MaiChiTu - 06/02/08

QC Batch Analysis Date: 5/29/2008

Parameter			Result	DF	PQLR	Units
1,2-Dibromoethane (EI	DB)		ND	1	0.50	µg/L
1,2-Dichloroethane			ND	1	0.50	µg/L
Benzene			ND	1	0.50	µg/L
Diisopropyl Ether			ND	1	5.0	µg/L
Ethyl Benzene			ND	1	0.50	µg/L
Methyl-t-butyl Ether			ND	1	1.0	µg/L
tert-Amyl Methyl Ether			ND	1	5.0	µg/L
tert-Butanol (TBA)			ND	1	10	µg/L
tert-Butyl Ethyl Ether			ND	1	5.0	µg/L
Toluene			ND	1	0.50	µg/L
Xylenes, Total			ND	1	1.0	µg/L
Surrogate for Blank	% Recovery	Control Limits				
4-Bromofluorobenzene	93.4	60 - 130				
Dibromofluoromethane	103	60 - 130				
Toluene-d8	95.2	60 - 130				

Method Blank - Liquid - TPH-Purgeable - GC/MS: EPA 5030B / GC/MS

QC Batch ID: WM2080529

QC Batch Analysis Date: 5/29/2008

Validated by: MaiChiTu - 06/02/08

Parameter			Result	DF	PQLR	Units
TPH as Gasoline			ND	1	25	μg/L
Surrogate for Blank	% Recovery	Control Limits				
4-Bromofluorobenzene	99.3	60 - 130				
Dibromofluoromethane	110	60 - 130				
Toluene-d8	98.8	60 - 130				



Method Blank - Liquid - VOCs: EPA 5030B / EPA 8260B for Groundwater and Water - EPA 624 for

Wastewater QC Batch ID: WM2080530

Validated by: MaiChiTu - 06/03/08

QC Batch Analysis Date: 5/30/2008

Parameter			Result	DF	PQLR	Units
1,2-Dibromoethane (EI	DB)		ND	1	0.50	µg/L
1,2-Dichloroethane			ND	1	0.50	µg/L
Benzene			ND	1	0.50	µg/L
Diisopropyl Ether			ND	1	5.0	µg/L
Ethyl Benzene			ND	1	0.50	µg/L
Methyl-t-butyl Ether			ND	1	1.0	µg/L
tert-Amyl Methyl Ether			ND	1	5.0	µg/L
tert-Butanol (TBA)			ND	1	10	µg/L
tert-Butyl Ethyl Ether			ND	1	5.0	µg/L
Toluene			ND	1	0.50	µg/L
Xylenes, Total			ND	1	1.0	µg/L
Surrogate for Blank	% Recovery	Control Limits				
4-Bromofluorobenzene	92.7	60 - 130				
Dibromofluoromethane	97.1	60 - 130				
Toluene-d8	100	60 - 130				

Method Blank - Liquid - TPH-Purgeable - GC/MS: EPA 5030B / GC/MS

QC Batch ID: WM2080530

QC Batch Analysis Date: 5/30/2008

Validated by: MaiChiTu - 06/03/08

Parameter			Result	DF	PQLR	Units
TPH as Gasoline			ND	1	25	µg/L
Surrogate for Blank	% Recovery	Control Limits				
4-Bromofluorobenzene	98.5	60 - 130				
Dibromofluoromethane	104	60 - 130				
Toluene-d8	104	60 - 130				



LCS / LCSD - Liquid - TPH-Extractable: EPA 3510C / EPA 8015B(M) QC Batch ID: WDA080523 QC/Prep Date: 5/23/2008									
LCS Parameter TPH as Diesel TPH as Motor Oil	Method Blank <50 <200	Spike Amt 1000 1000	SpikeResult 817 654	Units μg/L μg/L	% Recovery 81.7 65.4			Recovery Limits 45 - 140 45 - 140	
Surrogate n-Hexacosane	·	ntrol Limits 0 - 150							
LCSD Parameter TPH as Diesel TPH as Motor Oil Surrogate n-Hexacosane	Method Blank <50	1000 1000 ntrol Limits	SpikeResult 878 706	Units μg/L μg/L	% Recovery 87.8 70.6	RPD 7.2 7.7	RPD Limits 25.0 25.0	Recovery Limits 45 - 140 45 - 140	



QC Batch ID: WM2080529

Northern California 3334 Victor Court, Santa Clara, CA 95054 Phone: (408) 588-0200 Fax: (408) 588-0201

LCS / LCSD - Liquid - VOCs: EPA 5030B / EPA 8260B for Groundwater and Water - EPA 624 for

Wastewater

Reviewed by: MaiChiTu - 06/02/08

QC Batch ID Analysis Date: 5/29/2008

LCS								
Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery			Recovery Limits
1,1-Dichloroethene	0.0	20	20.4	µg/L	102			70 - 130
Benzene	<0.50	20	20.7	µg/L	104			70 - 130
Chlorobenzene	0.0	20	20.0	µg/L	100			70 - 130
Methyl-t-butyl Ether	<1.0	20	21.0	µg/L	105			70 - 130
Toluene	<0.50	20	19.2	µg/L	96.0			70 - 130
Trichloroethene	0.0	20	21.1	µg/L	106			70 - 130
Surrogate	% Recovery Co	ontrol Limits						
4-Bromofluorobenzene	96.4 6	60 - 130						
Dibromofluoromethane	102.0	0 - 130						
Toluene-d8	93.6	0 - 130						
LCSD								
Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits
1,1-Dichloroethene	0.0	20	21.3	µg/L	106	4.3	25.0	70 - 130
Benzene	<0.50	20	21.7	µg/L	108	4.7	25.0	70 - 130
Chlorobenzene	0.0	20	21.3	μg/L	106	6.3	25.0	70 - 130
Methyl-t-butyl Ether	<1.0	20	22.2	μg/L	111	5.6	25.0	70 - 130
Toluene	<0.50	20	20.6	μg/L	103	7.0	25.0	70 - 130
Trichloroethene	0.0	20	22.3	μg/L	112	5.5	25.0	70 - 130
Surrogate	% Recovery Co	ontrol Limits						
4-Bromofluorobenzene	•	60 - 130						
Dibromofluoromethane		0 - 130						
Toluene-d8		i0 - 130						
LCS/LCSD - Liqu		geable - G	C/MS: EPA	5030B	/ GC/MS			
QC Batch ID: WM2	2080529						Reviewed b	y: MaiChiTu - 06/02/08
QC Batch ID Analy	sis Date: 5/29/2	2008						
LCS								
Parameter	Method Blank	Spike Amt	SpikeResult	Units	% Recovery			Recovery Limits
TPH as Gasoline	<25	250	275	µg/L	110			65 - 135
Surrogate	% Recovery Co	ontrol Limits						
4-Bromofluorobenzene	-	io - 130						
Dibromofluoromethane		i0 - 130						
Toluene-d8		io - 130						
Toluclic-uo	90.0	0 - 150						
LCSD								
Parameter	Method Blank	•	•	Units	% Recovery	RPD		Recovery Limits
TPH as Gasoline	<25	250	269	µg/L	108	2.2	25.0	65 - 135
Surrogate	% Recovery Co	ontrol Limits						
4-Bromofluorobenzene	98.6 6	0 - 130						
Dibromofluoromethane	98.9 6	0 - 130						
Toluene-d8	97.1 6	0 - 130						



LCS / LCSD - Liquid - VOCs: EPA 5030B / EPA 8260B for Groundwater and Water - EPA 624 for

Wastewater

QC Batch ID: WM2080530

Reviewed by: MaiChiTu - 06/03/08

QC Batch ID Analysis Date: 5/30/2008

LCS									
Parameter	Method Blan	•	•	Units	% Recovery			Recovery Limits	
1,1-Dichloroethene	0.0	20	19.4	µg/L	97.0			70 - 130	
Benzene	<0.50	20	20.2	µg/L	101			70 - 130	
Chlorobenzene	0.0	20	20.7	µg/L	104			70 - 130	
Methyl-t-butyl Ether	<1.0	20	18.6	µg/L	93.0			70 - 130	
Toluene	<0.50	20	19.7	µg/L	98.5			70 - 130	
Trichloroethene	0.0	20	20.9	µg/L	104			70 - 130	
Surrogate	% Recovery C	ontrol Limits							
4-Bromofluorobenzene	94.1	60 - 130							
Dibromofluoromethane	97.5	60 - 130							
Toluene-d8	98.0	60 - 130							
LCSD									
Parameter	Method Blan	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits	
1,1-Dichloroethene	0.0	20	20.2	µg/L	101	4.0	25.0	70 - 130	
Benzene	<0.50	20	20.9	µg/L	104	3.4	25.0	70 - 130	
Chlorobenzene	0.0	20	20.6	µg/L	103	0.48	25.0	70 - 130	
Methyl-t-butyl Ether	<1.0	20	20.4	µg/L	102	9.2	25.0	70 - 130	
Toluene	<0.50	20	19.9	µg/L	99.5	1.0	25.0	70 - 130	
Trichloroethene	0.0	20	21.3	µg/L	106	1.9	25.0	70 - 130	
Surrogate	% Recovery C	ontrol Limits							
4-Bromofluorobenzene	99.0	60 - 130							
Dibromofluoromethane	100.0	60 - 130							
Toluene-d8	100.0	60 - 130							
QC Batch ID: WM2	LCS / LCSD - Liquid - TPH-Purgeable - GC/MS: EPA 5030B / GC/MS QC Batch ID: WM2080530 Reviewed by: MaiChiTu - 06/03/08 QC Batch ID Analysis Date: 5/30/2008								
LCS									
Parameter	Method Blan	Spike Amt	SpikeResult	Units	% Recovery			Recovery Limits	
TPH as Gasoline	<25	250	281	µg/L	112			65 - 135	
Surrogate	% Recovery C	ontrol Limits							
4-Bromofluorobenzene	103.0	60 - 130							
Dibromofluoromethane	108.0	60 - 130							
Toluene-d8	106.0	60 - 130							
LCSD									
Parameter	Method Blanl	Spike Amt	SpikeResult	Units	% Recovery	RPD	RPD Limits	Recovery Limits	
TPH as Gasoline	<25	250	294	µg/L	118	4.5	25.0	65 - 135	
Surrogate	% Recovery C	ontrol Limits							
4-Bromofluorobenzene	5	60 - 130							
Dibromofluoromethane		60 - 130							
Toluene-d8		60 - 130							

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Project Address:	4186 East Avenue, Livermore, California																						
Laboratory:	Entech Analytical Labs Contact: Simon Hague							•		l.			A	nalys	ses l	Real	uest	ed				٦	
-	(408) 588-0			-			<u> </u>						ΓĪ	T	ΤŤ		1		T	T	T	Т	-
RMA Project Manager:			 าn							23						2000 COLOR							
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MW-2 (702-		1205	<u> </u>	X		4	40 ml. VOA	HCL	X	x					╉							-	_
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MW-3 (903)			 	X		4	40 ml. VOA	HCL	X	x									••••••				
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Chain is signed / dated by both client and sample custodian? Yes / No circle one TAT requested available? Approved by								
If a cooler Note that A	ers: Coolers are at 0-6°C? is outside the 0-6°C range; note to NC does NOT accept evidentian Method:	elow the bottles	s in that cooler below.	4				
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 Client informed of irregularities at receiving Comments:

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Project Mgr needs to contact Client for issues

APPENDIX D

TRANSMITTAL LETTER

ROBINSON OIL CORPORATION



4250 WILLIAMS ROAD • SAN JOSE, CA 95129-3344 (408) 257-2222 • FAX (408) 252-6591 Rotten Robbie

July 1, 2008

Mr. Ronald W. Michelson RM Associates 16401 Meadow Vista Drive, Suite 102 Pioneer, CA 95666 FAX (209) 295-3974

> Site Location: Rotten Robbie #64 4186 East Avenue Livermore, CA

Report Title: Groundwater Monitoring Report No. 3 – 2nd Quarter 2008

Report Date: June 26, 2008

Dear Mr. Michelson:

I have reviewed and approved the above referenced report. Please submit it to the regulatory agencies listed in the distribution section of the report. Should any of the listed regulatory agencies require it, I am prepared to declare, under penalty of perjury, that to the best of my knowledge the information in the above referenced report is true and correct.

Sincerely,

Thomas L. Robinson