RM Associates
Environmental Consultants

May 5, 2010

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. 5 - 2nd Quarter 2010**
April 29, 2010

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) 517-4334, or the undersigned at (209) 295-6218.

Sincerely,

RM ASSOCIATES

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

TECHNICAL REPORT

GROUNDWATER MONITORING REPORT NO. 5 – 2ND QUARTER 2010

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

April 29, 2010

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

TABLE OF CONTENTS

1.0 INTRODUCTION 1

2.0 SITE DESCRIPTION AND BACKGROUND 1

2.1 Phase II Environmental Assessment 1

2.2 UST Removal 2

2.3 Monitoring Well Installations 2

2.4 Prior Groundwater Sampling and Results 2

3.0 GROUNDWATER MONITORING 2

3.1 Groundwater Elevation Measurements and Sampling 2

3.2 Field Measurements and Groundwater Analytical 2

4.0 DISCUSSION OF ANALYTICAL RESULTS 3

5.0 SUMMARY, CONCLUSIONS, AND RECOMMENDATION 3

6.0 CERTIFICATION 4

7.0 DISTRIBUTION 4

TABLES

TABLE 1 – Well Construction Details
TABLE 2 – Purge Data
TABLE 3 – Water Level Measurements and Elevation
TABLE 4 – Field Measurements
TABLE 5 – Groundwater Analytical Results (Petroleum Hydrocarbons)
TABLE 6 – Groundwater Analytical Results(Oxygenates and Chlorinated Hydrocarbons)
TABLE 7 – Groundwater Monitoring Schedule

TABLE OF CONTENTS (CONTINUED)

FIGURES

FIGURE 1 – Vicinity Map
FIGURE 2 – Site Map (showing soil boring and monitoring well locations)
FIGURE 3 – Groundwater Elevation Contours
FIGURE 4 – Distribution of Groundwater Analytical Results
FIGURE 5 – Iso-concentration Contours for TPHg
FIGURE 6 – Iso-concentration Contours for Benzene
FIGURE 7 – Iso-concentration Contours for MTBE
FIGURE 8 – Comparison of GW Elevations with TPHg Concentrations
FIGURE 9 – Comparison of GW Elevations with Benzene Concentrations
FIGURE 10 – Comparison of GW Elevations with MTBE Concentrations

APPENDICES

APPENDIX A - Groundwater Sampling Procedures
APPENDIX B - Purge and Sampling Worksheets
APPENDIX C - Laboratory Reports and Chain of Custody Documents
APPENDIX D – Transmittal Letter

GROUNDWATER MONITORING REPORT NO. 5 – 2ND QUARTER 2010

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

April 29, 2010

1.0 INTRODUCTION

This "Groundwater Monitoring Report No. 5, 2nd Quarter 2010" 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 of groundwater gauging and sampling conducted during April, 2010. 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 Avenue
Livermore, California
Contact: 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.

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, ten soil samples were collected from the native soil beneath the USTs, and five samples were collected from the native soil beneath the product lines. All UST 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 ten 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 Prior Groundwater Sampling and Results

Groundwater monitoring wells MW-1, MW-2, and MW-3 were initially sampled on May 7, 2007. The wells were subsequently monitored three times during 2007 and 2008. The field measurements, observations and analytical results for all prior monitoring events, are included in Tables 2 through 6 of this groundwater monitoring report.

3.0 GROUNDWATER MONITORING

3.1 Groundwater Elevation Measurements and Sampling

On April 8, 2010 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 three 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 risen approximately 4.3 feet since the previous (April 9, 2009) monitoring event and was highest recorded during the seven monitoring events at the site. The flow direction is presently to the south southwest at a gradient of 0.008 ft./ft.

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 Accutest Laboratory, Inc. (Accutest), a California DHS certified lab, 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.

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.

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 4,810 µg/L, 92.1 µg/L, and 455 µg/L, respectively. While these are in the range of previous results (MTBE at 455 µg/L is somewhat higher than the previously reported high of 330 µg/L), the respective concentrations are higher than those reported for the April 2009 monitoring event. This is likely attributable to the present four foot higher water table elevation. Figures 8 through 10 compare the groundwater elevations with the concentrations of TPHg, benzene, and MTBE, 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 continue to indicate that no appreciable amount of contaminant migration has occurred. The minor concentrations of TPHg detected in down gradient monitoring well MW-2 fell to near laboratory detection limits, and all of the other petroleum analytes, from this well were at concentrations less than the respective laboratory detection limits. It is RMA's opinion, after six monitoring events over three years, 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.

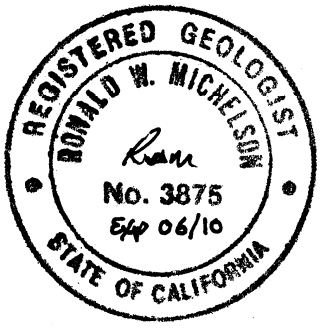
Based on the results of all investigative and monitoring activities that have been conducted to date, it is RMA's opinion that this site meets the criteria for fuel leak case closure as a low risk site. Within the next 90 days a formal recommendation for fuel leak case closure will be prepared and submitted.

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

Ronald W. Michelson, RG
Principal Geologist



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 Assoiciates

TABLE 1- WELL CONSTRUCTION DETAILS
Rotten Robbie 64, 4186 East Avemie. Livermore, California

Monitoring Well	Drilling Date	Borehole Diameter (inches)	Depth of Borehole (feet)	Casing Diameter (inches)	Screened Interval (feet)	Filter Pack Interval (feet)	Bentonite Seal Interval (feet)	Cement/ Bentonite Seal 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 monitoring well

RM Assoiciates

TABLE 2 - PURGE DATA
Rotten Robbie 64, 4186 East Avenue, Livermore, California

Well ID	Reporting Period	Method of Purging	Casing-Volumes 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
	04/09/09	12 V. PUMP	3
	04/08/10	**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
	04/09/09	12 V. PUMP	3
	04/08/10	**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
	05/21/08	12 V. PUMP	3
	04/09/09	12 V. PUMP	3
	04/08/10	**12 V. PUMP**	**3**

RM Associates

TABLE 3 - WATER LEVEL MEASURMENTS AND ELEVATION
Rotten Robbie 64, 4186 East Avenue, Livermore, California

Well Number	Sample Date	Well Head Elevation (feet MSL)	Depth to Groundwater (feet)	Groundwater Elevation (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
	04/09/09	539.50	22.63	516.87
	04/08/10	**539.50**	**18.48**	**521.02**
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
	04/09/09	539.15	22.92	516.23
	04/08/10	**539.15**	**18.48**	**520.67**
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
	04/09/09	539.76	22.26	517.50
	04/08/10	**539.76**	**18.43**	**521.33**

Notes:
MSL = Mean Sea Level
MW = Monitoring Well
NYS = Not Yet Surveyed
NC = Not Calculated
Bold = Not Previously Reported

Wellhead survey completed by Licensed Engineering Contractor, Mid Coast Engineers on 11/03/07

4.29

RM Assoiciates

TABLE 4 - FIELD MEASUREMENTS

Rotten Robbie 64, 4186 East Avenue, Livermore, California

Well No.	Sample Date	pH (Units)	Conductivity (umhos/cm)	Temp (C)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Oxygen Reduction Potential (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
	04/09/09	7.5	666	18.8	Clearing	2.2	158
	04/08/10	**7.3**	**825**	**19.1**	**181**	**2.4**	**156**
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
	04/09/09	7.6	612	19.1	Clearing	1.8	154
	04/08/10	**7.5**	**903**	**19.2**	**135**	**3.7**	**154**
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
	04/09/09	**7.3**	**530**	**18.4**	**Clearing**	**4.30**	**161**
	04/08/10	**7.5**	**865**	**18.7**	**141**	**4.60**	**161**

Notes:

C = Degrees Centigrade
mg/L = milligrams per liter
mV = millivolts
MW= Monitoring Well
NM = Not Measured
NTU = Nephelometric Turbidity Units
umhos/cm Micromhos per centimeter
NS = Not Sampled (Dry)
Bold = Not Previously Reported

RM Associates

TABLE 5 - GROUNDWATER ANALYTICAL RESULTS
Rotten Robbie 64, 4186 East Avenue, Livermore, California

Well No.	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethyl benzene (ug/L)	Total Xylenes (ug/L)	TPH as Gasoline (ug/L)	TPH as Diesel (ug/L)
Analytical Method		8260B	8260B	8260B	8260B	GC-MS	8015B M
MW-1	05/07/07	150	7.0	620	160	4,800	<50
	11/30/07	30	1.2	130	1.9	600	110
	02/29/08	190	<10	1,100	130	4,800	850
	05/21/08	55	<2.5	460	21	2,500	520
	04/09/09	66.5	<3.3	373	21.6	1,930	431
	04/08/10	**92.1**	**<13**	**1,100**	**40.1**	**4,810**	**<47****
MW-2	05/07/07	<0.5	<0.5	<0.5	<0.5	<50	<52
	11/30/07	NS(DRY)	NS(DRY)	NS(DRY)	NS(DRY)	NS(DRY)	NS(DRY)
	02/29/08	<0.5	<0.5	<0.5	<0.5	31	<48
	05/21/08	<0.5	<0.5	<0.5	<0.5	<25	<50
	04/09/09	0.39	<0.5	0.56	0.99	150	<47
	04/08/10	**<0.3**	**<0.5**	**<0.3**	**<0.7**	**62.9**	**<47**
MW-3	05/07/07	<0.5	<0.5	<0.5	<0.5	<50	<52
	11/30/07	<0.5	<0.5	<0.5	<0.5	<25	<52
	02/29/08	<0.5	<0.5	<0.5	<0.5	<25	<48
	05/21/08	<0.5	<0.5	<0.5	<0.5	<25	<50
	04/09/09	<0.30	<0.5	<0.30	<0.7	<25	<47
	04/08/10	**<0.30**	**<0.5**	**0.31**	**<0.7**	**<25**	**<47**

Notes:

** Lab Comment: "0.79 mg/L Gasoline compounds in the Diesel range. No Diesel pattern present."

MW = Monitoring Well

TPH = Total Petroleum Hydrocarbons

ug/L = Micrograms per liter (ppb)

NS = Not Sampled or Analyzed

Bold = Not Previously Reported

RM Associates

TABLE 6- GROUNDWATER ANALYTICAL RESULTS
Oxygenates and Chlorinated Hydrocarbons
Rotten Robbie 64, 4186 East Avenue, Livermore, California

Well No.	Sample Date	TBA (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	1,2 DCA (ug/L)	EDB (ug/L)
Analytical Method		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
	04/09/09	<33	85.6	<3.3	<3.3	<3.3	<2	<1.3
	04/08/10	**<130**	**455**	**<13**	**<13**	**<13**	**<5**	**<7.5**
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
	04/09/09	<5	<0.5	<0.5	<0.5	<0.5	<0.3	<0.2
	04/08/10	**<5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.3**	**<0.2**
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
	04/09/09	<5	<0.5	<0.5	<0.5	<0.5	<0.3	<0.2
	04/08/10	**<5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.3**	**<0.2**

Notes:

1,2 DCA =	1, 2 Dichloroethane
DIPE =	Di-Isopropyl Ether
EDB =	Ethylene Dibromide
ETBE =	Ethyl tert-Butyl Ether
MTBE =	Methyl tert-Butyl Ether
MW =	Monitoring Well
TAME =	tert-Amyl Methyl Ether
TBA =	tert-Butyl Alcohol (tert-Butanol)
ug/L =	Micrograms per liter (ppb)
NS=	Not Sampled or Analyzed
Bold =	**Not Previously Reported**

RM Associates

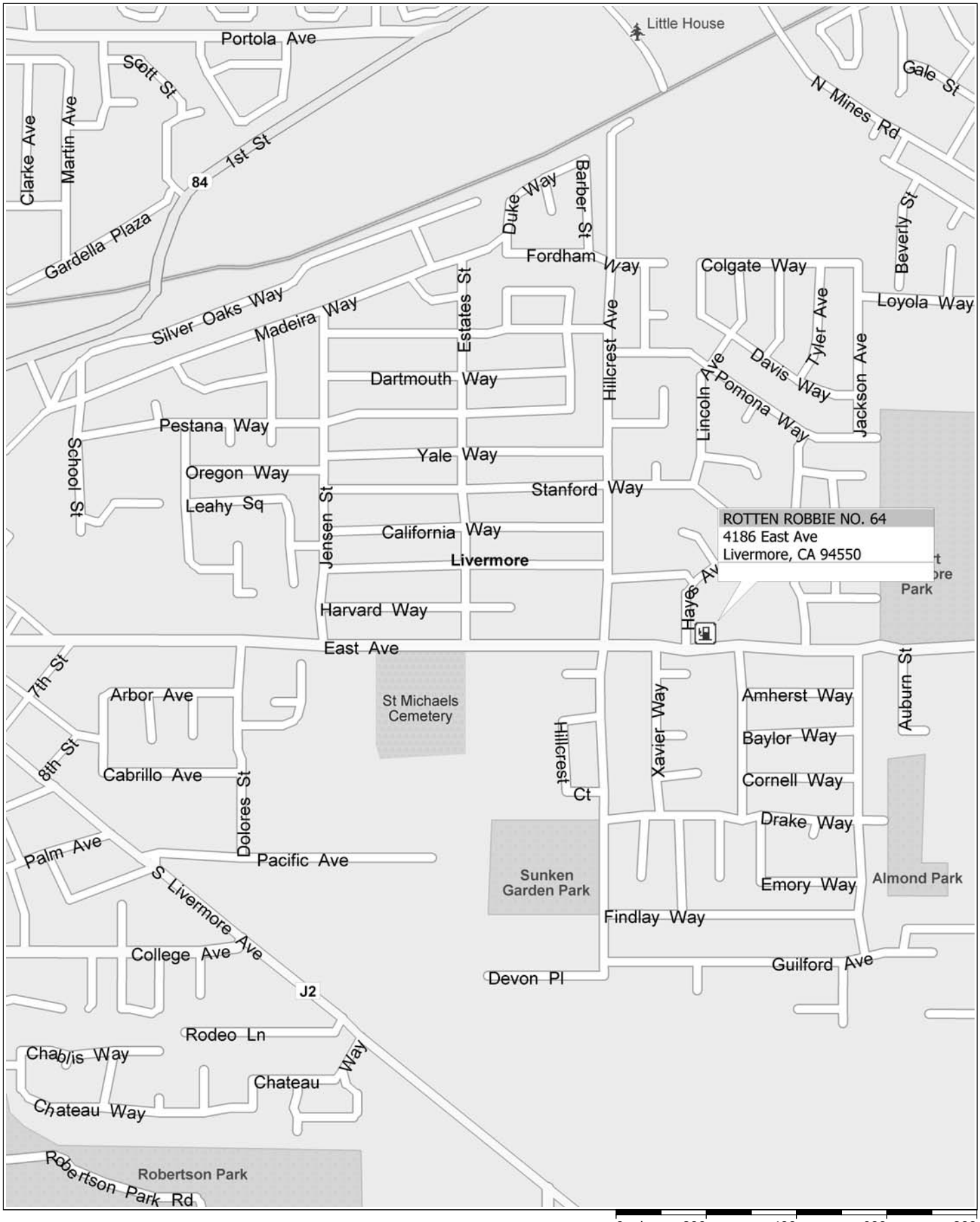
TABLE 7 - GROUNDWATER MONITORING SCHEDULE

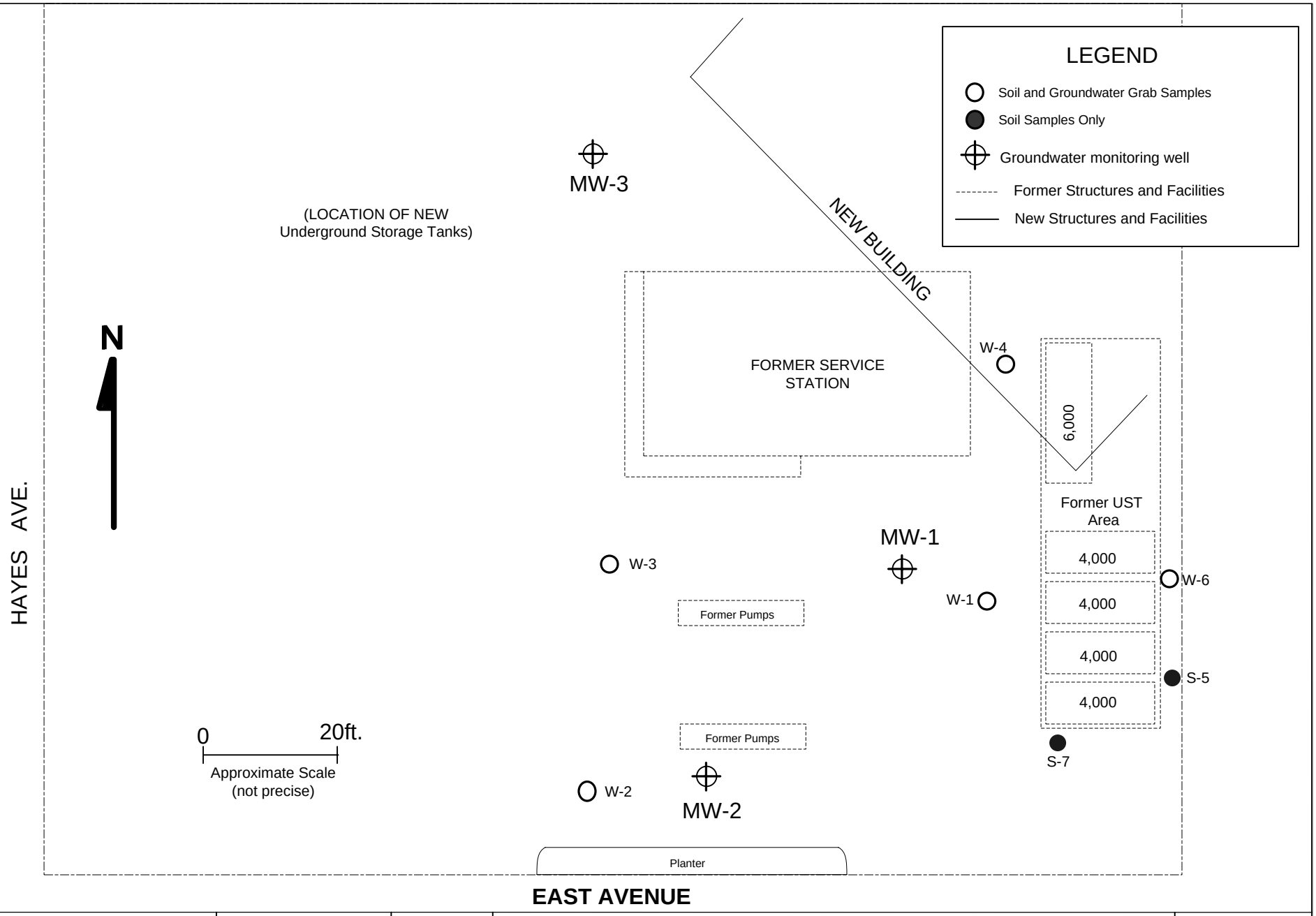
Rotten Robbie 64, 4186 East Avenue, Livermore, California

Activity	Jan	Feb	Mar	April	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Water Level Measurement	**NO FURTHER MONITORING PROPOSED**											
Water Sampling & Analysis												
Self-Monitoring Report												

FIGURES

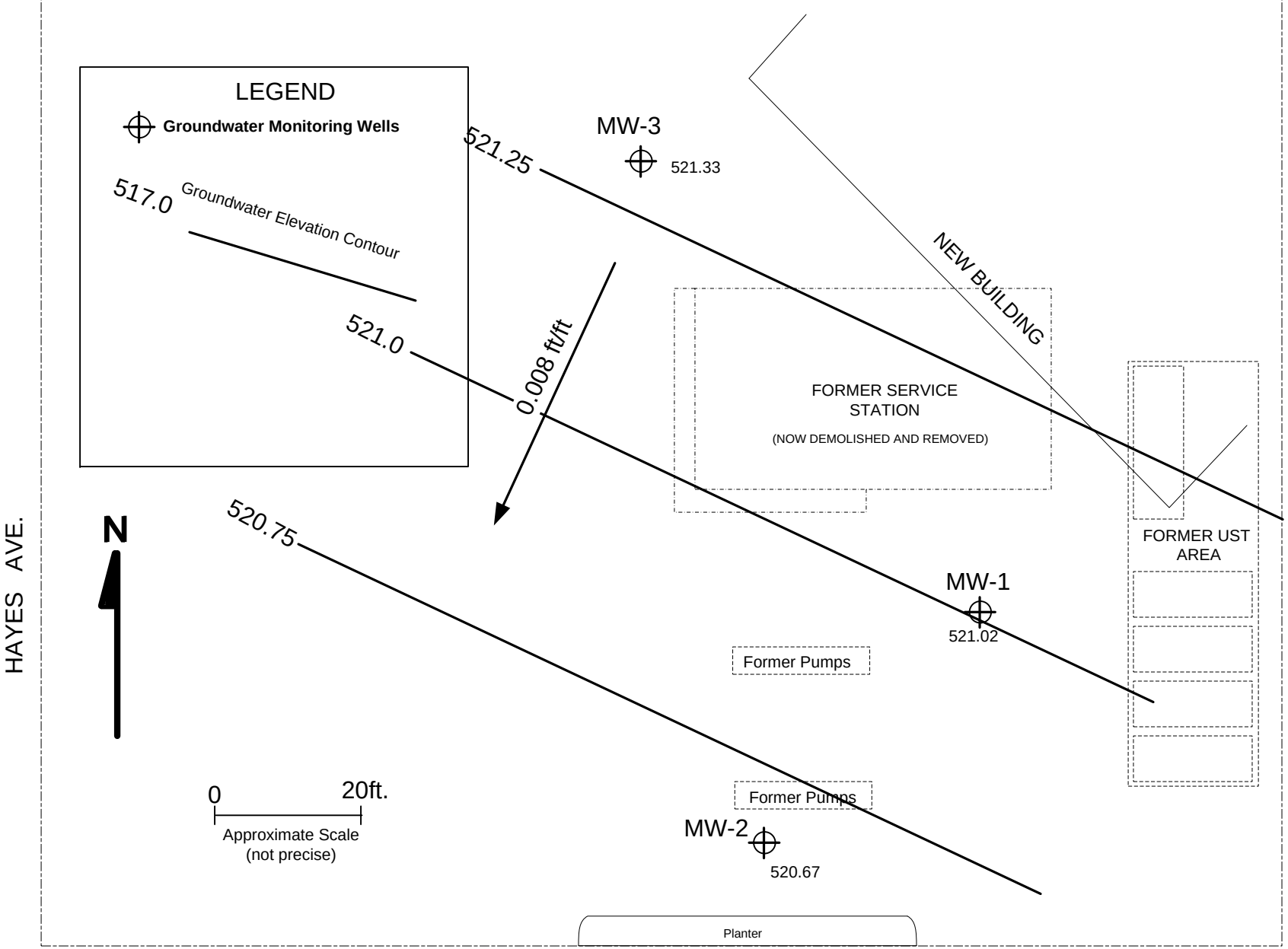
FIGURE 1 - VICINITY MAP



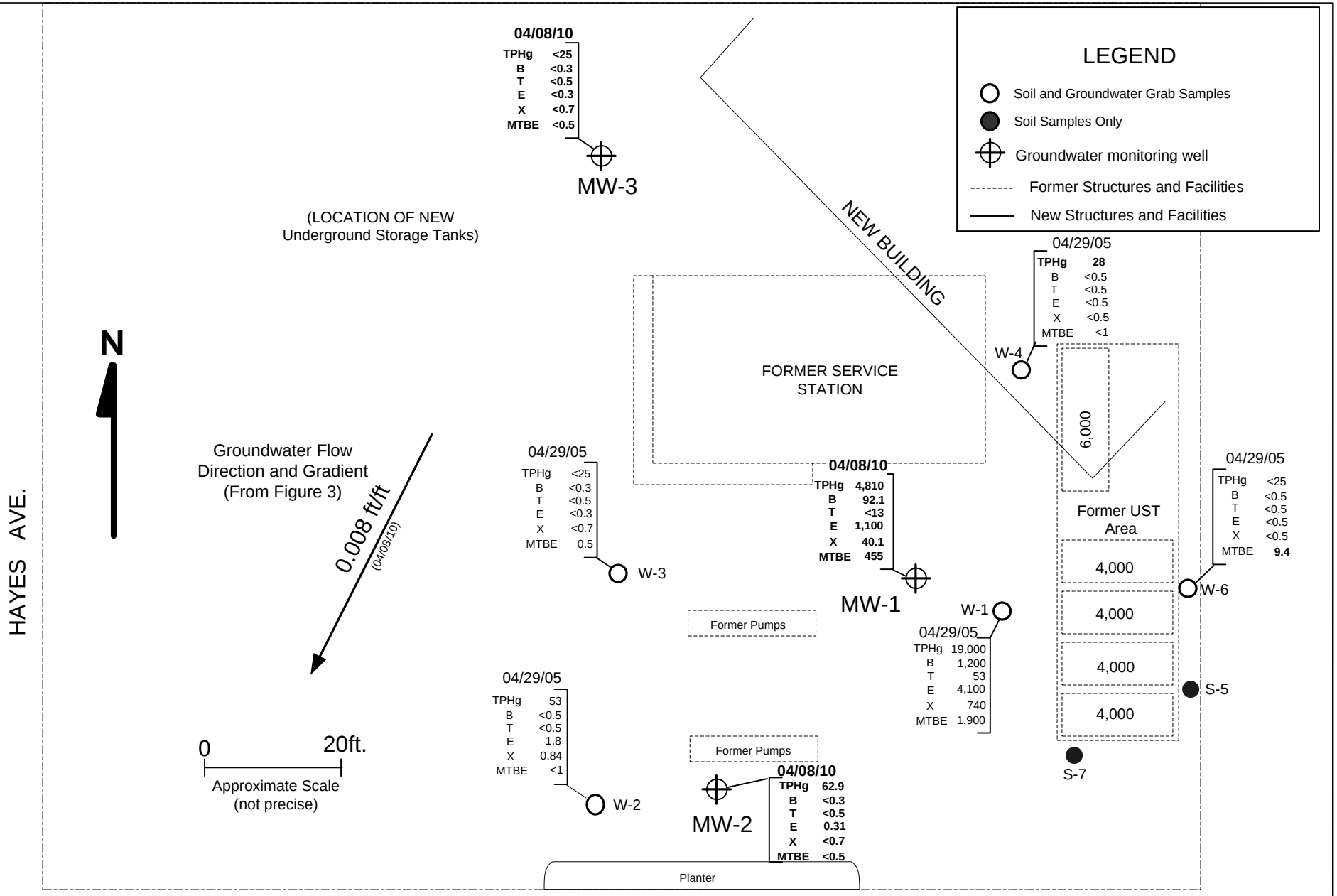


RM ASSOCIATES
Environmental Consultants

REVISED	REVIEWED BY	SITE MAP	FIGURE
RM 05/18/07		(showing approximate locations of former and existing structures and former and existing sampling locations)	2
8.5 x 11	REVIEW DATE	4186 EAST AVENUE, LIVERMORE, CALIFORNIA	PROJECT 101-6404



RM ASSOCIATES Environmental Consultants	REVISED RM 05/18/07	REVIEWED BY	**GROUNDWATER ELEVATION CONTOURS (04/08/10)**	FIGURE **3**
	8.5 x 11	REVIEW DATE	4186 EAST AVENUE, LIVERMORE, CALIFORNIA	PROJECT 101-6404

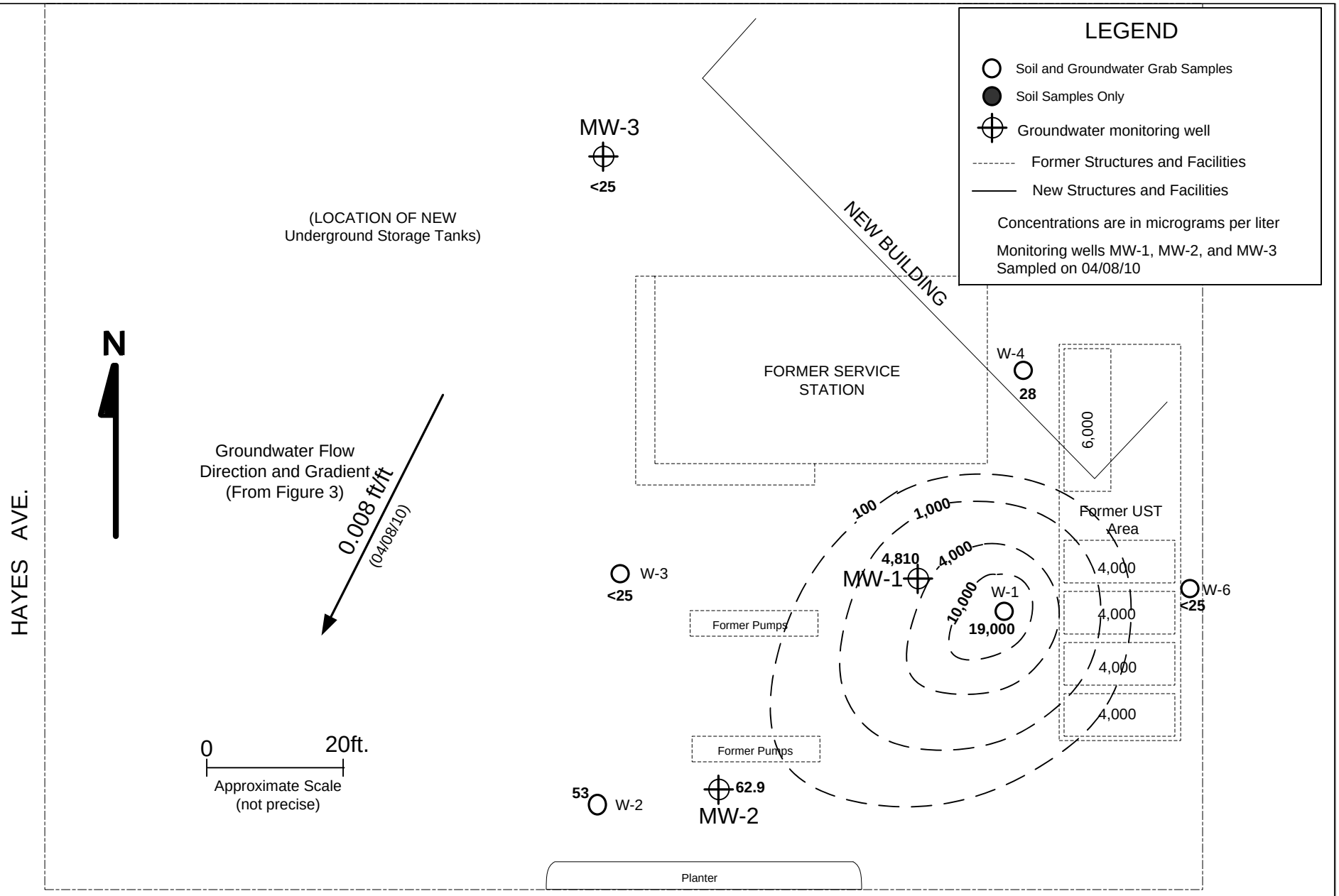


RM ASSOCIATES
Environmental Consultants

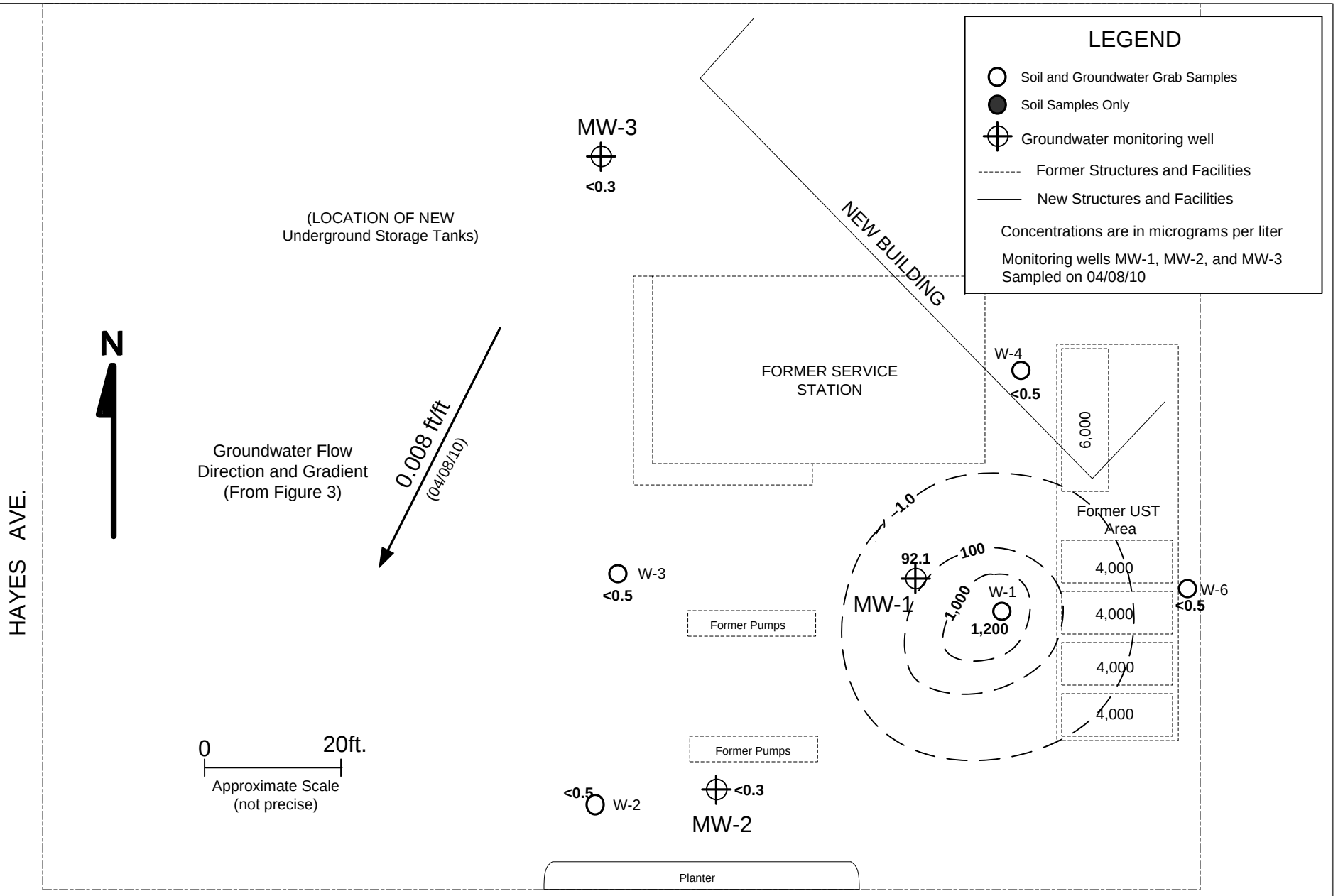
REVISED		REVIEWED BY
RM 05/18/07		
8.5 x 11		REVIEW DATE

DISTRIBUTION OF GROUNDWATER ANALYTICAL RESULTS
(Distribution Based on Last Sampling Event at Each Sampling Location)
4186 EAST AVENUE, LIVERMORE, CALIFORNIA

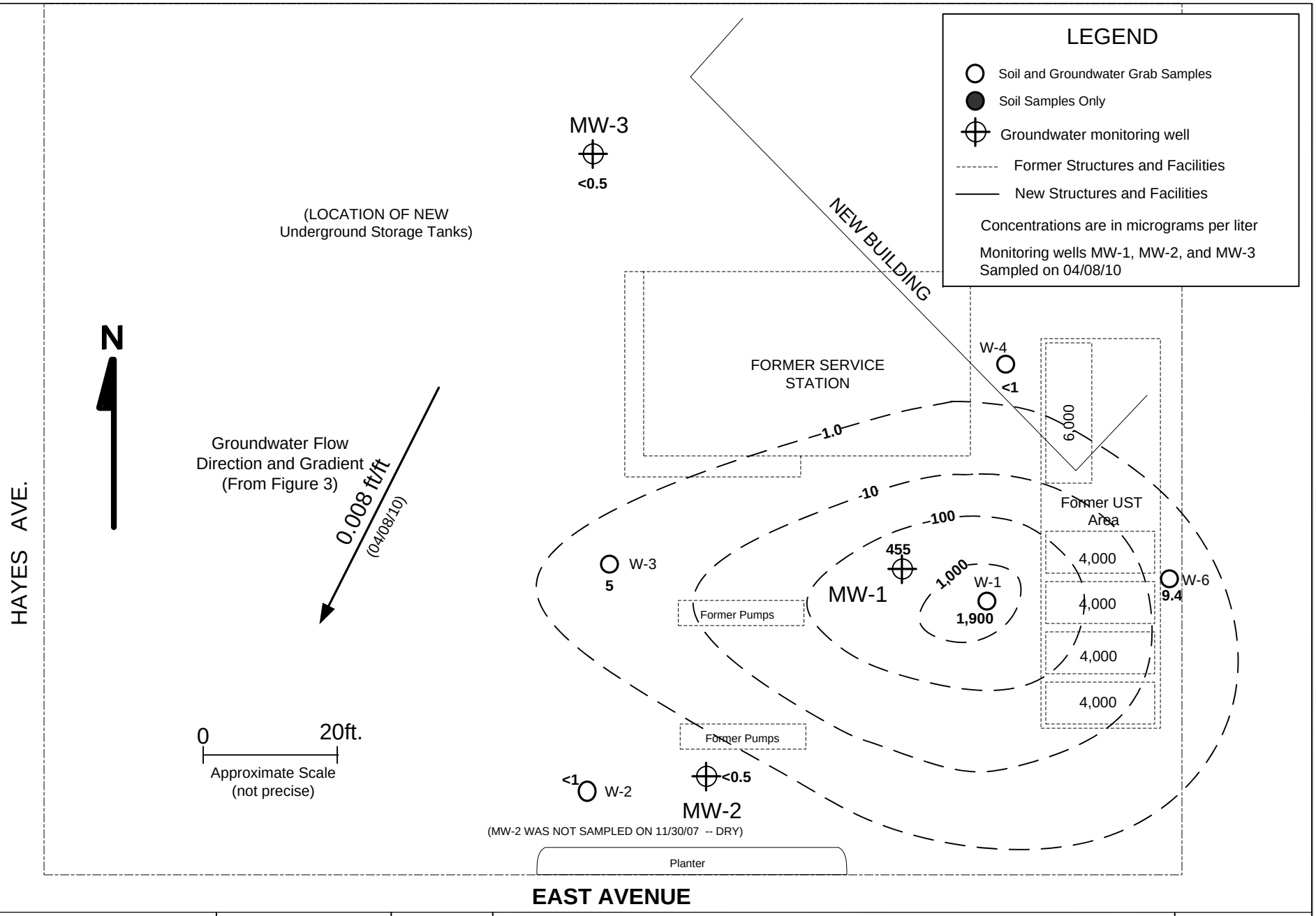
FIGURE **4**
PROJECT 101-6404



RM ASSOCIATES Environmental Consultants	REVISED RM 05/18/07	REVIEWED BY	**ISO-CONCENTRATION CONTOURS FOR TPHg** (Contours Based on Last Sampling Event at Each Sampling Location)	FIGURE 5
	8.5 x 11	REVIEW DATE	4186 EAST AVENUE, LIVERMORE, CALIFORNIA	PROJECT 101-6404



RM ASSOCIATES Environmental Consultants	REVISED RM 05/18/07	REVIEWED BY	**ISO-CONCENTRATION CONTOURS FOR BENZENE** (Contours Based on Last Sampling Event at Each Sampling Location)	FIGURE 6
	8.5 x 11	REVIEW DATE	4186 EAST AVENUE, LIVERMORE, CALIFORNIA	PROJECT 101-6404



RM ASSOCIATES
Environmental Consultants

REVISED	REVIEWED BY	ISO-CONCENTRATION CONTOURS FOR MTBE	FIGURE
RM 05/18/07		(Contours Based on Last Sampling Event at Each Sampling Location)	7
8.5 x 11	REVIEW DATE	4186 EAST AVENUE, LIVERMORE, CALIFORNIA	PROJECT 101-6404

Figure 8 - Comparison of GW Elevations with TPHg Concentrations - MW-1

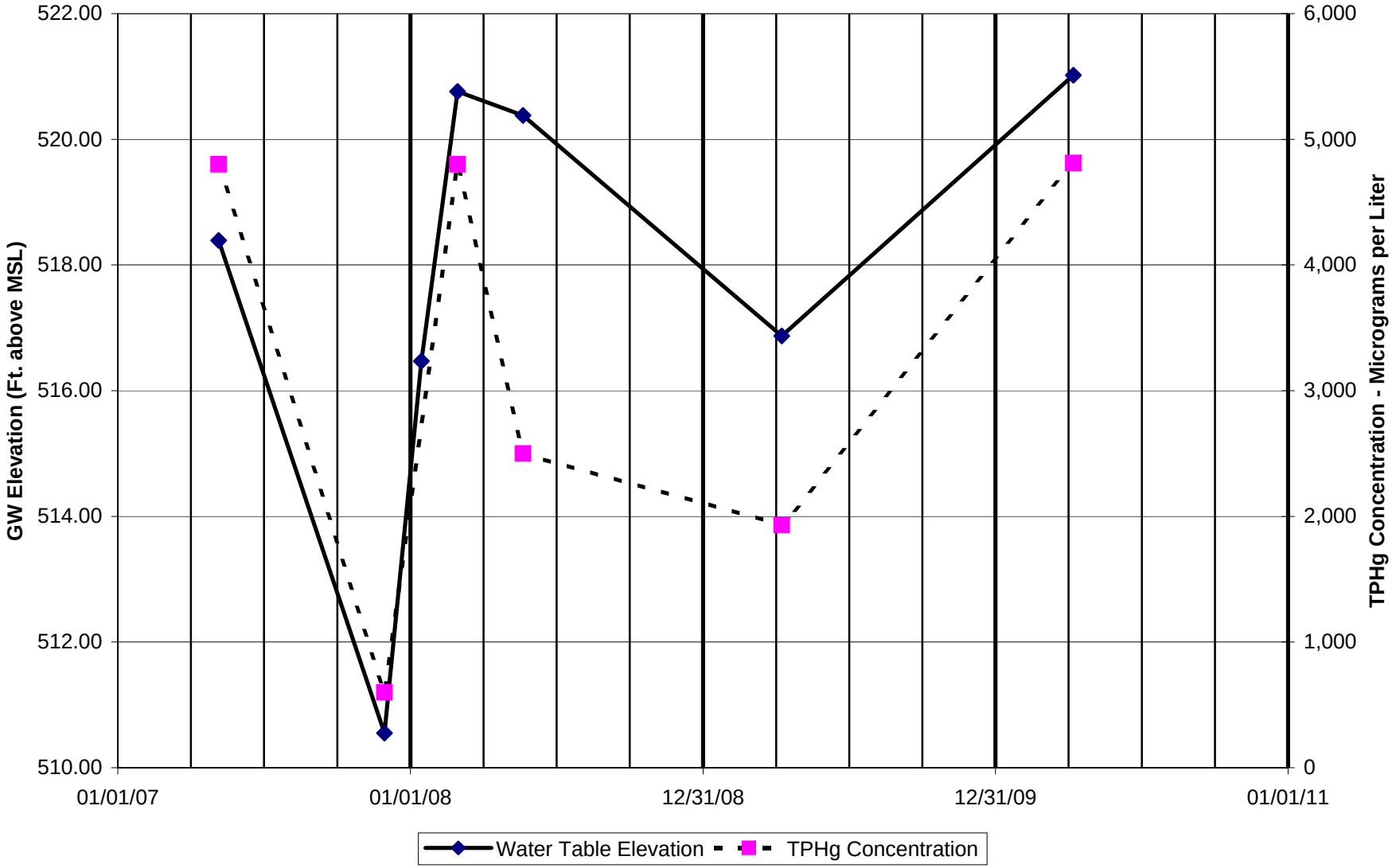


Figure 9 - Comparison of GW Elevations with Benzene Concentrations - MW-1

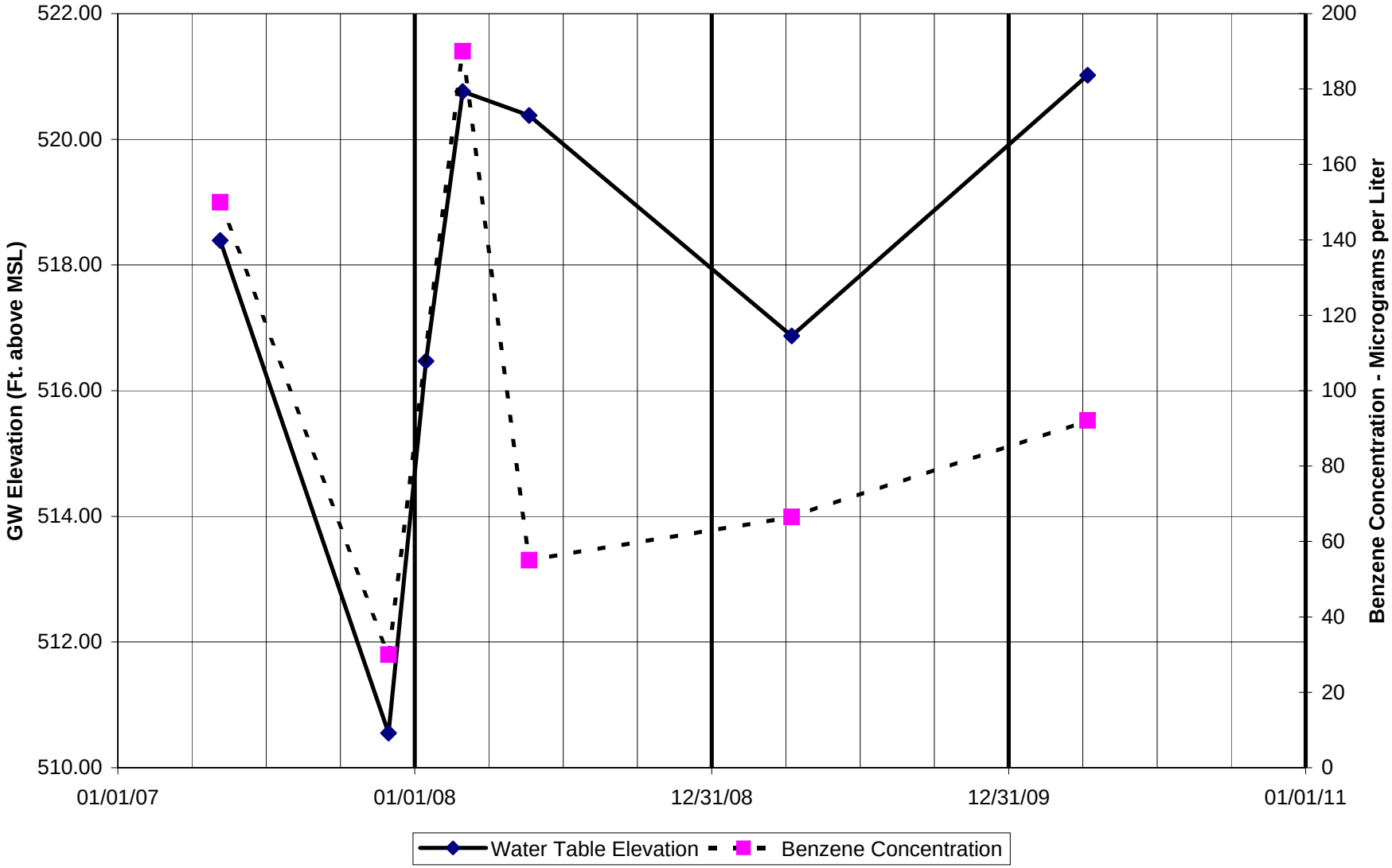
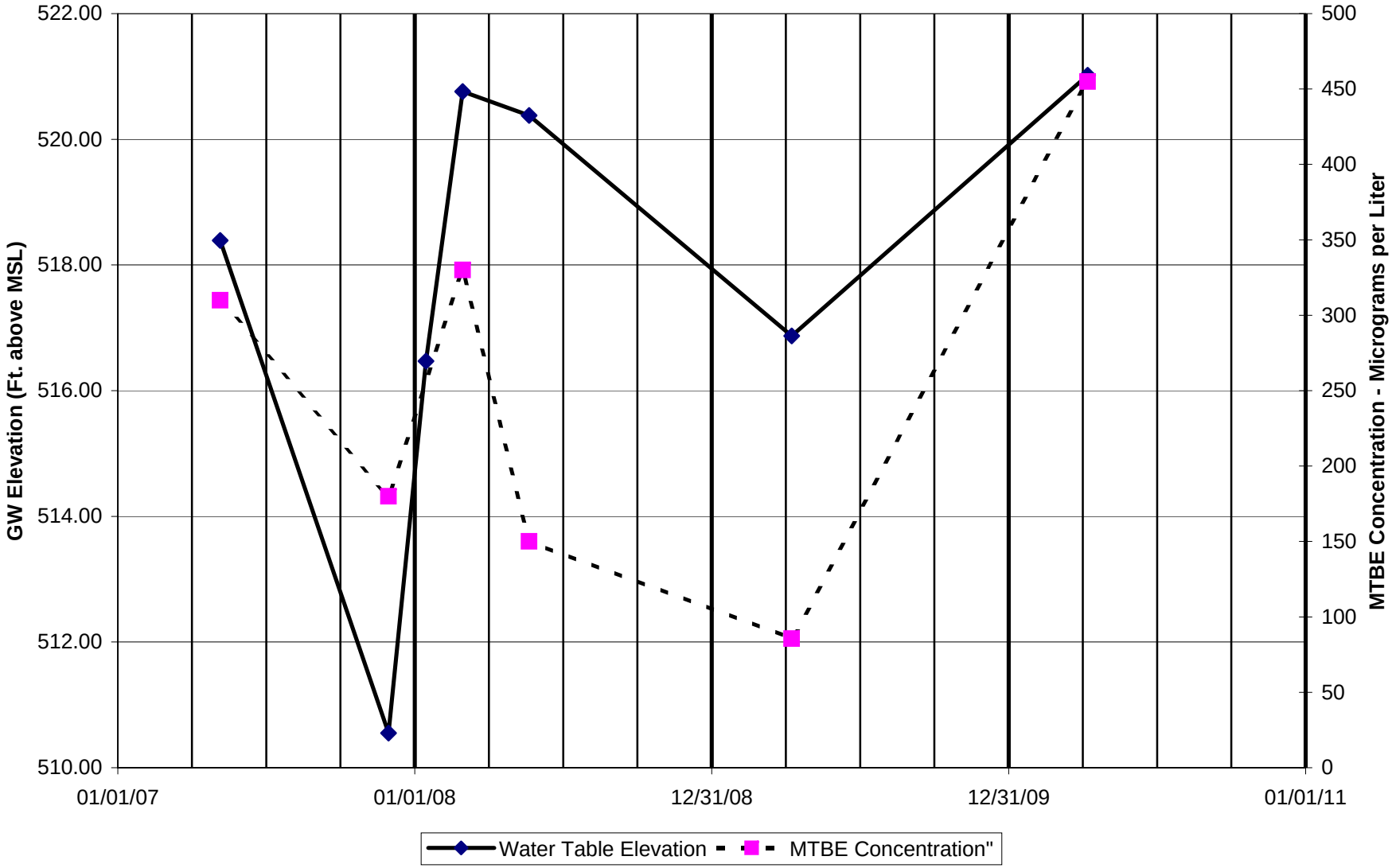


Figure 10 - Comparison of GW Elevations with MTBE Concentrations - MW-1



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 chain-of-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

GROUNDWATER MONITORING WELL PURGE/SAMPLING WORKSHEET

Project Name: Rotten Robbie 64 **Project Number:** 101-6404
Address: 4186 East Avenue **Reg. Agency:**
Livermore, CA **Other Reg's:**
Well Number: MW- 1 **Date:** 4/8/10 **Well Lock Number:** 2147
Sampler(s): Jim Pavick

Stagnant Volume Calculation	Well Casing Diameter (inches)	Total Well Depth (ft.)	Initial Depth to Groundwater (ft.)	Stagnant Volume (gal.)
	2	30.00	18.48	1.95

Stagnant Volume Calculation

Well Casing Diameter (inches)		Linear Feet. of Groundwater		Gallons per Linear Foot of Ground-Water =	Stagnant Volume (gal.)
2	Total Well Depth (ft.)	-	Depth to GW (ft.)	*0.17 =	"
3	"		"	*0.37 =	"
4	"		"	*0.66 =	"
6	"		"	*1.5 =	"

Groundwater Surface Inspection (bailer Check
0 Floating Product (ft.) (in.)
NO Sheen/Iridescence
YES/NO Odor
Remarks:
DO:(mg/l) 2.4 ORP:(mV) 156 TDS:(PPM) 538
Sample Date: 4/8/10 Time: 1020
Turbidity: FTU 181

Groundwater Purging — Purge Method Used
Depth of Intake from TOC: 22.00
_____ Stainless Steel Bailer: ✓ Submersible Pump
Other:

Purged Water Containment
6 gals stored in _____ 55 gal drum(s)
✓ Processed through GAC system
Any previous drums? _____ Capacity_____

Stagnant Volumes Purged	Volume Purged (gal)	Time	Temp (°C)	pH	Conductivity umhos us	Color/Turbidity (other)
0	-0-	1002	18.1	7.4	942	Clear / Med
1	2	1004	18.5	7.3	803	" / Low
2	4	1006	19.0	7.3	826	" / "
3	6	1008	19.1	7.3	825	" / "
4						
5						
6						
7						
8						
9						
10						

Groundwater Sampling — Water Level Recovery

Depth to GW (ft.)	
(P) After purging	21.58
(I) Initially	18.48
(S) Before sampling	19.00

(P-S) / (P-I) X 100 = 83 % Total Recovery

80% Recovery: S = P - 0.8 X (P-I)

Sample Containers

	How Many	Preservatives
1 Liter, amber glass	1	NONE
40 ml, VOA	4	HCL pH2
500 ml, Poly		

Other:
Sample Device: Bailer X Submersible Pump _____

Field Measurement Devices:
Temperature, Conductivity, pH, ORP: Hanna Water Test
Turbidity: Hanna HI 731313 TDS: HM Digital DO: SM 600

Notes:

GROUNDWATER MONITORING WELL PURGE/SAMPLING WORKSHEET

Project Name: Rotten Robbie 64 **Project Number:** 101-6404
Address: 4186 East Avenue **Reg. Agency:**
Livermore, CA **Other Reg's:**
Well Number: MW- 2 **Date:** 4/8/10 **Well Lock Number:** 2147
Sampler(s): Jim Pavick

Stagnant Volume Calculation	Well Casing Diameter (inches)	Total Well Depth (ft.)	Initial Depth to Groundwater (ft.)	Stagnant Volume (gal.)
	2	29.00	18.48	1.78

Stagnant Volume Calculation

Well Casing Diameter (inches)		Linear Feet. of Groundwater		Gallons per Linear Foot of Ground-Water =	Stagnant Volume (gal.)
2	Total Well Depth (ft.)	-	Depth to GW (ft.)	*0.17 =	"
3	"		"	*0.37 =	"
4	"		"	*0.66 =	"
6	"		"	*1.5 =	"

Groundwater Surface Inspection (bailer Check
0 Floating Product (ft.) (in.)
NO Sheen/Iridescence
NO Odor
Remarks:
DO:(mg/l) 3.7 ORP:(mV) 154 TDS:(PPM) 759
Sample Date: 4/8/10 Time: 955
Turbidity: FTU 135

Groundwater Purging — Purge Method Used
Depth of Intake from TOC: 21.50
_____ Stainless Steel Bailer: ✓ Submersible Pump
Other:

Purged Water Containment
7 gals stored in _____ 55 gal drum(s)
✓ Processed through GAC system
Any previous drums? _____ Capacity_____

Stagnant Volumes Purged	Volume Purged (gal)	Time	Temp (°C)	pH	Conductivity umhos us	Color/Turbidity (other)
0	-0-	9:50	18.1	7.5	802	Brown / High
1	2	931	19.1	7.5	846	" / "
2	4	933	19.2	7.5	909	Clear / Med
3	6	935	19.2	7.5	903	" / Low
4						
5						
6						
7						
8						
9						
10						

Groundwater Sampling — Water Level Recovery

Depth to GW (ft.)	
(P) After purging	20.78
(I) Initially	18.48
(S) Before sampling	18.48

(P-S) / (P-I) X 100 = 100 % Total Recovery

80% Recovery: S = P - 0.8 X (P-I)

Sample Containers

	How Many	Preservatives
1 Liter, amber glass	1	NONE
40 ml, VOA	4	HCL pH2
500 ml, Poly		

Other:
Sample Device: Bailer X Submersible Pump _____

Field Measurement Devices:
Temperature, Conductivity, pH, ORP: Hanna Water Test
Turbidity: Hanna HI 731313 TDS: HM Digital DO: SM 600

Notes:

GROUNDWATER MONITORING WELL PURGE/SAMPLING WORKSHEET

Project Name: Rotten Robbie 64 **Project Number:** 101-6404
Address: 4186 East Avenue **Reg. Agency:**
Livermore, CA **Other Reg's:**
Well Number: MW- 3 **Date:** 4/8/10 **Well Lock Number:** 2147
Sampler(s): Jim Pavick

Stagnant Volume Calculation	Well Casing Diameter (inches)	Total Well Depth (ft.)	Initial Depth to Groundwater (ft.)	Stagnant Volume (gal.)
	2	30.00	18.43	1.96

Stagnant Volume Calculation

Well Casing Diameter (inches)		Linear Feet. of Groundwater		Gallons per Linear Foot of Ground-Water =	Stagnant Volume (gal.)
2	Total Well Depth (ft.)	-	Depth to GW (ft.)	*0.17 =	"
3	"		"	*0.37 =	"
4	"		"	*0.66 =	"
6	"		"	*1.5 =	"

Groundwater Surface Inspection (bailer Check
0 Floating Product (ft.) (in.)
NO Sheen/Iridescence
NO Odor
Remarks:
DO:(mg/l) 4.6 ORP:(mV) 161 TDS:(PPM) 586
Sample Date: 4/8/10 Time: ~~1145~~ 1045
Turbidity: FTU 141

Groundwater Purging
Purge Method Used
Depth of Intake from TOC: 21.00
_____ Stainless Steel Bailer: ✓ Submersible Pump
Other:

Purged Water Containment
6 gals stored in _____ 55 gal drum(s)
✓ Processed through GAC system
Any previous drums? _____ Capacity_____

Stagnant Volumes Purged	Volume Purged (gal)	Time	Temp (°C)	pH	Conductivity umhos us	Color/Turbidity (other)
0	-0-	1029	18.7	7.5	621	clear / Med
1	2	1031	18.8	7.5	886	" "
2	4	1033	18.6	7.5	862	" "
3	6	1035	18.7	7.5	868	" "
4						
5						
6						
7						
8						
9						
10						

Groundwater Sampling
Water Level Recovery

Depth to GW (ft.)	
(P) After purging	20.43
(I) Initially	18.43
(S) Before sampling	18.43

(P-S) / (P-I) X 100 = 100 % Total Recovery

80% Recovery: S = P - 0.8 X (P-I)

Sample Containers

	How Many	Preservatives
1 Liter, amber glass	1	NONE
40 ml, VOA	4	HCL pH2
500 ml, Poly		

Other:
Sample Device: Bailer X Submersible Pump _____

Field Measurement Devices:
Temperature, Conductivity, pH, ORP: Hanna Water Test
Turbidity: Hanna HI 731313 TDS: HM Digital DO: SM 600

Notes:

Rotten Robbie # 64 Water Levels 4/8/10

MW-1	18.48
MW-2	18.48
MW-3	18.43

APPENDIX C

CERTIFIED ANALYTICAL RESULTS

Technical Report for

RM Associates

T0600152516-Rotten Robbie No.64,4186 East Avenue,Livermore,CA

101-6404

Accutest Job Number: C10561

Sampling Date: 04/08/10

Report to:

RM Associates
16401 Meadow Vista Drive Suite 102
Pioneer, CA 95666
Rmichelson@volcano.net

ATTN: Ron Michelson

Total number of pages in report: **26**

ACCUTEST LABORATORIES 50 YEARS 1956-2006

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Laurie Glantz-Murphy
Laboratory Director

Client Service contact: Diane Theesen 408-588-0200

Certifications: CA (08258CA)

Sections: 1 2 3 4 5

Table of Contents

Section 1: Sample Summary **3**
Section 2: Sample Results **4**
2.1: C10561-1: MW-1 5
2.2: C10561-2: MW-2 7
2.3: C10561-3: MW-3 9
Section 3: Misc. Forms **11**
3.1: Chain of Custody 12
Section 4: GC/MS Volatiles - QC Data Summaries **14**
4.1: Method Blank Summary 15
4.2: Blank Spike Summary 17
4.3: Matrix Spike/Matrix Spike Duplicate Summary 21
Section 5: GC Semi-volatiles - QC Data Summaries **23**
5.1: Method Blank Summary 24
5.2: Blank Spike/Blank Spike Duplicate Summary 25
5.3: Matrix Spike/Matrix Spike Duplicate Summary 26

Sample Summary

RM Associates

Job No: C10561

T0600152516-Rotten Robbie No.64,4186 East Avenue,Livermore,CA
Project No: 101-6404

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C10561-1	04/08/10	10:20	JP	04/08/10	AQ	Ground Water	MW-1
C10561-2	04/08/10	09:55	JP	04/08/10	AQ	Ground Water	MW-2
C10561-3	04/08/10	10:45	JP	04/08/10	AQ	Ground Water	MW-3

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	C10561-1	**Date Sampled:**	04/08/10
Matrix:	AQ - Ground Water	**Date Received:**	04/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	T0600152516-Rotten Robbie No.64,4186 East Avenue,Livermore,CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N14465.D	25	04/13/10	TF	n/a	n/a	VN490
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	92.1	25	7.5	ug/l	
108-88-3	Toluene	ND	25	13	ug/l	
100-41-4	Ethylbenzene	1100	25	7.5	ug/l	
1330-20-7	Xylene (total)	40.1	50	18	ug/l	J
106-93-4	1,2-Dibromoethane	ND	25	5.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	25	7.5	ug/l	
108-20-3	Di-Isopropyl ether	ND	130	13	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	130	13	ug/l	
1634-04-4	Methyl Tert Butyl Ether	455	25	13	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	130	13	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	250	130	ug/l	
	TPH-GRO (C6-C10)	4810	1300	630	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		60-130%
2037-26-5	Toluene-D8	106%		60-130%
460-00-4	4-Bromofluorobenzene	107%		60-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-1		
Lab Sample ID:	C10561-1	**Date Sampled:**	04/08/10
Matrix:	AQ - Ground Water	**Date Received:**	04/08/10
Method:	SW846 8015B M SW846 3510C	**Percent Solids:**	n/a
Project:	T0600152516-Rotten Robbie No.64,4186 East Avenue,Livermore,CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG13026.D	1	04/12/10	JH	04/12/10	OP2007	GGG413
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel) [a]	ND	0.094	0.047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	80%		45-140%

(a) 0.79 mg/L Gasoline compounds in the Diesel range. No Diesel pattern present.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-2
Lab Sample ID: C10561-2 **Date Sampled:** 04/08/10
Matrix: AQ - Ground Water **Date Received:** 04/08/10
Method: SW846 8260B **Percent Solids:** n/a
Project: T0600152516-Rotten Robbie No.64,4186 East Avenue,Livermore,CA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N14462.D	1	04/13/10	TF	n/a	n/a	VN490
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	5.0	ug/l	
	TPH-GRO (C6-C10)	62.9	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		60-130%
2037-26-5	Toluene-D8	106%		60-130%
460-00-4	4-Bromofluorobenzene	99%		60-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-2		
Lab Sample ID:	C10561-2	**Date Sampled:**	04/08/10
Matrix:	AQ - Ground Water	**Date Received:**	04/08/10
Method:	SW846 8015B M SW846 3510C	**Percent Solids:**	n/a
Project:	T0600152516-Rotten Robbie No.64,4186 East Avenue,Livermore,CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG13027.D	1	04/12/10	JH	04/12/10	OP2007	GGG413
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel)	ND	0.094	0.047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	82%		45-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-3		
Lab Sample ID:	C10561-3	**Date Sampled:**	04/08/10
Matrix:	AQ - Ground Water	**Date Received:**	04/08/10
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	T0600152516-Rotten Robbie No.64,4186 East Avenue,Livermore,CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N14437.D	1	04/12/10	TF	n/a	n/a	VN489
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	0.31	1.0	0.30	ug/l	J
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	5.0	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		60-130%
2037-26-5	Toluene-D8	104%		60-130%
460-00-4	4-Bromofluorobenzene	97%		60-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID: MW-3
Lab Sample ID: C10561-3 **Date Sampled:** 04/08/10
Matrix: AQ - Ground Water **Date Received:** 04/08/10
Method: SW846 8015B M SW846 3510C **Percent Solids:** n/a
Project: T0600152516-Rotten Robbie No.64,4186 East Avenue,Livermore,CA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG13028.D	1	04/12/10	JH	04/12/10	OP2007	GGG413
Run #2							

	Initial Volume	Final Volume
Run #1	1060 ml	1.0 ml
Run #2		

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel)	ND	0.094	0.047	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	82%		45-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

"RMACAP674" C10561

RM Associates

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

CHAIN OF CUSTODY FORM

Turnaround Time: (working days) — X Standard; 7 day; 5 day; 3 day; 2 day; 24 hr; 2-8 hr; other (_____)

Project Name: Rotten Robbie No. 64 — Client: Robinson Oil Corporation
Project Number: 101-6404 — Task: 1
Global I.D.: T0600152516
Project Address: 4186 East Avenue, Livermore, California
Laboratory: Entech Analytical Labs — Contact: Simon Hague
Lab Address/Phone: (408) 588-0200
RMA Project Manager: Ronald W. Michelson
RMA PM Ph. No.: (209) 295-7903 — Email: Rmichelson@volcano.net
RMA Sampler: ~~Ron Michelson~~ JCM — Phone: (209) 295-6218

RMA Sample ID	Sample Information: Date	Time	Matrix: Soil	Water	Vapor	Container Information: No.	Type	Preservative	Field Pt. I.D.- Check if same as Sample I.D.	Analyses Requested: TPHg/BTEX/5 Fuel Oxy's/ 1,2 DCA & EDB (8260B)	TPHd (8015M)
MW-1 -1	4/8/10	1020		X		4	40 ml. VOA	HCL	X	X	
MW-1 ↓		1020		X		1	1 Liter Amb		X		X
MW-2 -2		955		X		4	40 ml. VOA	HCL	X	X	
MW-2 ↓		955		X		1	1 Liter Amb		X		X
MW-3 -3		1045		X		4	40 ml. VOA	HCL	X	X	
MW-3 ↓		1045		X		1	1 Liter Amb		X		X

Additional Comments: Invoice to Robinson Oil Corporation, 4250 Williams Road, San Jose, CA 95129 Attn. Tom Robinson, (408) 257-22
Report to RMA

EDF Format X

Relinquished By:	Date/Time: 4/8/10 1305	Received By:	Date/Time: 4/8/10 1305
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

Sample Condition. Good? Yes ___ No ___ On Ice? Yes ___ No ___ Cooler Temp ____ Transportation Method: Page 1 of 1

4 vials each (w/HCl) (x3)
1x Liit Amber each N/P (x3)
Temp | 10.2 - 0.2 = 10°C

White - Lab
L:\Admin\Subsurface Group\Chain of Custody Master for GW Monitoring; revised 05/08/01

Yellow - Lab

Pink - ATC

C10561: Chain of Custody
Page 1 of 2

Accutest Laboratories Northern California
Sample Receiving Check List

Job#: C10561
Sample Control Rep. Initial: EK
RMACAP674

Review Chain of Custody **Chain of Custody is to be complete and legible.**

- ☒ Are these regulatory (~~NPDES~~) samples? ~~CWA~~ — (Yes) / No
- ☒ Is pH requested? — Yes / (No)
- N/A ☒ Was Client informed that hold time is 15 min? Yes / No Continue Yes / No
- ☒ Was ortho-Phosphate filtered with in 15 min? Yes / No Continue Yes / No
- ☒ Are sample within hold time? — (Yes) / No
- Are sample in danger of exceeding hold-time — Yes / (No)
- ☒ Existing Client? (Yes) / No Existing Project? (Yes) / No

If No: Is Report to info complete and legible, including;
□ deliverable □ Name □ Address □ phone □ e-mail
Is Bill to info complete and legible, including;
□ PO# □ Credit card □ Contact □address □ phone □ e-mail
Is Contact and/or Project Manager identified, including;
□ phone □ e-mail

- ☒ Project name / number □ Special requirements? — (Yes) / No
- ☒ Sample IDs / date & time of collection provided? — (Yes) / No
- ☒ Is Matrix listed and correct? — (Yes) / No
- ☒ Analyses listed we do or client has authorized a subcontract? — (Yes) / No
- ☒ Chain is signed and dated by both client and sample custodian? — (Yes) / No
- ☒ TAT requested available? (Yes) / No Approved by PM

Review Coolers:

- ☒ Were Coolers temperatures measured at ≤6°C? Cooler # 1 Temp 10 °C
  - If cooler is outside the ≤6°C; note down below the affected bottles in that cooler
  - Note that ANC does NOT accept evidentiary samples. (We do not lock refrigerators)
- ☒ Shipment Received Method walk In
- ☒ Custody Seals: Present: Yes / (No) If Yes; Unbroken: Yes / No

Review of Sample Bottles: If you answer no, explain to the side

- ☒ Chain matches bottle labels? (Yes) / No ☒ Sample bottle intact? (Yes) / No
- ☒ Is there enough sample volume in proper bottle for requested analyses? (Yes) / No
- ☒ Proper Preservatives? (Yes) / No Check pH on preserved samples except 1664, 625, 8270 and (VOAs).
- ☒ Headspace-VOAs? **Greater than 6mm in diameter Yes / (No)**
  List sample ID and affected container

Client Sample ID	pH Check	Other Comments/Issues

Non-Compliance issues and discrepancies on the COC are forwarded to Project Management

\\Anc-srv-file1\d$\Entech-Data\Laboratory\SOPs\SOP_CompleteListing\SC001F1_1_Form1_SampleControl_SampleReceivingChecklist_2010-02-15.doc

C10561: Chain of Custody
Page 2 of 2

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C10561
Account: RMACAP RM Associates
Project: T0600152516-Rotten Robbie No.64,4186 East Avenue,Livermore,CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN489-MB	N14427.D	1	04/12/10	TF	n/a	n/a	VN489

The QC reported here applies to the following samples: **Method:** SW846 8260B

C10561-3

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	5.0	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	60-130%
2037-26-5	Toluene-D8	105%	60-130%
460-00-4	4-Bromofluorobenzene	94%	60-130%

Method Blank Summary

Job Number: C10561
Account: RMACAP RM Associates
Project: T0600152516-Rotten Robbie No.64,4186 East Avenue,Livermore,CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN490-MB	N14456.D	1	04/13/10	TF	n/a	n/a	VN490

The QC reported here applies to the following samples: **Method:** SW846 8260B

C10561-1, C10561-2

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.30	ug/l	
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	5.0	0.50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	5.0	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	105%	60-130%
2037-26-5	Toluene-D8	105%	60-130%
460-00-4	4-Bromofluorobenzene	99%	60-130%

Blank Spike Summary

Job Number: C10561
Account: RMACAP RM Associates
Project: T0600152516-Rotten Robbie No.64,4186 East Avenue,Livermore,CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN489-BS	N14428.D	1	04/12/10	TF	n/a	n/a	VN489

The QC reported here applies to the following samples: **Method:** SW846 8260B

C10561-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	18.2	91	60-130
106-93-4	1,2-Dibromoethane	20	21.2	106	60-130
107-06-2	1,2-Dichloroethane	20	17.8	89	60-130
108-20-3	Di-Isopropyl ether	20	16.1	81	60-130
100-41-4	Ethylbenzene	20	20.6	103	60-130
637-92-3	Ethyl Tert Butyl Ether	20	17.3	87	60-130
1634-04-4	Methyl Tert Butyl Ether	20	16.3	82	60-130
994-05-8	Tert-Amyl Methyl Ether	20	17.8	89	60-130
75-65-0	Tert-Butyl Alcohol	100	94.8	95	60-130
108-88-3	Toluene	20	19.6	98	60-130
1330-20-7	Xylene (total)	60	64.4	107	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	103%	60-130%
2037-26-5	Toluene-D8	102%	60-130%
460-00-4	4-Bromofluorobenzene	101%	60-130%

Blank Spike Summary

Job Number: C10561
Account: RMACAP RM Associates
Project: T0600152516-Rotten Robbie No.64,4186 East Avenue,Livermore,CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN489-BS	N14429.D	1	04/12/10	TF	n/a	n/a	VN489

The QC reported here applies to the following samples: **Method:** SW846 8260B

C10561-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
	TPH-GRO (C6-C10)	125	118	94	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	60-130%
2037-26-5	Toluene-D8	103%	60-130%
460-00-4	4-Bromofluorobenzene	97%	60-130%

Blank Spike Summary

Job Number: C10561
Account: RMACAP RM Associates
Project: T0600152516-Rotten Robbie No.64,4186 East Avenue,Livermore,CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN490-BS	N14457.D	1	04/13/10	TF	n/a	n/a	VN490

The QC reported here applies to the following samples: **Method:** SW846 8260B

C10561-1, C10561-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	19.0	95	60-130
106-93-4	1,2-Dibromoethane	20	22.2	111	60-130
107-06-2	1,2-Dichloroethane	20	19.6	98	60-130
108-20-3	Di-Isopropyl ether	20	18.2	91	60-130
100-41-4	Ethylbenzene	20	21.3	107	60-130
637-92-3	Ethyl Tert Butyl Ether	20	19.6	98	60-130
1634-04-4	Methyl Tert Butyl Ether	20	18.6	93	60-130
994-05-8	Tert-Amyl Methyl Ether	20	19.8	99	60-130
75-65-0	Tert-Butyl Alcohol	100	113	113	60-130
108-88-3	Toluene	20	20.2	101	60-130
1330-20-7	Xylene (total)	60	63.8	106	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	106%	60-130%
2037-26-5	Toluene-D8	104%	60-130%
460-00-4	4-Bromofluorobenzene	104%	60-130%

Blank Spike Summary

Job Number: C10561
Account: RMACAP RM Associates
Project: T0600152516-Rotten Robbie No.64,4186 East Avenue,Livermore,CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VN490-BS	N14458.D	1	04/13/10	TF	n/a	n/a	VN490

The QC reported here applies to the following samples: **Method:** SW846 8260B

C10561-1, C10561-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
	TPH-GRO (C6-C10)	125	123	98	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	60-130%
2037-26-5	Toluene-D8	105%	60-130%
460-00-4	4-Bromofluorobenzene	102%	60-130%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C10561
Account: RMACAP RM Associates
Project: T0600152516-Rotten Robbie No.64,4186 East Avenue,Livermore,CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C10565-7MS	N14446.D	1	04/13/10	TF	n/a	n/a	VN489
C10565-7MSD	N14447.D	1	04/13/10	TF	n/a	n/a	VN489
C10565-7	N14434.D	1	04/12/10	TF	n/a	n/a	VN489

The QC reported here applies to the following samples: **Method:** SW846 8260B

C10561-3

CAS No.	Compound	C10565-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	17.7	89	18.2	91	3	60-130/25
106-93-4	1,2-Dibromoethane	ND		20	19.7	99	20.3	102	3	60-130/25
107-06-2	1,2-Dichloroethane	ND		20	17.4	87	17.5	88	1	60-130/25
108-20-3	Di-Isopropyl ether	ND		20	15.2	76	16.0	80	5	60-130/25
100-41-4	Ethylbenzene	ND		20	19.8	99	20.6	103	4	60-130/25
637-92-3	Ethyl Tert Butyl Ether	ND		20	16.3	82	17.1	86	5	60-130/25
1634-04-4	Methyl Tert Butyl Ether	ND		20	14.9	75	15.8	79	6	60-130/25
994-05-8	Tert-Amyl Methyl Ether	ND		20	16.7	84	17.5	88	5	60-130/25
75-65-0	Tert-Butyl Alcohol	ND		100	80.2	80	87.4	87	9	60-130/25
108-88-3	Toluene	ND		20	18.7	94	19.4	97	4	60-130/25
1330-20-7	Xylene (total)	ND		60	62.8	105	63.6	106	1	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C10565-7	Limits
1868-53-7	Dibromofluoromethane	100%	103%	101%	60-130%
2037-26-5	Toluene-D8	100%	102%	104%	60-130%
460-00-4	4-Bromofluorobenzene	103%	101%	92%	60-130%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C10561
Account: RMACAP RM Associates
Project: T0600152516-Rotten Robbie No.64,4186 East Avenue,Livermore,CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C10559-1MS	N14466.D	1	04/13/10	TF	n/a	n/a	VN490
C10559-1MSD	N14467.D	1	04/13/10	TF	n/a	n/a	VN490
C10559-1	N14463.D	1	04/13/10	TF	n/a	n/a	VN490

The QC reported here applies to the following samples: **Method:** SW846 8260B

C10561-1, C10561-2

CAS No.	Compound	C10559-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	18.4	92	18.5	93	1	60-130/25
106-93-4	1,2-Dibromoethane	ND		20	20.4	102	21.3	107	4	60-130/25
107-06-2	1,2-Dichloroethane	ND		20	18.7	94	19.0	95	2	60-130/25
108-20-3	Di-Isopropyl ether	ND		20	17.1	86	17.2	86	1	60-130/25
100-41-4	Ethylbenzene	ND		20	20.3	102	20.6	103	1	60-130/25
637-92-3	Ethyl Tert Butyl Ether	ND		20	18.4	92	18.7	94	2	60-130/25
1634-04-4	Methyl Tert Butyl Ether	ND		20	17.3	87	18.1	91	5	60-130/25
994-05-8	Tert-Amyl Methyl Ether	ND		20	18.4	92	19.0	95	3	60-130/25
75-65-0	Tert-Butyl Alcohol	ND		100	99.7	100	111	111	11	60-130/25
108-88-3	Toluene	ND		20	19.1	96	19.4	97	2	60-130/25
1330-20-7	Xylene (total)	ND		60	61.1	102	61.4	102	0	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C10559-1	Limits
1868-53-7	Dibromofluoromethane	104%	104%	107%	60-130%
2037-26-5	Toluene-D8	104%	104%	105%	60-130%
460-00-4	4-Bromofluorobenzene	103%	104%	99%	60-130%

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C10561
Account: RMACAP RM Associates
Project: T0600152516-Rotten Robbie No.64,4186 East Avenue,Livermore,CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2007-MB	HH6247.D	1	04/12/10	JH	04/12/10	OP2007	GHH272

The QC reported here applies to the following samples: **Method:** SW846 8015B M

C10561-1, C10561-2, C10561-3

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (Diesel)	ND	0.10	0.050	mg/l	

CAS No.	Surrogate Recoveries		Limits
630-01-3	Hexacosane	91%	45-140%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C10561
Account: RMACAP RM Associates
Project: T0600152516-Rotten Robbie No.64,4186 East Avenue,Livermore,CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2007-BS	HH6248.D	1	04/12/10	JH	04/12/10	OP2007	GHH272
OP2007-BSD	HH6249.D	1	04/12/10	JH	04/12/10	OP2007	GHH272

The QC reported here applies to the following samples: **Method:** SW846 8015B M

C10561-1, C10561-2, C10561-3

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH (Diesel)	1	0.795	80	0.760	76	5	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	89%	93%	45-140%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C10561
Account: RMACAP RM Associates
Project: T0600152516-Rotten Robbie No.64,4186 East Avenue,Livermore,CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP2007-MS	GG13045.D	1	04/12/10	JH	04/12/10	OP2007	GGG413
OP2007-MSD	GG13046.D	1	04/12/10	JH	04/12/10	OP2007	GGG413
C10582-12	GG13024.D	1	04/12/10	JH	04/12/10	OP2007	GGG413

The QC reported here applies to the following samples: **Method:** SW846 8015B M

C10561-1, C10561-2, C10561-3

CAS No.	Compound	C10582-12 mg/l	Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH (Diesel)	ND		2	1.55	78	1.65	83	6	45-140/25

CAS No.	Surrogate Recoveries	MS	MSD	C10582-12	Limits
630-01-3	Hexacosane	81%	86%	79%	45-140%

APPENDIX D

TRANSMITTAL LETTER

ROBINSON OIL CORPORATION

AN INDEPENDENT FRANCHISEE OF
PACIFIC PRIDE
THE COMMERCIAL FUELING SYSTEM

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

Rotten Robbie

May 4, 2010

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. 5 – 2nd Quarter 2010

Report Date: April 29, 2010

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