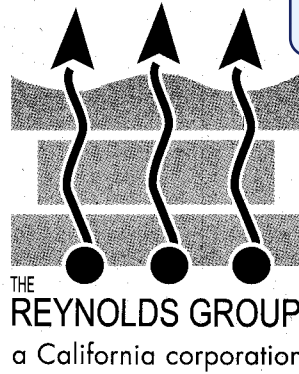


RECEIVED

By Alameda County Environmental Health at 7:48 am, Mar 13, 2007



GROUNDWATER WELL REDEVELOPMENT AND SAMPLING REPORT

**1400 Park Avenue
Emeryville, California**

JANUARY 31, 2007

TRG Project #7103

TABLE OF CONTENTS
GROUNDWATER WELL REDEVELOPMENT
AND SAMPLING REPORT

1400 Park Avenue
Emeryville, California

1.0	EXECUTIVE SUMMARY	1
2.0	BACKGROUND	2
2.1	Involved Parties.....	2
3.0	FIELDWORK	3
3.1	Well Redevelopment.....	3
3.2	Well Surveying	4
3.3	Groundwater Sampling	4
3.4	Groundwater Gradient.....	5
4.0	LABORATORY ANALYSES & RESULTS.....	4
5.0	CONCLUSIONS	6
6.0	RECOMMENDATIONS.....	7

Table 1 -	Summary of Groundwater Elevation Data and Results
Figure 1 -	Site Location Map
Figure 2	Plot Plan with Well Locations and Results
Figure 3 -	Plot Plan with Groundwater Contours
Appendix A -	Laboratory Analytical Results
Appendix B -	Standard Operating Procedures
Appendix C -	Field Data Sheets
Appendix D-	Registered Survey of Groundwater Monitoring Wells
Appendix E -	Site Specific Health & Safety Plan

1.0 EXECUTIVE SUMMARY

As specified in our Workplan for Groundwater Re-Development and Sampling, The Reynolds Group (TRG) conducted groundwater monitoring well redevelopment and sampling activities on January 8 and 15, 2007, at the property located at 1400 Park Avenue in Emeryville, California (Site). This report documents these activities and presents the results of the groundwater monitoring. Based on the results presented herein, TRG is also requesting closure of the Site on behalf of Emeryville Properties.

Included with this report are descriptions of TRG's groundwater monitoring and sampling procedures, groundwater elevation data and laboratory results (**Table 1**), a Site Location Map (**Figure 1**), Site Plot Plan With Groundwater Monitoring Results (**Figure 2**), and Site Plot Plan With Groundwater Contours measured on January 15, 2006 (**Figure 3**). Analytical results with chain of custody documentation are included as **Appendix A**, Standard Operating Procedures are attached as **Appendix B**, and field data sheets are attached as **Appendix C**, Registered Survey of Groundwater Monitoring Wells are attached in **Appendix D** and a Site Specific Health and Safety Plan is found in **Appendix E**.

On January 15, 2007, a week after re-developing the onsite groundwater monitoring wells, the three wells (MW-1, MW-2, and MW-4) were sampled by TRG. Samples were analyzed for Lead by EPA Method 200, for total petroleum hydrocarbons (TPH) as Diesel and as Gasoline by EPA Method 8015, and by EPA Method 8260B for benzene, toluene, ethylbenzene and xylenes (BTEX) and methyl tertiary butyl ether (MTBE) and other fuel oxygenates. Groundwater samples collected from each of the three wells had no detected levels of petroleum hydrocarbons, BTEX or fuel oxygenates. Trace levels of total lead, were detected ranging from 0.005 to 0.006 milligrams per liter (mg/L, see **Table 1** and **Figure 2**). These lead detections are well below the State of California Maximum Contamination Levels for Drinking Water (MCLs) of 0.015 mg/L as specified in the Lead and Copper Rule. Thus lead is not considered an impact to the groundwater.

TRG requests that this Site be granted regulatory closure. Based on results of the recent testing, there are no contaminants which present any threat to groundwater at the Site or any of the neighboring sites. The data presented herein demonstrates that there has been no release of hydrocarbons from the former USTs and ASTs at the Site.

2.0 BACKGROUND

The Site, located at 1400 Park Avenue in Emeryville, California (see **Figure 1 – Site Location Map**), formerly housed facilities operated by Chromex and The Charles Lowe Company. A former below grade concrete vault associated with Chromex's activities was removed in 1992. In December 1995, a "No Further Action" letter was issued for the Site by the Alameda County Health Care Services (ACHCS) for the former chromium vault at the Site. In 1995, Aqua Science Engineers (ASE) excavated and removed hydrocarbon contaminated soils beneath the vertical honing pit area. A total of 75 yards of soil was removed during these excavation activities. Also in 1995, ASE removed three 550 gallon steel underground storage tanks (USTs), which at one time contained diesel, motor oil and gasoline. In 1997, ASE successfully abandoned a half buried 700 gallon steel Above-Ground Storage Tank (AST). Three monitoring wells (MW-1, MW-2 and MW-4) were installed between 1994 and 1996 and still exist at the Site.

2.10 Involved Parties

The Reynolds Group was retained by the Site owner to perform the work associated with this project. The Alameda County Health Care Services Agency is the lead agency on this case as represented by Mr. Steven Plunkett.

TRG was responsible for managing this project and overseeing the developing, surveying, and sampling the groundwater monitoring wells, and producing this report. Associated Laboratories of

Orange, California, provided laboratory analytical services for groundwater samples. Associated Laboratories is a California State Certified Laboratory. Gregg Drilling helped with the well redevelopment, Blaine Tech Services assisted in the groundwater sampling, and Morrow Surveying of Sacramento, a licensed surveyor located all three monitoring wells using a NAD 83 coordinate datum.

3.0 FIELDWORK

3.10 Well Redevelopment

On January 8, 2007, three monitoring wells (MW1, MW2, and MW4) at the Site were re-developed to obtain a representative sample of formation groundwater. The specific field procedures used in the groundwater well development and groundwater sampling are attached in **Appendix B – Standard Operating Procedures**.

Before purging any wells, the depth to groundwater was measured in all wells using a sounder. The depth to water and total depth of each well was recorded on a field data sheet to 0.01 feet accuracy. Development included surging the well screen to remove fines from the filter pack. After surging was completed and the sand content of the bailed water decreased, as determined by another well depth measurement, a submersible pump was used to continue well development. The surge block and submersible were decontaminated with Liquinox and deionized water in between each well development. The three groundwater monitoring wells had a total of 162 gallons purged, with more than three boring volumes removed per well, to remove fines from the filter pack material. At the completion of well development, all physical parameters (temperature, dissolved oxygen, specific conductivity, pH, turbidity, and oxidation reduction potential) had stabilized (see **Appendix C – Field Data Sheets**). All field generated wastes (development water) were containerized on-Site in 55 gallon drums pending profiling for proper off-Site disposal.

3.20 Well Surveying

Since two of the three wells had been previously surveyed, MW-1, MW-3 and MW-4 were surveyed on January 8, 2007, by a California licensed surveyor, Morrow Surveying (see **Appendix D**). The groundwater well location was measured at the top of the casing and referenced to the elevation relative to mean sea level and latitude and longitude using NAD 83. The casing elevations are shown in **Table 1**. The field data sheets are included in **Appendix D**.

3.30 Groundwater Sampling

Prior to gauging and sampling activities on January 15, 2007, an equipment cleaning station was set up that consisted of a wash bucket and two rinse buckets. The wash bucket was filled with tap water and mixed with Liquinox cleaning solution. The first rinse bucket was filled with tap water and the second rinse bucket contained deionized water. The well sounder, pump and discharge hose were all cleaned, flushed and rinsed prior to their initial use on site and between each subsequent use.

Before purging any wells, the depth to groundwater was measured in all wells using a sounder. The depth to water and total depth of each well was recorded on a field data sheet to 0.01 feet accuracy. All wells were sampled using the (low-flow) sampling method shown in Appendix D. A 2" Grundfos Pump with tubing (separate tubing used for each well), attached to a Flow Cell, was used to purge, read, and collect groundwater samples. The pump was placed two feet above the total depth of the wells. The purge rate was one gallon per minute and the total purge volume per well varied from 17 to 27 gallons.

During purging, temperature, pH, conductivity, dissolved oxygen and turbidity were measured and recorded on the field data sheets. Purging continued until the monitored purge water characteristics stabilized. Approximately 68 gallons of purge water was generated during this groundwater

monitoring event. Purge and decontamination water was deposited into 55-gallon drums and stored on site pending profiling for proper offsite disposal.

Groundwater samples were collected directly from the submersible pump's tubing prior to the flow cell. Each water sample was collected into 5 vials (voas) preserved with hydrochloric acid, a 1 Liter Amber bottle (unpreserved), and one 250 mL plastic bottle (unpreserved). The sample containers were filled to avoid headspace and bubbles. The filled sample containers were labeled, placed in an ice-cooled chest, and transported following proper chain-of-custody procedures to Associated Laboratories.

3.40 Groundwater Gradient

Prior to purging and sampling on January 15, 2007, the depth to groundwater in each well was measured from the top of each well casing using an EnviroSupply and Service Inc. Interface Meter Model H. Oil. The groundwater flow direction and slope were calculated by determining the elevation of groundwater in each well relative to surveyed top-of-casing elevations (top of casing minus depth to water). These data are summarized in Table 1. The location and elevation of each well was professionally surveyed by Morrow Surveying Land Surveyors (see Appendix D).

Groundwater gauging during this event was performed in January 15, 2007. The groundwater flow direction was shown to be from the north northeast to the south southwest direction at 0.67 ft. per foot. Groundwater elevation contours for January 2007 are shown on the attached **Figure 3**.

4.0 LABORATORY ANALYSES & RESULTS

All samples were analyzed for TPH as gasoline and diesel by EPA Method 8015, for BTEX, MTBE and other fuel oxygenates by EPA Method 8260B, and for lead by EPA Method 200. The laboratory reports and chain-of-custodies are included as **Appendix A**.

Groundwater samples were collected from a total of three of the monitoring wells (MW1, MW-2, and MW-4). Groundwater samples from each of the three wells had no detected hydrocarbons or VOCs, including gasoline (<50 ug/L), diesel(<0.1 mg/L), benzene (<1 ug/L), toluene (<5 ug/L), ethylbenzene (<5 ug/L), xylenes (<5 ug/L), MTBE (<1 ug/L), di-isopropylether (<1 ug/L), ethyl-tertbutylether (<1 ug/L), tert-amylmethylether (<1 ug/L), and tertiary butyl alcohol (<10 ug/L). Trace concentrations of lead were detected in the three monitoring wells ranging from 0.005 to 0.006 mg/L. When compared to the California State Action Level of 0.015 mg/L, as specified in the Lead and Copper Rule, the concentrations of lead are not considered hazardous.

5.0 CONCLUSIONS

Based on the results of this current investigation, closure should be granted at the Site given that:

- (1) No evidence of any release of hydrocarbons to the groundwater from the former on-site USTs and AST was found in this investigation. The data presented herein shows no detections of gasoline, diesel, BTEX, MTBE or other oxygenates in the groundwater samples collected at the Site;
- (2) Trace levels of Total Lead were found, ranging from 0.005 to 0.006 mg/L. These lead detections are well below the State of California Maximum Contamination Levels for Drinking Water (MCLs) of 0.015 mg/L as specified in the Lead and Copper Rule. Thus lead is not considered an impact to the groundwater.

6.0 RECOMMENDATIONS

TRG recommends that the Alameda County Health Care Agency grant closure to the Site located at 13702 Ventura Boulevard based on the information provided herein.

If you have any questions or concerns pertaining to the Closure Request, I can be reached directly at (949)378-8448.

Thank you for your consideration of this matter.

Sincerely,
THE REYNOLDS GROUP
a California corporation by:



Gwen Tellegen, P.E.
Project Manager



TABLES

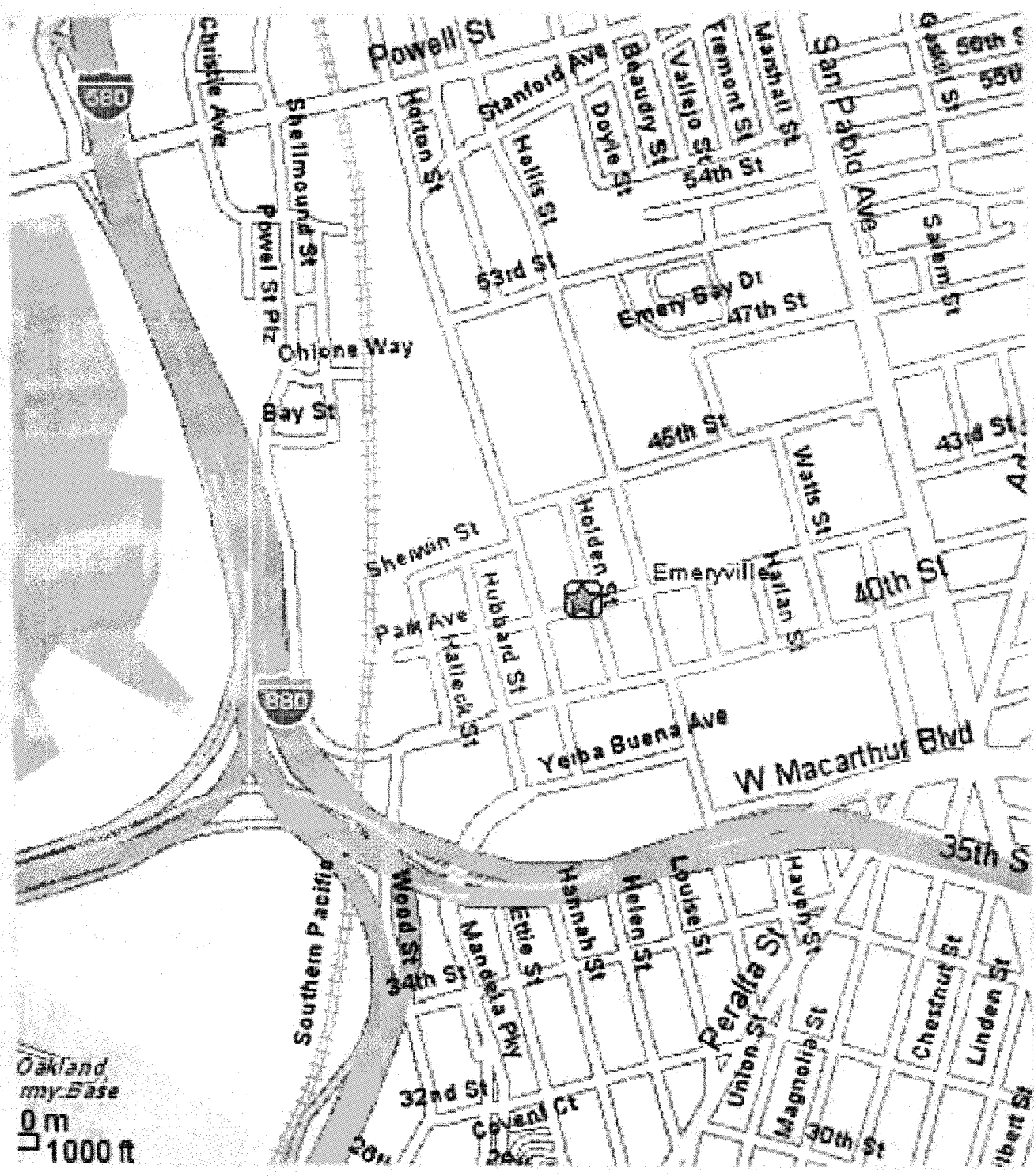
TABLE 1
Groundwater Elevation Data and Sample Results

Emeryville Properties
1400 Main St.
Emeryville, CA

Well ID	Date	Casing Elevation (ft)	Water Elevation (ft)	Depth to Water (ft)	EPA 8015	EPA 8015B	200.7 Lead in H2O	EPA 8015B	EPA 8260B							
					mg/L TEPH Diesel	ug/L Gasoline	mg/L Lead	ug/L Benzene	Toluene	Ethylbenzene	Xylene	DIPE	ETBE	TAME	TBA	MTBE
MW-1 (Dup MW-X)	1/15/2007	19.17	10.94	8.23	<0.1	<50	0.006	<1	<5	<5	<5	<1	<1	<1	<10	<1
MW-2	1/15/2007	16.43	10.78	5.65	<0.1	<50	0.005	<1	<5	<5	<5	<1	<1	<1	<10	<1
MW-4	1/15/2007	14.6	10.28	4.32	<0.1	<50	0.006	<1	<5	<5	<5	<1	<1	<1	<10	<1
MW-X	1/15/2007	19.17	10.94	8.23	<0.1	<50	0.006	<1	<5	<5	<5	<1	<1	<1	<10	<1
Maximum Contamination Levels for Drinking Water (MCL)					na	na	0.015*	1	150	300	1750	na	na	na	na	5**

na = not available
* = Copper and Lead Rule
** = Secondary MCL

FIGURES



Adapted from Yahoo Maps.com



Project No: 7103
 Date: January 2006

1400 Park Avenue
 Emeryville, CA

SITS
 LOCATION MAP

FIGURE 1



WELL ID	SAMPLE DATE	EPA 8015B (ug/L)		EPA 8015 (200.7 mg/L)		EPA §260B (ug/L)								
		Gasoline	Diesel	Lead	Lead	B	T	E	X	MTBE	TBA	DIBE	ETBE	TAME
MW-1	1/15/2007	<50	<0.1	0.006	<0.1	<1	<5	<5	<5	<1	<10	<1	<1	<1

WELL ID	SAMPLE DATE	EPA 8015B (ug/L)		EPA 8015 (200.7 mg/L)		EPA §260B (ug/L)								
		Gasoline	Diesel	Lead	Lead	B	T	E	X	MTBE	TBA	DIBE	ETBE	TAME
MW-2	1/15/2007	<50	<0.1	0.005	<0.1	<1	<5	<5	<5	<1	<10	<1	<1	<1

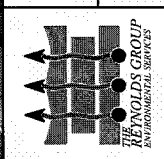
WELL ID	SAMPLE DATE	EPA 8015B (ug/L)		EPA 8015 (200.7 mg/L)		EPA §260B (ug/L)								
		Gasoline	Diesel	Lead	Lead	B	T	E	X	MTBE	TBA	DIBE	ETBE	TAME
MW-4	1/15/2007	<50	<0.1	0.006	<0.1	<1	<5	<5	<5	<1	<10	<1	<1	<1

**SITE PLOT PLAN WITH
GROUNDWATER
MONITORING WELL
RESULTS**

FIGURE 2

Site Name: Emeryville Properties
1400 Park Avenue, Emeryville, CA

Prepared By: The Reynolds Group
Project No: 7103
Date: January 2007



DIBE = Diisobutyl Ethylene
ETBE = Ethyl Tertiary Butyl Ether
TAME = Tertiary Amyl Methyl Ether
TBA = Tertiary Butyl Alcohol

B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl Tertiary Butyl Ether
TL = Below Laboratory Reporting Limit

Legend:
● - Groundwater Monitoring Well
MW-4



SITE PLOT PLAN WITH
GROUNDWATER
ELEVATION
CONTOURS

FIGURE 3

Site Name: Emeryville Properties
1400 Park Avenue, Emeryville, CA

Project No: 7103
Date: January 2007

Prepared By:
The Reynolds Group



Legend:

- MW-4 - Groundwater Monitoring Well
- - - - - Groundwater Elevation Contour

On 10/19/07, well MW-4 was found to be approximately 10.85 feet above the groundwater table.

APPENDIX A

Laboratory Analytical Results



ASSOCIATED LABORATORIES
 806 North Balavia - Orange, California 92868 - 714/771-6900

FAX 714/538-1209

CLIENT The Reynolds Group (6428)
 ATTN: Kiwon Tellegan
 100 E. San Marcos Blvd. # 400
 San Marcos, CA 92069

LAB REQUEST 18306K

REPORTED 01/24/2007

RECEIVED 01/16/2007

PROJECT #7163
 Emeryville Props LLC

SUBMITTER Client


COMMENTS

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

<u>Order No.</u>	<u>Client Sample Identification</u>
769936	MW-2
769937	MW-1
769938	MW-X
769939	TB
769940	TB
769941	MW-4
769942	Laboratory Method Blank

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

ASSOCIATED LABORATORIES by,


 Edward S. Schare, Ph.D.
 Vice President

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

The reports of the Associated Laboratories are confidential property of our clients and may not be reproduced or used for publication in part or in full without our written permission. This is for the mutual protection of the public, our clients, and ourselves.

TESTING & CONSULTING
 Chemical
 Microbiological
 Environmental

Lab request 18306K cover, page 1 of 1

Order #: 769936

Client: The Reynolds Group

Matrix: WATER

Client Sample ID: MW-2

Date Sampled: 01/15/2007

Time Sampled: 09:10

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
200.7 Lead in water by ICP					
Lead	0.005	1	0.005	mg/L	01/17/07 NVK
8015 TEPH Diesel					
TEPH Diesel	ND	1	0.1	mg/L	01/17/07 AF
Surrogates				Units	Control Limits
o-Terphenyl (sur)	120			%	55 - 200
8260B BTEX/MTBE Only					
Benzene	ND	1	1	ug/L	01/20/07 RP
Ethyl benzene	ND	1	5	ug/L	01/20/07 RP
Methyl-tert-butylether (MTBE)	ND	1	1	ug/L	01/20/07 RP
Toluene	ND	1	5	ug/L	01/20/07 RP
Xylenes, total	ND	1	5	ug/L	01/20/07 RP
Di-isopropyl ether (DIPE)	ND	1	1	ug/L	01/20/07 RP
Ethyl-terbutylether (ETBE)	ND	1	1	ug/L	01/20/07 RP
Tert-amy(methylether (TAME)	ND	1	1	ug/L	01/20/07 RP
Tertiary butyl alcohol (TBA)	ND	1	10	ug/L	01/20/07 RP
Surrogates				Units	Control Limits
Surr1 - Dibromofluoromethane	90			%	70 - 130
Surr2 - 1,2-Dichloroethane-d4	106			%	70 - 130
Surr3 - Toluene-d8	100			%	70 - 130
Surr4 - p-Bromofluorobenzene	107			%	70 - 130
8015B - Gasoline					
Gasoline	ND	1	50	ug/L	01/17/07 LD
Surrogates				Units	Control Limits
a,a,a-Trifluorotoluene	81			%	55 - 200

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

ASSOCIATED LABORATORIES

Analytical Results Report



Order #: 769937

Client: The Reynolds Group

Matrix: WATER

Client Sample ID: MW-1

Date Sampled: 01/15/2007

Time Sampled: 10:00

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
200.7 Lead in water by ICP					
Lead	0.006	1	0.005	mg/L	01/17/07 NVK
8015 TEPH Diesel					
TEPH Diesel	ND	1	0.1	ng/L	01/17/07 AF
Surrogates				Units	Control Limits
o-Terphenyl (sur)	110			%	55 - 200
8260B BTEX/MIBE Only					
Benzene	ND	1	1	ug/L	01/20/07 RP
Ethyl benzene	ND	1	5	ug/L	01/20/07 RP
Methyl-tert-butylether (MIBE)	ND	1	1	ug/L	01/20/07 RP
Toluene	ND	1	5	ug/L	01/20/07 RP
Xylenes, total	ND	1	5	ug/L	01/20/07 RP
Di-isopropyl ether (DIPE)	ND	1	1	ug/L	01/20/07 RP
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L	01/20/07 RP
Tert-amylmethylether (TAME)	ND	1	1	ug/L	01/20/07 RP
Tertiary butyl alcohol (TBA)	ND	1	10	ug/L	01/20/07 RP
Surrogates				Units	Control Limits
Surr1 - Dibromofluoromethane	90			%	70 - 130
Surr2 - 1,2-Dichloroethane-d4	106			%	70 - 130
Surr3 - Toluene-d8	104			%	70 - 130
Surr4 - p-Bromonitrobenzene	105			%	70 - 130
8015B - Gasoline					
Gasoline	ND	1	50	ug/L	01/17/07 LD
Surrogates				Units	Control Limits
a,a,a-Trifluorotoluene	59			%	55 - 200

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

ASSOCIATED LABORATORIES

Analytical Results Report



Order #: 769938

Client: The Reynolds Group

Matrix: WATER

Client Sample ID: MW-X

Date Sampled: 01/15/2007

Time Sampled: 10:02

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
---------	--------	----	-----	-------	--------------

200.7 Lead in water by ICP

Lead	0.006	1	0.005	mg/L	01/17/07 NVK
------	-------	---	-------	------	--------------

8015 TEPH Diesel

TEPH Diesel	ND	1	0.1	mg/L	01/17/07 AF
-------------	----	---	-----	------	-------------

Surrogates

o-Terphenyl (sur)	115			%	55 - 200
-------------------	-----	--	--	---	----------

8260B BTEX/MTBE Only

Benzene	ND	1	1	ug/L	01/20/07 RP
---------	----	---	---	------	-------------

Ethyl benzene	ND	1	5	ug/L	01/20/07 RP
---------------	----	---	---	------	-------------

Methyl-tert-butylether (MTBE)	ND	1	1	ug/L	01/20/07 RP
-------------------------------	----	---	---	------	-------------

Toluene	ND	1	5	ug/L	01/20/07 RP
---------	----	---	---	------	-------------

Xylenes, total	ND	1	5	ug/L	01/20/07 RP
----------------	----	---	---	------	-------------

Di-isopropyl ether (DIPE)	ND	1	1	ug/L	01/20/07 RP
---------------------------	----	---	---	------	-------------

Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L	01/20/07 RP
-----------------------------	----	---	---	------	-------------

Tert-amylmethylether (TAME)	ND	1	1	ug/L	01/20/07 RP
-----------------------------	----	---	---	------	-------------

Tertiary butyl alcohol (TBA)	ND	1	10	ug/L	01/20/07 RP
------------------------------	----	---	----	------	-------------

Surrogates

Surr1 - Dibromofluoromethane	89			%	70 - 130
------------------------------	----	--	--	---	----------

Surr2 - 1,2-Dichloroethane-d4	105			%	70 - 130
-------------------------------	-----	--	--	---	----------

Surr3 - Toluene-d8	102			%	70 - 130
--------------------	-----	--	--	---	----------

Surr4 - p-Bromofluorobenzene	105			%	70 - 130
------------------------------	-----	--	--	---	----------

8015B - Gasoline

Gasoline	ND	1	50	ug/L	01/17/07 LD
----------	----	---	----	------	-------------

Surrogates

a,a,a-Trifluorotoluene	61			%	55 - 200
------------------------	----	--	--	---	----------

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

ASSOCIATED LABORATORIES

Analytical Results Report



Order #: 769939

Matrix: WATER

Date Sampled: 01/15/2007

Time Sampled: 10:30

Sampled By:

Client: The Reynolds Group

Client Sample ID: TB

Analyte	Result	DF	DLR	Units	Date/Analyst
8260B BTEX/MTBE Only					
Benzene	ND	1	1	ug/L	01/20/07 RP
Ethyl benzene	ND	1	5	ug/L	01/20/07 RP
Methyl-tert-butylether (MTBE)	ND	1	1	ug/L	01/20/07 RP
Toluene	ND	1	5	ug/L	01/20/07 RP
Xylenes, total	ND	1	1	ug/L	01/20/07 RP
Di-isopropyl ether (DIPE)	ND	1	1	ug/L	01/20/07 RP
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L	01/20/07 RP
Tert-amylmethylether (TAME)	ND	1	1	ug/L	01/20/07 RP
Tertiary butyl alcohol (TBA)	ND	1	10	ug/L	01/20/07 RP
				Units	Control Limits
Surrogates					
Surr1 - Dibromofluoromethane	91			%	70 - 130
Surr2 - 1,2-Dichloroethane-d4	107			%	70 - 130
Surr3 - Toluene-d8	102			%	70 - 130
Surr4 - p-Bromofluorobenzene	104			%	70 - 130

8015B - Gasoline

Gasoline	ND	1	50	ug/L	01/17/07 LID
				Units	Control Limits
Surrogates					
a,a,a-Trifluorotoluene	88			%	55 - 200

DLR = Detection limit for reporting purposes. ND - Not Detected below indicated detection limit, DF = Dilution Factor

ASSOCIATED LABORATORIES

Analytical Results Report



Order #: 769940

Client: The Reynolds Group

Matrix: WATER

Client Sample ID: FB

Date Sampled: 01/15/2007

Time Sampled: 10:25

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
200.7 Lead in water by ICP					
Lead	ND	1	0.005	mg/L	01/17/07 NVK
8015 TEPH Diesel					
TEPH Diesel	ND	1	0.1	mg/L	01/17/07 AF
Surrogates				Units	Control Limits
o-Terphenyl (sur)	100			%	55 - 200
8260B BTEX/MTBE Only					
Benzene	ND	1	1	ug/L	01/20/07 RP
Ethyl benzene	ND	1	5	ug/L	01/20/07 RP
Methyl-tert-butylether (MTBE)	ND	1	1	ug/L	01/20/07 RP
Toluene	ND	1	5	ug/L	01/20/07 RP
Xylenes, total	ND	1	5	ug/L	01/20/07 RP
Di-isopropyl ether (DIPE)	ND	1	1	ug/L	01/20/07 RP
Ethyl-terbutylether (ETBE)	ND	1	1	ug/L	01/20/07 RP
Tert-amylmethylether (TAME)	ND	1	1	ug/L	01/20/07 RP
Tertiary butyl alcohol (TBA)	ND	1	10	ug/L	01/20/07 RP
Surrogates				Units	Control Limits
Surr1 - Dibromofluoromethane	87			%	70 - 130
Surr2 - 1,2-Dichloroethane-d4	102			%	70 - 130
Surr3 - Toluene-d8	100			%	70 - 130
Surr4 - p-Bromofluorobenzene	107			%	70 - 130
8015B - Gasoline					
Gasoline	ND	1	50	ug/L	01/18/07 LD
Surrogates				Units	Control Limits
a,a,a-Trifluorotoluene	94			%	55 - 200

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

ASSOCIATED LABORATORIES

Analytical Results Report



Order #: 769941

Client: The Reynolds Group

Matrix: WATER

Client Sample ID: MW-4

Date Sampled: 01/15/2007

Time Sampled: 10:55

Sampled By:

Analyte	Result	DF	DLR	Units	Date/Analyst
200.7 Lead in water by ICP					
Lead	0.006	1	0.005	mg/L	01/17/07 NVK
8015 TEPH Diesel					
TEPH Diesel	ND	1	0.1	mg/L	01/17/07 AP
				Units	Control Limits
Surrogates					
o-Terphenyl (sur)	135			%	55 - 200
8260B BTEX/MTBE Only					
Benzene	ND	1	1	ug/L	01/20/07 RP
Ethyl benzene	ND	1	5	ug/L	01/20/07 RP
Methyl-tert-butylether (MTBE)	ND	1	1	ug/L	01/20/07 RP
Toluene	ND	1	5	ug/L	01/20/07 RP
Xylenes, total	ND	1	5	ug/L	01/20/07 RP
Di-isopropyl ether (DIPE)	ND	1	1	ug/L	01/20/07 RP
Ethyl-tertbuylether (ETBE)	ND	1	1	ug/L	01/20/07 RP
Tert-amylmethylether (TAME)	ND	1	1	ug/L	01/20/07 RP
Tertiary butyl alcohol (TBA)	ND	1	10	ug/L	01/20/07 RP
				Units	Control Limits
Surrogates					
Surr1 - Dibromofluoromethane	90			%	70 - 130
Surr2 - 1,2-Dichloroethane-d4	108			%	70 - 130
Surr3 - Toluene-d8	102			%	70 - 130
Surr4 - p-Bromofluorobenzene	105			%	70 - 130
8015B - Gasoline					
Gasoline	ND	1	50	ug/L	01/18/07 LD
				Units	Control Limits
Surrogates					
a,a,a-Trifluorotoluene	192			%	55 - 200

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

ASSOCIATED LABORATORIES

Analytical Results Report



Order #: **769942**

Matrix: WATER

Date Sampled:

Time Sampled:

Sampled By:

Client: The Reynolds Group

Client Sample ID: Laboratory Method Blank

Analyte	Result	DF	DLR	Units	Date/Analyst
200.7 Lead in water by ICP					
Lead	ND	1	0.005	mg/L	01/17/07 NVK
8015 TEPH Diesel					
TEPH Diesel	ND	1	0.1	mg/L	01/17/07 AF
Surrogates				Units	Control Limits
o-Terphenyl (sur)	130			%	55 - 200
8260B BTEX/MTBE Only					
Benzene	ND	1	1	ug/L	01/20/07 RP
Ethyl benzene	ND	1	5	ug/L	01/20/07 RP
Methyl-tert-butylether (MTBE)	ND	1	1	ug/L	01/20/07 RP
Toluene	ND	1	5	ug/L	01/20/07 RP
Xylenes, total	ND	1	5	ug/L	01/20/07 RP
Di-isopropyl ether (DIPE)	ND	1	1	ug/L	01/20/07 RP
Ethyl-tertbutylether (ETBE)	ND	1	1	ug/L	01/20/07 RP
Tert-amylmethylether (TAME)	ND	1	1	ug/L	01/20/07 RP
Tertiary butyl alcohol (TBA)	ND	1	10	ug/L	01/20/07 RP
Surrogates				Units	Control Limits
Surr1 - Dibromofluoromethane	89			%	70 - 130
Surr2 - 1,2-Dichloroethane-d4	104			%	70 - 130
Surr3 - Toluene-d8	102			%	70 - 130
Surr4 - p-Bromofluorobenzene	107			%	70 - 130
8015B - Gasoline					
Gasoline	ND	1	50	ug/L	01/17/07 I.D.
Surrogates				Units	Control Limits
a,a,a-Trifluorotoluene	93			%	55 - 200

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



ASSOCIATED LABORATORIES

Analytical Results Report

**ASSOCIATED LABORATORIES
QA REPORT FORM - METHOD 200.7 / 6010**

QC Sample: 183069-769945 HW 011707 W1
 Matrix: WATER
 Prep. Date: January 17, 2007
 Analysis Date: January 17, 2007
 Lab ID#'s in Batch: 183069, 183087, 183106, 183108, 183065, 183068, 183078, 183155

Reporting Units ~ mg/L.

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RESULT

Test	Sample Result	Spike Added	Matrix Spike	Matrix Spike Dup	%Rec MS	%Rec MSD	% RPD
As	0.027	1	0.96	0.95	93	92	1
Sc	0.108	1	1.00	0.99	89	88	1
Tl *	ND	1	0.54	0.55	54	55	2
Pb	0.005	1	0.90	0.89	90	89	1
Sb	ND	1	1.09	1.08	109	108	1
Ba	0.079	1	1.01	1.06	93	98	5
Be	ND	1	1.01	1.02	101	102	1
Cd	ND	1	0.94	0.98	94	98	4
Cr	0.009	1	0.93	0.96	92	95	3
Co	ND	1	0.89	0.92	89	92	3
Cu	0.014	1	0.90	0.95	89	94	5
Mo	0.026	1	1.03	1.04	100	101	1
Ni	ND	1	0.87	0.89	87	89	2
Ag *	ND	1	0.35	0.35	70	70	0
V	ND	1	0.94	0.99	94	99	5
Zn	0.247	1	1.13	1.18	88	93	4
Al	0.011	1	0.86	0.89	85	88	3
Mn	ND	1	0.89	0.92	89	92	3
B	0.219	1	1.12	1.17	90	95	4
Pc *	0.654	1	1.00	1.23	35	58	21
Sr	0.676	10	11.70	11.80	110	111	1
Li *	ND	10	17.00	16.90	170	169	1
Ca	153.000	10	171.00	170.00	NC	NC	1
Mg	45.000	10	50.40	51.10	NC	NC	1
K	3.080	10	14.00	14.30	109	112	2
Na	90.100	10	106.00	105.00	NC	NC	1

* = Outside QC limits, due to matrix interference
 If Sample Result > 4 times Spike Added, then "NC"

% REC. LIMITS - 75 - 125
RPD LIMITS - 20

**ASSOCIATED LABORATORIES
LCS REPORT FORM - METHOD 200.7 / 6010**

LCS RECOVERY / METHOD BLANK

Test	LCS Result	True Value	LCS %Rec	QC Limit %REC	MB Limit	MB Result
Ag	0.97	1	97	80-120	0.005	ND
Al	2.17	2	109	80-120	0.030	ND
As	2.05	2	103	80-120	0.005	ND
B	2.23	2	112	80-120	0.050	ND
Ba	2.10	2	105	80-120	0.010	ND
Bc	2.05	2	103	80-120	0.005	ND
Cd	2.06	2	103	80-120	0.005	ND
Co	2.04	2	102	80-120	0.005	ND
Cr	2.02	2	101	80-120	0.010	ND
Cu	1.94	2	97	80-120	0.010	ND
Fe	2.02	2	101	80-120	0.029	
Mn	2.05	2	103	80-120	0.010	ND
Mo	2.07	2	104	80-120	0.010	ND
Ni	2.03	2	102	80-120	0.015	ND
Pb	2.08	2	104	80-120	0.005	ND
Sb	2.34	2	117	80-120	0.006	ND
Se	2.03	2	102	80-120	0.006	ND
Tl	2.03	2	102	80-120	0.005	ND
V	2.02	2	101	80-120	0.005	ND
Zn	2.08	2	104	80-120	0.010	ND
Sr	1.90	2	95	80-120	0.010	ND
Ti	2.03	2	102	80-120	0.010	ND
Cu	105.00	100	105	80-120	0.100	ND
Mg	103.00	100	103	80-120	0.100	ND
K	104.00	100	104	80-120	0.500	ND
Na	107.00	100	107	80-120	0.100	ND

**ASSOCIATED LABORATORIES
LCS REPORT FORM**

QC Sample: LCS/LCSD

Matrix: WATER

Extraction Method : 3510C

Prep. Date: January 17, 2007

Analysis Date: January 17, 2007

Lab ID#'s in Batch: 183055, 183068

LAB CONTROLLED SPIKE / LAB CONTROLLED DUPLICATE RESULT

Reporting Units = mg/L

Test	Method	Method Blank	Spike Added	LCS Spike	LCSD Spk. Dup	%Rec LCS	%Rec LCSD	RPD
DIESEL	8015D	ND	1	0.78	0.97	78	97	22

ND - Not Detected

LCS Result - Lab Control Sample Result

%REC-LCS & LCSD - Percent Recovery of LCS Spike & LCS Spike Duplicate

RPD - Relative Percent Difference of LCS Spike and LCS Spike Duplicate

%REC LIMITS - 70 - 130
RPD LIMITS = 30

SURROGATE RECOVERY

Sample No.	O-Terphenyl
QC Limit	55-200
Method Blank	130
LCS	150
LCSD	190

**ASSOCIATED LABORATORIES
LCS REPORT FORM**

QC Sample: G15-LCS&LCSD

Matrix: WATER

Prep. Date: January 17, 2007

Analysis Date: January 17, 2007

Lab ID#'s in Batch: 183183, 183155, 183068, 183055, 182936

LAB CONTROLLED SPIKE / LAB CONTROLLED DUPLICATE RESULT

Reporting Units = $\mu\text{g/L}$

Test	Method	Method Blank	Spike Added	LCS Spike	LCSD Spk. Dup	%Rec LCS	%Rec LCSD	RPD
TPH	8015M-G	ND	500	425	415	85	83	2

ND = Not Detected

LCS Result = Lab Control Sample Result

%REC-LCS & LCSD = Percent Recovery of LCS Spike & LCS Spike Duplicate

RPD = Relative Percent Difference of LCS Spike and LCS Spike Duplicate

%REC LIMITS = 70 - 130
RPD LIMITS = 30

SURROGATE RECOVERY

Sample No.	AAA-TFT
QC Limit	55-200
Method Blank	93
LCS	140
LCSD	129

AAA-TFT = *n,n,a-Trifluorotoluene*

**ASSOCIATED LABORATORIES
LCS REPORT FORM**

QC Sample: G2-LCS&LCSD
 Matrix: WATER
 Prep. Date: January 17, 2007
 Analysis Date: January 17, 2007
 Lab ID#'s in Batch: 183138, 183120, 183068, 183123,

LAB CONTROLLED SPIKE / LAB CONTROLLED DUPLICATE RESULT

Reporting Units = µg/L

Test	Method	Method Blank	Spike Added	LCS Spike	LCSD Spk. Dup	%Rec LCS	%Rec LCSD	RPD
TPH	8015M-G	ND	500	463	469	93	94	1

ND = Not Detected

LCS Result = Lab Control Sample Result

%REC-LCS & LCSD = Percent Recovery of LCS Spike & LCS Spike Duplicate

RPD = Relative Percent Difference of LCS Spike and LC'S Spike Duplicate

%REC LIMITS = 70 - 130
RPD LIMITS = 30

SURROGATE RECOVERY

Sample No.	AAA-TFT
QC Limit	55-200
Method Blank	110
LCS	100
LCSD	117

AAA-TFT - a.a.a-Trifluorotoluene



ASSOCIATED LABORATORIES

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

FAX 714-538-1209

SAMPLE ACCEPTANCE CHECKLIST

Section 1
 Client: The Reynolds Project: _____
 Date Received: 1/16/07
 Sample(s) received in cooler: Yes No (Skip Section 2)

Section 2
 Was the cooler packed with: Ice Ice Packs Bubble Wrap Styrofoam
 Paper None Other _____
 Cooler or box temperature: 3.2°C
 (Acceptance range is 2 to 6 Deg. C.)

Section 3	YES	NO	N/A
Was a COC received?			<input checked="" type="checkbox"/>
Were custody seals present?			
If Yes - were they intact?	<input checked="" type="checkbox"/>		
Were all samples sealed in plastic bags?	<input checked="" type="checkbox"/>		
Did all samples arrive intact? If no, indicate below.	<input checked="" type="checkbox"/>		
Did all bottle labels agree with COC? (ID, dates and times)	<input checked="" type="checkbox"/>		
Were correct containers used for the tests required?	<input checked="" type="checkbox"/>		
Was a sufficient amount of sample sent for tests indicated?	<input checked="" type="checkbox"/>		
No head space in VOA vials?	<input checked="" type="checkbox"/>		
Were the correct preservatives used?			<input checked="" type="checkbox"/>
Were the samples scanned for presence of radioactivity?			<input checked="" type="checkbox"/>
Was total residual chlorine measured (Fish Bioassay samples only)? *			

enough
fish
ID: FB

*: If the answer is no, please inform Fish Bioassay Dept. immediately.

Section 4
 Explanations/Comments

Section 5
 Was Project Manager notified of discrepancies: Y / N N/A

Completed By: [Signature] Date: 1/16/07



ASSOCIATED LABORATORIES
806 North Batavia - Orange, California 92868
714/71-6900 FAX 714/538-1209

CHAIN OF CUSTODY RECORD

Date 1/15/07 Page 2 of 2

Assigned LR# 18306

CLIENT: <u>The Reynolds Group</u>	PROJECT IDENTIFICATION/LOCATION: <u>Emeryville Properties LLC</u>	SAMPLE TURNAROUND TIME: Requested Turnaround Time (CIRCLE ONE)* Priority Charges Apply to Rush Turn Around Times RUSH: Same Day 24 Hr 48 Hr 72 Hr <u>STANDARD: Standard TAT ** (5 to 10 Working Days)</u> Other: * Availability of Same Day/24/48/72 Hr TAT Varies Based Upon: Test Method Requirements. ** Standard TAT Varies According to Analyses.
ADDRESS: <u>100 E San Marcos Blvd #100</u> <u>San Marcos CA 92069</u>	PURCHASE ORDER #: <u>7124</u>	
Is this the address the final report is to be sent to? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If "No" list mailing address in "Special Instructions" section at the bottom of this Chain of Custody.	SAMPLER: (Print AND Sign) <u>Gwen Tellegen</u>	
CONTACT PERSON: <u>Gwen Tellegen</u>	PHONE #: <u>(949) 522-8448</u>	SAMPLE CONDITION INFO - FOR LAB USE ONLY: Samples Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Sample Seals Intact: Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Cooler Seals Intact: Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
SAMPLED BY (Circle One): <u>Client</u> Assoc. Lab Personnel	FAX #: <u>1-800-760-510-2377</u>	

	SAMPLE ID	SAMPLE OR LOCATION DESCRIPTION	DATE	TIME	MATRIX (See Codes Below)	# OF CONTAINERS	TEST REQUIRED
1	TB	Trip Blank	1/15/07	1800	W	2 VOAS	8210 BTEX oxygenates 8015 91
2	FB	Field Blank	1/15/07	1625	W	5 VOAS	8210 BTEX oxygenates 8015 91
3	FB	Field Blank	1/15/07	1855	W	1-Liter Amber	8015 Dioxin
4	FB	Field Blank	1/15/07	1025	W	1 250ml plastic	Total lead
5	MW-1	Emeryville Monitoring well #4	1/15/07	1055	GW	1-Liter Amber	8015 Dioxin
6	MW-1	↓ ↓	1/15/07	1055	GW	1 250ml plastic	Total lead
7	MW-1	↓ ↓ well #4	1/15/07	1055	GW	5-VOAS	8210 BTEX oxygenates 8015 91
8							
9							
10							

MATRIX: GW=Ground Water DW=Drinking Water WW=Waste Water SW=Storm Water S=Solid/Soil A=Air L=Liquid F=Food (Use the codes shown here to identify the matrix above)

Relinquished by: (Print AND Sign) <u>Gwen Tellegen</u>	Received By: (Print AND Sign) <u>Juan Montano</u>	Date/Time: <u>1/15/07 11:00 AM</u>	Special Instructions:
Relinquished by: (Print AND Sign) <u>Gwen Tellegen</u>	Received By: (Print AND Sign)	Date/Time:	
Relinquished by: (Print AND Sign) <u>Gwen Tellegen</u>	Received by Lab for Analysis: (Print AND Sign)	Date/Time:	

***By signing this Chain of Custody you are authorizing the analyses shown above. (Print AND Sign) _____

COC DISTRIBUTION: White with report. Yellow to AL. Pink to Client's Courier.

JAN-25-2007 16:01 FROM: Associated Laboratories 714-538-1209 T-455 P. 016/017 F-348

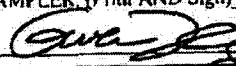


ASSOCIATED LABORATORIES
806 North Botavia - Orange, California 92868
714/771-6900 FAX 714/538-1209

CHAIN OF CUSTODY RECORD


Date 1/15/07 Page 1 of 2

Assigned LR# 83068

CLIENT: <u>The Reynolds Group</u> ADDRESS: <u>100 E San Marcos Blvd #400</u> <u>San Marcos CA 92069</u> Is this the address the final report is to be sent to? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If "No" list mailing address in "Special Instructions" section at the bottom of this Chain of Custody.	PROJECT IDENTIFICATION/LOCATION: <u>EMERYVILLE PROPS LLC</u> PREVIOUS PURCHASE ORDER #: <u>7163</u> SAMPLER: (Print AND Sign) <u>Gwen Tellega</u> 	SAMPLE TURNAROUND TIME: Requested Turnaround Time (CIRCLE ONE)* Priority Charges Apply to Rush Turn Around Times Rush: <input type="checkbox"/> Same Day 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input checked="" type="checkbox"/> STANDARD: Standard TAT *(5 to 10 Working Days) Other: * Availability of Same Day/24/48/72 Hr TAT Varies Based Upon Test Method Requirements. **Standard TAT Varies According to Analyses.
CONTACT PERSON: <u>Gwen Tellega</u> SAMPLED BY (Circle One): <input checked="" type="radio"/> Client <input type="radio"/> Assoc. Lab Personnel	PHONE #: <u>999 378-8948</u> FAX #: <u>760 510-2377</u>	SAMPLE CONDITION INFO - FOR LAB USE ONLY: Samples Intact: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Sample Seals Intact: Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Cooler Seals Intact: Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>

	SAMPLE ID	SAMPLE OR LOCATION DESCRIPTION	DATE	TIME	MATRIX (See Codes Below)	# OF CONTAINERS	TEST REQUIRED
1	MW-2	Emeryville Monitoring Well 2	1/15/07	9 ¹⁰ am	GW	1-L-amber	8015 Diesel
2	MW-2	" "	1/15/07	9 ¹⁰ am	GW	1-250ml plastic	Total Lead
3	MW-2	" "	1/15/07	9 ¹⁰ am	GW	5-VOLS	8260 BTEX Oxygenated OH 8015 Gasoline
4	MW-1	Emeryville Monitoring Well 1	1/15/07	10 ⁰⁰ am	GW	1-L Amber	8015 Diesel
5	MW-1	" Monitoring Well	1/15/07	10 ⁰⁰ am	GW	1-250ml plastic	Total Lead
6	MW-1	" "	1/15/07	10 ⁰⁰ am	GW	5-VOLS	8260 BTEX Oxygenated OH 8015 Gasoline
7	MW-X	Emeryville Monitoring Well X	1/15/07	10 ⁰² am	GW	1-L amber	8015 Diesel
8	MW-X	" "	1/15/07	10 ⁰² am	GW	1-250ml plastic	Total Lead
9	MW-X	" "	1/15/07	10 ⁰² am	GW	5-VOLS	8260 BTEX Oxygenated OH 8015 Gasoline
10	next page						

MATRIX: GW=Ground Water DW=Drinking Water WW=Waste Water SW=Storm Water S=Solid/Soil A=Air L=Liquid F=Food (Use the codes shown here to identify the matrix above)

Relinquished by: (Print AND Sign)*** 	Received By: (Print AND Sign) <u>Juan Montoya</u>	Date/Time: <u>1/15/07 10:10</u>	Special Instructions:
Relinquished by: (Print AND Sign)***	Received By: (Print AND Sign)	Date/Time:	
Relinquished by: (Print AND Sign)***	Received by Lab for Analysis (Print AND Sign)	Date/Time:	

***By signing this Chain of Custody you are authorizing the analyses shown above. (Print AND Sign)

COC DISTRIBUTION:
White with report Yellow to AL Pink to Client's Courier

2/16/07 11:20

JAN-25-2007 16:01 FROM Associated Laboratories 714-638-1209 T-455 P.015/017 F-348

ASSOCIATED LABORATORIES

QA / QC EPA Methods 8260 - GCMS # 3

Sample ID: *MS/MSD Water Sample* 183068-936
 Date Prepared: January 19, 2007
 Date Analyzed: January 21, 2007
 Sample Matrix: Water
 Units: µg/L

Lab ID#s in Batch: 183088, 183210, 183123, 183173

Compound	Sample Conc.	Spike Added	Spike Res	Dup Res	Spike % Rec	Dup % Rec	RPD	QC RPD	Limits % Rec
1,1-Dichloroethene	0.00	50.0	50.60	51.80	101	103	2	22	59 - 172
MTBE	0.00	50.0	49.60	50.50	99	101	2	24	62 - 137
Benzene	0.00	50.0	49.20	52.00	98	104	6	24	62 - 137
Trichloroethene	3.40	50.0	51.90	52.60	97	98	1	21	66 - 142
Toluene	0.00	50.0	49.60	49.70	99	99	0	21	59 - 139
Chlorobenzene	0.00	50.0	49.00	48.70	98	97	1	21	60 - 133

Sample ID: *LCS*

Compound	Spike Added	Spike Res	Spike % Rec	Limits % Rec
1,1-Dichloroethene	50.0	46.40	93	59 - 172
MTBE	50.0	48.10	96	62 - 137
Benzene	50.0	48.20	96	62 - 137
Trichloroethene	50.0	47.80	95	66 - 142
Toluene	50.0	48.30	97	59 - 139
Chlorobenzene	50.0	48.20	96	60 - 133

*=Outside QC limits due to high concentration in sample

If Sample Result > 4 times Spike Added, then "NC"

Surrogate Recovery

Compound	MB 1 % Rec	MB 2 % Rec	MS % Rec	MSD % Rec	LCS % Rec	Limits % Rec
Dibromofluoromethane	89		96	97	98	70 - 135
1,2-Dichloroethane-d4	104		95	96	93	70 - 135
Toluene-d8	102		103	103	102	70 - 135
p-Bromofluorobenzene	107		99	101	98	70 - 135

APPENDIX B

Standard Operating Procedures

THE REYNOLDS GROUP -STANDARD OPERATING PROCEDURE

GROUNDWATER WELL DEVELOPMENT

SCOPE OF WORK

Monitoring well development establishes a complete hydraulic connection between the well and the aquifer material surrounding the well screen and filter pack. Monitoring wells will be measured and developed according to the TRG Well Development Standard Operating Procedure described below. The Well Development SOP consists of Field Preparation, Well Development and Decontamination Procedures.

Field Preparations include the following:

1. Review of Health and Safety Plan (HASP), especially required PPE and hospital route map
2. Discuss field procedures and requirements with project team/ development contractor
3. Completion of the Field Prep Checklist (See Attached)
4. Obtain all required development equipment – IF THE DEVELOPMENT EQUIPMENT IS PROVIDED BY THE SUBCONTRACTOR BE SURE TO CALIBRATE IT IN THE OFFICE BEFORE FIELD WORK
 - PPE (Tyvec, booties, gloves, hardhat, steel toe boots)
 - Proper instruments to measure specific conductivity, temperature, and pH
 - Turbidimeter
 - PID/ FID
 - Plastic
 - Paper towels
 - Camera
 - Trash bags
 - Surge block
 - Submersible pump

Well Development Procedures include the following:

1. Most wells are developed by using surge block and submersible pumping methods to draw the coarse and/or fine material out of the sand pack.
2. Well development should begin no sooner than 72 hours after well installation. However, if drilling muds are used during well installation, well development should occur approximately 24 hours following well installation so that the drilling mud does not set up in well screen section. A phased process is used to develop wells, starting with a gentle pumping or bailing phase to remove sand, followed by a surging phase, and then a pumping phase after the well begins to clear up. Step by step procedures are described as follows:

a. At the time of installation, immediately after the well completion, gentle pumping is used to remove water and sand from the well. The purpose of this technique is used to settle the sand pack with the borehole.

b. Approximately 72 hours after well installation, bailing or pumping for well development can begin. The initial bailing removes sand and fine material that may have accumulated in the well, and pulls in natural material into the sand pack. To determine the amount of sediment in the well, the total well depth should be measured and compared to the well installation boring log depth. The difference between measured depth and installed depth represents the amount of sediment in the well. Bailing or pumping is conducted until the sand content in the water begins to decrease and the measured depth approaches the total well depth.

c. After the sand content begins to decrease, surging is conducted. A surge block is used to move sediments from the filter pack into the well casing. A surge block consists of a plunger attached to a rod or pipe of sufficient length to reach bottom of the well. All surge blocks are made of inert materials that cannot contaminate the well. Surge blocks should release pressure to prevent casing collapse. Care should be taken to not surge too strongly which could result in casing collapse or deformation. The surge block is moved up and down the well screen interval and then removed, followed by a return to bailing or pumping to remove any sand brought into the well by the surging action.

d. After surging has been completed and the sand content of the bailed water has decreased, as determined by another well depth measurement, a submersible pump is used to continue well development. The pump should be moved up and down the well screen interval until the obtained water is relatively clear. During well development pH, specific conductivity, temperature, and turbidity should be monitored frequently (every 2-5 minutes) to establish natural conditions and evaluate whether the well has been completely developed. The primary criteria used to determine the completion of well development is the clearness of the groundwater (Nephelometric Turbidity Units or NTU). Before ceasing well development activities a turbidity of less than 5 NTU should be attained. Any well with turbidity greater than 5 NTU after development is considered to be suspect in integrity by the State of California.

- i. Development will conclude when at least 3 well bore volumes are removed, the water clarifies, and water quality parameters have stabilized within 10% for three successive readings. The final three readings collect should conform to the following readings:
pH +/- 0.1 unit
electrical conductance (EC) +/- 3%

A copy of The Reynolds Group Well Development log form is attached. These parameters as well as time, depth to water, total volume pumped, temperature should be recorded on this form.

The volume of water purged from the well during development will be a minimum of 3 borehole volumes (wells will typically not reach stabilization of water quality parameters before this condition is achieved and may not have reached stability even after this threshold has been achieved). A copy of The Reynolds Group well volume calculation form is attached. Greater volumes may be required if the measured water quality parameters do not stabilize to the stated criteria.

THE REYNOLDS GROUP -STANDARD OPERATING PROCEDURE

LOW FLOW GROUNDWATER MONITORING

SCOPE OF WORK

Monitoring wells will be measured, purged, and sampled according to the TRG Well Monitoring Low Flow Groundwater Monitoring Standard Operating Procedure described below. The Groundwater Monitoring SOP consists of Field Preparation, Sampling Procedures, and Decontamination Procedures sections.

Field Preparations include the following:

1. Review of Health and Safety Plan (HASP), especially required PPE and hospital route map
2. Discuss field procedures and requirements with project team
3. Completion of the Field Prep Checklist (See Attached)
4. Obtain all required sampling equipment – IF THE SAMPLING EQUIPMENT IS RENTED BE SURE TO TRY USE AND CALIBRATION IN THE OFFICE BEFORE FIELD WORK
 - PPE (Tyvec, booties, gloves, hardhat, steel toe boots)
 - Dedicated tubing
 - Low flow pump
 - In-line Flow Cell to measure DO, ORP, Temperature, and pH
 - Turbidimeter
 - PID/ FID
 - Plastic
 - Paper towels
 - Ziplock bags
 - Cooler
 - Ice
 - Disposable bailers
 - Twine
 - Camera
 - Trash bags
5. Review site specific monitoring procedure, which will include the following:
 - a. Removal of any dedicated tubing from each well before purging and sampling, safely placing it in a clean area in separate clean trash bags.
 - b. Purging water from wells using a low flow pump connected to a Flow Cell (removing at least 3 casing volumes or until all parameters stabilize-see below)
 - c. Measuring water quality parameters during purging on attached monitoring form

- d. Sampling the well using a disposable bailer or from the low flow pump discharge hose (before the Flow cell)
 - e. Re-inserting the dedicated tubing after sampling.
6. Obtain sample containers for required analysis
- a. The two wells will be sampled for:
 - Filtered CAM Metals by EPA Method 6010
 - Hex Chromium by EPA Method 7199 (24 hour hold time)
 - Nitrates (48 hour hold time)
 - Sulfates by EPA Method 300
 - The laboratory will filter ONLY the samples for dissolved metals
 - From each well the samples will be collected in two 1 Liter polyethylene bottles with no preservatives

Sampling Procedures include the following:

1. Arrive at Site and conduct tailgate meeting discussing HASP.
2. Don proper PPE, which will consist of a tyvex uniform with booties and gloves for each technician, and carefully open each well and remove the dedicated tubing, placing it in separate clean trash bags.
3. Measure the total depth and depth to water of each well to the nearest one-tenth of a foot using a sounder, properly decontaminating (see Section below) the instrument between each well.
4. Place visqueen around each well while noting and recording the condition of well lids, caps, seals, and casing. IF THE WELLS ARE NOT LABELED, A PERMANENT MARKER OR PAINT PEN SHOULD BE USED TO MARK THE TOP AND UNDERSIDE OF THE WELL CAP, as well as the casing.
5. Properly decontaminate the low flow pump prior to purging of each well (see Decontamination Procedure).
6. Cut appropriate length of tubing for each well (total well depth minus two ft.)
7. Calibrate all instruments (Flow Cell, FID, and Turbidimeter) being used to collect parameters or monitor air quality during the purge and sample process. This must be done before the start of EVERY day, and if readings seem to drift during the monitoring, the instrument should be recalibrated.
8. Calculate three well volumes for each well (see Attached Spreadsheet).
9. **Purging Wells** – minimize spillage during pumping by having extra drums in the well area
 - a. Each well will be purged to extract three boring volumes while measuring and recording on to two minute intervals for temperature, conductivity, pH, turbidity, and dissolved oxygen.

- b. Purging will conclude after three volumes are removed, or when the water quality parameters have stabilized within 10% for three successive readings.
 - pH +/- 0.1
 - specific electrical conductance (SEC) +/- 3%
 - oxidation-reduction potential (ORP) +/- 10 millivolts
 - turbidity +/- 10% (when turbidity is greater than 5 NTUs)
 - dissolved oxygen (DO) +/- 0.3 milligrams per liter
- 7. Monitor and record water levels during purging. Adjust pump flow levels so that water levels do not fluctuate more than 10% of total water column and do not cause aeration.
- 8. All purged water will be contained in properly labeled drums for characterization and proper disposal.
- 9. **Sampling Wells** - will be carried out once water quality parameters have stabilized.
 - a. Sampling will be performed either from the discharge line of the low flow pump (before the Flow Cell) or from disposable bailers lowered slowly with twine (new twine will be used for each well) approximately two ft. below the water surface.
 - b. Sample bottles, will be labeled with well name, date, time sampled, and constituents to be analyzed.
 - i. Each well will be sampled using the required number of bottles
 - ii. A field blank sample will be taken by running distilled water through the sampling equipment into sample bottles and will be labeled FB.
 - iii. A trip blank sample will be taken using distilled water to fill the bottle set and labeled TB
 - iv. A duplicate sample will be taken will be taken by taking separate samples from the same well and labeled MW-X.
 - c. Sample bottles will be placed into buckets while sampling to ensure no spillage of water onto the sidewalk or street.
 - d. Sample bottles will be rinsed with sample water that is discarded before sampling.
 - e. Water retrieved from each well will be deposited into bottles by opening the check valve at the bottom of the disposable bailer allowing water to slowly fill to the top of the rims minimizing spillage, agitation, and aeration.
 - f. Bailers will be placed back into the bags in which they came and placed into drums for proper disposal.
 - g. The sample bottles from each well will be put into separate ziplock bags to ensure no cross contamination.
 - h. Samples will be kept on ice in coolers and chilled to 4 degrees C.
- 10. Following the collection of each sample, a chain of custody will be properly completed showing sample identification, date, time of sample, matrix, number of containers, and tests required.
- 11. Any dedicated micro-purge tubing will be carefully re-installed into wells, ensuring no contact with the ground surface.

12. All persons involved in purging and sampling will remove and dispose of PPE in a properly labeled drum.
13. All equipment will be decontaminated and placed in special storage containers.
14. A state certified laboratory will arrive onsite to receive all samples and chain of custody.

Decontamination Procedures include the following:

1. Once removed from the well, the purging and sampling pumps should be decontaminated with a non-phosphate soapy-water wash and scrubbed with a brush, a water rinse, and a distilled-water rinse, to help ensure that there is no cross-contamination between wells.
2. The step-by-step procedure is:
 - a. Pull pump out of previously-sampled well (or out of vehicle) and use three sprayers filled with soapy water, tap water and distilled water. Spray outside of tubing and pump until water is flowing off of tubing after each rinse. Use bristle brush to help remove visible dirt, contaminants, etc.
 - b. Have three long-PVC tubes with caps or buckets filled with soapy water, tap water and distilled water. Run pump in each until approximately 2 to 3 gallons of each decon solution is pumped through tubing. Pump at low rate to increase contact time between the decon solutions and the tubing.
 - c. Prior to lowering the pump down the next well, spray the outside of the pump with distilled water. Use disposable paper towels and dry the pump.
 - f. It is especially important to clean thoroughly that portion of the equipment that will be in contact with sample water. In addition, a clean plastic sheet should be placed adjacent to or around the well to prevent surface soils from coming in contact with the purging equipment. The effects of cross-contamination also can be minimized by sampling the least contaminated well first and progressing to the more contaminated ones. The bailer cable/rope (if a bailer is used) and plastic sheet should be properly discarded, as provided in the site health and safety plan, and new materials provided for the next well.
 - g. Dedicated tubing will be used and disposed of after each well is sampled.

APPENDIX C

Field Data Sheets

TRG

WELL DEVELOPMENT LOG

 Well Number: *MW-1*

 Client: *Emeryville Properties*

 Job No: *7103*

 Location: *1400 Park Ave, Emeryville, CA*

Sample Time:

 Rep: *Sean Boykin*

Sample #:

DEVELOPMENT/PURGING LOG

 DTB = *23.23*
 DTW = *8.10*

DATE	TIME	DTFP (0.01) ft.	DTW (0.01) ft.	DTB (0.01) ft.	Vol. Purged (Gal)	pH	Temp °F	EC μ mhos	Turbidity Color
	<i>1200</i>				<i>3</i>	<i>7.1</i>	<i>19.9</i>	<i>.573</i>	<i>210</i>
	<i>1202</i>		<i>8.22</i>		<i>6</i>	<i>6.8</i>	<i>20.0</i>	<i>.579</i>	<i>>1000</i>
	<i>1204</i>				<i>9</i>	<i>6.7</i>	<i>20.1</i>	<i>.567</i>	<i>600</i>
	<i>1206</i>		<i>8.33</i>		<i>12</i>	<i>6.6</i>	<i>20.1</i>	<i>.576</i>	<i>320</i>
	<i>1208</i>				<i>15</i>	<i>6.5</i>	<i>20.1</i>	<i>.579</i>	<i>230</i>
	<i>1210</i>		<i>8.55</i>		<i>18</i>	<i>6.6</i>	<i>19.9</i>	<i>.590</i>	<i>95</i>
	<i>1212</i>				<i>21</i>	<i>6.6</i>	<i>20.0</i>	<i>.593</i>	<i>50</i>
	<i>1214</i>		<i>8.55</i>		<i>24</i>	<i>6.6</i>	<i>20.0</i>	<i>.595</i>	<i>30</i>
	<i>1216</i>				<i>27</i>	<i>6.6</i>	<i>20.0</i>	<i>.596</i>	<i>19</i>
	<i>1218</i>		<i>8.57</i>		<i>30</i>	<i>6.5</i>	<i>20.0</i>	<i>.596</i>	<i>14</i>
	<i>1220</i>				<i>33</i>	<i>6.5</i>	<i>19.9</i>	<i>.596</i>	<i>10</i>
	<i>1222</i>				<i>36</i>	<i>6.5</i>	<i>20.0</i>	<i>.598</i>	<i>8.6</i>
	<i>1224</i>		<i>8.55</i>		<i>39</i>	<i>6.5</i>	<i>20.0</i>	<i>.598</i>	<i>7.1</i>
	<i>1226</i>				<i>42</i>	<i>6.5</i>	<i>19.9</i>	<i>.599</i>	<i>6.0</i>

41 gal.

Well Volume Calculations

23.23 - 8.10
23.23

Recovery Calculations *8.10*

• Water Column (ft)	(WCH)	DTB-DTW		• Bailer/Pump Type	
• Casing Diameter		2", 4"	<i>4.2</i>	• Pump Rate (gpm)	
• Casing capacity (gal/ft)	(CK)	2"(.16), 4"(.65)	<i>.16</i>	• DTW Before Purging (ft)	
• Casing WC Volume (gal)	(CV)	(CK) (WCH)		• DTW After Purging (ft)	
• Borehole Diameter		6", 8", 10"	10"	• Recovery Time After 80% WC Recharge (min)	
• Borehole Capacity (gal/ft)	(BK)	6"(1.46), 8"(2.6), 10"(4.1)	4.1	• Recovery Time To Static Water Level (min)	
• Borehole WC Volume (gal)	(BV)	(BK) (WCH)		• Recharge Rate (ft/min)	
• Porosity	(N)	Sand (.3)	.3	• Comments	
• Annulus WC Volume (gal)	(AV)	(BV-CV) (N)			
• Total Well Volume (gal)	(TV)	CV + AV			
• Min. Development Vol. (gal)	(DV)	(1.5) (TV)			
• LPH Thickness (ft)	(Well)	DTW-DTFP	0		

TRG

WELL DEVELOPMENT LOG

Well Number: *MW-1*
 Job No: *7103*
 Sample Time:
 Sample #:

Client: *Emeryville Properties*
 Location: *1400 Park Ave., Emeryville, CA*
 Rep: *Sean Boyka*

DEVELOPMENT/PURGING LOG

DATE	TIME	DTFP (0.01) ft.	DTW (0.01) ft.	DTB (0.01) ft.	Vol. Purged (Gal)	pH	Temp °F	EC μ mhos	Turbidity Color
	<i>1228</i>		<i>8.55</i>		<i>45</i>	<i>6.6</i>	<i>19.9</i>	<i>.599</i>	<i>5.5</i>
	<i>1230</i>				<i>48</i>	<i>6.5</i>	<i>19.9</i>	<i>.598</i>	<i>4.8</i>
	<i>1232</i>		<i>8.55</i>		<i>51</i>	<i>6.6</i>	<i>20.0</i>	<i>.599</i>	<i>4.8</i>
	<i>1234</i>				<i>54</i>	<i>6.5</i>	<i>20.1</i>	<i>.596</i>	<i>4.0</i>
<i>Final Depth To Water = 8.10</i>									

Well Volume Calculations				Recovery Calculations	
• Water Column (ft)	(WCH)	DTB-DTW		• Bailer/Pump Type	
• Casing Diameter		2", 4"	4"	• Pump Rate (gpm)	
• Casing capacity(gal/ft)	(CK)	2"(.16), 4"(.65)	.65	• DTW Before Purging (ft)	
• Casing WC Volume (gal)	(CV)	(CK) (WCH)		• DTW After Purging (ft)	
• Borehole Diameter		6", 8", 10"	10"	• Recovery Time After 80% WC Recharge (min)	
• Borehole Capacity (gal/ft)	(BK)	6"(1.46), 8"(2.6), 10" (4.1)	4.1	• Recovery Time To Static Water Level (min)	
• Borehole WC Volume (gal)	(BV)	(BK) (WCH)		• Recharge Rate (ft/min)	
• Porosity	(N)	Sand (.3)	.3	• Comments	
• Annulus WC Volume (gal)	(AV)	(BV-CV) (N)			
• Total Well Volume (gal)	(TV)	CV + AV			
• Min. Development Vol. (gal)	(DV)	(1.5) (TV)			
• LPH Thickness (ft)	(Well)	DTW-DTFP	0		

TRG

WELL DEVELOPMENT LOG

 Well Number: **AW-2**

 Client: **Emeryville Properties**

 Job No: **7103**

 Location: **1400 Park Ave., Emeryville, CA**

Sample Time:

 Rep: **Sean Boykin**

Sample #:

DEVELOPMENT/PURGING LOG

 DTB = 23.17
 DTW = 5.52

DATE	TIME	DTFP (0.01) ft.	DTW (0.01) ft.	DTB (0.01) ft.	Vol. Purged (Gal)	pH	Temp %C	EC ^{MS} μ mhos	Turbidity Color
	815				3	5.8	40.6	.508	999
	817		5.82		7	6.1	37.2	.473	999
	819				11	6.3	40.4	.449	999
	821				15	6.4	32.5	.552	999
	823		9.57		19	6.5	33.1	.512	866
	825				23	6.6	40.1	.470	660
	827		9.55		27	6.6	34.0	.512	393
	829				31	6.6	33.7	.508	497
	831		9.31		34	6.6	31.1	.364	380
	833				38	6.6	33.9	.527	236
	835		9.16		41	6.6	36.0	.492	134
	837				44	6.6	29.3	.612	32
	839		9.16		47	6.6	24.9	.602	4
	841				48	6.7	22.0	.601	3

843

Well Volume Calculations

 51
 23.17 - 5.52
 23.19

 22.1
 Recovery Calculations
 Final DTW \rightarrow 5.52

• Water Column (ft)	(WCH)	DTB-DTW		• Bailer/Pump Type	
• Casing Diameter		2", 4"	4 2	• Pump Rate (gpm)	
• Casing capacity(gal/ft)	(CK)	2"(1.16), 4"(6.5)	5.16	• DTW Before Purging (ft)	
• Casing WC Volume (gal)	(CV)	(CK) (WCH)		• DTW After Purging (ft)	
• Borehole Diameter		6", 8", 10"	10"	• Recovery Time After 80% WC Recharge (min)	
• Borehole Capacity (gal/ft)	(BK)	6"(1.46), 8"(2.6), 10"(4.1)	4.1	• Recovery Time To Static Water Level (min)	
• Borehole WC Volume (gal)	(BV)	(BK) (WCH)		• Recharge Rate (ft/min)	
• Porosity	(N)	Sand (.3)	.3	• Comments	
• Annulus WC Volume (gal)	(AV)	(BV-CV) (N)			
• Total Well Volume (gal)	(TV)	CV + AV			
• Min. Development Vol. (gal)	(DV)	(1.5) (TV)			
• LPH Thickness (ft)	(Well)	DTW-DTFP	0		

TRG

WELL DEVELOPMENT LOG

 Well Number: *MW-4*

 Client: *Emeryville Properties*

 Job No: *7103*

 Location: *1400 Park Ave., Emeryville, CA*

Sample Time:

 Rep: *Sean Boykin*

Sample #:

DEVELOPMENT/PURGING LOG

 DTB = *19.91*
 DTW = *4.55*

DATE	TIME	DTFP (0.01) ft.	DTW (0.01) ft.	DTB (0.01) ft.	Vol. Purged (Gal)	pH	Temp °C	EC μ S/cmhos	Turbidity Color
1010	1010		5.10		3	7.0	18.6	.519	>1000
	1012				6	6.8	21.8	.501	>1000
	1014		9.60		9	6.8	22.2	.556	71000
	1016				12	6.6	22.4	.675	71000
	1019		9.59		15	6.7	19.4	.694	71000
	1021				18	6.7	19.7	.735	71000
	1023		9.60		21	6.8	19.9	.757	>1000
	1025				24	6.8	21.5	.744	71000
	1027		9.58		27	6.8	21.6	.772	310
	1029				30	6.8	25.7	.728	160
	1031		9.58		33	6.8	21.0	.761	75
	1034				36	6.9	23.6	.760	38
	1036		9.58		39	6.9	24.2	.755	60
	1039				42	6.9	23.8	.755	50

Well Volume Calculations

 $19.91 - 4.55 = 23.17 - 5$

Recovery Calculations

• Water Column (ft)	(WCH)	DTB-DTW		• Bailer/Pump Type	
• Casing Diameter		2", 4"	2	• Pump Rate (gpm)	
• Casing capacity (gal/ft)	(CK)	2"(.16), 4"(.65)	.16	• DTW Before Purging (ft)	
• Casing WC Volume (gal)	(CV)	(CK) (WCH)		• DTW After Purging (ft)	
• Borehole Diameter		6", 8", 10"	10"	• Recovery Time After 80% WC Recharge (min)	
• Borehole Capacity (gal/ft)	(BK)	6"(1.46), 8"(2.6), 10"(4.1)	4.1	• Recovery Time To Static Water Level (min)	
• Borehole WC Volume (gal)	(BV)	(BK) (WCH)		• Recharge Rate (ft/min)	
• Porosity	(N)	Sand (.3)	.3	• Comments	
• Annulus WC Volume (gal)	(AV)	(BV-CV) (N)			
• Total Well Volume (gal)	(TV)	CV + AV			
• Min. Development Vol. (gal)	(DV)	(1.5)(TV)			
• LPH Thickness (ft)	(Well)	DTW-DTFP	0		

TRG

WELL DEVELOPMENT LOG

 Well Number: *MW-4*

 Client: *Emeryville Properties*

 Job No: *7103*

 Location: *1400 Park Ave, Emeryville, CA*

Sample Time:

 Rep: *Sean Boykin*

Sample #:

DEVELOPMENT/PURGING LOG

DATE	TIME	DTFP (0.01) ft.	DTW (0.01) ft.	DTB (0.01) ft.	Vol. Purged (Gal)	pH	Temp °F	EC µ mhos	Turbidity Color
	<i>1042</i>		<i>9.57</i>		<i>45</i>	<i>6.9</i>	<i>20.2</i>	<i>.825</i>	<i>14</i>
	<i>1044</i>				<i>48</i>	<i>6.9</i>	<i>22.9</i>	<i>.779</i>	<i>15</i>
	<i>1046</i>		<i>9.58</i>		<i>51</i>	<i>6.8</i>	<i>21.9</i>	<i>.801</i>	<i>4.6</i>
	<i>1048</i>				<i>54</i>	<i>6.8</i>	<i>25.8</i>	<i>.782</i>	<i>2.8</i>
	<i>1050</i>				<i>57</i>	<i>6.8</i>	<i>25.4</i>	<i>0.781</i>	<i>2.2</i>
<i>Final Depth to Water = 5.34</i>									

Well Volume Calculations *DTW = 5.34*

Recovery Calculations

• Water Column (ft)	(WCH)	DTB-DTW		• Bailor/Pump Type	
• Casing Diameter		2", 4"	4"	• Pump Rate (gpm)	
• Casing capacity(gal/ft)	(CK)	2"(.16), 4"(.65)	.65	• DTW Before Purging (ft)	
• Casing WC Volume (gal)	(CV)	(CK) (WCH)		• DTW After Purging (ft)	
• Borehole Diameter		6", 8", 10"	10"	• Recovery Time After 80% WC Recharge (min)	
• Borehole Capacity (gal/ft)	(BK)	6"(1.46), 8"(2.6), 10" (4.1)	4.1	• Recovery Time To Static Water Level (min)	
• Borehole WC Volume (gal)	(BV)	(BK) (WCH)		• Recharge Rate (ft/min)	
• Porosity	(N)	Sand (.3)	.3	• Comments	
• Annulus WC Volume (gal)	(AV)	(BV-CV) (N)			
• Total Well Volume (gal)	(TV)	CV + AV			
• Min. Development Vol. (gal)	(DV)	(1.5) (TV)			
• LPH Thickness (ft)	(Well)	DTW-DTFP	0		

WELLHEAD INSPECTION CHECKLIST

Date 11/5/07 Client Reynolds Group

Site Address 1400 Park Ave. Emeryville, CA

Job Number 070115-DA1 Technician DA

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)
MW-2							X	
MW-1							X	
MW-4							X	

NOTES: MW-2: casing is too high. Apron has major cracks, is below grade
MW-1: wellbox rim is damaged. MW-4: 2/2 bolts missing. lid tab is broken. Casing is too high for cap.

WELL GAUGING DATA

Project # 070115-DA1 Date 1/15/07 Client Reynolds Group

Site Emeryville Properties 1400 Park Ave. Emeryville, CA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-2	0813	2					5.65	23.02	TOC	
MW-1	0816	2					8.23	23.15	↓	
MW-4	0820	2				4.32	19.78			

WELL MONITORING DATA SHEET

Project #: 070115-DA1	Client: Reynolds Group
Sampler: DA	Start Date: 1/15/07
Well I.D.: MW-1	Well Diameter: (2) 3 4 6 8
Total Well Depth: 23.15	Depth to Water Pre: 8.23 Post: 8.37
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVD) Grade	Flow Cell Type: YSI 556

Purge Method: X2" Grundfos Pump 2.4 g/w Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing X3 = 7.2 X New Tubing Other _____
 Flow Rate: ~1 gpm Pump Depth: 17'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)g	Observations
0934	18.66	6.93	581	340	0.73	44.4	-	tan, cloudy 8.23
0937	19.21	6.71	602	101	0.23	40.7	3	clearing 8.33
0940	19.34	6.73	676	21	0.29	47.8	6	" 8.34
0943	19.37	6.72	692	11	0.53	48.4	9	" 8.35
0946	19.35	6.73	701	8	0.33	46.2	12	" 8.35
0949	19.33	6.73	705	6	0.28	44.6	15	" 8.38
0952	19.31	6.73	709	4	0.24	42.5	18	" 8.38
0955	19.33	6.73	711	3	0.24	40.4	21	" 8.37
0958	19.30	6.73	713	2	0.25	39.0	24	" 8.37

Did well dewater? Yes <input checked="" type="radio"/> No <input type="radio"/>	Amount actually evacuated:
Sampling Time: 1000	Sampling Date: 1/15/07
Sample I.D.: MW-1	Laboratory: Assoc.
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: see coc.
Equipment Blank I.D.: @ Time	Duplicate I.D.: MW-X

WELL MONITORING DATA SHEET

Project #: 070115-2A1	Client: TRG
Sampler: PA	Start Date: 11/15/09
Well I.D.: MW-2	Well Diameter: <input checked="" type="radio"/> 2 3 4 6 8
Total Well Depth: 23.02	Depth to Water Pre: 5.65 Post: 8.30
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="checkbox"/> PVC Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump 2.8 g/w Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing New Tubing Other _____
 Flow Rate: 1.5 3" 8.4 Pump Depth: 18'

Time	Temp. (°C or °F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals or mL)	Observations	PTW
0848	17.79	6.72	805	217	1.00	207.6	-	tan, cloudy	7.18
0851	17.94	6.69	809	97	0.86	201.0	3	cleaning	8.28
0854	18.40	6.69	817	49	1.63	190.7	7.5	"	8.42
0857	18.34	6.70	816	44	2.27	181.1	10.5	"	8.42
0900	18.37	6.70	817	11	1.79	176.2	15	"	8.38
0903	18.34	6.70	816	4	1.17	170.9	19.5	"	8.38
0906	18.33	6.70	815	3	0.94	162.5	24	"	8.32
0909	18.40	6.69	816	2	0.79	158.7	27	"	8.30

Did well dewater? Yes <input checked="" type="checkbox"/> No	Amount actually evacuated: 27
Sampling Time: 0911	Sampling Date: 11/15/09
Sample I.D.: MW-2	Laboratory: Assoc.
Analyzed for: TPH-G BTEX MTBE TPH-D Other: see col	
Equipment Blank I.D.: @	Duplicate I.D.:

WELL MONITORING DATA SHEET

Project #: 070115-DA1	Client: Reynolds Group
Sampler: DA	Start Date: 11/15/07
Well I.D.: MW-4	Well Diameter: ② 3 4 6 8
Total Well Depth: 19.78	Depth to Water Pre: 4.32 Post: 8.05
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="checkbox"/> VDO Grade	Flow Cell Type: YSI 550

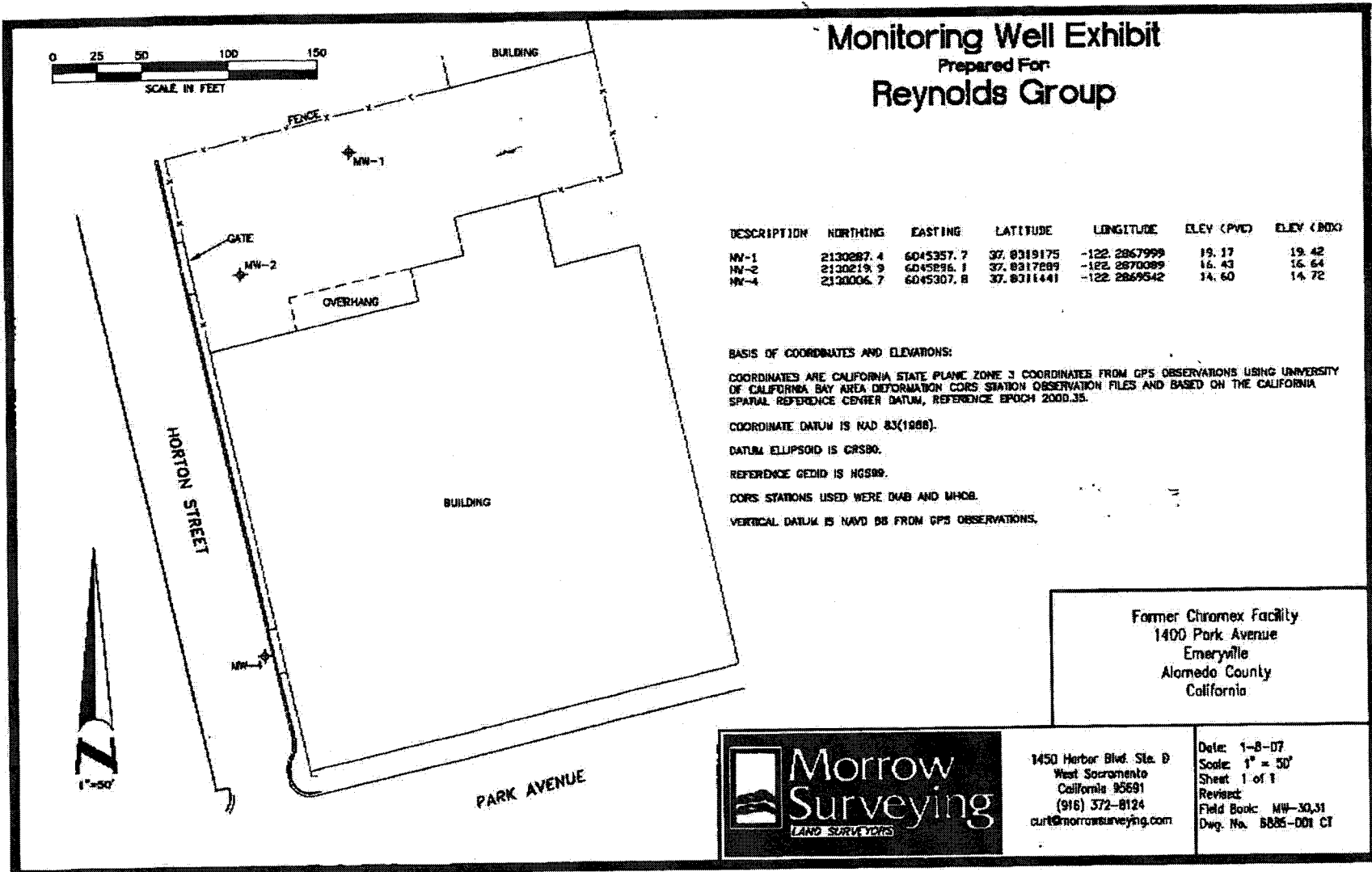
Purge Method: ~2" Grundfos Pump 2.5 g/cv Peristaltic Pump Bladder Pump
 Sampling Method: Dedicated Tubing x3 = 7.5 xNew Tubing Other _____
 Flow Rate: ~1 gpm Pump Depth: 17'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals or mL)	Observations	DTW
1032	17.80	6.93	945	842	0.67	61.8	-	cloudy	4.32
1035	17.94	6.93	913	2136	0.28	42.9	3	"	7.94
1038	18.42	6.91	963	49	0.22	36.4	6	"	8.32
1041	18.59	6.97	988	25	0.27	19.0	9	"	8.62
1044	18.87	6.96	1007	6	0.32	16.7	11	"	8.32
1047	18.87	6.96	1009	4	0.26	18.7	13	"	8.28
1050	18.86	6.92	1011	3	0.22	19.2	15	"	8.20
1053	18.90	6.97	1012	2	0.21	11.0	17	"	8.05

Did well dewater? Yes <input checked="" type="checkbox"/> No	Amount actually evacuated: 17
Sampling Time:	Sampling Date: 11/15/07
Sample I.D.: MW-4	Laboratory: Assoc.
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: see coc
Equipment Blank I.D.: @	Duplicate I.D.:

APPENDIX D

Registered Survey of Groundwater Monitoring Wells



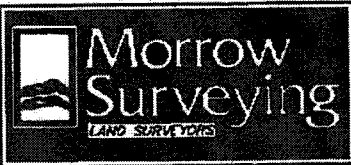
Monitoring Well Exhibit

Prepared For
Reynolds Group

DESCRIPTION	NORTHING	EASTING	LATITUDE	LONGITUDE	ELEV (PVD)	ELEV (BOK)
MW-1	2130287.4	6045357.7	37.8319175	-122.2867999	19.17	19.42
MW-2	2130219.9	6045296.1	37.8317289	-122.2870089	16.43	16.64
MW-4	2130006.7	6045307.8	37.8311441	-122.2869542	14.60	14.72

BASIS OF COORDINATES AND ELEVATIONS:
 COORDINATES ARE CALIFORNIA STATE PLANE ZONE 3 COORDINATES FROM GPS OBSERVATIONS USING UNIVERSITY OF CALIFORNIA BAY AREA DEFORMATION CORS STATION OBSERVATION FILES AND BASED ON THE CALIFORNIA SPATIAL REFERENCE CENTER DATUM, REFERENCE EPOCH 2000.35.
 COORDINATE DATUM IS NAD 83(1983).
 DATUM ELLIPSOID IS GRS80.
 REFERENCE GECHD IS NGS89.
 CORS STATIONS USED WERE D4B AND MHCB.
 VERTICAL DATUM IS NAVD 83 FROM GPS OBSERVATIONS.

Former Chromex Facility
 1400 Park Avenue
 Emeryville
 Alameda County
 California

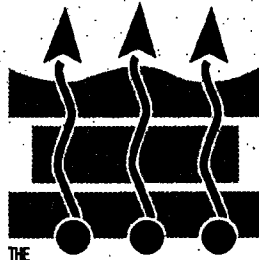


1450 Harbor Blvd. Ste. B
 West Sacramento
 California 95691
 (916) 372-8124
 curt@morrowsurveying.com

Date: 1-8-07
 Scale: 1" = 50'
 Sheet 1 of 1
 Revised:
 Field Book: MW-30,31
 Dwg. No. 8885-001 CT

APPENDIX E

Site Specific Health and Safety Plan



THE
REYNOLDS GROUP
a California corporation

HEALTH AND SAFETY PLAN

GROUNDWATER MONITORING

EMERYVILLE PROPERTIES
1400 PARK AVENUE
EMERYVILLE, California

Tel 714-730-5397

PO Box 1996, Tustin, California 92781-1996
www.reynolds-group.com

Fax 714-730-6476

INTRODUCTION

The Reynolds Group (TRG) was engaged to perform groundwater monitoring at Emeryville Properties located at 1400 Park Avenue in Emeryville, California.

KEY PERSONNEL AND RESPONSIBILITIES

Following are key assignments for this project:

ASSIGNMENT

RESPONSIBLE PARTY

Project Manager:
Project Site Safety Officer:
Office Health and Safety Manager;

Gwen Tellegen/Ed Reynolds
Sean Boykin
Gwen Tellegen

The Project Manager (PM) has overall responsibility for field development and implementation of this Health and Safety Plan (HASP). The PM assigns health and safety related duties and responsibilities only to qualified individuals. Before anyone enters the work area, they must meet the requirements of 29 CFR 110.120 for medical examination and health and safety training.

The Project Site Safety Officer (PSSO), who must be on-site during all work activities, will be responsible for on-site health and safety activities. The PSSO has stop-work authorization that he will exercise when he perceives an imminent safety hazard, an emergency situation, or any other potentially dangerous situations, such as extreme weather conditions. If the PSSO stops work for a safety-related issue, work cannot begin again until approved by the OHSM. In an emergency, the PSSO will arrange for emergency support services when needed.

GENERAL SAFETY REQUIREMENTS

Continuous air monitoring for worker safety and regulatory compliance will be conducted using a photoionization detector (PID) or flame-ionization detector (FID) a minimum of every 15 minutes during the entire operation, unless directed otherwise by the appropriate regulatory agency officer(s) present on site.

Monitoring equipment, including PID/FID and CG/O2 meter, will be calibrated daily and calibration logs will be maintained on-site and made available upon request.

All on-site personnel operating within the work zone will show proof of current 40-hour hazardous waste operations training upon request.

Cellular telephones/radios will be available on-site at all times during work for communication in the event of an emergency.

HAZARD EVALUATION

The following is an evaluation of the hazards which might be associated with this project and the countermeasures which should be taken to remediate these hazards:

Exposure

POTENTIAL CHEMICALS:

The most likely chemical compounds to be encountered during this remediation are elevated petroleum fuel hydrocarbons, found typically in oil field operations.

ASSOCIATED HAZARD:

Gasoline, Diesel, Oil and Grease: Dermal: can defat and irritate skin
Inhalation: TLV's typically 300-600 ppm
Acute effects = irritant to skin, eyes, nose, mouth

BTEX: Dermal: can defat and irritate skin
Inhalation: TLV for benzene = 1 ppm
Acute effect = irritant
Chronic effect: benzene is a human carcinogen.

MTBE: Dermal: can defat and irritate skin
Inhalation: TLV for MTBE = 25 ppm
Acute effect = irritant
Chronic effects: MTBE is a human carcinogen.

EXPOSURE PROBABILITY AND LIKELY CONSEQUENCE:

A low hazard level exists where there is no contact with the chemicals, when low concentrations are encountered, or when proper protection is worn.

COUNTERMEASURES:

- When OVM reading is less than 50 ppm above background level wear Level D protection;
- When OVM reading is above 100 ppm for greater than 15 minutes wear Level C protection;
- When OVM reading is above 1000 ppm cease work operations until level decreases.

Fire and Explosion

POTENTIAL FOR FIRE OR EXPLOSION:

Workers may encounter fire or explosion hazards on this project. Fire or explosion could occur by rupturing an underground gas line or if digging through soil that contains high concentrations of fuel hydrocarbons.

EXPOSURE PROBABILITY AND LIKELY CONSEQUENCE:

Low probability with moderate consequence.

COUNTERMEASURES:

Seek information about possible underground obstructions from knowledgeable individuals before excavating. Note if Dig Alert has marked the site for underground lines (see Section 3.11).

Oxygen Deficiency

On-site workers are not likely to encounter an oxygen deficiency. Workers will not enter confined spaces on this project.

Ionizing Radiation

On-site workers are not likely to encounter radioisotopes or other hazardous ionizing radiation on this site.

Biologic Hazards

On-site workers are not likely to encounter biologic hazards on this site.

Safety Hazards

On-site workers may encounter physical safety hazards on this site. Work operations include:

- working near moving, powered machinery;
- slips, strains, trips, and falls;
- moving and lifting of heavy objects;
- use of hand tools, and
- use of motor vehicles.

COUNTERMEASURES:

Use experienced on-site persons. Wear hard-toed shoes and approved hard hats. Heighten worker awareness with a tailgate safety session for all on-site workers at the start of work each day. Maintain all equipment (including safety devices) in proper operation condition. Never leave an open excavation unattended.

Electrical

On-site workers could encounter electrical hazards on this site if the front loader contacts overhead power lines, if subsurface work encounters buried live electrical lines, if poor weather conditions exist, or equipment is not properly grounded.

COUNTERMEASURE:

Be sure not to raise the front loader in proximity to overhead power lines. Work shall cease if bad weather conditions exist. Equipment shall be grounded. Seek information about possible underground lines from knowledgeable individuals before excavating. Note if Dig Alert has marked the site for underground lines (see Section 3.11).

Heat Stress

There will be a low likelihood that on-site workers may encounter heat stress on this project. Workers will be wearing Tyvek suits and ambient temperature will likely be in the low-to mid-eighties.

COUNTERMEASURES:

Heighten worker awareness about heat stress at daily tailgate safety session. Monitor heart rate at break time. If heart rate exceeds 110 beats per minute, cut work period by one-third. Provide and encourage drinking of water and juices at the job site.

Cold Exposure

On-site workers are not likely to encounter cold exposure on this project.

Noise

On-site workers will likely encounter excessive noise levels from operation of the heavy equipment.

COUNTERMEASURE:

Workers will wear hearing protection around the backhoe and whenever they have trouble conversing in normal tones at a distance of about five feet.

Underground Lines

Every effort will be made to determine if underground lines exist beneath the site. Dig Alert will be contacted at least two working days prior to the commencement of work.

SITE CONTROL

For control purposes, the work area consists of a 160-foot area around the backhoe. It is open and workers will enter and leave the site with care. Smoking, eating, and drinking are prohibited in the immediate work area. The PSSO will exclude casual observers from the work area and will be on-site during work operations.

EMERGENCY RESPONSE PLAN

Following are emergency names, phone numbers, and contacts:

Police	911
Fire Department	911
Ambulance	911
Emergency Hospital Alta Bates Summit Medical Center 350 Hawthorne Avenue Oakland, California	(510) 655-4000
The Reynolds Group 520 West First Street Tustin, CA 92780	(714) 730-5397

Closest Phone for Emergencies: Cellular Phones

Medical Emergencies:

For emergencies requiring ambulance service, call 911 for transportation of injured to hospital. Life-flight is available and can be obtained when calling 911.

Nearest Facility:

Alta Bates Summit Medical Center is nearest the Site. The most direct route is shown on the attached map.

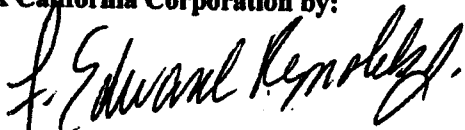
Emergency Decontamination:

In a medical emergency, personnel decontamination is of lesser importance than medical attention. Alert paramedics or emergency room attendants about the potential for contamination.

The undersigned have read and will comply with the Health and Safety Plan for the 1400 Park Avenue, Emeryville Groundwater Well Development and Monitoring project.

REPRESENTING	NAME	SIGNATURE	DATE
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

THE REYNOLDS GROUP
A California Corporation by:



F. Edward Reynolds, Jr., P.E.

Yahoo! My Yahoo! Mail Make Y! your home page

Search:

YAHOO! LOCAL
Maps

Sign In
New User? Sign Up

Maps Home - Broadband Map (New) - Help

Yahoo! Driving Directions

Maps | Driving Directions MY YAHOO!

Starting from: 1400 Park Ave, Emeryville, CA 94608-3520 [Save Address](#)

Arriving at: 350 Hawthorne Ave, Oakland, CA 94609-3108 [Save Address](#)

Distance: 1.7 miles Approximate Travel Time: 6 mins

[Get Reverse Directions](#)

New Send to Phone Text Only | Printable Version | Email Directions

Your Full Route

[Zoom In](#) -

[1st.3city567state910-](#)

[Zoom](#)

[Out](#)



Your Destination

[View Larger Map](#)



Traffic



SmartView™
See locations on this:

- [Restaurants](#)
- [Hotels](#)
- [ATMs](#)
- [Gas Stations](#)
- [More](#)

[What's this?](#)

Zoom in & Re-Center Re-Center only

Directions

[Show Turn by Turn Maps](#)

1.	Start at 1400 PARK AVE, EMERYVILLE going toward HOLDEN ST - go 0.1 mi
2.	Turn R on HOLLIS ST - go 0.4 mi
3.	Turn L on 34TH ST - go 1.1 mi