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Environmental Health

YRC Worldwide Inc.
10390 Roe Avenue
Overland Park, KS 66211-1213
Phone 913 695 6100
yrc.com



November 25, 2008

To Whom It May Concern:

Attached is the "Third Quarter 2008 Groundwater Monitoring Report" for the Roadway Express, Inc. property located at 1708 Wood Street in Oakland, CA 94607. I declare, under penalty of perjury, that the information and/or recommendations contained in the attached report are true and correct to the best of my knowledge.

Roadway Express, Inc. is a subsidiary of YRC Worldwide, Inc. I am authorized by YRC Worldwide, Inc. to represent Roadway Express, Inc. regarding environmental matters.

Sincerely,

Ruben D. Byerley
Supervisor-Environmental Services

November 21, 2008

Mr. Paresh C. Khatri
Hazardous Materials Specialist
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

Subject: Third Quarter 2008 Groundwater Monitoring Report
Roadway Express, Inc.
1708 Wood Street
Oakland, California
Fuel Leak Case No. RO0000039
Burns & McDonnell Project No. 48791

Dear Mr. Khatri,

Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) has been retained by YRC North American Transportation, Inc. (YRC) to prepare a letter report summarizing the groundwater sampling activities for the third quarter of 2008 at the Roadway Express, Inc. truck terminal located at 1708 Wood Street, Oakland, California (Site). Figure 1 shows the location of the Site.

1.0 Site Description and Location

The Site is currently operating as a trucking facility, which includes a terminal, loading dock, warehouse, business office, and the perimeter is used for trailer storage (Figure 2). The Site is secured with a full perimeter fence and staffed by professional security guards.

The Site is situated between Wood Street to the west, 18th Street to the north, 17th Street to the south, and Campbell Street to the east. Across 18th Street is a community park and surrounding businesses are industrial complexes.

2.0 Regional and Site Geology

The Site is located approximately 1 mile east of the central-east portion of the San Francisco Bay, at an elevation of approximately 10 feet above mean sea level (MSL). The Site is near the current eastern extent of the San Francisco Bay, and in the recent geologic past, was part of the San Francisco Bay. The near-surface geology has largely been controlled by the changing morphology of the San Francisco Bay over geologic time. The closest surface-water bodies to the

Site are the Oakland Outer Harbor, located approximately 1 mile west of the Site and the Oakland Inner Harbor, located approximately 1.75 miles south of the Site.

The Site's lithology is characterized by: dark gray, very soft, moist clay to a depth of approximately 15 feet below ground surface (bgs); overlying approximately 10 feet of brown, soft, wet, silty sandy clay that extends from approximately 15 to 25 feet bgs; approximately 4 feet of brown, wet, silty clayey sand that extends from approximately 25 to 29 feet bgs; and a gray, very soft, wet clay of unknown thickness.

3.0 Site History and Underground Storage Tank Overview

According to an internal document review conducted by the consultant firm Marshal Miller & Associates, (*Marshall Miller & Associates 2006*) between the years 1987 to 1996, three underground storage tanks (USTs) were properly removed and two USTs were abandoned-in-place.

In March 1987, two USTs (one 10,000 gallon gasoline tank and one 2,000 gallon motor oil tank) were removed from the central-eastern area of the Site (Figure 2). During this work, two other USTs were identified at the northwest corner of the property (one 2,000 gallon waste oil tank and one 10,000 gallon tank of unknown contents). These two USTs were abandoned-in-place (filled with sand slurry and grout) by R.S. Eagan & Co. At that time, R.S. Eagan & Co. installed two monitoring wells, MW-1 and MW-2, within the footprint of the central-eastern excavation.

In April 1996, the remaining 10,000 gallon diesel UST and all associated piping was removed from the central-eastern area of the Site.

In September 2000, One Environment installed three monitoring wells (MW-3, MW-4, and MW-5) around the location of the removed USTs in the central-eastern area of the Site. Well construction details are summarized in Table 1.

On August 7, 2008, Burns & McDonnell removed monitoring wells MW-1 and MW-2. These wells were constructed without a proper sanitary seal and posed a risk as a pathway to the subsurface for contaminants.

4.0 Groundwater Monitoring

On September 10, 2008, groundwater samples were collected from the Site's existing groundwater monitoring wells: MW-3 through MW-5 (Figure 3).

4.1 Depth to Water

Prior to collecting groundwater samples, depth-to-water (DTW) was measured from the top of casing (TOC) at each well using a clean, battery-operated, oil/water interface probe. Well gauging and groundwater elevations are summarized in Table 2. The DTW for each well was

recorded on Groundwater Sampling Forms (Appendix A). The interface probe was cleaned between each well with an Alconox water solution and rinsed with deionized water.

4.2 Depth to Water

Prior to sampling, the wells were purged with new, disposable polyethylene bailers. Groundwater parameters (temperature, pH, and specific conductance) were measured and recorded on Groundwater Sampling Forms (Appendix A). Water clarity was visually qualified and recorded. After field parameters stabilized to within +/- 10% over at least three consecutive readings while at a stabilized water elevation, groundwater samples were collected in laboratory supplied sampling bottles.

4.3 Well Sampling

Groundwater samples were uniquely labeled with the well identification, date, time of collection, type of preservative, and analyses to be performed. A duplicate sample was taken from MW-5, and submitted to the laboratory as Dup-1. Once collected, each groundwater sample was immediately placed into an insulated, ice-filled cooler. Samples were transferred under Chain-of-Custody protocol to Curtis & Tompkins Laboratories Inc., a California State Certified Laboratory.

5.0 Groundwater Monitoring Results

5.1 Groundwater Flow Direction and Gradient

On September 10, 2008, static groundwater was observed in the Site's wells, at depths ranging from 3.45 feet (MW-5) to 4.48 feet (MW-3) below the top of casing (TOC), with corresponding groundwater elevations ranging from 6.52 feet (MW-5) to 5.61 feet (MW-4) above MSL. Burns & McDonnell used gauging and well casing elevation data to calculate groundwater elevations. In the area of the removed USTs, groundwater flow direction was to the north with a gradient of approximately 0.021 feet per foot (ft/ft). Groundwater elevations are summarized in Table 2 and presented on Figure 3.

5.2 Groundwater Analytical Results

Samples were analyzed for Total Petroleum Hydrocarbons in the Diesel (TPH-d), Gasoline (TPH-g), and Motor Oil (TPH-mo) ranges using Environmental Protection Agency (EPA) Method 8015M. Silica gel cleanup, EPA Method 3630C, was used on the samples that had results for TPH-d and TPH-mo, to remove naturally occurring organic compounds and are flagged with an '*' qualifier. Monitoring wells MW-3 and MW-4 did not have concentrations of TPH-d or TPH-mo at or above the laboratory detection limits. MW-5 had detectable concentrations of TPH-d and TPH-mo, however after silica gel cleanup, none of the TPH concentrations were at or above the detection limit.

Samples were analyzed for benzene, toluene, ethylbenzene, xylenes (BTEX), and Methyl tert-butyl ether (MTBE) using EPA Method 8260 B. None of the samples submitted for analysis had concentrations above the method detection limits for BTEX or MTBE.

Current and historical concentrations for all Site monitoring wells are presented in Table 3: with results from this quarter's sampling presented on Figure 4. Copies of the certified analytical reports and Chain-of-Custody documentation are included as Appendix B.

6.0 Summary


Groundwater samples from the monitoring wells screened in the deep water zone did not show any petroleum impacts above laboratory detection limits.


7.0 Certification

This report was prepared under the supervision of a California Professional Geologist. All statements, conclusions and recommendations are based solely upon published results from previous consultants, field observations by Burns & McDonnell and laboratory analysis performed by a California state-certified laboratory related to the work performed by Burns & McDonnell.

If you have any questions regarding this project please feel free to contact either of the undersigned at (650) 871-2926.

Sincerely,


Patrick Bratton
Project Manager


Gary P. Messerotes, P.G.
Senior Geologist



Attachments:

Figure 1 – Site Location Map

Figure 2 – Site Map

Figure 3 – Groundwater Elevations Third Quarter 2008 – Former USTs Area

Table 1: Well Construction Details

Table 2: Groundwater Elevations

Table 3: Monitoring Well Groundwater Summary

Appendix A – Field Sampling Forms

Appendix B – Certified Analytical Report

TABLES

TABLE 1
Well Construction Details
USF Roadway Express Facility
1708 Wood Street
Oakland, California

Well ID	Casing Diameter	Casing Elevation	Construction Depth	Screened Interval
	(Inches)	Feet (1)	Feet (2)	Feet (2)
MW-1	4	unknown	10	0.5-10
MW-2	4	9.89	9.5	0.5-9.5
MW-3	2	10.11	30	10-30
MW-4	2	9.52	30	10-30
MW-5	2	9.97	30	10-30

1 - Elevation in feet above mean sea level

2 - Depth in feet below ground surface

Costruction depth and screened intervals based on boring logs located in the *Additional Groundwater Investigation Report by One Environment, 2001*
Casing Elevation Resurveyed by Luk and Associates on December 20, 2007

TABLE 2
Groundwater Elevations
USF Roadway Express Facility
1708 Wood Street
Oakland, California

Well ID	Date Measured	Total Depth	Depth to Water	Groundwater Elevation
		Feet (1)	Feet (1)	Feet (2)
MW-1	<i>Well Abandoned August 2008</i>			
MW-2	17-Dec-07	9.2	1.56	8.33
	28-Mar-08	9.2	1.03	8.86
	2-Jun-08	9.2	1.44	8.45
	<i>Well Abandoned August 2008</i>			
MW-3	22-Mar-07	29.4	4.04	6.07
	17-Dec-07	29.4	4.40	5.71
	28-Mar-08	29.4	4.12	5.99
	2-Jun-08	29.5	4.35	5.76
	10-Sep-08	29.5	4.48	5.63
MW-4	22-Mar-07	29.5	3.25	6.27
	17-Dec-07	29.5	3.66	5.86
	28-Mar-08	29.5	3.32	6.20
	2-Jun-08	29.5	3.56	5.96
	10-Sep-08	29.5	3.91	5.61
MW-5	22-Mar-07	29.2	3.73	6.24
	17-Dec-07	29.2	4.11	5.86
	28-Mar-08	29.2	3.82	6.15
	2-Jun-08	29.5	4.05	5.92
	10-Sep-08	29.5	3.45	6.52

1 - Measured depth in feet below top of casing
2 - Elevation in feet above mean sea level

TABLE 3
Monitoring Well Groundwater Summary
Total Petroleum Hydrocarbons in Groundwater
USF Roadway Express Facility
1708 Wood Street
Oakland, California

Well ID	Date Sampled	TPH-d	TPH-g	Total BTEX	MTBE	Total Oil & Grease	TPH-mo
Analytical Reporting Units		µg/L	µg/L	µg/L	µg/L	mg/L	µg/L
MW-1	24-Jul-97	1,200	<50	---	---	1.4	---
	<i>Well Abandoned August 2008</i>						
MW-2	24-Jul-97	940	<50	---	---	6.2	---
	17-Dec-07	140	---	<2.0	---	<5.0	---
	28-Mar-08	180* Y	<50	<2.5	<0.5	---	<300*
	3-Jun-08	150*	<50	<2.5	<2.0	---	<300*
	<i>Well Abandoned August 2008</i>						
MW-3	6-Sep-00	65.9	ND	---	---	ND	---
	22-Mar-07	<50	<50	---	<0.5	<4.75	---
	17-Dec-07	<50	---	<2.0	---	<5.0	---
	28-Mar-08	<50	<50	<2.5	<0.5	---	<300
	3-Jun-08	<50	<50	<2.5	<2.0	---	<300
	10-Sep-08	<50	<50	<2.5	<2.0	---	<300
MW-4	6-Sep-00	65.7	ND	---	---	ND	---
	22-Mar-07	<50	<50	---	<0.5	<4.75	---
	17-Dec-07	<50	---	<2.0	---	<5.0	---
	28-Mar-08	<50	<50	<2.5	<0.5	---	<300
	2-Jun-08	<50	<50	<2.5	<2.0	---	<300
	10-Sep-08	<50	<50	<2.5	<2.0	---	<300
MW-5	6-Sep-00	78.7	ND	---	---	ND	---
	22-Mar-07	500 HY	<50	---	<0.5	<4.85	---
	17-Dec-07	<50	---	<2.0	---	<5.0	---
	28-Mar-08	<50*	<50	<2.5	<0.5	---	<300
	2-Jun-08	<50*	<50	<2.5	<2.0	---	<300*
	10-Sep-08	<50*	<50	<2.5	<2.0	---	<300*
dup-1	10-Sep-08	<50*	<50	<2.5	<2.0	---	<300*

Notes:

ND = Sample not detected above detection limit; unable to find detection limit in prior sampling reports

< ## = Sample not detected above detection limit of ##

--- = Not sampled/analyzed for this constituent

* = Silica Gel Cleanup (EPA 3630) run to remove naturally occurring organic compounds

Y = Sample exhibits chromatographic pattern which does not resemble standard

FIGURES

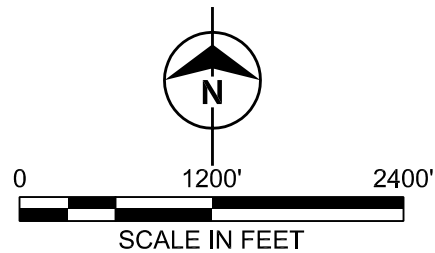
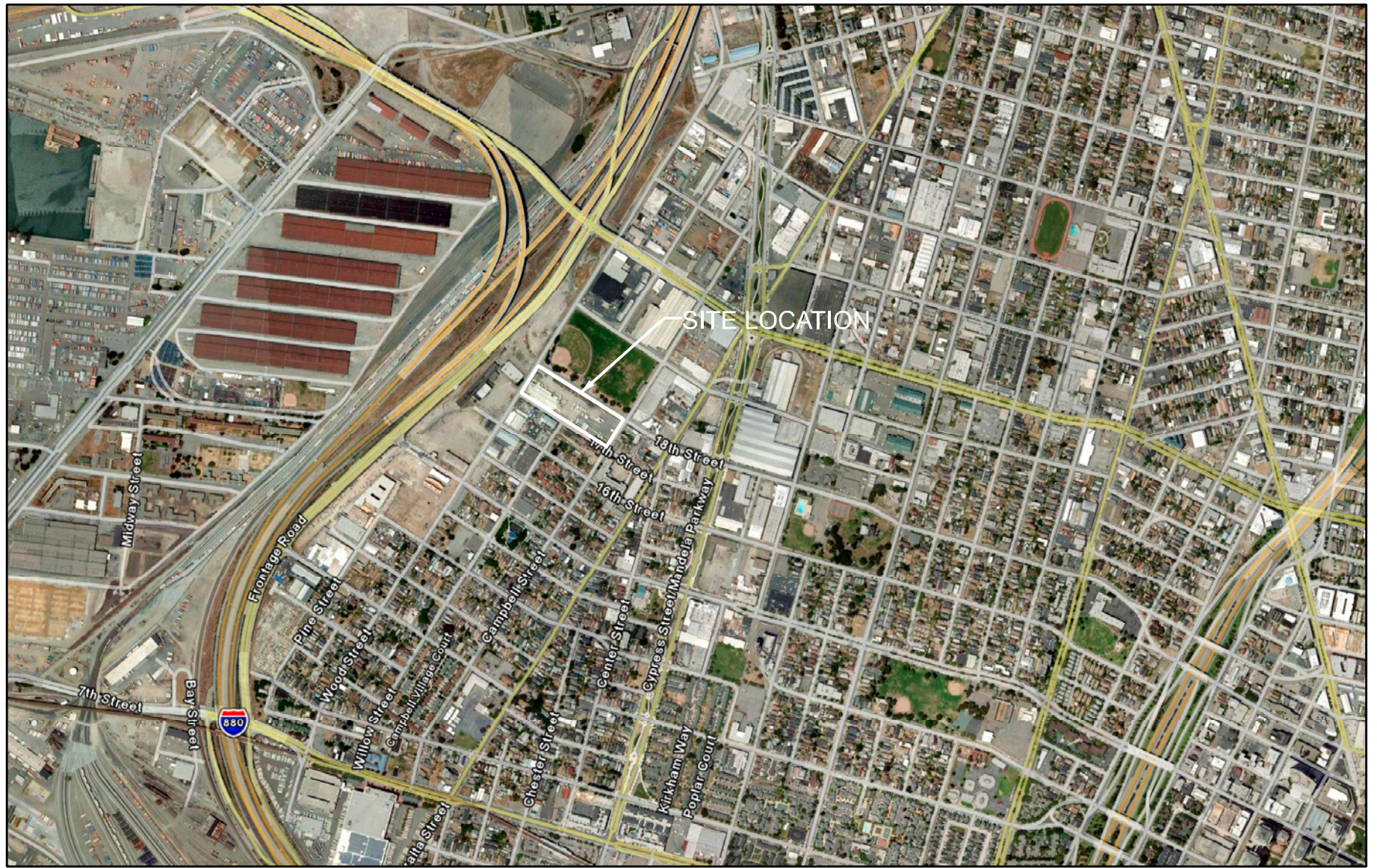


Figure 1
SITE LOCATION MAP
ROADWAY EXPRESS
1708 WOOD STREET
OAKLAND, CA

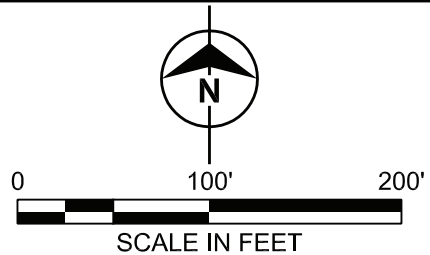
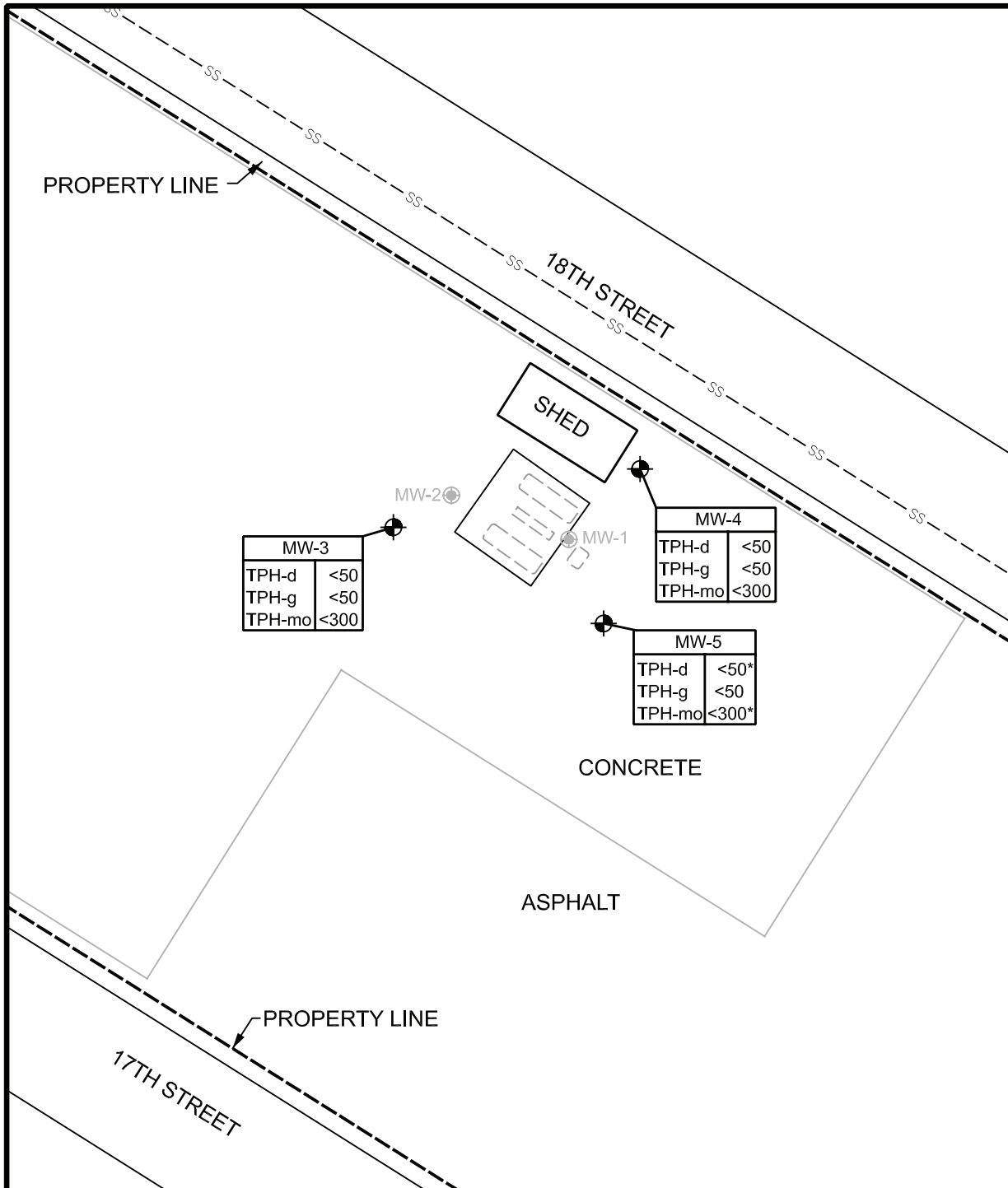


Figure 2
SITE MAP
ROADWAY EXPRESS
1708 WOOD STREET
OAKLAND, CA



LEGEND

⊕ EXISTING MONITORING WELL

⊙ REMOVED MONITORING WELL

TPH-d CONCENTRATION OF TPH AS DIESEL

TPH-g CONCENTRATION OF TPH AS GASOLINE

TPH-mo CONCENTRATION OF TPH AS MOTOR OIL

* CONCENTRATION AFTER SILICA GEL CLEANUP

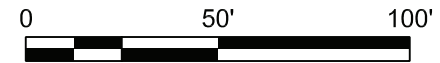
NOTES

1. MONITORING WELLS MW-2 THROUGH MW-5 SURVEYED ON DECEMBER 17, 2007 BY LUK AND ASSOCIATES LAND SURVEYING; ALL OTHER LOCATIONS ARE APPROXIMATE AND BASED ON INFORMATION PROVIDED BY ROADWAY EXPRESS.

2. TPH = TOTAL PETROLEUM HYDROCARBONS

3. ALL CONCENTRATIONS ARE IN MICROGRAMS PER LITER ($\mu\text{g/l}$)

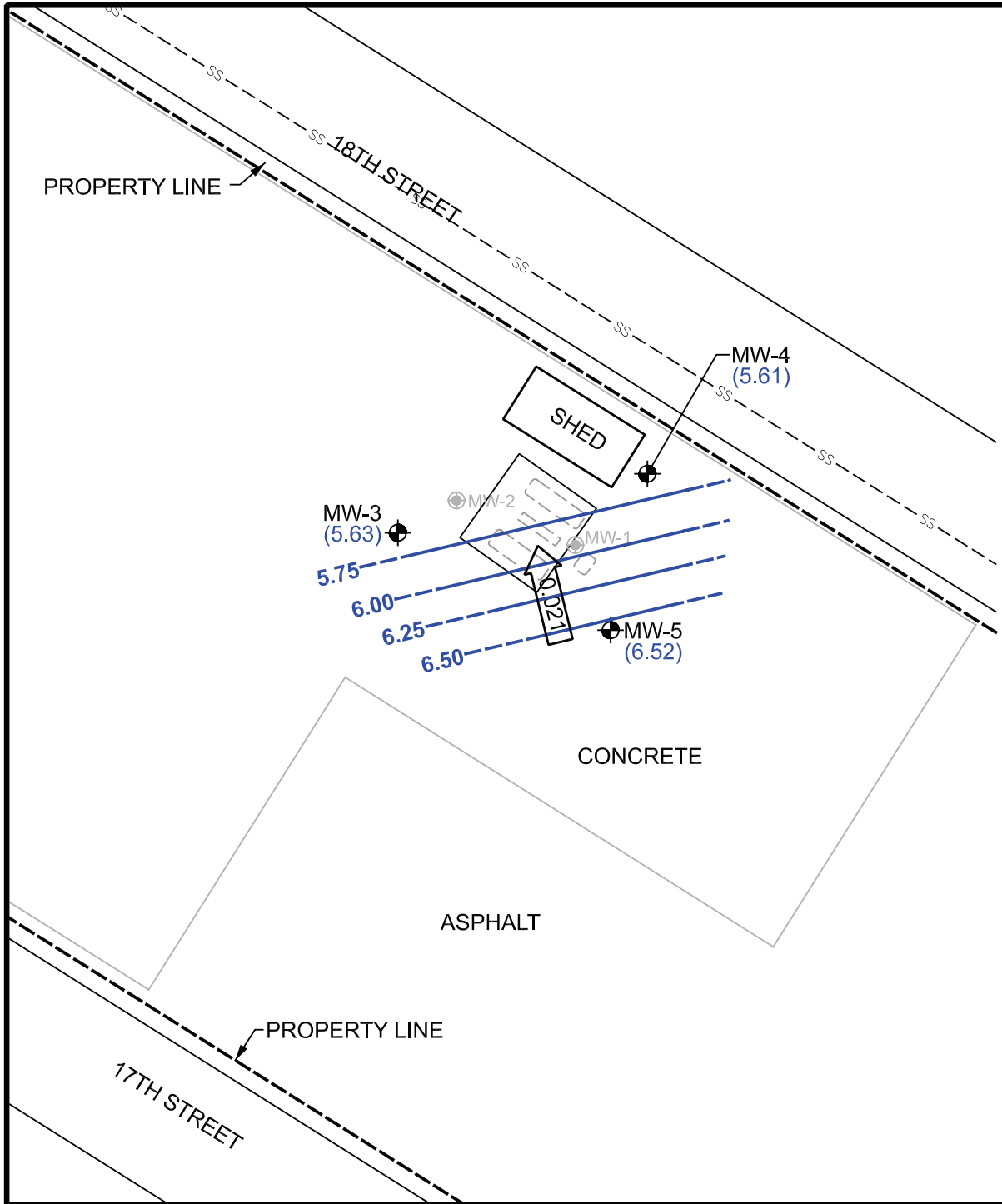
4. SAMPLES COLLECTED ON SEPTEMBER 10, 2008.



SCALE IN FEET



Figure 4
GROUNDWATER
CONCENTRATIONS
FORMER USTs AREA
ROADWAY EXPRESS
1708 WOOD STREET
OAKLAND, CA

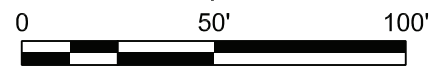
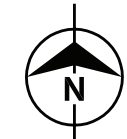


LEGEND

- EXISTING MONITORING WELL
- REMOVED MONITORING WELL
- (6.52)** GROUNDWATER ELEVATION (FT MSL) MEASURED ON SEPTEMBER 10, 2008.
- GROUNDWATER CONTOUR (FT MSL) - DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION AND GRADIENT IN FEET/FOOT

NOTE

MONITORING WELLS MW-2 THROUGH MW-5 SURVEYED ON DECEMBER 17, 2007 BY LUK AND ASSOCIATES LAND SURVEYING; ALL OTHER LOCATIONS ARE APPROXIMATE AND BASED ON INFORMATION PROVIDED BY ROADWAY EXPRESS.



SCALE IN FEET

	<p style="text-align: center;">Figure 3 GROUNDWATER ELEVATIONS THIRD QUARTER 2008 FORMER USTs AREA ROADWAY EXPRESS 1708 WOOD STREET OAKLAND, CA</p>
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APPENDIX A
FIELD SAMPLING FORMS



GROUNDWATER SAMPLING FORM

Site Name: YRC - Oakland
 Project Number: 48791
 Recorded By: K. Spencer

Well Number: MW-3
 Well Type: Monitor Extraction Other: _____
 Date: 9-10-08 Sample Time: 1000

Purge Method

Bailer-Type: 2"
 Pumping Method: bailer
 Other-Type: _____

Purge Volume

Casing Diameter (D in inches): 2"
 Total Depth of Casing (TD in feet BTOC): 29.5
 Water Level Depth (WL in feet BTOC): 4.48

Purge Volume Calculation:

$$\begin{matrix}
 (29.5) - (4.48) & \times & (2)^2 & \times & 3 & \times & 0.0408 & = & 12.25 \\
 \text{TD (feet)} & & \text{D (inches)} & & \text{\# Vols} & & & & \text{Purge Volume (gallons)}
 \end{matrix}$$

Total Volume Generated (gallons): 13

Start Time: 0940 Stop Time: 1000

Field Parameter Measurements					
Time	Volume	Temp	pH	Conductivity	Remarks
0920	INIT	21.6	7.6	1017	slight gray, no odor
0937	4.5	21.4	7.4	1131	same
0948	9.0	20.9	7.4	1009	same
1000	13.0	21.3	7.5	989	same

Notes:
 Temperature is measured in degrees Celsius
 Volume units are in gallons
 Conductivity units are in microsiemens per centimeter (mS/cm)

Sampling Information				
Sample Point	Sample Designator	# of Containers	Preservatives	Analysis/Comments



GROUNDWATER SAMPLING FORM

Site Name: YRC-Oakland
 Project Number: 48791
 Recorded By: K. Spencer

Well Number: MW-4
 Well Type: Monitor Extraction Other: _____
 Date: 9-10-08 Sample Time: 1100

Purge Method

Bailer-Type: 2"
 Pumping Method: bailer
 Other-Type: _____

Purge Volume

Casing Diameter (D in inches): 2"
 Total Depth of Casing (TD in feet BTOC): 29.5
 Water Level Depth (WL in feet BTOC): 3.91

Purge Volume Calculation:

$$(29.5) - (3.91) \times (2)^2 \times 3 \times 0.0408 = 12.5$$

TD (feet) WL (feet) D (inches) # Vols Purge Volume (gallons)

Total Volume Generated (gallons): 13

Start Time: 1000 Stop Time: 1050

Field Parameter Measurements					
Time	Volume	Temp	pH	Conductivity	Remarks
1005	1.15	17.9	7.1	4987	slight gray, bubbly
1015	4.5	16.8	6.9	4232	more gray, not as bubbly
1025	9.0	16.9	6.5	4174	same
1045	13.0	17.2	6.2	3981	same

Notes:
 Temperature is measured in degrees Celsius
 Volume units are in gallons
 Conductivity units are in microsiemens per centimeter (mS/cm)

Sampling Information				
Sample Point	Sample Designator	# of Containers	Preservatives	Analysis/Comments



GROUNDWATER SAMPLING FORM

Site Name: YRC-Oak
 Project Number: 48791
 Recorded By: K. Spencer

Well Number: MW-5
 Well Type: Monitor Extraction Other: _____
 Date: 9-10-08 Sample Time: 130

Purge Method
 Bailer-Type: 2" ~~1"~~
 Pumping Method: bailer
 Other-Type: _____

Purge Volume
 Casing Diameter (D in inches): 2"
 Total Depth of Casing (TD in feet BTOC): 29.5
 Water Level Depth (WL in feet BTOC): 3.45

Purge Volume Calculation:

$$\begin{matrix}
 (29.5) - (3.45) & \times & (2) & ^2 & \times & 3 & \times & 0.0408 & = & 12.75 \\
 \text{TD (feet)} & & \text{D (Inches)} & & \text{\# Vols} & & & & & \text{Purge Volume (gallons)}
 \end{matrix}$$

Total Volume Generated (gallons): 13
 Start Time: 1100 Stop Time: 1135

Field Parameter Measurements					
Time	Volume	Temp	pH	Conductivity	Remarks
1101	INIT	18.91	7.9	4100	light yellow brown, slight odor
1110	4.5	18.72	6.4	4206	same
1118	9.0	18.90	6.7	3710	brown with lots of suspended sed.
1127	13.0	19.7	6.8	3918	same

Notes:
 Temperature is measured in degrees Celsius
 Volume units are in gallons
 Conductivity units are in microsiemens per centimeter (mS/cm)

Sampling Information				
Sample Point	Sample Designator	# of Containers	Preservatives	Analysis/Comments

APPENDIX B

**CERTIFIED ANALYTICAL REPORT
BURNS & MCDONNELL QA/QC REPORT**



Date: October 20, 2008

To: Patrick Bratton

From: Michelle Beckman

Re: QA/QC Review of Analytical Data
 Yellow Freight – Oakland 4th Quarter Groundwater Samples
Project Number (48791 – Yellow Freight - Oakland)

Groundwater samples were collected on September 10, 2008. Samples were analyzed for one or more of the following parameters:

Analysis	Method
Groundwater Samples – Curtis & Tompkins, Ltd. of Berkeley, California	
Total Petroleum Hydrocarbons (TPH)	
Gasoline C7-C12	SW-846 Methods 5030B / 8015B
Diesel C10-C24	SW-846 Methods 3520C / 8015B
Diesel C10-C24 (Silica Gel Cleanup [SGCU])	SW-846 Methods 3520C / 3630C / 8015B
Motor Oil C24-C36	SW-846 Methods 3520C / 8015B
Motor Oil C24-C36 (SGCU)	SW-846 Methods 3520C / 3630C / 8015B
Volatile Organic Compounds (VOCs)	
Methyl-tert-butyl ether (MTBE)	SW-846 Methods 5030B / 8260B
Benzene, Toluene, Ethylbenzene, and Xylene (BTEX)	

The following data set was reviewed in support of this investigation:

Lab	Data Set	Date Collected	Matrix
Curtis & Tompkins	302966	9/10/2008	Groundwater

The quality assurance/quality control (QA/QC) results for the analyses were evaluated for achievement of any method-specific QA/QC criteria. Data qualifiers, when appropriate, were assigned according to the guidelines presented in *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review* (NFGO), 1999. No data required qualification as a result of the data review. The QA/QC review results are discussed in the following paragraphs.

1. Chain-of-Custody – No problems were noted with the chain-of-custody (COC) forms.
2. Requested Analyses Completed – All samples were analyzed as requested on the COCs.
3. Holding Times – All samples were extracted and/or analyzed within the method holding times.
4. Sample Preservation – Air bubbles were noted in some of the vials for Samples MW-3 (Lab ID 302966-001), MW-5 (Lab ID 302966-003), and Dup-1 (Lab ID 302966-004). Sufficient sample vials without air bubbles were available for the analysis of all samples, so no data required qualification. No other problems were noted with sample preservation.



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5. Laboratory Method Blanks – Method blanks were reviewed to determine the potential for sample cross contamination due to handling within the laboratory. No detections of target compounds were noted in the method blanks.
6. Trip Blanks – No trip blanks were submitted for analysis.
7. Surrogates – Surrogates are added for organic analyses. Surrogates are compounds not normally found in the environment that are added (spiked) into samples and analyzed for percent recovery (REC). Maximum and minimum limits on the REC are set by the laboratory for the method used.

All surrogate RECs were within control limits.

8. Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD) – The LCS contains a matrix similar to that of the sample that has been spiked with known concentrations of target analytes. The LCS is prepared and analyzed by the same method as the samples. As a measure of analytical accuracy, the results of the LCS are compared against the known analyte concentrations in the spike to determine REC. The purpose of the LCS is to determine the performance of the laboratory with respect to analyte recovery, independent of field sample matrix interference. The LCSD is a duplicate preparation and analysis of the LCS. Results of the LCS and LCSD are compared to each other to determine analytical precision using the relative percent difference (RPD). Note: these QC samples were also called Blind Spike (BS)/Blind Spike Duplicate (BSD) samples for some analyses.

All LCS/LCSD and/or BS/BSD results were within QC limits.

9. Matrix Spike and Matrix Spike Duplicate (MS/MSD) – MS and MSDs are typically run for organic analyses performed using a soil or water matrix. A sample is split into three portions (original, MS, and MSD), and a known amount of a target analyte is added (spiked) to two portions (MS and MSD) of the sample. The results are compared against the unspiked portion of the sample for REC of the spike. Additionally, the results are compared against each other using a relative percent difference (RPD) to determine reproducibility.
 - Project-specific MS/MSD results were not provided any of the analyses. Analytical accuracy and precision for these analyses were assessed based on the associated surrogate, LCS/LCSD, and/or BS/BSD results. All results were within control limits and no qualifiers were added based on this omission.
10. Field Duplicate Results – Table 1 provides a summary of the field duplicate results. The following field duplicate sample was collected:
 - MW-5 and Dup-1: All analytes were adequately replicated.
11. Detection and Quantitation Limits – No dilutions were required to account for matrix interference and/or high concentrations of target analytes.



Memorandum
October 20, 2008
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12. Other – In addition to data qualifiers assigned during the QA/QC data review, the laboratory assigned the following laboratory qualifiers:
- Diesel, C10-C24
 - A “Y” flag was assigned to Samples MW-5 and Dup-1 to indicate that the samples exhibited a chromatographic pattern that does not resemble the standard.
 - Motor Oil, C24-C36
 - A “Y” flag was assigned to Samples MW-5 and Dup-1 to indicate that the samples exhibited a chromatographic pattern that does not resemble the standard.
13. Conclusion – No data were qualified as a result of the QA/QC review. All data are usable in reporting the results of this investigation.

Attachments

Table 1 – Field Duplicate Results – MW-5 and Dup-1

Table 1
Field Duplicate Results - MW-5 and Dup-1
Yellow Freight - Oakland

Sample Name		MW-5	Dup-1	Meets Criteria? (Yes/No)
Date Sampled		9/10/2008	9/10/2008	
Laboratory Number		205966-003	205966-004	
Parameter	Units			
Volatile Organic Compounds				
All VOCs	µg/L	Not Detected	Not Detected	Yes
Total Petroleum Hydrocarbons				
Gasoline C7-C12	µg/L	50 U	50 U	Yes
Diesel C10-C24	µg/L	470 Y	450 Y	Yes
Diesel C10-C24 (SGCU)	µg/L	50 U	50 U	Yes
Motor Oil C24-C36	µg/L	520 Y	590 Y	Yes
Motor Oil C24-C36 (SGCU)	µg/L	300 U	300 U	Yes

µg/L = micrograms per liter

SGCU = Silica gel cleanup

U = Not Detected. Value reported is the detection limit.

Y = Sample exhibits chromatographic pattern which does not resemble standard.



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 205966
ANALYTICAL REPORT

Burns & McDonnell
393 East Grand Avenue
South San Francisco, CA 94080

Project : 48791
Location : YRC-Oakland
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
MW-3	205966-001
MW-4	205966-002
MW-5	205966-003
DUP-1	205966-004

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: 
Project Manager

Date: 09/19/2008

Signature: 
Senior Program Manager

Date: 09/22/2008

CASE NARRATIVE

Laboratory number: 205966
Client: Burns & McDonnell
Project: 48791
Location: YRC-Oakland
Request Date: 09/11/08
Samples Received: 09/11/08

This hardcopy data package contains sample and QC results for four water samples, requested for the above referenced project on 09/11/08. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B and EPA 8021B):

No analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):

No analytical problems were encountered.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	205966	Location:	YRC-Oakland
Client:	Burns & McDonnell	Prep:	EPA 5030B
Project#:	48791		
Matrix:	Water	Batch#:	142431
Units:	ug/L	Sampled:	09/10/08
Diln Fac:	1.000	Received:	09/11/08

Field ID: MW-3 Lab ID: 205966-001
 Type: SAMPLE Analyzed: 09/13/08

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	96	61-149	EPA 8015B
Bromofluorobenzene (FID)	95	65-146	EPA 8015B
Trifluorotoluene (PID)	89	52-143	EPA 8021B
Bromofluorobenzene (PID)	87	56-141	EPA 8021B

Field ID: MW-4 Lab ID: 205966-002
 Type: SAMPLE Analyzed: 09/13/08

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	94	61-149	EPA 8015B
Bromofluorobenzene (FID)	92	65-146	EPA 8015B
Trifluorotoluene (PID)	85	52-143	EPA 8021B
Bromofluorobenzene (PID)	84	56-141	EPA 8021B

ND= Not Detected
 RL= Reporting Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	205966	Location:	YRC-Oakland
Client:	Burns & McDonnell	Prep:	EPA 5030B
Project#:	48791		
Matrix:	Water	Batch#:	142431
Units:	ug/L	Sampled:	09/10/08
Diln Fac:	1.000	Received:	09/11/08

Field ID: MW-5 Lab ID: 205966-003
 Type: SAMPLE Analyzed: 09/13/08

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	88	61-149	EPA 8015B
Bromofluorobenzene (FID)	87	65-146	EPA 8015B
Trifluorotoluene (PID)	81	52-143	EPA 8021B
Bromofluorobenzene (PID)	79	56-141	EPA 8021B

Field ID: DUP-1 Lab ID: 205966-004
 Type: SAMPLE Analyzed: 09/13/08

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	99	61-149	EPA 8015B
Bromofluorobenzene (FID)	98	65-146	EPA 8015B
Trifluorotoluene (PID)	92	52-143	EPA 8021B
Bromofluorobenzene (PID)	89	56-141	EPA 8021B

ND= Not Detected
 RL= Reporting Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	205966	Location:	YRC-Oakland
Client:	Burns & McDonnell	Prep:	EPA 5030B
Project#:	48791		
Matrix:	Water	Batch#:	142431
Units:	ug/L	Sampled:	09/10/08
Diln Fac:	1.000	Received:	09/11/08

Type: BLANK Analyzed: 09/12/08
 Lab ID: QC460021

Analyte	Result	RL	Analysis
Gasoline C7-C12	ND	50	EPA 8015B
MTBE	ND	2.0	EPA 8021B
Benzene	ND	0.50	EPA 8021B
Toluene	ND	0.50	EPA 8021B
Ethylbenzene	ND	0.50	EPA 8021B
m,p-Xylenes	ND	0.50	EPA 8021B
o-Xylene	ND	0.50	EPA 8021B

Surrogate	%REC	Limits	Analysis
Trifluorotoluene (FID)	101	61-149	EPA 8015B
Bromofluorobenzene (FID)	96	65-146	EPA 8015B
Trifluorotoluene (PID)	91	52-143	EPA 8021B
Bromofluorobenzene (PID)	89	56-141	EPA 8021B

ND= Not Detected
 RL= Reporting Limit

Batch QC Report
Curtis & Tompkins Laboratories Analytical Report

Lab #:	205966	Location:	YRC-Oakland
Client:	Burns & McDonnell	Prep:	EPA 5030B
Project#:	48791	Analysis:	EPA 8021B
Matrix:	Water	Batch#:	142431
Units:	ug/L	Analyzed:	09/12/08
Diln Fac:	1.000		

Type: BS Lab ID: QC460022

Analyte	Spiked	Result	%REC	Limits
MTBE	10.00	9.959	100	61-143
Benzene	10.00	10.64	106	80-120
Toluene	10.00	10.68	107	77-120
Ethylbenzene	10.00	11.32	113	79-123
m,p-Xylenes	10.00	11.23	112	78-123
o-Xylene	10.00	11.31	113	78-122

Surrogate	%REC	Limits
Trifluorotoluene (PID)	94	52-143
Bromofluorobenzene (PID)	91	56-141

Type: BSD Lab ID: QC460023

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	20.00	18.45	92	61-143	8	32
Benzene	20.00	19.92	100	80-120	7	20
Toluene	20.00	20.07	100	77-120	6	20
Ethylbenzene	20.00	21.80	109	79-123	4	20
m,p-Xylenes	20.00	21.43	107	78-123	5	21
o-Xylene	20.00	21.33	107	78-122	6	20

Surrogate	%REC	Limits
Trifluorotoluene (PID)	93	52-143
Bromofluorobenzene (PID)	90	56-141

RPD= Relative Percent Difference

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	205966	Location:	YRC-Oakland
Client:	Burns & McDonnell	Prep:	EPA 5030B
Project#:	48791	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC460024	Batch#:	142431
Matrix:	Water	Analyzed:	09/12/08
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	996.4	100	78-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	113	61-149
Bromofluorobenzene (FID)	99	65-146

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	205966	Location:	YRC-Oakland
Client:	Burns & McDonnell	Prep:	EPA 5030B
Project#:	48791	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	142431
MSS Lab ID:	205923-004	Sampled:	09/09/08
Matrix:	Water	Received:	09/09/08
Units:	ug/L	Analyzed:	09/12/08
Diln Fac:	1.000		

Type: MS Lab ID: QC460025

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	17.78	2,000	2,282	113	65-120

Surrogate	%REC	Limits
Trifluorotoluene (FID)	133	61-149
Bromofluorobenzene (FID)	107	65-146

Type: MSD Lab ID: QC460026

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,290	114	65-120	0	20

Surrogate	%REC	Limits
Trifluorotoluene (FID)	131	61-149
Bromofluorobenzene (FID)	104	65-146

RPD= Relative Percent Difference

Total Extractable Hydrocarbons			
Lab #:	205966	Location:	YRC-Oakland
Client:	Burns & McDonnell	Prep:	EPA 3520C
Project#:	48791	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	09/10/08
Units:	ug/L	Received:	09/11/08
Diln Fac:	1.000	Prepared:	09/12/08
Batch#:	142447		

Field ID: MW-3 Lab ID: 205966-001
 Type: SAMPLE Analyzed: 09/17/08

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	110	58-127

Field ID: MW-4 Lab ID: 205966-002
 Type: SAMPLE Analyzed: 09/17/08

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
Hexacosane	112	58-127

Field ID: MW-5 Lab ID: 205966-003
 Type: SAMPLE Cleanup Method: EPA 3630C

Analyte	Result	RL	Analyzed
Diesel C10-C24	470 Y	50	09/17/08
Diesel C10-C24 (SGCU)	ND	50	09/18/08
Motor Oil C24-C36	520 Y	300	09/17/08
Motor Oil C24-C36 (SGCU)	ND	300	09/18/08

Surrogate	%REC	Limits	Analyzed
Hexacosane (SGCU)	101	58-127	09/18/08
Hexacosane	98	58-127	09/17/08

Field ID: DUP-1 Lab ID: 205966-004
 Type: SAMPLE Cleanup Method: EPA 3630C

Analyte	Result	RL	Analyzed
Diesel C10-C24	450 Y	50	09/17/08
Diesel C10-C24 (SGCU)	ND	50	09/18/08
Motor Oil C24-C36	590 Y	300	09/17/08
Motor Oil C24-C36 (SGCU)	ND	300	09/18/08

Surrogate	%REC	Limits	Analyzed
Hexacosane (SGCU)	106	58-127	09/18/08
Hexacosane	108	58-127	09/17/08

Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected
 RL= Reporting Limit
 SGCU= Silica gel cleanup

Total Extractable Hydrocarbons			
Lab #:	205966	Location:	YRC-Oakland
Client:	Burns & McDonnell	Prep:	EPA 3520C
Project#:	48791	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	09/10/08
Units:	ug/L	Received:	09/11/08
Diln Fac:	1.000	Prepared:	09/12/08
Batch#:	142447		

Type: BLANK Analyzed: 09/17/08
 Lab ID: QC460076 Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	50
Diesel C10-C24 (SGCU)	ND	50
Motor Oil C24-C36	ND	300
Motor Oil C24-C36 (SGCU)	ND	300

Surrogate	%REC	Limits
Hexacosane (SGCU)	111	58-127
Hexacosane	105	58-127

Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected
 RL= Reporting Limit
 SGCU= Silica gel cleanup

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	205966	Location:	YRC-Oakland
Client:	Burns & McDonnell	Prep:	EPA 3520C
Project#:	48791	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	142447
Units:	ug/L	Prepared:	09/12/08
Diln Fac:	1.000	Analyzed:	09/17/08

Type: BS Cleanup Method: EPA 3630C
 Lab ID: QC460077

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24 (SGCU)	2,500	1,996	80	52-120

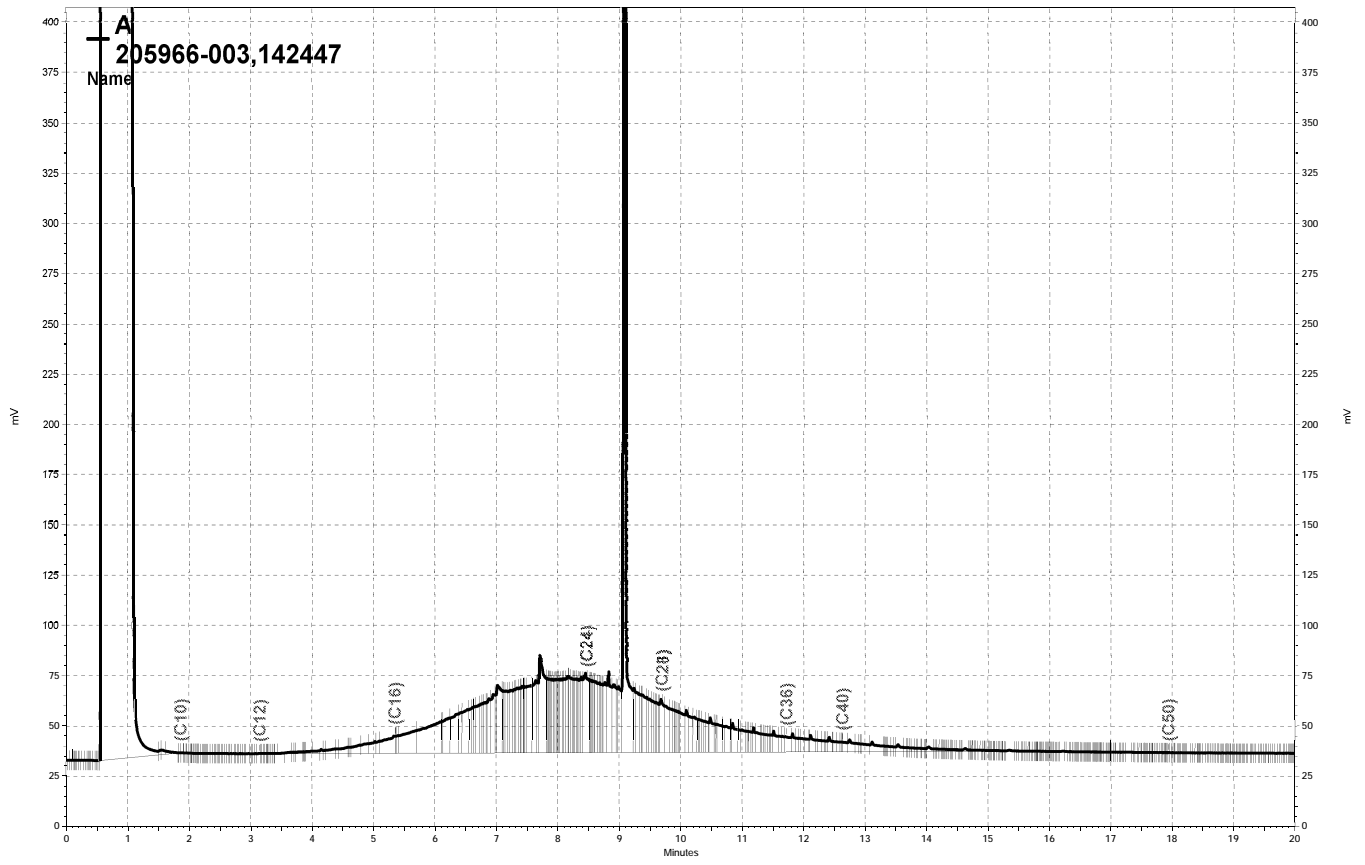
Surrogate	%REC	Limits
Hexacosane (SGCU)	91	58-127

Type: BSD Cleanup Method: EPA 3630C
 Lab ID: QC460078

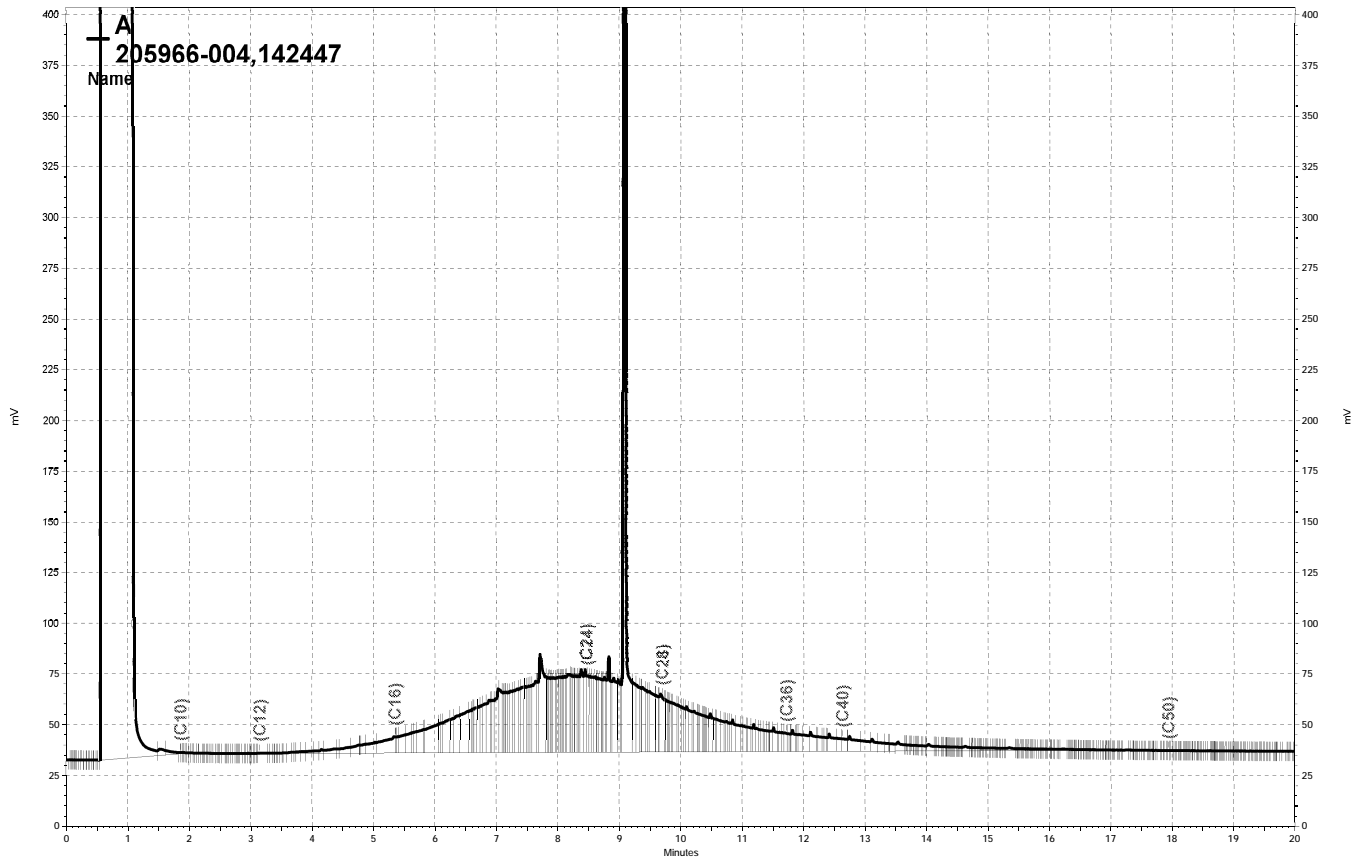
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24 (SGCU)	2,500	2,584	103	52-120	26	30

Surrogate	%REC	Limits
Hexacosane (SGCU)	117	58-127

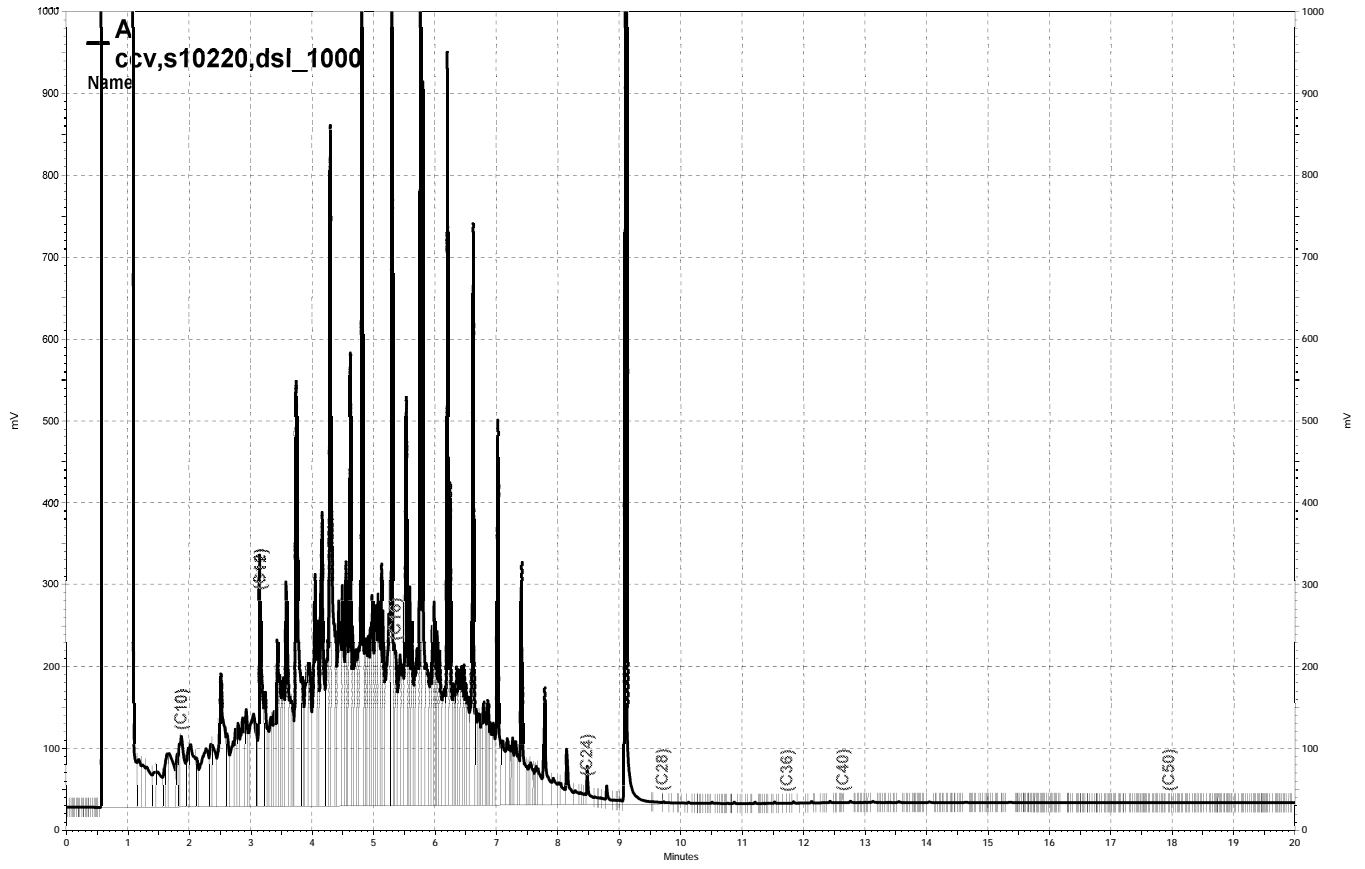
RPD= Relative Percent Difference
 SGCU= Silica gel cleanup



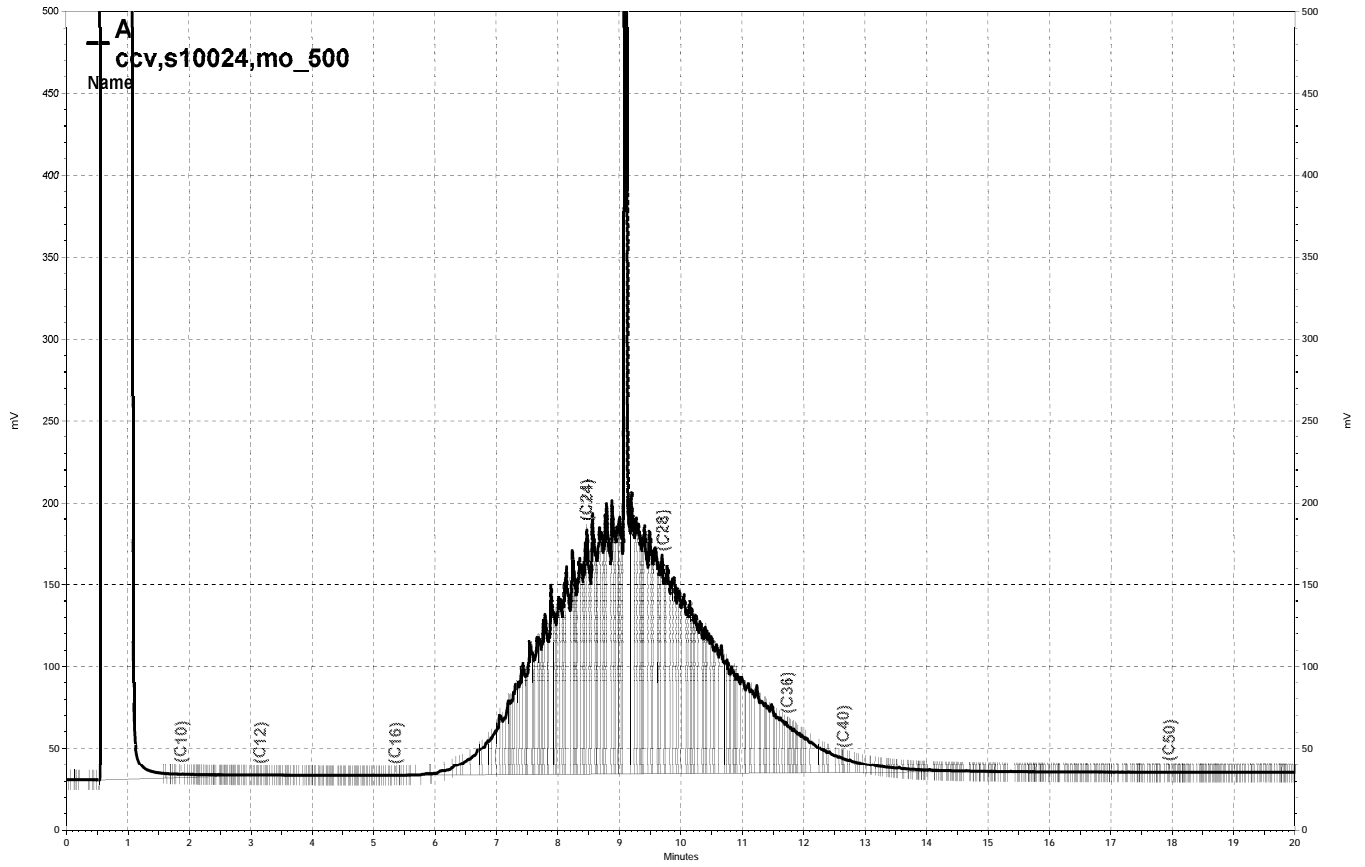
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205966

Request for Chemical Analysis and Chain of Custody Record

Burns & McDonnell Engineering
 393 E. Grand Avenue, Suite J
 So. San Francisco, CA 94080
 Phone: (650) 871-2926 Fax: (650) 871-2653

Attention: P Bratten
 K Spencer

Laboratory: Curtis & Tompkins

Address: 2323 5th Street

City/State/Zip: Berkeley, CA

Telephone: (510) 486-0900

Document Control No.: 09102008

Lab. Reference No. or Episode No.:

Project Number: 48791

Sample Type

Client Name: YRC - Oakland

Matrix

Number of Containers

Analysis
 TPH₉ (8015m)
 TPH₄, TPH₁₀ (8015m)
 BTEX, MTBE* (8021)*

Sample Number			Sample Event		Sample Depth (in feet)		Sample Collected		Liquid	Solid	Gas	Number of Containers	Analysis	Remarks
Group or SMWU Name	Sample Point	Sample Designator	Round	Year	From	To	Date	Time						
	MW-3		3rd	2008			9-10	1000	X			6	X X X	* IF TPH detected rerun after + Confirm MTBE detections with 8400B STAT
-1	MW-4		3rd	2008			9-10	1100	X			6	X X X	
-2	MW-5		3rd	2008			9-10	1130	X			6	X X X	
-3	Dup-1		3rd	2008			9-10	—	X			6	X X X	
-4														

Sampler (signature): 1. *K. Spencer*

Sampler (signature):

Special Instructions: submit Geotracks EPF
 ID# TC600102107

Relinquished By (signature): 1. *[Signature]*

Date/Time: 9/11/08
 1315

Received By (signature): *[Signature]*

Date/Time: 9/11/8 1315

Ice Present in Container: Yes No

Temperature Upon Receipt:

Relinquished By (signature): 2.

Date/Time:

Received By (signature):

Date/Time:

Laboratory Comments:

COOLER RECEIPT CHECKLIST



Curtis & Tompkins, Ltd.

Login # 205966 Date Received 9/11/08 Number of coolers 1
Client Burns & McDermott Project TRC Oakland

Date Opened 9/11 By (print) K Wellbrock (sign) [Signature]
Date Logged in 9-11-08 By (print) Troy Windsor (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc)? YES NO

2A. Were custody seals present? YES (circle) on cooler on samples NO
How many Name Date

2B. Were custody seals intact upon arrival? YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe)
Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels

7. Temperature documentation:
Type of ice used: Wet Blue/Gel None Temp(C) 3.4

Samples Received on ice & cold without a temperature blank
Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES NO
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are samples in the appropriate containers for indicated tests? YES NO

11. Are sample labels present, in good condition and complete? YES NO

12. Do the sample labels agree with custody papers? YES NO

13. Was sufficient amount of sample sent for tests requested? YES NO

14. Are the samples appropriately preserved? YES NO N/A

15. Are bubbles > 6mm absent in VOA samples? YES NO N/A

16. Was the client contacted concerning this sample delivery? YES NO
If YES, Who was called? By Date:

COMMENTS
X15: 2/4 MW-3; 1/4 MW-5; 1/4 Dup-1 VOAs with Bubble