YRC Worldwide Inc.
10990 Roe Avenue
Overland Park, KS 66211-1213
Phone 913 696 6100
yrcw.com

October 6, 2009

To Whom It May Concern:

Attached is the "Third Quarter 2009 Groundwater Monitoring Report" for the YRC Inc. property located at 1708 Wood Street in Oakland, CA 94607, Fuel Leak Case No. RO 0000039. 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.

YRC Inc. is a subsidiary of YRC Worldwide, Inc., and as Supervisor of Environmental Services at YRC North American Transportation I have been charged by YRC Worldwide, Inc. to represent YRC Inc. regarding environmental matters.

Sincerely,

Ruben D. Byerley
Supervisor – Environmental Services

THIRD QUARTER 2009 GROUNDWATER MONITORING REPORT

YRC, Inc.
1708 Wood Street, Oakland, California
(Fuel Leak Case No. RO0000039)

October 2009

Burns & McDonnell Project No. 48791

393 E. Grand Ave., Ste. J
South San Francisco, CA 94080

October 30, 2009

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

Subject: Third Quarter 2009 Groundwater Monitoring Report
YRC, 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 this letter report summarizing the groundwater sampling activities conducted in the third quarter of 2009 at the YRC Inc. (formerly 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 operated as a trucking facility, which includes a terminal, loading dock, warehouse, business office, with the perimeter used for trailer storage (Figure 2). The Site is secured with a full perimeter fence and with professional security guards on staff.

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 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 inter-bedded with silt and sand layers to a depth of approximately 8 to 10 feet below ground surface (bgs); this is overlying a 5 to 10 foot layer of blackish-brown to gray, soft, clay layer with a distinct peat layer and high organics content; approximately 5 to 10 feet of brown, soft, wet, silty sand and clay 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.

The Site's hydrology is divided into two separate groundwater zones, a shallow water zone and a deeper water zone. The shallow zone is made up of sand and silt layers extending from the near surface to approximately 8 to 10 feet bgs. Static groundwater measured in monitoring wells screened in the shallow zone are higher than the first encountered groundwater so it appears this zone is under semi-confined conditions with a clay layer above and below it. The deeper zone is made up of silty and sandy layers which grade into medium and coarse sand to a depth of approximately 30 feet. This zone also appears to be under confined conditions as the static groundwater level is significantly higher than the confining soft clay layer. The two water zones are separated by a 5 to 10 foot thick layer of soft clay with a characteristic peat layer and high organic content, designated as bay mud.

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 were 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.

In August 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.

In February 2009, Burns & McDonnell supervised the installation of monitoring wells (MW-6, MW-7, and MW-8) in the central-eastern portion of the Site surrounding the location of the former USTs (Figure 3). These wells were installed to monitor the shallow groundwater zone and are screened between 5 and 10 ft bgs.

4.0 Groundwater Monitoring

On September 18, 2009, Burns & McDonnell gauged depth-to-water (DTW) from all Site wells, and collected groundwater samples from monitoring wells MW-6, MW-7, and MW-8 (Figures 3 and 4).

4.1 Depth to Water

Prior to collecting groundwater samples, 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 Well Sampling

All wells were purged and sampled using low-flow sampling methods. New polyethylene tubing was lowered to a depth corresponding to near the middle of the screened interval. Where possible, the intake depth was set so that it was adjacent to the sand layer based on the soil borings logged during the installation of the wells. A peristaltic pump was used to maintain a flow rate of approximately 0.5 Liters per minute (L/min). Water levels were monitored and recorded to ensure minimal drawn down. Groundwater parameters (temperature, pH, and specific conductance) were measured using a flow-through cell and recorded on Groundwater Sampling Forms (Appendix A). Once a minimum of 1 Liter was purged and groundwater parameters stabilized, groundwater samples were collected in laboratory supplied sampling bottles while keeping the flow rate constant.

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-7, 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 Accutest Laboratories Inc., a California State Certified Laboratory.

5.0 Groundwater Monitoring Results

5.1 Groundwater Flow Direction and Gradient

On September 18, 2009, static groundwater was observed in the Site's shallow groundwater monitoring wells (MW-6, MW-7, and MW-8), at depths ranging from 1.75 feet (MW-7) to 2.08 feet (MW-8) below the TOC, with groundwater elevations ranging from 7.75 feet (MW-8) to 8.22 feet (MW-6) above MSL.

Static groundwater in the Site's deep groundwater monitoring wells (MW-3, MW-4, and MW-5), was observed at depths ranging from 3.76 feet (MW-4) to 4.58 feet (MW-3) below the TOC, with groundwater elevations ranging from 5.53 feet (MW-3) to 5.76 feet (MW-4) above MSL.

Burns & McDonnell used gauging and well casing elevation data to calculate groundwater elevations. For this sampling event, there is an average difference of 2.38 feet between the shallow groundwater zone elevations and the deep groundwater zone elevations. In the area of the removed USTs, the flow direction in the shallow groundwater zone was to the east with a gradient of approximately 0.01 feet per foot (ft/ft). The flow direction in the deep groundwater zone was to the west with a gradient of approximately 0.003 ft/ft.

Groundwater elevations are summarized in Table 2 and presented on Figures 3 and 4.

5.2 Groundwater Analytical Results

Samples were analyzed for total petroleum hydrocarbons (TPH) in the diesel (TPH-d) and motor oil (TPH-mo) ranges using Environmental Protection Agency (EPA) Method 8015M. Silica gel cleanup, EPA Method 3630C, was used prior to analysis for TPH-d and TPH-mo, to remove naturally occurring organic compounds and are flagged with an 'SG' qualifier in Table 2. TPH-d was detected in MW-7 and DUP-1 at concentrations of 84.5 micrograms per Liter (µg/L) and 56.7 µg/L, respectively. TPH-mo was not detected in either MW-7 or DUP-1. TPH-d and TPH-mo were not detected in any of the other samples submitted for analysis.

The analytical laboratory qualified both of these results as estimates, and flagged each with a "J" qualifier, indicating that the detected concentrations are above the method detection limit but below the reporting limit.

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

A duplicate sample was taken from well MW-7 and designated DUP-1, as a quality assurance/quality control (QA/QC) measure. The certified analytical report was reviewed by a Burns & McDonnell senior environmental scientist. Burns & McDonnell concludes that the duplicate sample set was adequately replicated; and all data are usable in reporting the results of this investigation. No qualifiers were added as a result of the Burns & McDonnell's QA/QC report (Appendix B).

Current and historical groundwater data for all Site monitoring wells is presented in Table 2. Copies of the certified analytical reports and Chain-of-Custody documentation are included as Appendix B.

6.0 Summary

Third quarter groundwater results showed no detectable concentrations of TPH-d, TPH-mo, TPH-g, BTEX, and MTBE with the sole exception of TPH-d in well MW-7; however, TPH-d concentrations were detected above the method reporting limit, but below the laboratory reporting limit and qualified as an estimated value. Quarterly groundwater sampling will continue to monitor for potential impacts to the shallow and deep water zones. The next quarterly groundwater monitoring event is scheduled for November 2009.

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,

Simon Barber
Project Geologist

M. Mitch Monroe, P.G.
Senior Geologist

Attachments:

Figure 1 – Site Location Map
Figure 2 – Site Map
Figure 3 – Groundwater Elevations Shallow Zone – 3Q2009 – Former USTs Area
Figure 4 – Groundwater Elevations Deep Zone – 3Q2009 – Former USTs Area

Table 1: Well Construction Details
Table 2: Historical Monitoring Well Groundwater Summary

Appendix A – Groundwater Sampling Forms
Appendix B – Laboratory Analytical Reports & Burns & McDonnell QA/QC 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
MW-6	1	10.13	10	5-10
MW-7	1	9.93	10	5-10
MW-8	1	9.83	10	5-10

1 - Elevation in feet above mean sea level
2 - Depth in feet below ground surface

Notes:
- Construction depth and screened intervals for MW-3, MW-4, and MW-5 based on boring logs located in the *Additional Groundwater Investigation Report by One Environment, 2001*
- Casing elevation for MW-2, MW-3, MW-4, and MW-5 resurveyed by Luk and Associates on December 20, 2007
- Casing elevation for MW-6, MW-7, and MW-8 surveyed by Luk and Associates on March 3, 2009

- In August 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.

TABLE 2

Historical Monitoring Well Groundwater Summary
Groundwater Elevations and Total Petroleum Hydrocarbons in Groundwater
Roadway Express
1708 Wood Street
Oakland, California

Well ID	Aquifer Zone	Date	Depth to Water (ft below Top of Casing)	Groundwater Elevation (ft MSL)	TPHd (µg/L)	TPHg (µg/L)	TPHmo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total Oil & Grease (mg/L)	MTBE (8021B) (µg/L)	MTBE (8260B) (µg/L)
MW-1	Shallow	24-Jul-97	---	---	1,200	50 U	---	---	---	---	---	1.4	---	---
Well Abandoned August 2008														
MW-2	Shallow	24-Jul-97	---	---	940	50 U	---	---	---	---	---	6.2	---	---
MW-2	Shallow	17-Dec-07	1.56	8.33	140	---	---	---	---	---	---	---	---	---
MW-2	Shallow	28-Mar-08	1.03	8.86	180 BI, SG	50 U	300 U,SG	0.5 U	0.5 U	0.5 U	---	---	---	0.5 U
MW-2 (DUP-1)	Shallow	28-Mar-08	---	---	160 BI, SG	50 U	300 U,SG	0.5 U	0.5 U	0.5 U	---	---	---	0.5 U
MW-2	Shallow	02-Jun-08	1.44	8.45	---	---	---	---	---	---	---	---	---	---
MW-2	Shallow	03-Jun-08	---	---	120 SG	50 U	300 U,SG	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-2 (DUP-1)	Shallow	03-Jun-08	---	---	150 SG	50 U	300 U,SG	0.5 U	0.5 U	0.5 U	---	---	2 U	---
Well Abandoned August 2008														
MW-3	Deep	22-Mar-07	4.04	6.07	50 U	50 U	---	---	---	---	---	4.75 U	---	0.5 U
MW-3	Deep	28-Mar-08	4.12	5.99	50 U	50 U	300 U	0.5 U	0.5 U	0.5 U	---	---	---	0.5 U
MW-3	Deep	02-Jun-08	4.35	5.76	---	---	---	---	---	---	---	---	---	---
MW-3	Deep	03-Jun-08	---	---	50 U	50 U	300 U	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-3	Deep	10-Sep-08	4.48	5.63	50 U	50 U	300 U	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-3	Deep	29-Dec-08	4.42	5.69	50 U	50 U	300 U	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-3 (DUP-1)	Deep	29-Dec-08	---	---	50 U	50 U	300 U	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-3	Deep	06-Mar-09	3.68	6.43	95 U	50 U	190 U	1 U	1 U	1 U	2 U	---	---	1 U
MW-3	Deep	13-May-09	3.81	6.30	94 U,SG	50 U	190 U,SG	1 U	1 U	1 U	2 U	---	---	1 U
MW-3	Deep	19-Sep-09	4.58	5.53	---	---	---	---	---	---	---	---	---	---
MW-4	Deep	22-Mar-07	3.25	6.27	50 U	50 U	---	---	---	---	---	4.75 U	---	0.5 U
MW-4	Deep	28-Mar-08	3.32	6.2	50 U	50 U	300 U	0.5 U	0.5 U	0.5 U	---	---	---	0.5 U
MW-4	Deep	02-Jun-08	3.56	5.96	50 U	50 U	300 U	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-4	Deep	10-Sep-08	3.91	5.61	50 U	50 U	300 U	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-4	Deep	29-Dec-08	3.71	5.81	50 U	50 U	300 U	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-4	Deep	06-Mar-09	2.90	6.62	95 U	50 U	190 U	1 U	1 U	1 U	2 U	---	---	1 U
MW-4	Deep	13-May-09	3.06	6.46	94 U,SG	50 U	190 U,SG	1 U	1 U	1 U	2 U	---	---	1 U
MW-4	Deep	18-Sep-09	3.76	5.76	---	---	---	---	---	---	---	---	---	---
MW-5	Deep	22-Mar-07	3.73	6.24	500 BI	50 U	---	---	---	---	---	4.85 U	---	0.5 U
MW-5 (DUP-1)	Deep	22-Mar-07	---	---	710 BI	50 U	---	---	---	---	---	4.75 U	---	0.5 U
MW-5	Deep	28-Mar-08	3.82	6.15	50 U,SG	50 U	300 U,SG	0.5 U	0.5 U	0.5 U	---	---	---	0.5 U
MW-5	Deep	02-Jun-08	4.05	5.92	50 U,SG	50 U	300 U,SG	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-5	Deep	10-Sep-08	3.45	6.52	50 U,SG	50 U	300 U,SG	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-5 (DUP-1)	Deep	10-Sep-08	---	---	50 U,SG	50 U	300 U,SG	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-5	Deep	29-Dec-08	4.19	5.78	50 U,SG	50 U	300 U,SG	0.5 U	0.5 U	0.5 U	---	---	2 U	---
MW-5	Deep	06-Mar-09	3.32	6.65	95 U	50 U	190 U	1 U	1 U	1 U	2 U	---	---	1 U
MW-5 (DUP-1)	Deep	06-Mar-09	---	---	95 U	50 U	190 U	1 U	1 U	1 U	2 U	---	---	1 U
MW-5	Deep	13-May-09	3.54	6.43	94 U,SG	50 U	190 U,SG	1 U	1 U	1 U	2 U	---	---	1 U
MW-5 (DUP-1)	Deep	13-May-09	---	---	94 U,SG	50 U	190 U,SG	1 U	1 U	1 U	2 U	---	---	1 U
MW-5	Deep	18-Sep-09	4.25	5.72	---	---	---	---	---	---	---	---	---	---
MW-6	Shallow	06-Mar-09	0.60	9.53	95 U	50 U	190 U	1 U	1 U	1 U	2 U	---	---	1 U
MW-6	Shallow	13-May-09	1.06	9.07	95 U,SG	50 U	190 U,SG	1 U	1 U	1 U	2 U	---	---	1 U
MW-6	Shallow	18-Sep-09	1.91	8.22	94 U, SG	50 U	190 U, SG	1 U	1 U	1 U	2 U	---	---	1 U
MW-7	Shallow	06-Mar-09	0.42	9.51	95 U,SG	50 U	190 U	1 U	1 U	1 U	2 U	---	---	1 U
MW-7	Shallow	13-May-09	0.95	8.98	94 U,SG	50 U	190 U,SG	1 U	1 U	1 U	2 U	---	---	1 U
MW-7	Shallow	18-Sep-09	1.75	8.18	84.5 SG, J	50 U	190 U,SG	1 U	1 U	1 U	2 U	---	---	1 U
MW-7 (DUP-1)	Shallow	18-Sep-09	---	---	56.7 SG, J	50 U	190 U, SG	1 U	1 U	1 U	2 U	---	---	1 U
MW-8	Shallow	06-Mar-09	0.46	9.37	96 U,SG	50 U	190 U	1 U	1 U	1 U	2 U	---	---	1 U
MW-8	Shallow	13-May-09	1.64	8.19	77.1 SG, J	50 U	200 U,SG	1 U	1 U	1 U	2 U	---	---	1 U
MW-8	Shallow	18-Sep-09	2.08	7.75	94 U,SG	50 U	190 U,SG	1 U	1 U	1 U	2 U	---	---	1 U

Notes:

ft MSL	Feet above mean sea level
µg/L	Micrograms per Liter
---	No data for the cell, indicates "not measured" or "not analyzed for this constituent"

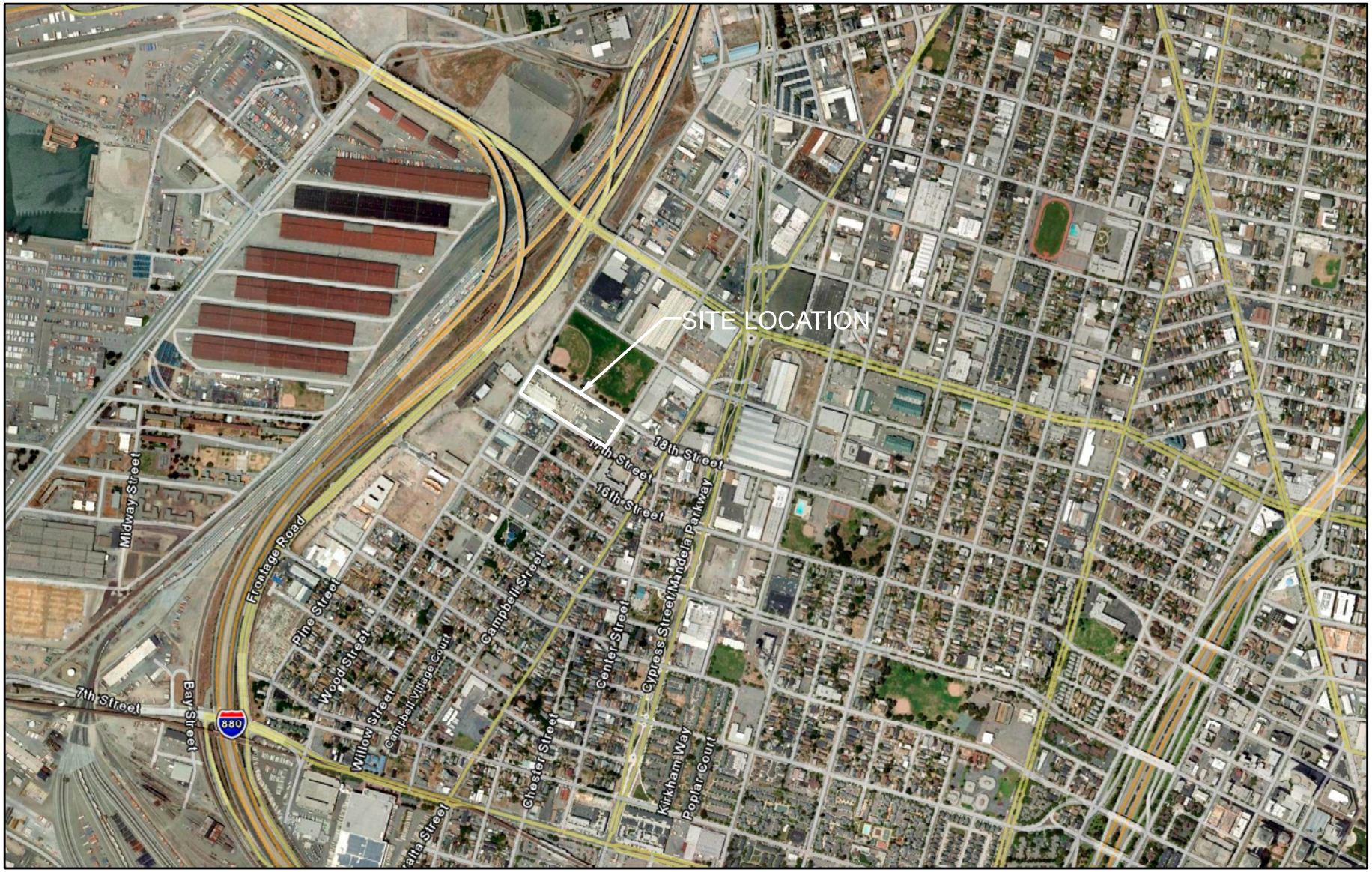
Laboratory Qualifiers:

BI	Sample does not resemble standard
SG	SGCU, Silica Gel Clean-up, EPA Method 3630C
J	EPA Flag - Estimated value
U	Compound was not detected above the indicated laboratory reporting limits

Chemical Abbreviations:

TPHd	Total petroleum hydrocarbons as diesel range by EPA Method 8015M
TPHmo	Total petroleum hydrocarbons as motor oil range by EPA Method 8015M
TPHg	Total petroleum hydrocarbons as gasoline range by EPA Method 8260B
BTEX	Benzene, ethyl-benzene, toluene, and total xylenes by EPA Method 8260B
MTBE (8021B)	Methyl tert-butyl ether by EPA 8021B
MTBE (8260B)	Methyl tert-butyl ether by EPA 8260B
TOG	Total Oil and Grease by EPA Method 413.2

FIGURES

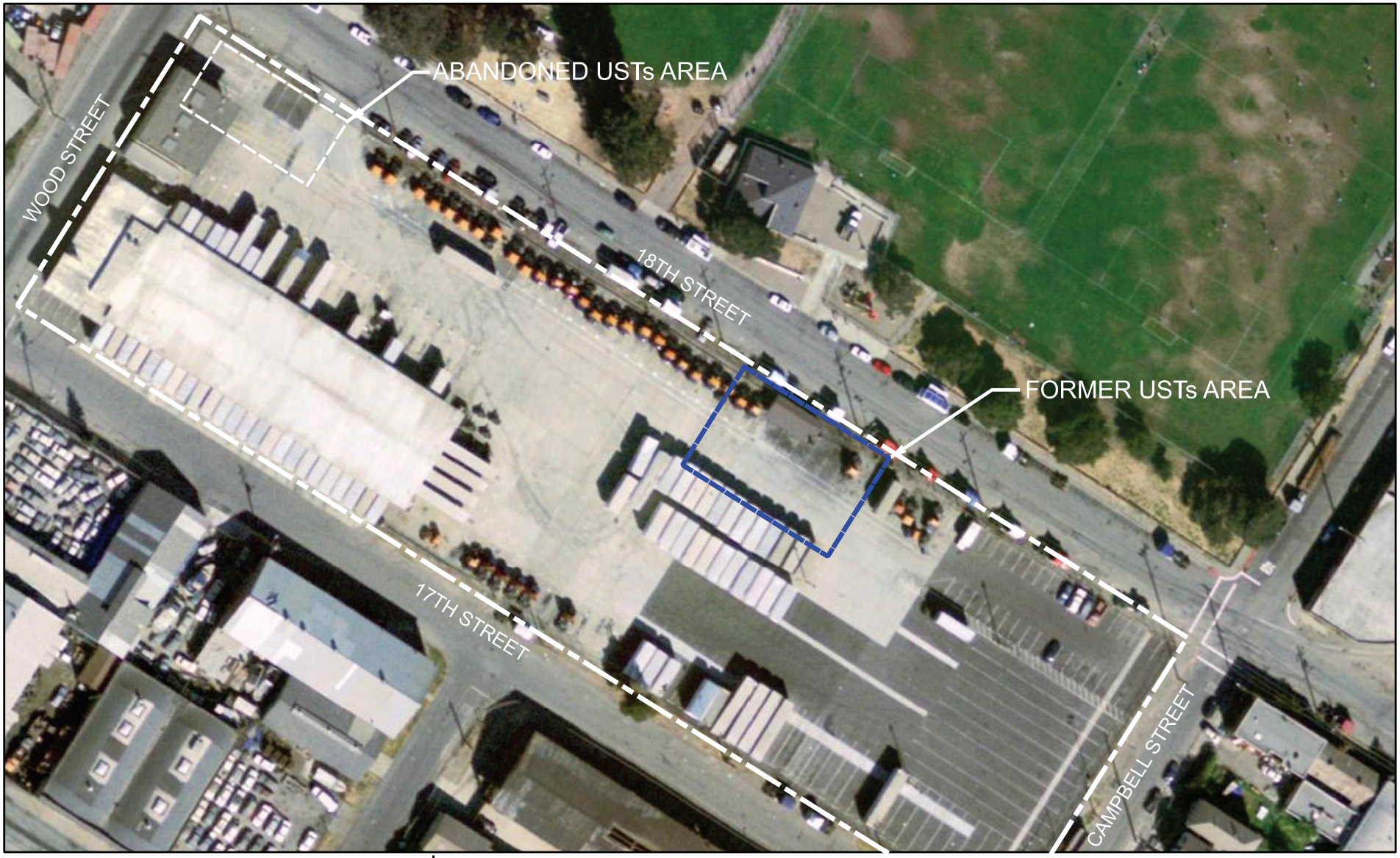


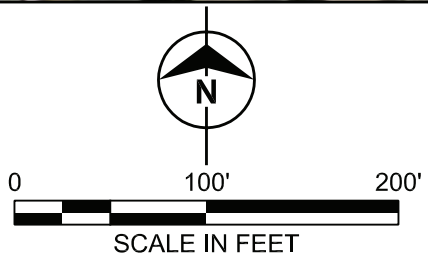
Burns & McDonnell
SINCE 1898

Figure 1

SITE LOCATION MAP
ROADWAY EXPRESS
1708 WOOD STREET
OAKLAND, CA

K:\YRC ENTERPRISE SERVICES INC\YRCW OAKLAND, CA\USTN\SITE\YRC OAKLAND FIG 1.DGN 12-04-2007 16:40 F_BITTNE





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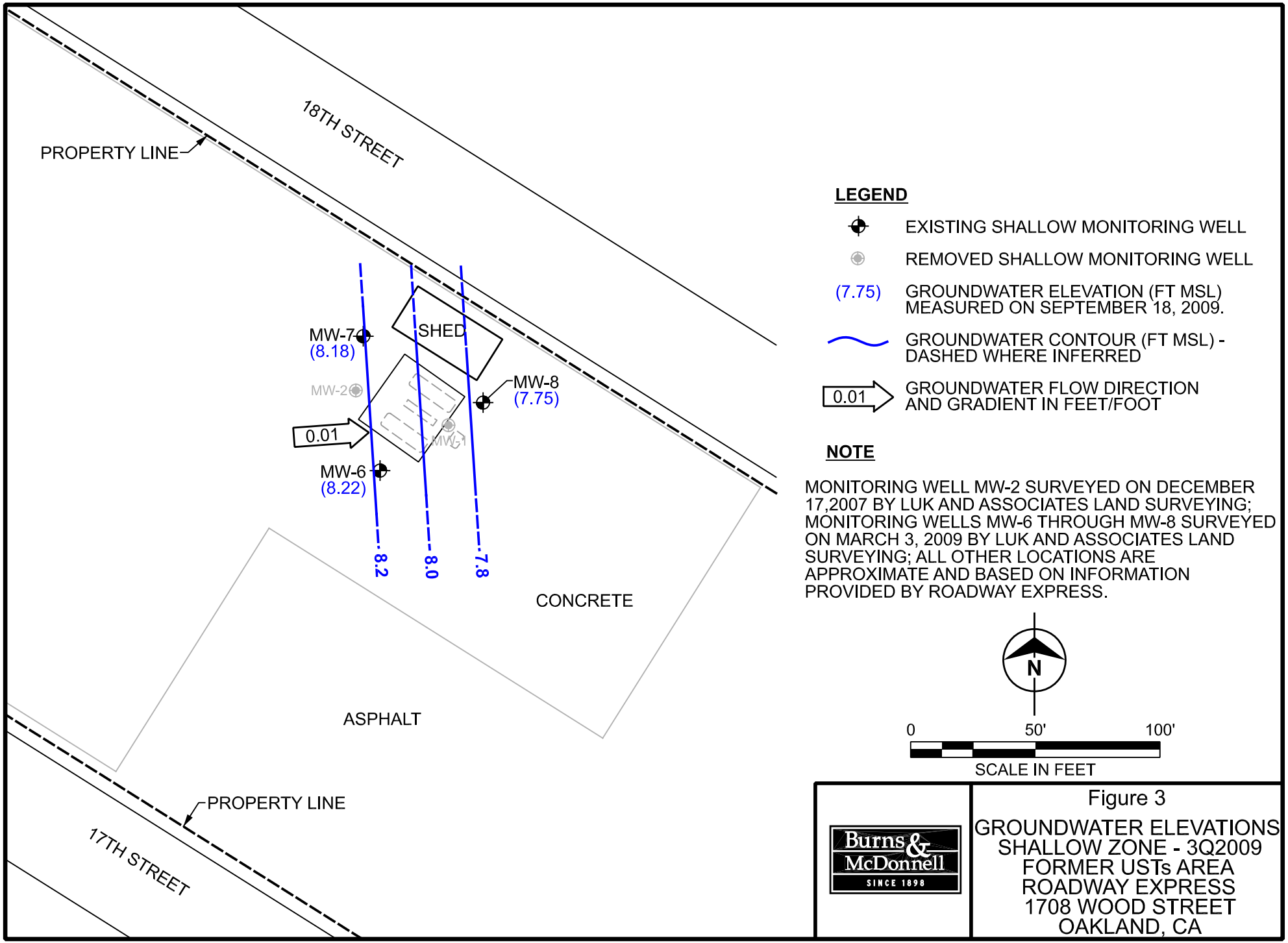
SINCE 1898

Figure 2

SITE MAP
ROADWAY EXPRESS
1708 WOOD STREET
OAKLAND, CA



LEGEND

- EXISTING SHALLOW MONITORING WELL
- REMOVED SHALLOW MONITORING WELL
- (7.75) GROUNDWATER ELEVATION (FT MSL) MEASURED ON SEPTEMBER 18, 2009.
- GROUNDWATER CONTOUR (FT MSL) - DASHED WHERE INFERRED
- 0.01 GROUNDWATER FLOW DIRECTION AND GRADIENT IN FEET/FOOT

NOTE

MONITORING WELL MW-2 SURVEYED ON DECEMBER 17,2007 BY LUK AND ASSOCIATES LAND SURVEYING; MONITORING WELLS MW-6 THROUGH MW-8 SURVEYED ON MARCH 3, 2009 BY LUK AND ASSOCIATES LAND SURVEYING; ALL OTHER LOCATIONS ARE APPROXIMATE AND BASED ON INFORMATION PROVIDED BY ROADWAY EXPRESS.

N

0 50' 100'

SCALE IN FEET

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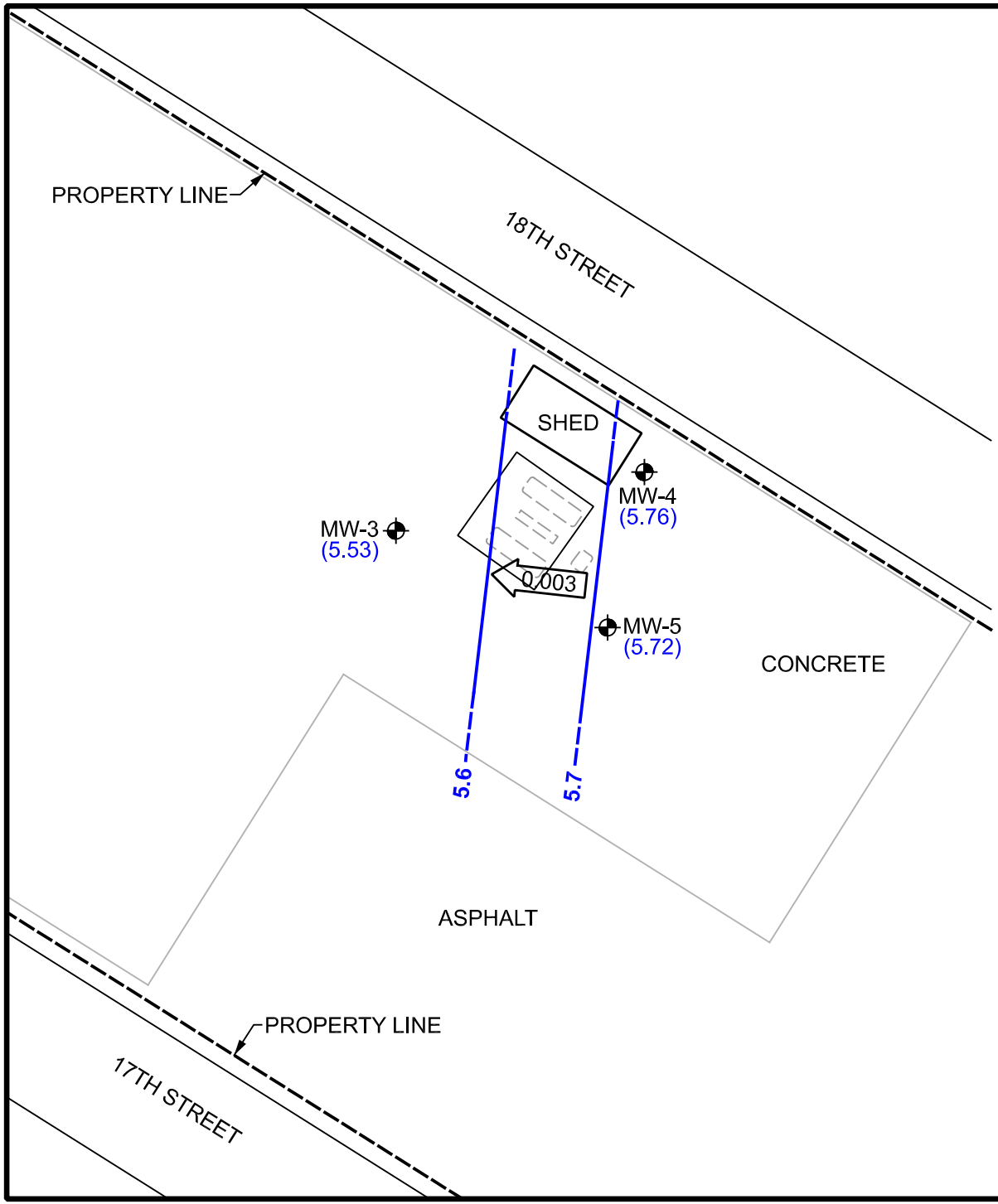
Figure 3

GROUNDWATER ELEVATIONS
SHALLOW ZONE - 3Q2009
FORMER USTs AREA
ROADWAY EXPRESS
1708 WOOD STREET
OAKLAND, CA

K:\YRC ENTERPRISE SERVICES INC\YRCW OAKLAND, CA\UST\SITE\YRC-OAK 2009-09-18 SHALLOW GW.DGN 9-29-2009 14:42 F_BITTNER



LEGEND

- EXISTING DEEP MONITORING WELL
- (5.53) GROUNDWATER ELEVATION (FT MSL) MEASURED ON SEPTEMBER 18, 2009.
- GROUNDWATER CONTOUR (FT MSL) - DASHED WHERE INFERRED
- 0.003 GROUNDWATER FLOW DIRECTION AND GRADIENT IN FEET/FOOT

NOTE

MONITORING WELLS MW-3 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.

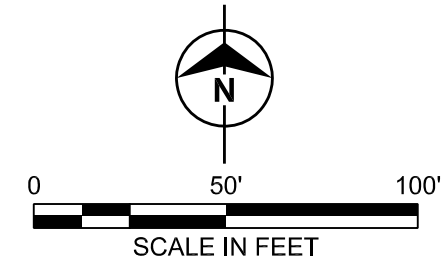


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Figure 4

GROUNDWATER ELEVATIONS
DEEP ZONE - 3Q2009
FORMER USTs AREA
ROADWAY EXPRESS
1708 WOOD STREET
OAKLAND, CA

APPENDIX A

GROUNDWATER SAMPLING FORMS

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LOW-FLOW GROUNDWATER SAMPLING FORM

Site Name: YRC-Oakland
Project Number: 48791
Recorded By: Patrick Bratton

Well Number: MW-6
Well Type: Monitoring
Date: 9-18-09 Sample Time: 1445

Pump Type: Peristaltic
Pump Intake Depth: 5.0
Screen Interval: 5-10

Casing Diameter (inches): 1
Total Depth of Casing (feet BTOC): 9.4
Water Level Depth (feet BTOC): 1.91

Total Volume Generated ~~(gallons)~~ (Liters): 1.3

Start Time: 1428 Stop Time: 1445

Field Parameter Measurements

Time	Volume (mL)	Temp (Celsius)	pH	Conductivity (uS/cm)	DTW (ft BTOC)	Remarks
1428	Init	26.15	7.06	3885	2.6	slightly cloudy, yellowish
1429	200	23.47	7.00	3976	2.8	" "
1430	300	23.44	6.81	4025	2.8	" "
1431	400	23.46	6.76	4061	2.8	" "
1432	500	23.36	6.79	4051	2.9	" "
1433	600	23.47	6.69	4068	2.9	" "
1434	700	23.52	6.67	4093	2.9	" "
1435	800	23.46	6.68	4091	3.0	" "
1436	900	23.37	6.67	4115	3.0	" "
1437	1000	23.28	6.68	4108	3.0	" "
1438	1100	23.25	6.67	4187	3.2	" "
1439	1200	23.28	6.65	4250	3.2	" "
1440	1300	23.29	6.66	4291	3.2	" "
						Parameters & WL stable, Sample [redacted] psp

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

Sampling Information

Sample Point	Sample Designator	# of Containers	Preservatives	Analysis/Comments

Burns & McDonnell
SINCE 1898

LOW-FLOW GROUNDWATER SAMPLING FORM

Site Name: YRC-Oakland
Project Number: 48791
Recorded By: Patrick Bratton

Well Number: MW-8
Well Type: Monitoring
Date: 9-18-09 Sample Time: 1525

Pump Type: Peristaltic
Pump Intake Depth: 6.5 ft BTOC
Screen Interval: 5-10

Casing Diameter (inches): 1
Total Depth of Casing (feet BTOC): 9.4
Water Level Depth (feet BTOC): 2.08

Total Volume Generated ~~(gallons)~~ Liters: 0.9

Start Time: 1458 Stop Time: 1530

Field Parameter Measurements

Time	Volume (mL)	Temp (Celsius)	pH	Conductivity (uS/cm)	DTW (ft BTOC)	Remarks
1458	Init	28.00	7.45	3978	3.40	
1500	200	26.00	7.40	3625	4.2	Well dewing down
1502	400mL	25.89	7.36	4902	4.5	
1504	500	26.39	7.26	4022	5.2	
1505	600	26.68	7.18	4083	5.4	Pausing pumping to allow well recharge
1507	700	27.30	7.09	2205	5.0	
1509	800	26.75	7.13	2091	5.6	Well drawing down again, not Possible
1511	900	27.50	6.95	2040	5.8	to achieve a low flow due to poor recharge. Leave well to recharge, will Sample once WL is sufficient to get Sample

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

Sampling Information

Sample Point	Sample Designator	# of Containers	Preservatives	Analysis/Comments

Burns & McDonnell
SINCE 1898

LOW-FLOW GROUNDWATER SAMPLING FORM

Site Name: YRC-Oakland
Project Number: 48791
Recorded By: Patrick Bratton

Well Number: MW-7 (Dup-1)
Well Type: Monitoring
Date: 9-18-09 Sample Time: 1555

Pump Type: Peristaltic
Pump Intake Depth: 5.0
Screen Interval: 5-10

Casing Diameter (inches): 1
Total Depth of Casing (feet BTOC): 8.8
Water Level Depth (feet BTOC): 1.75

Total Volume Generated (~~gallons~~ Liters): 1.7

Start Time: 1540 Stop Time: 1600

Field Parameter Measurements

Time	Volume (mL)	Temp (Celsius)	pH	Conductivity (uS/cm)	DTW (ft BTOC)	Remarks
1545	Init	26.95	7.50	2725	2.05	Clear
1546	100	26.34	7.53	2069	2.20	Clear
1547	300	26.22	7.33	1601	2.30	Clear
1548	500	26.22	7.22	1439	2.50	Clear
1549	700	26.24	7.15	1367	2.50	Clear
1550	900	26.20	7.12	1352	2.50	Clear
1551	1100	26.12	7.08	1344	2.60	Clear
1552	1300	26.22	7.03	1355	2.60	Clear
1553	1500	26.12	7.02	1341	2.60	Clear
1554	1700	26.14	7.01	1348	2.60	Clear Good flow, Sample

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

Sampling Information

Sample Point	Sample Designator	# of Containers	Preservatives	Analysis/Comments

APPENDIX B

LABRATORY ANALYTICAL REPORT
BURNS & MCDONNELL QA/QC REPORT

Date: September 29, 2009

To: Simon Barber

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 18, 2008. Samples were analyzed for one or more of the following parameters:

Analysis	Method
Groundwater Samples – Accutest of San Jose, California	
Total Petroleum Hydrocarbons (TPH)	
Gasoline Range Organics (GRO) C6-C10	SW-846 Methods 5030B / 8015B
Diesel C10-C28 (Silica Gel Cleanup [SGCU])	SW-846 Methods 3510C / 3630C / 8015B
Motor Oil >C28-C40 (SGCU)	SW-846 Methods 3510C / 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
Accutest	C7545-1	9/18/2009	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 and 2008. 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 – No problems were noted with sample preservation.

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 – Trip blank results were reviewed to determine the potential for sample cross contamination during transportation to the laboratory. No detections of target compounds were noted in the trip blank.

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. Blank Spike (BS)/Blank Spike Duplicate (BSD) – The BS contains a matrix similar to that of the sample that has been spiked with known concentrations of target analytes. The BS is prepared and analyzed by the same method as the samples. As a measure of analytical accuracy, the results of the BS are compared against the known analyte concentrations in the spike to determine REC. The purpose of the BS is to determine the performance of the laboratory with respect to analyte recovery, independent of field sample matrix interference. The BSD is a duplicate preparation and analysis of the BS. Results of the BS and BSD are compared to each other to determine analytical precision using the relative percent difference (RPD).

   All 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 RPD to determine reproducibility.

   - A project-specific MS/MSD analysis was conducted using Sample MW-7 (C7545-2) for BTEX and MTBE. All results were within control limits.

   - No project-specific MS/MSD analysis was conducted for the TPH-GRO, TPH-Diesel, or TPH-Motor Oil analyses. Analytical accuracy and precision for these analyses were assessed based on the associated surrogate 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-7 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.

12. 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-7 and Dup-1

Table 1
Field Duplicate Results - MW-7 and Dup-1
Yellow Freight - Oakland

	Sample Name	MW-7		Dup-1		
	Date Sampled	9/18/2009		9/18/2009		Meets Criteria?
	Laboratory Number	C7545-2		C7545-4		(Yes/No)
Parameter	**Units**					
Volatile Organic Compounds						
All VOCs	µg/L	Not Detected		Not Detected		Yes
Total Petroleum Hydrocarbons						
GRO (C6-C10)	µg/L	50	U	50	U	Yes
TPH (C10-C28) (SGCU)	µg/L	84.5	J	56.7	J	Yes
TPH (>C28-C40) (SGCU)	µg/L	190	U	190	U	Yes

GRO = Gasoline range organics
J = Estimated value
TPH = Total petroleum hydrocarbons
SGCU = Silica gel cleanup
U = Not Detected. Value reported is the detection limit.
µg/L = micrograms per liter

Northern California ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

09/29/09

Technical Report for

Burns and McDonnell Engineering

T0600102107-YRC-Roadway Express, Oakland, CA

48791

Accutest Job Number: C7545

Sampling Date: 09/18/09

Report to:

Burns and McDonnell Engineering

sbarber@burnsmcd.com

ATTN: Simon Barber

Total number of pages in report: **24**

ACCUTEST LABORATORIES 50 YEARS 1956-2006

ACCREDITED IN ACCORDANCE WITH nelac

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

Laurie Glantz-Murphy
Laboratory Director

Client Service contact: Anne Kathain 408-588-0200

Certifications: CA (08258CA)

Test results relate only to samples analyzed.

Sections: 1 2 3 4 5

Table of Contents

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Sample Summary

Burns and McDonnell Engineering

Job No: C7545

T0600102107-YRC-Roadway Express, Oakland, CA
Project No: 48791

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C7545-1	09/18/09	14:45	SB	09/22/09	AQ	Ground Water	MW-6
C7545-2	09/18/09	15:55	SB	09/22/09	AQ	Ground Water	MW-7
C7545-3	09/18/09	15:25	SB	09/22/09	AQ	Ground Water	MW-8
C7545-4	09/18/09	00:00	SB	09/22/09	AQ	Ground Water	DUP-1
C7545-5	09/18/09	00:00	SB	09/22/09	AQ	Trip Blank Water	TRIP

Sample Results

Report of Analysis

Accutest LabLink@4766 14:28 29-Sep-2009

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	C7545-1	**Date Sampled:**	09/18/09
Matrix:	AQ - Ground Water	**Date Received:**	09/22/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	T0600102107-YRC-Roadway Express, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W8443.D	1	09/24/09	BD	n/a	n/a	VW296
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		60-130%
2037-26-5	Toluene-D8	102%		60-130%
460-00-4	4-Bromofluorobenzene	106%		60-130%

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

Accutest LabLink@4766 14:28 29-Sep-2009

Report of Analysis

Client Sample ID:	MW-6		
Lab Sample ID:	C7545-1	**Date Sampled:**	09/18/09
Matrix:	AQ - Ground Water	**Date Received:**	09/22/09
Method:	SW846 8015B M SW846 3510C	**Percent Solids:**	n/a
Project:	T0600102107-YRC-Roadway Express, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG8132.D	1	09/24/09	JH	09/23/09	OP1333	GGG289
Run #2							

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

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	0.094	0.047	mg/l	
	TPH (> C28-C40)	ND	0.19	0.094	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	62%		45-140%

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

Accutest LabLink@4766 14:28 29-Sep-2009

Report of Analysis

Client Sample ID:	MW-7		
Lab Sample ID:	C7545-2	**Date Sampled:**	09/18/09
Matrix:	AQ - Ground Water	**Date Received:**	09/22/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	T0600102107-YRC-Roadway Express, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W8444.D	1	09/24/09	BD	n/a	n/a	VW296
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		60-130%
2037-26-5	Toluene-D8	102%		60-130%
460-00-4	4-Bromofluorobenzene	104%		60-130%

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

Accutest LabLink@4766 14:28 29-Sep-2009

Report of Analysis

Client Sample ID:	MW-7		
Lab Sample ID:	C7545-2	**Date Sampled:**	09/18/09
Matrix:	AQ - Ground Water	**Date Received:**	09/22/09
Method:	SW846 8015B M SW846 3510C	**Percent Solids:**	n/a
Project:	T0600102107-YRC-Roadway Express, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG8133.D	1	09/24/09	JH	09/23/09	OP1333	GGG289
Run #2							

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

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.0845	0.094	0.047	mg/l	J
	TPH (> C28-C40)	ND	0.19	0.094	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	78%		45-140%

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

Accutest LabLink@4766 14:28 29-Sep-2009

Report of Analysis

Client Sample ID:	MW-8		
Lab Sample ID:	C7545-3	**Date Sampled:**	09/18/09
Matrix:	AQ - Ground Water	**Date Received:**	09/22/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	T0600102107-YRC-Roadway Express, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W8445.D	1	09/24/09	BD	n/a	n/a	VW296
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		60-130%
2037-26-5	Toluene-D8	106%		60-130%
460-00-4	4-Bromofluorobenzene	103%		60-130%

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

Accutest LabLink@4766 14:28 29-Sep-2009

Report of Analysis

Client Sample ID:	MW-8		
Lab Sample ID:	C7545-3	**Date Sampled:**	09/18/09
Matrix:	AQ - Ground Water	**Date Received:**	09/22/09
Method:	SW846 8015B M SW846 3510C	**Percent Solids:**	n/a
Project:	T0600102107-YRC-Roadway Express, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG8134.D	1	09/24/09	JH	09/23/09	OP1333	GGG289
Run #2							

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

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	0.094	0.047	mg/l	
	TPH (> C28-C40)	ND	0.19	0.094	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	64%		45-140%

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

Accutest LabLink@4766 14:28 29-Sep-2009

Report of Analysis

Client Sample ID:	DUP-1		
Lab Sample ID:	C7545-4	**Date Sampled:**	09/18/09
Matrix:	AQ - Ground Water	**Date Received:**	09/22/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	T0600102107-YRC-Roadway Express, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W8446.D	1	09/24/09	BD	n/a	n/a	VW296
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		60-130%
2037-26-5	Toluene-D8	103%		60-130%
460-00-4	4-Bromofluorobenzene	105%		60-130%

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

Accutest LabLink@4766 14:28 29-Sep-2009

Report of Analysis

Client Sample ID:	DUP-1		
Lab Sample ID:	C7545-4	**Date Sampled:**	09/18/09
Matrix:	AQ - Ground Water	**Date Received:**	09/22/09
Method:	SW846 8015B M SW846 3510C	**Percent Solids:**	n/a
Project:	T0600102107-YRC-Roadway Express, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG8135.D	1	09/24/09	JH	09/23/09	OP1333	GGG289
Run #2							

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

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.0567	0.094	0.047	mg/l	J
	TPH (> C28-C40)	ND	0.19	0.094	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	76%		45-140%

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

Accutest LabLink@4766 14:28 29-Sep-2009

Report of Analysis

Client Sample ID:	TRIP		
Lab Sample ID:	C7545-5	**Date Sampled:**	09/18/09
Matrix:	AQ - Trip Blank Water	**Date Received:**	09/22/09
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	T0600102107-YRC-Roadway Express, Oakland, CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W8432.D	1	09/23/09	BD	n/a	n/a	VW296
Run #2							

	Purge Volume
Run #1	10.0 ml
Run #2	

Purgeable Aromatics, MTBE

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		60-130%
2037-26-5	Toluene-D8	103%		60-130%
460-00-4	4-Bromofluorobenzene	106%		60-130%

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

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Burns & McDonnell SINCE 1898

Request for Chemical Analysis and Chain of Custody Record

C7545

"BMECASF736"

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

Attention:

Laboratory: Accutest
Address:
City/State/Zip:
Telephone:

Document Control No: 091809
Lab. Reference No. or Episode No.:

Project Number: 48791
Client Name: YRC-Oakland

Sample Type

Matrix

Sample Number: Group or SWMU Name	Sample Number: Sample Point	Sample Number: Sample Designator	Sample Event: Round	Sample Event: Year	Sample Depth (in feet): From	Sample Depth (in feet): To	Sample Collected: Date	Sample Collected: Time	Matrix: Liquid	Matrix: Solid	Matrix: Gas	Number of Containers	Analysis: TPHg, BTEX, MTBE (EPA 8260)	Analysis: TPH diesel, motor oil (EPA 8015M)	Analysis: Silica Gel Cleanup	Remarks
	MW-6	-1	3rd	2009			9-18	1445	X			6	X	X	X	Standard
	MW-7	-2	3rd	2009			9-18	1555	X			6	X	X	X	5 day turn
1Lit only →	MW-8	-3	3rd	2009			9-18	1525	X			5	X	X	X	around
	DUP-1	-4	3rd	2009			9-18		X			6	X	X	X	Time.
	TRIP	-5	—	—			—		X			3	X			3 vials (w/HCL)
																Comm Bt
																2 Lit Ambers each N/P
																4 vials each (w/HCL)

Sampler (signature):

Sampler (signature):

Special Instructions: Submit Geotracker EDF
TO 600102107

Relinquished By (signature): 1.
Date/Time: 9-22-09 0822
Received By (signature):
Date/Time: 9/22/09 0822

Relinquished By (signature): 2.
Date/Time: 9/22/09 1038
Received By (signature):
Date/Time: 10/22/09 10:55

Ice Present in Container: Yes ☐ No ☐

Temperature Upon Receipt: 2.3

Laboratory Comments:

011102 Form WCD-KC1-SDO

C7545: Chain of Custody
Page 1 of 1

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: C7545
Account: BMECASF Burns and McDonnell Engineering
Project: T0600102107-YRC-Roadway Express, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW296-MB2	W8430.D	1	09/23/09	BD	n/a	n/a	VW296

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

C7545-1, C7545-2, C7545-3, C7545-4, C7545-5

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	60-130%
2037-26-5	Toluene-D8	102%	60-130%
460-00-4	4-Bromofluorobenzene	106%	60-130%

Method Blank Summary

Job Number: C7545
Account: BMECASF Burns and McDonnell Engineering
Project: T0600102107-YRC-Roadway Express, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW296-MB	W8419.D	1	09/23/09	BD	n/a	n/a	VW296

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

VW296-BS

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.30	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.70	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	60-130%
2037-26-5	Toluene-D8	103%	60-130%
460-00-4	4-Bromofluorobenzene	105%	60-130%

Blank Spike Summary

Job Number: C7545
Account: BMECASF Burns and McDonnell Engineering
Project: T0600102107-YRC-Roadway Express, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW296-BS	W8416.D	1	09/23/09	BD	n/a	n/a	VW296

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

C7545-1, C7545-2, C7545-3, C7545-4, C7545-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	18.3	92	60-130
100-41-4	Ethylbenzene	20	18.6	93	60-130
1634-04-4	Methyl Tert Butyl Ether	20	19.9	100	60-130
108-88-3	Toluene	20	17.5	88	60-130
1330-20-7	Xylene (total)	60	54.8	91	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	109%	60-130%
2037-26-5	Toluene-D8	102%	60-130%
460-00-4	4-Bromofluorobenzene	109%	60-130%

Blank Spike Summary

Job Number: C7545
Account: BMECASF Burns and McDonnell Engineering
Project: T0600102107-YRC-Roadway Express, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW296-BS	W8418.D	1	09/23/09	BD	n/a	n/a	VW296

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

C7545-1, C7545-2, C7545-3, C7545-4, C7545-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
	TPH-GRO (C6-C10)	125	112	90	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	60-130%
2037-26-5	Toluene-D8	102%	60-130%
460-00-4	4-Bromofluorobenzene	107%	60-130%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C7545
Account: BMECASF Burns and McDonnell Engineering
Project: T0600102107-YRC-Roadway Express, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C7545-2MS	W8448.D	1	09/24/09	BD	n/a	n/a	VW296
C7545-2MSD	W8449.D	1	09/24/09	BD	n/a	n/a	VW296
C7545-2	W8444.D	1	09/24/09	BD	n/a	n/a	VW296

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

C7545-1, C7545-2, C7545-3, C7545-4, C7545-5

CAS No.	Compound	C7545-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	17.0	85	16.3	82	4	60-130/25
100-41-4	Ethylbenzene	ND		20	17.1	86	16.4	82	4	60-130/25
1634-04-4	Methyl Tert Butyl Ether	ND		20	18.0	90	18.5	93	3	60-130/25
108-88-3	Toluene	ND		20	16.2	81	15.5	78	4	60-130/25
1330-20-7	Xylene (total)	ND		60	50.1	84	48.0	80	4	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C7545-2	Limits
1868-53-7	Dibromofluoromethane	103%	106%	102%	60-130%
2037-26-5	Toluene-D8	102%	101%	102%	60-130%
460-00-4	4-Bromofluorobenzene	106%	107%	104%	60-130%

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: C7545
Account: BMECASF Burns and McDonnell Engineering
Project: T0600102107-YRC-Roadway Express, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1333-MB	HH4440.D	1	09/23/09	JH	09/22/09	OP1333	GHH199

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

C7545-1, C7545-2, C7545-3, C7545-4

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	0.10	0.050	mg/l	
	TPH (> C28-C40)	ND	0.20	0.10	mg/l	

CAS No.	Surrogate Recoveries		Limits
630-01-3	Hexacosane	77%	45-140%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C7545
Account: BMECASF Burns and McDonnell Engineering
Project: T0600102107-YRC-Roadway Express, Oakland, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP1333-BS	HH4441.D	1	09/23/09	JH	09/22/09	OP1333	GHH199
OP1333-BSD	HH4442.D	1	09/23/09	JH	09/22/09	OP1333	GHH199

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

C7545-1, C7545-2, C7545-3, C7545-4

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	1	0.716	72	0.691	69	4	45-140/30
	TPH (> C28-C40)	1	0.670	67	0.628	63	6	45-140/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	77%	71%	45-140%