### R. W. L. Investments, Inc. 4919 Tidewater Ave. Unit B. Oakland, CA 94601

Ph# 510 434-0175

#### **RECEIVED**

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Alameda County
Environmental Health

January 23, 2009

Jerry Wickham Senior Hazardous Materials Specialist Alameda County Health Care Services Agency 1131 Harbor Bay Parkway, Ste. 250 Alameda, CA 94502

Subject:

Letter of Transmittal for

Semi-annual Groundwater Monitoring Report, Fourth Quarter 2008

4919 Tidewater Avenue, Oakland, California

Case No. RO0000107

Dear Mr. Wickham,

On behalf of R. W. L. Investments, Inc., ETIC Engineering, Inc. prepared the attached Semi-annual Groundwater Monitoring Report, Fourth Quarter 2008 dated January 2009 for the above-referenced site.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

If you have any questions or comments, please contact me at (510) 434-0175 or Maura Dougherty (extension 41) or Alan Anselmo (extension 19) of ETIC Engineering, Inc. at (925) 602-4710.

Sincerely,

R. W. L. Investments, Inc.

Bob Lawlor President



## Semi-annual Groundwater Monitoring Report Fourth Quarter 2008

Former DiSalvo Trucking 4919 Tidewater Avenue, Unit B Oakland, California 94601

**Fuel Leak Case Number: RO0000107** 

January 2009

Prepared For:

R.W.L. Investments, Inc. 4919 Tidewater Avenue, Unit B Oakland, California 94601

Prepared By:

ETIC Engineering, Inc. 2285 Morello Avenue Pleasant Hill, California 94523



## Semi-annual Groundwater Monitoring Report Fourth Quarter 2008

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ETIC Engineering, Inc. 2285 Morello Avenue Pleasant Hill, California 94523

Nathan D. Diem Staff Geologist JANUARY 23, 2009
Date

Maura C. Bugh

Maura E. Dougherty, P.E.

Project Manager

C 68966 Z EXP 12/3) 107

Tanuary 23, 2009 Date

#### TABLE OF CONTENTS

LIST (	OF FIGURES	ii
LIST (	OF TABLES	ii
LIST (	OF APPENDIXES	ii
GENE	RAL INFORMATION	iii
1.0	INTRODUCTION	1
2.0	SITE BACKGROUND	1
2.1	DESCRIPTION OF SITE	1
2.2	LOCAL GEOLOGY AND HYDROGEOLOGY	1
2.3	TOPOGRAPHY AND SURFACE WATER	2
2.4	UST HISTORY	2
2.5	SUBSURFACE INVESTIGATIONS (1989 THROUGH 2008)	3
2.6	GROUNDWATER MONITORING	5
2.7	CURRENT SITE STATUS	
3.0	GROUNDWATER MONITORING	
3.1	GROUNDWATER MONITORING PROCEDURES	6
3.2	GROUNDWATER ELEVATIONS AND HYDRAULIC GRADIENT	6
3.3	ANALYTICAL DATA FOR TPH-d, TPH-g, AND BTEX	6
3.4	ANALYTICAL DATA FOR MTBE	7
4.0	SUMMARY AND CONCLUSIONS	7
6.0	REFERENCES	8

#### LIST OF FIGURES

- Figure 1. Site Location and Topographic Map
- Figure 2. Site Map
- Figure 3. Site Map with Historical Sampling Locations
- Figure 4. Groundwater Elevation Contour Map December 11, 2008
- Figure 5. Site Map Showing Groundwater Analytical Results December 11, 2008

#### LIST OF TABLES

- Table 1. Monitoring Well Construction Details
- Table 2. Groundwater Elevation Data
- Table 3. Analytical Data for Monitoring Well Groundwater Samples TPH-d, TPH-g, BTEX, and MTBE

#### LIST OF APPENDIXES

- Appendix A. Field Data Forms
- Appendix B. Laboratory Analytical Report and Chain-of-Custody Documentation

#### **GENERAL INFORMATION**

#### **Site Location**

Former DiSalvo Trucking 4919 Tidewater Avenue, Unit B Oakland, California 94601

Alameda County

Township 2 South, Range 3 West, Section 17 of the Mount Diablo Baseline and Meridian

#### **Responsible Party**

Bob Lawlor R.W.L. Investments, Inc. 4919 Tidewater Avenue, Unit B Oakland, California 94601

#### **Environmental Consultant**

ETIC Engineering, Inc. 2285 Morello Avenue Pleasant Hill, California 94523

Maura E. Dougherty Project Manager (925) 602-4710 ext. 41 mdougherty@eticeng.com

#### Regulatory Agency

Alameda County Health Care Services Agency 1131 Harbor Bay Parkway Suite 250 Alameda, California 94502-6577

Jerry Wickham Senior Hazardous Materials Specialist (510) 567-6791

#### 1.0 INTRODUCTION

On behalf of R.W.L. Investments, Inc., ETIC Engineering, Inc. (ETIC) has prepared this *Semi-annual Groundwater Monitoring Report*, Fourth Quarter 2008 for the Heitz Trucking (formerly DiSalvo Trucking) facility located at 4919 Tidewater Avenue in Oakland, California (the Site). This report summarizes the groundwater monitoring activities performed on December 11, 2008.

#### 2.0 SITE BACKGROUND

#### 2.1 DESCRIPTION OF SITE

The Site is located east of the San Francisco Bay in southwest Oakland, approximately 500 feet southeast of the Tidewater Avenue and Lesser Street intersection, on the southwest side of Tidewater Avenue (Figure 1). The Site is located in Section 17 of Township 2 South, Range 3 West, of the Mount Diablo Baseline and Meridian. The Site is currently owned by R.W.L. Investments, Inc. and leased to Heitz Trucking.

The 3.61-acre property contains an approximately 11,800 square foot concrete warehouse and loading dock terminal in the northern portion of the Site, an office trailer, and a truck repair shop and maintenance building in the southern portion of the Site (Figure 2). An aboveground fuel storage tank is located north of the maintenance building, and outside yard areas are located along the northwest side of the building and between the buildings.

The Site is listed as a fuel leak case and is overseen by the Alameda County Health Care Services Agency (ACHCSA).

#### 2.2 LOCAL GEOLOGY AND HYDROGEOLOGY

Soil borings from previous onsite investigations indicate that the area beneath the Site was likely filled to create land and lift the surface approximately 5 feet above the high tide line (ART, 2007). The soil beneath the Site consists mostly of gravel and sand fill with concrete and asphalt debris (ART, 2007). The thickness of the fill material varies across the Site from about 1.5 feet near the southern corner, to 4 to 5 feet along the northern portion of the property, to more than 9 feet thick along Tidewater Avenue (ART, 2007). The fill is underlain by organic clay with thin interbeds of peat.

Groundwater flow direction in the area of the Site is generally toward the San Francisco Bay. Historically, depths to groundwater measured in monitoring wells at the Site have ranged from approximately 0.3 to 6.1 feet below ground surface (bgs). The magnitude of the hydraulic

gradient has historically ranged from approximately 0.0002 to 0.008 foot-per-foot. The groundwater flow is generally toward the southwest.

#### 2.3 TOPOGRAPHY AND SURFACE WATER

The land surface in the area of the Site generally slopes down to the west toward San Francisco Bay. The Site is relatively flat with little topographic change. The elevation of the Site is approximately 5 feet above mean sea level (msl).

San Leandro Bay is located approximately 200 feet south of the Site. San Leandro Bay is connected to San Francisco Bay and the Oakland Estuary.

#### 2.4 UST HISTORY

DiSalvo Trucking reportedly operated one 10,000-gallon diesel underground storage tank (UST), one 5,000-gallon diesel UST, and one 280-gallon used-oil UST at the Site until their removal in March 1989 (GET,1989a). The USTs and a remote dispensing system were reportedly installed in 1968 (GET, 1989b). The remote dispensing system consisted of four hydrants in two separate lines, one on the northwestern side and one on the southeastern side of the trucking terminal building. Two pressurized single-wall 2-inch diameter galvanized steel lines were connected to a red jacket pump located on the 10,000-gallon diesel UST. One 2-inch diameter product line crossed underneath the trucking terminal building and connected to the first remote hydrant on the north side of the building. The second 2-inch product line connected to the first remote hydrant on the south side of the building, adjacent to the USTs. A 1½-inch diameter galvanized steel line connected the first hydrant to the second remote hydrant in each line. The hydrant lines were located approximately 2 feet bgs (GET, 1989b).

In March 1989, the three USTs, fill lines, and the southern remote hydrant dispenser lines were removed. Two areas of corrosion were visible when the hydrant line was removed (GET, 1989b). During removal activities a 550-gallon UST was discovered and also removed. Visual inspection identified two holes in the 550-gallon UST. In addition, a 10-inch diameter pipeline crossing the excavation was discovered. The pipe was broken during excavation activities and "diesel-like fuel" drained into the UST excavation (GTE, 1994a). The pipe was cut, the middle section was removed, and the ends were capped at the limits of the excavation (GTE, 1994a).

Petroleum hydrocarbons were detected at concentrations up to 240 milligrams per kilogram (mg/kg) in soil samples collected from the UST excavation. Diesel-impacted groundwater was observed flowing into the open UST excavation from the northeastern corner.

Approximately 3,000 cubic yards of excavated soil were treated onsite by enhanced biodegradation (GTE, 1991). The treated soil was placed into a landscape berm located between Tidewater Avenue and the site boundary and used as fill across the Site (GTE, 1994c).

The liquid-phase hydrocarbons (LPH) and contaminated groundwater were pumped from the excavation pit for disposal. In April 1989, a recovery well and recovery trench were installed from which an estimated 2,400 gallons of diesel fuel and 20,000 gallons of contaminated groundwater were recovered between April and August 1989 (GTE, 1991).

#### 2.5 SUBSURFACE INVESTIGATIONS (1989 THROUGH 2008)

Subsurface investigations were performed at the Site from 1989 to 2008. Historical sampling locations are shown on Figure 3. These investigations confirmed the presence of diesel- and gasoline-impacted soil and groundwater beneath the Site and identified LPH at various locations including in monitoring wells MW-2 and MW-3. Total petroleum hydrocarbons in the diesel range (TPH-d), total petroleum hydrocarbons in the gasoline range (TPH-g), benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tertiary butyl ether (MTBE) have been detected in groundwater samples collected at the Site.

In May 1989, Geo-Environmental Technology (GET) performed a shallow soil investigation at the Site in which 11 soil samples and one groundwater sample were collected from 22 shallow soil borings (BH-1 through BH-22). Samples were not collected from borings with obvious petroleum impacts (GET, 1989b). Soil sampling confirmed the presence of diesel-impacted soil in the area of the former UST excavation and along the former fuel dispenser hydrant line extending from the former USTs to the northeast. The maximum TPH-d concentration (46,000 mg/kg) was detected in a soil sample collected at 5 feet bgs from boring BH-11, located approximately 10 feet west of the former UST excavation (GET, 1989b). Oil and grease was detected in the same sample at a concentration of 27,000 mg/kg.

In an April 1994 soil and groundwater investigation, Gen-Tech Environmental (GTE) drilled 14 borings (EB-1 through EB-11 and MW-1 through MW-3), collected soil and groundwater samples, and installed three groundwater monitoring wells (MW-1 through MW-3) (GTE, 1994b). The maximum concentrations of TPH-d (29,000 mg/kg) and oil and grease (36,000 mg/kg) in soil were detected in samples from boring MW-2. The maximum concentrations of TPH-d detected during grab groundwater sampling were 64,000 micrograms per liter (μg/L) from boring EB-2 and 73,000 μg/L from boring EW-4. Groundwater monitoring well sampling conducted on April 14, 1994 indicated LPH in monitoring well MW-2 and elevated concentrations of TPH-d and TPH-g (7,700 μg/L and 250 μg/L, respectively) in well MW-3 (GTE, 1994b).

In July 1995, Environmental Restoration Services drilled two soil borings and installed monitoring well MW-4 (ART, 2007). MW-4 was installed on the northern side of the terminal building. TPH-g and BTEX were detected in the August 1995 groundwater sample from MW-4.

PIERS Environmental (PIERS) drilled 16 soil borings (SB-1 through SB-16) during a soil and groundwater investigation in December 2000. Eight soil samples between 6 and 7 feet bgs and 16 grab groundwater samples were collected and analyzed for TPH-d. The only TPH-d detection in soil was 14 mg/kg in a sample collected from SB-16 at 6.5 feet bgs. The maximum TPH-d concentration in groundwater was 670,000  $\mu$ g/L (SB-10) (PIERS, 2000). PIERS identified two main areas of TPH-d impacted soil: 1) located in the area of the former UST excavation and 2) from the northeast end of the recovery trench to the area of MW-2. TPH-d concentrations in groundwater along the northwestern property boundary were 44,000  $\mu$ g/L (SB-14) and 48,000  $\mu$ g/L (SB-15) and PIERS concluded that the groundwater contamination plume extended offsite to the northwest (PIERS, 2000).

In February and April 2006, ERAS Environmental (ERAS) conducted additional subsurface investigations to further delineate vertical and lateral extents of diesel impacts in soil and groundwater at the Site (ERAS, 2006). In February 2006, ERAS collected soil and groundwater samples from soil borings B-1 through B-9 for TPH-d analysis and Murray Engineers, Inc. (Murray) collected soil samples from borings B-6 through B-9 for geotechnical analysis (named B-1 through B-4 for the Murray report). In April 2006, an 8-inch dewatering well (EW-1) and four observation wells (OB-3 through OB-6) were installed and soil and groundwater samples were collected from borings B-10 through B-15. No LPH was encountered during these investigations. The maximum detection of TPH-d in soil was 5,400 mg/kg collected from B-9 at 4.5 feet bgs, located adjacent to the southwestern corner of the former UST excavation. The maximum concentration of TPH-d in groundwater was 2,500,000 µg/L collected from B-12 located northwest of the former UST excavation (ERAS, 2006).

Geotechnical results were reported by Murray in an April 2006 Limited Geotechnical Evaluation Contaminated Soil Replacement Report. The report summarized the subsurface geology and provided shoring design parameters for potential excavation activities at the Site.

Applied Remedial Technologies, Inc. (ART) conducted a groundwater aquifer test and construction dewatering analysis in April 2006. ART performed both a step drawdown pumping test and a constant-rate aquifer test at well EW-1. Pumping from EW-1 (screened across the fill material and approximately three feet into the clay unit underlying the fill material) resulted in drawdown in all observation wells screened in fill material. No drawdown was observed in well OB-5, which is screened in the clay unit, located approximately seven feet from EW-1 (ART, 2007).

In February 2007, ART prepared a *Feasibility Study Report* to address the removal of petroleum hydrocarbons from the site subsurface. Based on the feasibility evaluation of remedial alternatives, ART recommended groundwater extraction and treatment with limited source area remediation.

In their May 29, 2007 letter, ACHCSA requested the preparation of a remedial action plan. In accordance with this request, ETIC submitted the *Remedial Action Plan* (RAP) dated September 14, 2007. The RAP included a description of how the affected soil area would be precisely determined and how remedial alternatives other than excavation would be evaluated (ETIC, 2007).

#### 2.6 GROUNDWATER MONITORING

Groundwater monitoring has been conducted at the Site intermittently since April 1994. Two monitoring wells, MW-2 and MW-3, historically have had LPH, which has been removed by bailing. The groundwater flow direction is generally toward the southwest. The second semi-annual 2008 groundwater sampling event took place in December 2008.

#### 2.7 CURRENT SITE STATUS

In their May 1, 2008 letter, ACHCSA approved the proposal to perform a geophysical survey at the Site and requested a revised RAP. A geophysical survey was conducted at the Site on June 3, 2008 by NORCAL Geophysical Consultants, Inc. ETIC prepared a revised RAP which reported the results of the geophysical survey and addressed ACHCSA comments and submitted the document to ACHCSA on July 15, 2008.

In their August 14, 2008 letter, ACHCSA approved the revised RAP. In accordance with the revised RAP, soil and groundwater sampling activities took place in September 2008. A *Site Assessment Report* is being prepared and will be submitted on January 19, 2009 in accordance with the ACHCSA August 14, 2008 letter.

#### 3.0 GROUNDWATER MONITORING

On behalf of R.W.L. Investments, Inc., ETIC performed the semi-annual groundwater monitoring event on December 11, 2008. Summary tables for monitoring well construction details, groundwater elevations, and analytical data are included in Tables 1 through 3. Site maps with well locations, groundwater elevations, and analytical data are included as Figures 1 through 5. Field data forms are included in Appendix A. Laboratory analytical reports and chain-of-custody documentation are included in Appendix B.

#### 3.1 GROUNDWATER MONITORING PROCEDURES

Groundwater monitoring was performed at four monitoring wells (MW-1 through MW-4). Prior to sample collection, the depth to water, the depth to the bottom of the well, and product thickness (if present) were measured to the nearest 0.01 foot in each monitoring well, using an oil/water interface probe. Each sampled monitoring well was purged a minimum of three casing volumes of groundwater with a disposable bailer, with the exception of MW-1 which dewatered after one casing volume. Water quality parameters (temperature, pH, specific conductance, dissolved oxygen, and oxidation-reduction potential) were measured, utilizing calibrated field instruments. The purged water from each monitoring well was placed in a temporary and portable poly-tank and then transferred into properly labeled 55-gallon drums. The drums were left onsite for subsequent profiling and offsite disposal. All reusable sampling equipment was thoroughly washed with a Liquinox solution and then rinsed with distilled water.

Groundwater samples were collected and stored in pre-cleaned, laboratory-supplied containers. The containers were sealed, labeled, stored on ice in a thermally-insulated cooler, and transported under chain-of-custody protocol to Kiff Analytical, LLC (Kiff), a state-certified analytical laboratory. A travel blank accompanied the groundwater samples to Kiff.

Kiff analyzed the groundwater samples for TPH-d by EPA Method 8015M with a silica gel cleanup. The groundwater samples and the travel blank were analyzed for TPH-g, BTEX, and MTBE by EPA Method 8260B.

#### 3.2 GROUNDWATER ELEVATIONS AND HYDRAULIC GRADIENT

A groundwater elevation contour map for the December 2008 monitoring event and a rose diagram with historical hydraulic gradients are presented on Figure 4. Current and historical groundwater elevations are presented in Table 2. The depth to groundwater was approximately 2.5 to 4 feet bgs. The groundwater elevations ranged from -1.35 feet relative to msl in MW-1 to 0.37 feet relative to msl in MW-3. The direction of groundwater flow was generally to the southwest with a hydraulic gradient of approximately 0.007 foot-per-foot.

#### 3.3 ANALYTICAL DATA FOR TPH-d, TPH-g, AND BTEX

Laboratory analytical data for groundwater samples collected in December 2008 are presented on Figure 5. Historical and current analytical data for groundwater samples is presented in Table 3.

TPH-d was detected in groundwater samples collected from three of the four monitoring wells, at concentrations of 14,000  $\mu$ g/L in MW-3, 4,000  $\mu$ g/L in MW-4, and 3,700  $\mu$ g/L in MW-2.

TPH-d was not detected in the groundwater sample collected from MW-1. TPH-g was detected in groundwater samples collected from three monitoring wells, at concentrations of 250  $\mu$ g/L in MW-3 and 200  $\mu$ g/L in MW-2 and MW-4. TPH-g was not detected in the groundwater sample collected from MW-1. TPH-g was not detected in the travel blank.

BTEX was not detected in any of the groundwater samples collected on December 11, 2008. BTEX was not detected in the travel blank.

#### 3.4 ANALYTICAL DATA FOR MTBE

MTBE was detected in groundwater samples collected from three monitoring wells, at concentrations of 25  $\mu$ g/L in MW-3, 6.3  $\mu$ g/L in MW-1, and 2.7  $\mu$ g/L in MW-2. MTBE was not detected in the groundwater sample collected from MW-4. MTBE was not detected in the travel blank.

#### 4.0 SUMMARY AND CONCLUSIONS

A summary of current Site conditions is presented below:

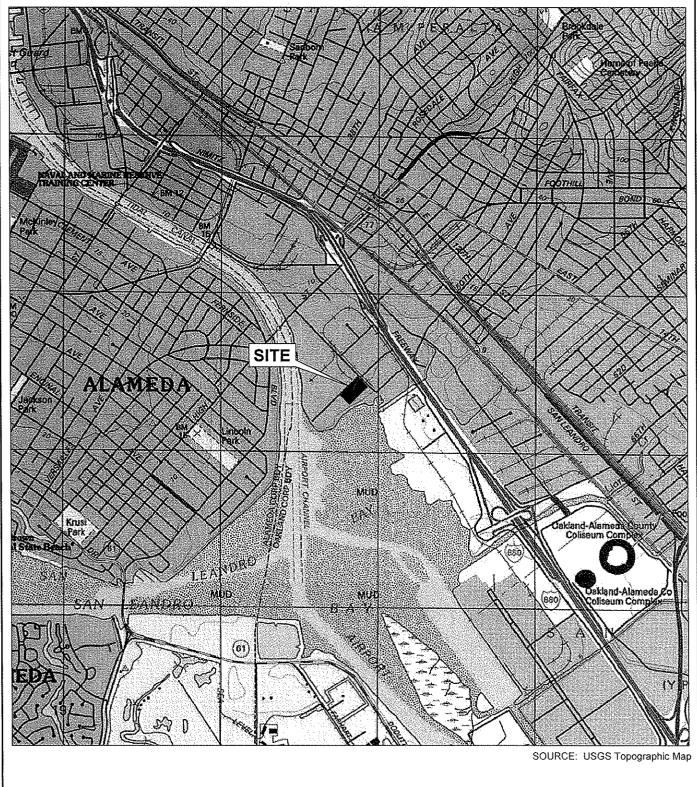
- During the December 2008 sampling event, monitoring wells MW-1, MW-2, MW-3, and MW-4 were gauged and sampled.
- During the December 2008 event, groundwater elevations ranged from -1.35 to 0.37 feet relative to msl. The direction of groundwater flow was to the southwest with a hydraulic gradient of approximately 0.007 foot-per-foot;
- TPH-d was detected in the groundwater samples collected from MW-2, MW-3, and MW-4. TPH-g was detected in the samples from MW-2, MW-3, and MW-4. BTEX was not detected in any of the samples; and
- MTBE was detected in groundwater samples from three monitoring wells, MW-1, MW-2, and MW-3.

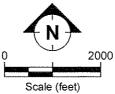
The first semi-annual groundwater monitoring event for 2009 is scheduled for June.

#### 6.0 REFERENCES

- Applied Remedial Technologies, Inc. (ART), 2007. Feasibility Study Report, Heitz Trucking, 4919 Tidewater Avenue, Unit B, Oakland, California. February 26.
- ERAS, 2006. Report of Environmental Investigations, 4919 Tidewater Avenue, Oakland, California. May 12.
- ETIC Engineering, Inc. (ETIC), 2007. Remedial Action Plan, Heitz Trucking, 4919 Tidewater Avenue, Unit B, Oakland, California 94601. September 14.
- ETIC Engineering, Inc. (ETIC), 2008. Revised Remedial Action Plan, Heitz Trucking, 4919 Tidewater Avenue, Unit B, Oakland, California 94601. July 15.
- Geo-Environmental Technology (GET), 1989a. Letter Re: Underground Tank Removal, 4919 Tidewater Ave., Oakland, California 94612. April 27.
- GET, 1989b. Technical Report Preliminary Investigation, DiSalvo Trucking, 4919 Tidewater Avenue, Oakland, California. June 15.
- Gen-Tech Environmental (GTE), 1991. Contaminated Site Interim Report and Technical Work Plan for Migration Control, 4919 Tidewater Ave., Oakland, CA 94612. March 12.
- GTE, 1994a. Summary Report of Previous Site Activity for DiSalvo Trucking, 4919 Tidewater Avenue, Oakland, California. March 24.
- GTE, 1994b. Soil and Groundwater Investigation Site at 4919 Tidewater Avenue, Oakland, CA. May17.
- GTE, 1994c. Letter Re: Supplemental Technical Report Letter on Bioremediation of Contaminated Soils and Trench Installation for the DiSalvo Trucking Facility at 4919 Tidewater Ave., Oakland, CA 94601. July 12.
- PIERs, 2000. Investigative Report. December 27.

**Figures** 

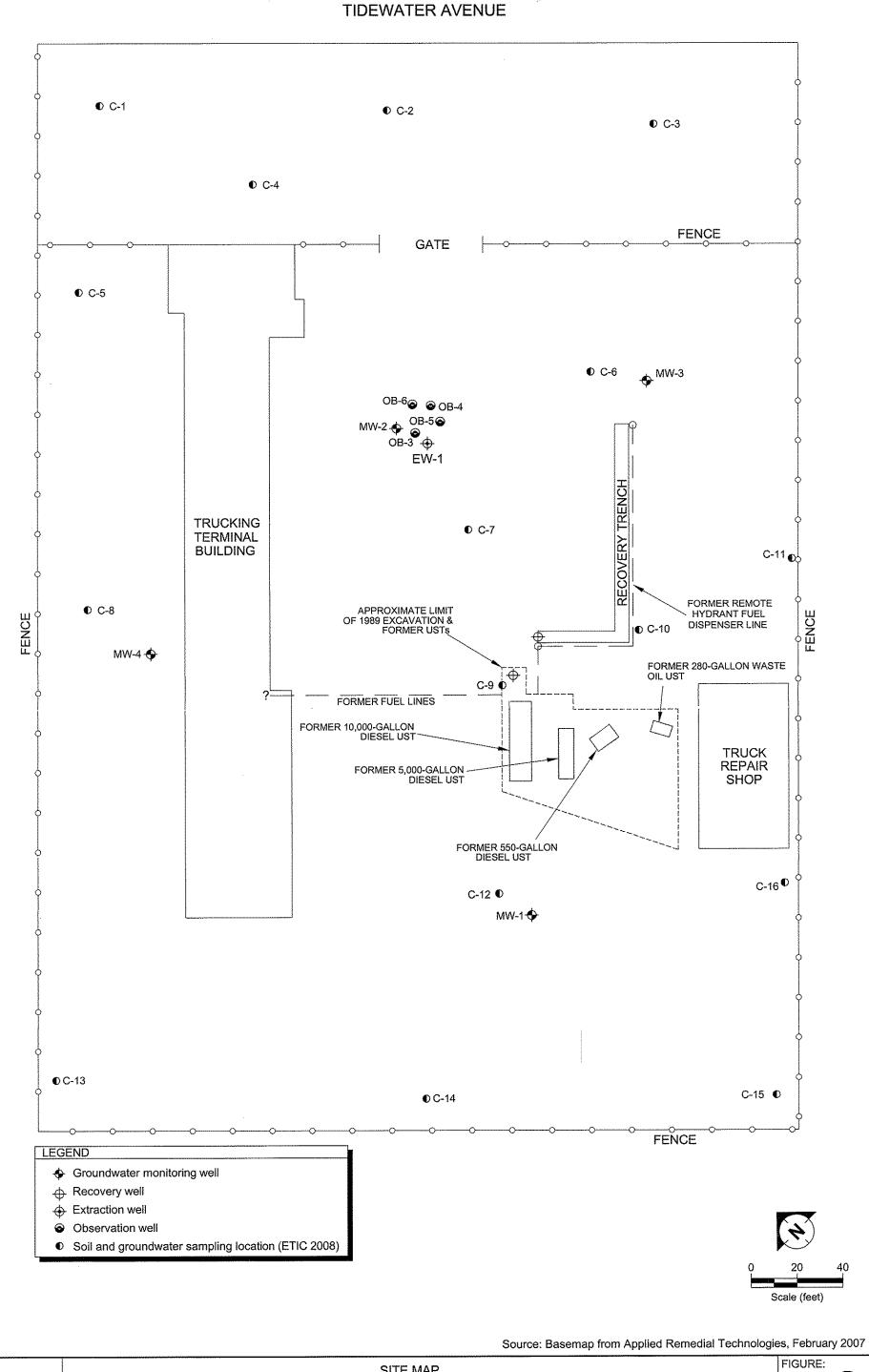


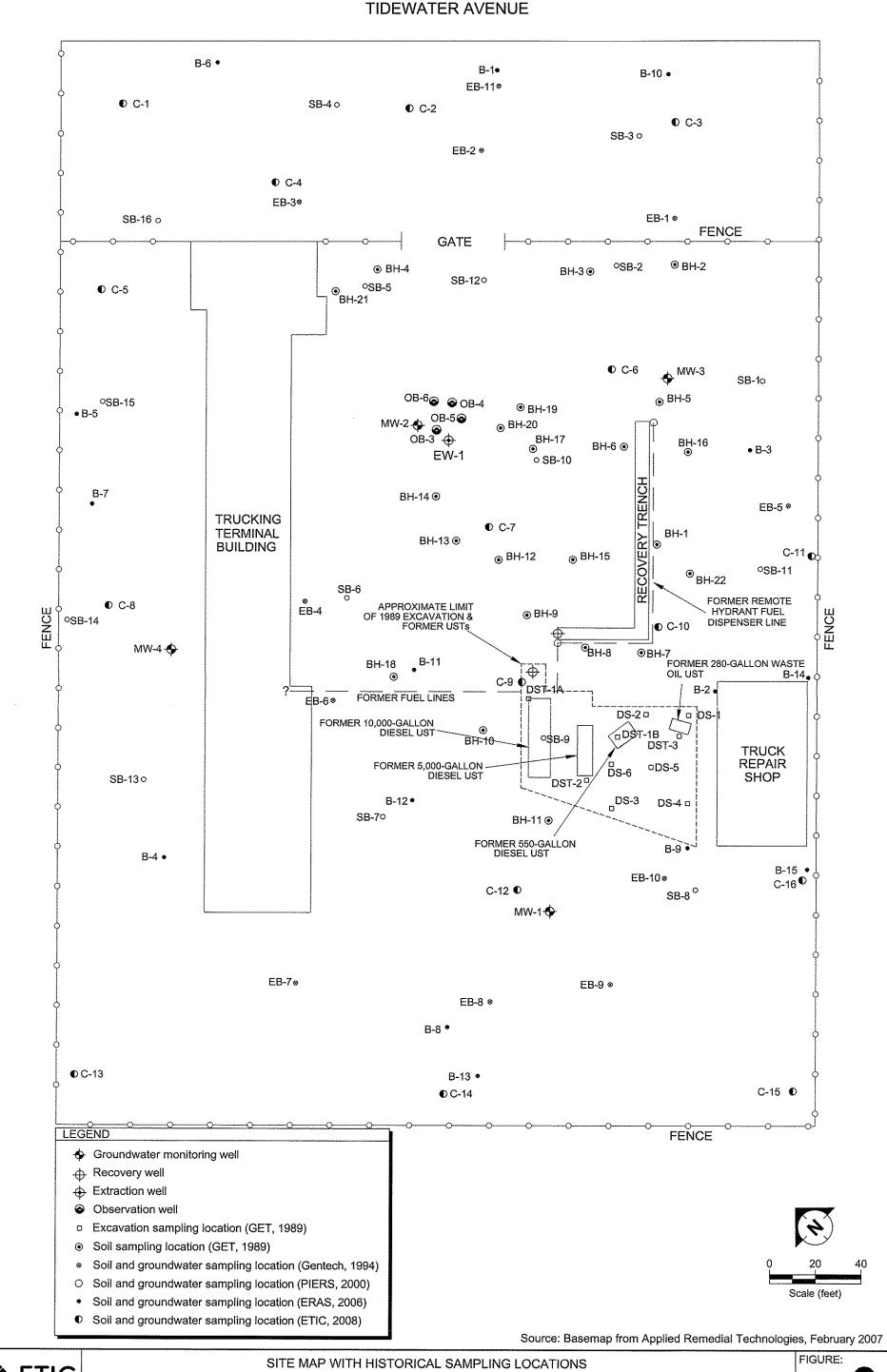


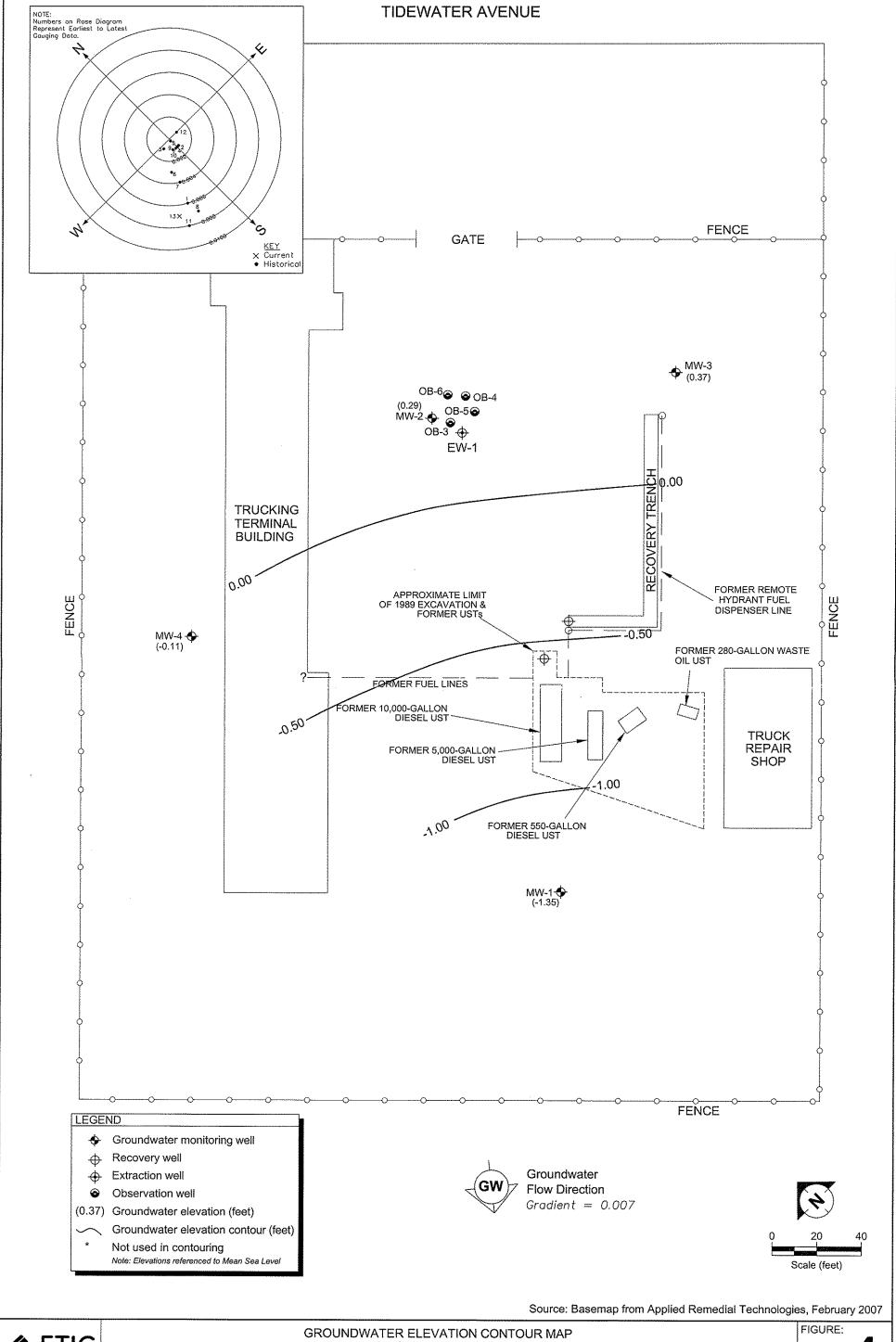


SITE LOCATION AND TOPOGRAPHIC MAP FORMER DISALVO TRUCKING 4919 TIDEWATER AVENUE OAKLAND, CALIFORNIA FIGURE:

1

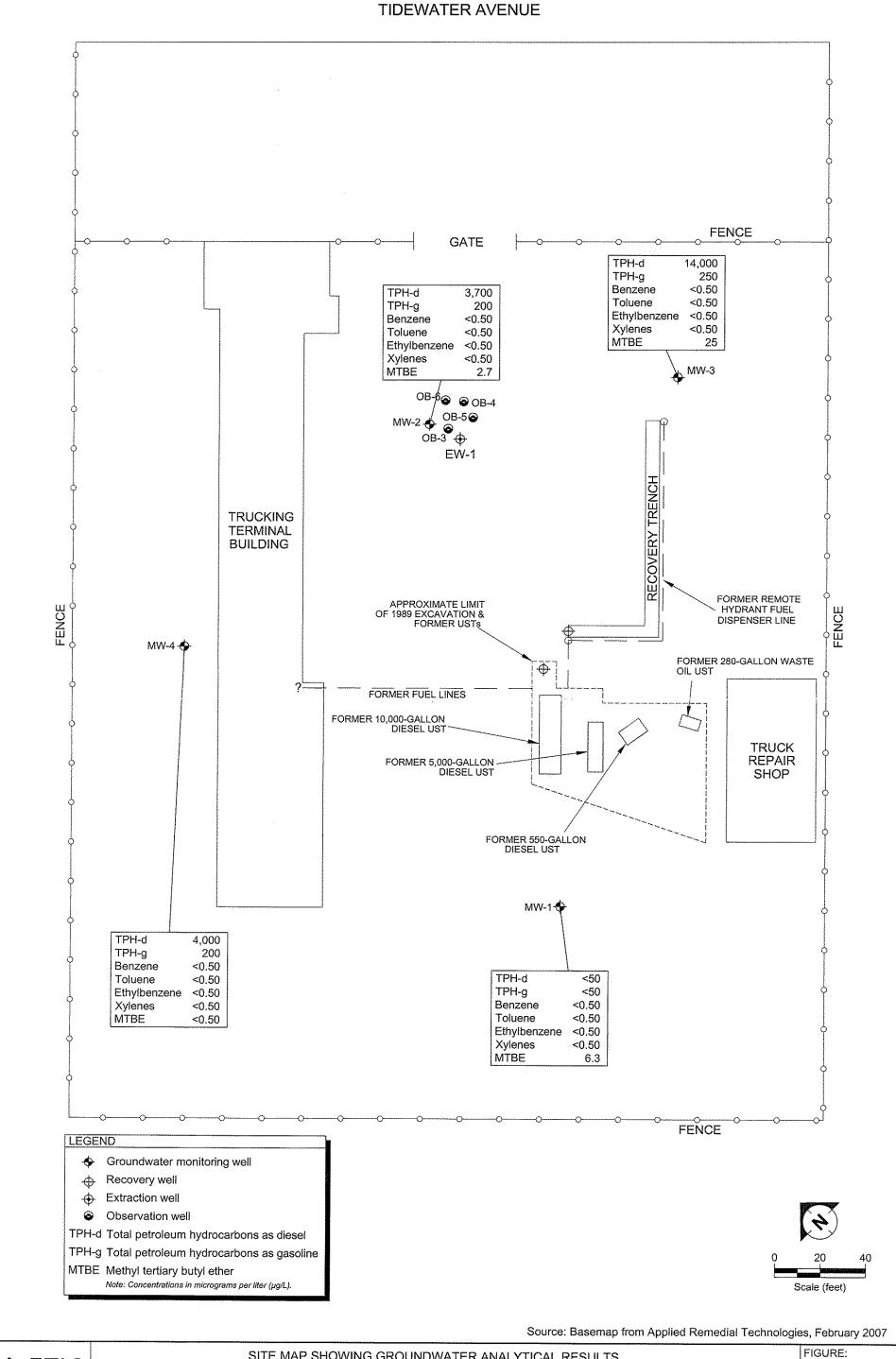


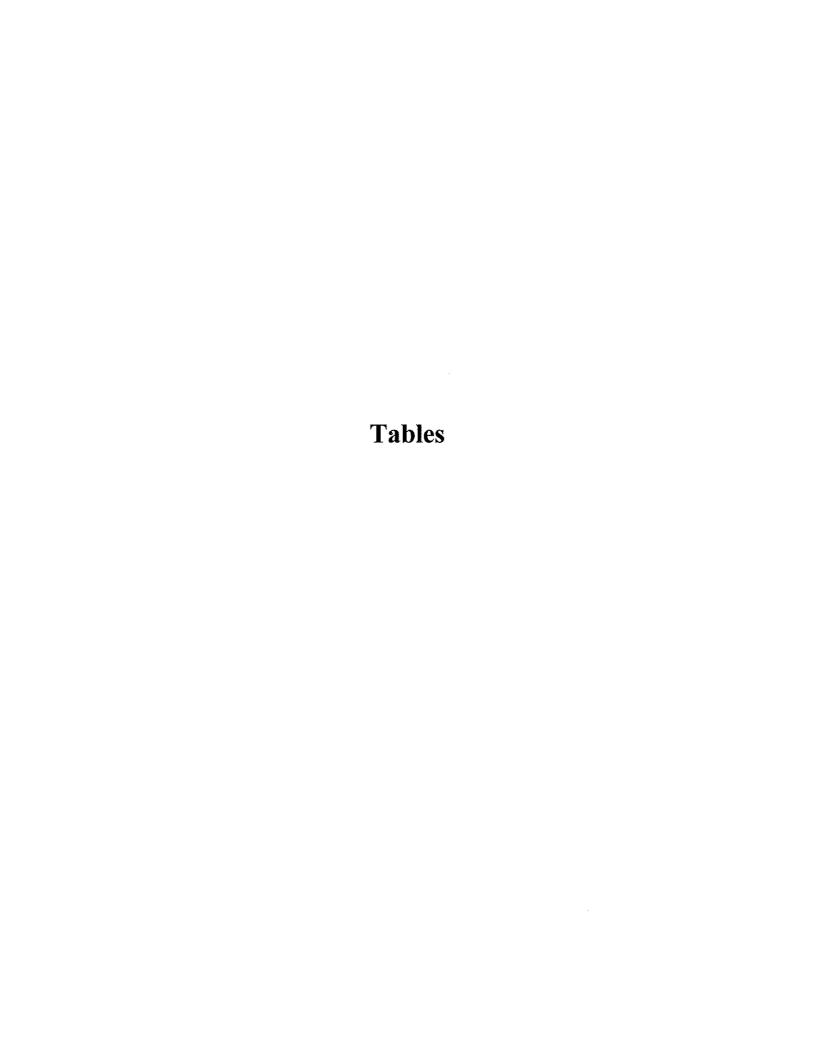




FILE NAME: 402008.DWG

GROUNDWATER ELEVATION CONTOUR MAP DECEMBER 11, 2008 FORMER DISALVO TRUCKING 4919 TIDEWATER AVENUE, OAKLAND, CALIFORNIA





## Table 1 Monitoring Well Construction Details Former DiSalvo Trucking 4919 Tidewater Avenue Oakland, California 94601

Monitoring Well	Date Installed	Top of Casing Elevation (feet msl)	Casing Material	Boring Depth (feet)	Well Depth (feet)	Boring Diameter (inches)	Casing Diameter (inches)	Slot Size (inches)	Screened Interval (feet)	Filter Pack Interval (feet)	Filter Pack Material
MW-1	4/8/1994	2.68	Sch. 40 PVC	8	8	NDA	2	0.020	3-8	2.5-8	#2/12 Sand
MW-2	4/8/1994	3.50	Sch. 40 PVC	8	8	NDA	2	0.020	3-8	2.5-8	#2/12 Sand
MW-3	4/8/1994	2.90	Sch. 40 PVC	8	. 8	NDA	2	0.020	3-8	2.5-8	#2/12 Sand
MW-4	7/19/1995	3.87	Sch. 40 PVC	8	8	NDA	2	0.020	3-8	2.5-8	#2/12 Sand
OB-3	4/7/2006	NDA	Sch. 40 PVC	8	7	8	2	0.020	2-7	1.5-7	#2/12 Sand
OB-4	4/7/2006	NDA	Sch. 40 PVC	10	10	8	2	0.020	2.5-10	2-10	#2/12 Sand
OB-5	4/7/2006	NDA	Sch. 40 PVC	15	15	NDA	2	0.020	10-15	9-15	#2/12 Sand
OB-6	4/7/2006	NDA	Sch. 40 PVC	7.5	7	8	2	0.020	2-7	1.5-7	#2/12 Sand
EW-1	4/14/2006	NDA	Sch. 40 PVC	11.5	11.5	36	12	0.032	NDA	NDA	#2/12 Sand-1/4" gravel mix

#### Notes:

Sch. 40 PVC = Schedule 40 polyvinyl chloride.

msl = Mean sea level.

NDA = No data available.

Table 2 Groundwater Elevation Data Former DiSalvo Trucking 4919 Tidewater Avenue Oakland, California 94601

Monitoring Well	Gauging Date	Top of Casing Elevation (feet msl)	Depth to Water (feet)	Free Product Thickness (feet)	Groundwater Elevation (feet msl)
MW-1	4/14/1994	2.68	1.26	0.00	1.42
MW-1	11/17/1994	2.68	3.88	0.00	-1.20
MW-1	8/13/1995	2.68	3.09	0.00	-0.41
MW-1	8/23/1999	2.68	2.17	0.00	0.51
MW-1	5/26/1999	2.68	2.29	0.00	0.39
MW-1	4/26/2001	2.68	1.14	0.00	1.54
MW-1	9/5/2002	2.68	2.15	0.00	0.53
MW-1	8/18/2005	2.68	2.54	0.00	0.14
MW-1	8/19/2005	2.68	6.10	- 0.00	-3.42
MW-1	1/25/2006	2.68	2.02	0.00	0.66
MW-1	5/9/2006	2.68	0.30	0.00	2.38
MW-1	7/12/2006	2.68	1.81	0.00	0.87
MW-1	6/27/2007	2.68	1.82	0.00	0.86
MW-1	11/26/2007	2.68	3.80	0.00	-1.12
MW-1	6/9/2008	2.68	1.78	0.00	0.90
MW-1	12/11/2008	2.68	4.03	0.00	-1.35
MW-2	4/14/1994	3.50	1.92	0.00	1.58
MW-2	11/18/1994	3.50	1.78	0.00	1.72
MW-2	8/13/1995	3.50	2.95	0.00	0.55
MW-2	8/23/1999	3.50	2.89	0.00	0.61
MW-2	5/26/1999	3.50	2.96	0.00	0.54
MW-2	4/26/2001	3.50	1.74	0.00	1.76
MW-2	9/5/2002	3.50	3.06	0.00	0.44
MW-2	8/18/2005	3.50	2.62	0.00	0.88
MW-2	8/19/2005	3.50	2.62	0.00	0.88
MW-2	1/25/2006	3.50	1.27	0.00	2.23

Table 2 Groundwater Elevation Data Former DiSalvo Trucking 4919 Tidewater Avenue Oakland, California 94601

Gauging Date	Top of Casing Elevation (feet msl)	Depth to Water (feet)	Free Product Thickness (feet)	Groundwater Elevation (feet msl)
7/12/2006	3.50	2.42	0.00	1.08
6/27/2007	3.50	2.46	0.00	1.04
11/26/2007	3.50	2.74	0.00	0.76
6/9/2008	3.50	2.63	0.00	0.87
12/11/2008	3.50	3.21	0.00	0.29
4/14/1994	2.90	1.33	0.00	1.57
11/18/1994	2.90	1.23	0.00	1.67
8/13/1995	2.90	2.18	0.00	0.72
8/23/1999	2.90	2.18	0.00	0.72
5/26/1999	2.90	2.50	0.00	0.40
4/26/2001	2.90	1.29	0.00	1.61
9/5/2002	2.90	2.34	0.00	0.56
8/18/2005	2.90	2.08	0.04	0.85
8/19/2005	2.90	2.10	0.03	0.82
1/25/2006	2.90	0.97	0.00	1.93
7/12/2006	2.90	1.82	0.00	1.08
6/27/2007	2.90	1.90	0.00	1.00
11/26/2007	2.90	2.18	0.00	0.72
6/9/2008	2.90	2.13	0.02	0.77
12/11/2008	2.90	2.53	0.00	0.37
8/13/1005	3 27	3 22	0.00	0.54
				0.56
				2.18
<b> </b>				0.56
				0.50
<b> </b>				0.30
	7/12/2006 6/27/2007 11/26/2007 6/9/2008 12/11/2008 12/11/2008 4/14/1994 11/18/1994 8/13/1995 8/23/1999 5/26/1999 4/26/2001 9/5/2002 8/18/2005 8/19/2006 6/27/2007 11/26/2007 6/9/2008	Gauging Date         Elevation (feet msl)           7/12/2006         3.50           6/27/2007         3.50           11/26/2007         3.50           6/9/2008         3.50           12/11/2008         3.50           4/14/1994         2.90           11/18/1994         2.90           8/13/1995         2.90           8/23/1999         2.90           5/26/1999         2.90           4/126/2001         2.90           9/5/2002         2.90           8/18/2005         2.90           1/25/2006         2.90           7/12/2006         2.90           6/27/2007         2.90           11/26/2007         2.90           6/9/2008         2.90           12/11/2008         2.90           8/13/1995         3.87           8/26/1999         3.87           4/26/2001         3.87           9/5/2002         3.87           8/18/2005         3.87           8/18/2005         3.87	Gauging Date         Elevation (feet msl)         Water (feet)           7/12/2006         3.50         2.42           6/27/2007         3.50         2.46           11/26/2007         3.50         2.74           6/9/2008         3.50         2.63           12/11/2008         3.50         3.21           4/14/1994         2.90         1.33           11/18/1994         2.90         1.23           8/13/1995         2.90         2.18           8/23/1999         2.90         2.18           5/26/1999         2.90         2.50           4/26/2001         2.90         1.29           9/5/2002         2.90         2.34           8/18/2005         2.90         2.08           8/19/2006         2.90         2.10           1/25/2006         2.90         1.82           6/27/2007         2.90         1.90           11/26/2007         2.90         2.18           6/9/2008         2.90         2.13           12/11/2008         2.90         2.53           8/13/1995         3.87         3.31           8/26/1999         3.87         3.31           4/26/2001	Gauging Date         Elevation (feet msl)         Water (feet)         Thickness (feet)           7/12/2006         3.50         2.42         0.00           6/27/2007         3.50         2.46         0.00           11/26/2007         3.50         2.74         0.00           6/9/2008         3.50         2.63         0.00           12/11/2008         3.50         3.21         0.00           4/14/1994         2.90         1.33         0.00           8/13/1995         2.90         2.18         0.00           8/23/1999         2.90         2.18         0.00           8/26/1999         2.90         2.50         0.00           4/26/2001         2.90         2.34         0.00           8/18/2005         2.90         2.34         0.00           8/18/2005         2.90         2.10         0.03           1/25/2006         2.90         1.82         0.00           6/27/2007         2.90         1.82         0.00           6/9/2008         2.90         2.18         0.00           11/26/2007         2.90         1.90         0.00           11/26/2007         2.90         2.13         0.02

Table 2 Groundwater Elevation Data Former DiSalvo Trucking 4919 Tidewater Avenue Oakland, California 94601

Monitoring Well	Gauging Date	Top of Casing Elevation (feet msl)	Depth to Water (feet)	Free Product Thickness (feet)	Groundwater Elevation (feet msl)
MW-4	1/25/2006	3.87	2.50	0.00	1.37
MW-4	7/12/2006	3.87	3.09	0.00	0.78
MW-4	6/27/2007	3.87	3.26	0.00	0.61
MW-4	11/26/2007	3.87	3.58	0.00	0.29
MW-4	6/9/2008	3.87	3.41	0.00	0.46
MW-4	12/11/2008	3.87	3.98	0.00	-0.11

#### Notes:

msl = Mean sea level.

bgs = Below ground surface.

# Table 3 Analytical Data for Monitoring Well Groundwater Samples TPH-d, TPH-g, BTEX, and MTBE Former DiSalvo Trucking 4919 Tidewater Avenue Oakland, California 94601

Monitoring Well	Sampling Date	TPH-d (µg/L)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-1	4/14/1994	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
MW-1	11/17/1994	<50	<50	< 0.5	<0.5	<0.5	<0.5	1,100
MW-1	8/13/1995	<50	<50	<0.5	< 0.5	<0.5	< 0.5	NA
MW-1	5/26/1999	<50	60	0.6	<0.5	0.8	1.9	< 0.50
MW-1	8/23/1999	<50	NA	<0.5	<0.5	<0.5	<0.5	NA
MW-1	10/16/2000	150	<50	< 0.5	<0.5	<0.5	<0.5	NA
MW-1	4/26/2001	1,300	<50	<0.5	<0.5	<0.5	<0.5	NA
MW-1	9/5/2002	<50	NA	<0.5	<0.5	<0.5	<1	9.8
MW-1	8/18/2005	410 <sup>1</sup>	<50	<1	<1	<1	<1	6.0
MW-1	1/25/2006	$3,600^2$	<50	2.3	<0.5	<0.5	1.2	11.0
MW-1	7/12/2006	100	<50	<0.5	<0.5	<0.5	<1	6.2
MW-1	6/27/2007	<50	<50	<0.50	< 0.50	< 0.50	< 0.50	4.4
MW-1	11/26/2007	<50	<50	<0.50	<0.50	< 0.50	<0.50	5.0
MW-1	6/9/2008	<50	<50	< 0.50	< 0.50	< 0.50	< 0.50	5.0
MW-1	12/11/2008	<50	<50	<0.50	<0.50	<0.50	<0.50	6.3
MW-2	4/14/1994			Not san	pled due to f	ree product.		
MW-2	10/17/1994	28,000	<50	<0.5	<0.5	<0.5	<0.5	NA
MW-2	8/13/1995	180	<50	<0.5	<0.5	<0.5	<0.5	NA
MW-2	5/26/1999	120	<50	<0.5	<0.5	<0.5	<0.5	<50
MW-2	8/23/1999	61	NA	<0.5	<0.5	<0.5	<0.5	NA
MW-2	10/16/2000	3,400	-570	<0.5	<0.5	<0.5	<0.5	NA
MW-2	4/26/2001	57,000	2,400	<0.5	<0.5	<0.5	<0.5	NA
MW-2	9/5/2002	27,100	NA	<0.5	<0.5	<0.5	<1	5.1
MW-2	8/18/2005	13,300	<50	<10	<10	<10	<10	<30
MW-2	1/25/2006	110,000 <sup>2</sup>	1,200	<10	<10	<10	<20	<10
MW-2	7/12/2006	5,900	330	<0.5	<0.5	<0.5	<1	3.6
MW-2	6/27/2007	10,000	200	<0.50	< 0.50	< 0.50	< 0.50	1.8
MW-2	11/26/2007	25,000	330	<0.50	< 0.50	< 0.50	< 0.50	2.4
MW-2	6/9/2008	13,000	230	<0.50	<0.50	<0.50	<0.50	1.5
MW-2	12/11/2008	3,700	200	<0.50	< 0.50	< 0.50	<0.50	2.7

# Table 3 Analytical Data for Monitoring Well Groundwater Samples TPH-d, TPH-g, BTEX, and MTBE Former DiSalvo Trucking 4919 Tidewater Avenue Oakland, California 94601

Monitoring Well	Sampling Date	TPH-d (µg/L)	TPH-g (μg/L)	Benzene (μg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (μg/L)	MTBE (µg/L)
MW-3	4/14/1994	7,700	250	<0.5	<0.5	<0.5	1.2	NA
MW-3	10/17/1994	160,000	<50	<0.5	<0.5	<0.5	<0.5	NA
MW-3	8/13/1995	1,500	<50	<0.5	<0.5	<0.5	<0.5	NA
MW-3	5/26/1999	1,100	160	1.6	1.1	16	54.00	< 0.50
MW-3	8/23/1999	84	NA	<0.5	<0.5	<0.5	<0.5	NA
MW-3	10/16/2000	42,000	130	0.52	<0.5	<0.5	<0.5	NA
MW-3	4/26/2001	21,000	310	<0.5	<0.5	<0.5	<0.5	NA
MW-3	9/5/2002	1,990	NA	<0.5	<0.5	<0.5	<1	31.1
MW-3	8/18/2005			Not san	pled due to f	ree product.		
MW-3	1/25/2006	$21,000^2$	440	<2.5	<2.5	<2.5	<5.0	29
MW-3	7/12/2006	16,000	280	<0.5	<0.5	<0.5	<1	47
MW-3	6/27/2007	2,600	140	<0.50	< 0.50	<0.50	< 0.50	25
MW-3	11/26/2007	690	160	< 0.50	< 0.50	< 0.50	< 0.50	27
MW-3	6/9/2008			Not san	pled due to f	ree product.		
MW-3	12/11/2008	14,000	250	<0.50	<0.50	<0.50	<0.50	25
MW-4	8/13/1995	<50	450	2.1	0.7	4.1	13	NA
MW-4	5/26/1999	100	600	0.7	<0.5	<0.5	5.8	<0.5
MW-4	8/23/1999	180	NA	<0.5	<0.5	<0.5	<0.5	NA
MW-4	10/16/2000	75,000	890	<0.5	<0.5	<0.5	11	NA
MW-4	4/26/2001	24,000	2,100	<0.5	<0.5	<0.5	< 0.5	NA
MW-4	9/5/2002	17,000	NA	<0.5	<0.5	<0.5	<1	1.2
MW-4	8/18/2005	6,200	<50	<1	<1	<1	<1	<3
MW-4	1/25/2006	8,200	110	2.0	0.87	<0.5	2.3	4.5
MW-4	7/12/2006	5,200	250	<0.5	<0.5	<0.5	<1	0.93
MW-4	6/27/2007	320	<50	<0.50	< 0.50	<0.50	<0.50	<0.50
MW-4	-11/26/2007	1,400	<50	<0.50	<0.50	<0.50	<0.50	< 0.50
MW-4	6/9/2008	22,000	120	< 0.50	<0.50	<0.50	<0.50	< 0.50
MW-4	12/11/2008	4,000	200	<0.50	<0.50	<0.50	<0.50	<0.50

#### Table 3

## Analytical Data for Monitoring Well Groundwater Samples TPH-d, TPH-g, BTEX, and MTBE

#### Former DiSalvo Trucking 4919 Tidewater Avenue Oakland, California 94601

Monitoring Well	Sampling Date	TPH-d (µg/L)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
Travel Blank	6/27/2007	NA	<50	<0.50	< 0.50	<0.50	<0.50	<0.50
Travel Blank	11/26/2007	NA	<50	< 0.50	<0.50	<0.50	<0.50	<0.50
Travel Blank	6/9/2008	- NA	<50	<0.50	< 0.50	< 0.50	<0.50	<0.50
Travel Blank	12/11/2008	NA	<50	<0.50	<0.50	<0.50	<0.50	<0.50
Title 2	22 CCR MCLs	NE	NE	1	150	300	1,750	13

#### Notes:

 $\mu$ g/L = Micrograms per liter.

TPH-d = Total petroleum hydrocarbons quantified as diesel.

TPH-g = Total petroleum hydrocarbons quantified as gasoline.

MTBE = Methyl tertiary butyl ether.

NA = Not analyzed.

NE = Not established.

<50 = Analyte not detected above the laboratory method reporting limit indicated.

- 1. Chromatogram does not resemble the typical diesel pattern.
- 2. Q106 TPH-d sample collected on 2/2/2006.

Title 22 CCR MCLs = Title 22 California Code of Regulations Maximum Contaminant Levels (June 2004).

## Appendix A Field Data Forms



—— MONITORING WELL DATA FORM —

m							Date: 12 11 4			
Project Number: TMTIDE1, S108										
Site Location: 4919 Tidewater Av	venue				Samplers: AC	*				
MONITORING W	PTH TO WATER FEET)	DEPTH TO PRODUCT (FEET)	APPARENT PRODUCT THICKNESS (FEET)	AMOUNT OF PRODUCT REMOVED (LITERS)	APPROX. INSTALLED TOTAL DEPTH (FEET)	DEPTH TO BOTTOM (FEET)	WELL DIAMETER (IN.)			
MW-1 0911 6941 6	1.23	N.To.	6.00	٥	6.5	6.60	2			
MW-2 6915 /6947	3.21	N.P.	0.0	0	7.2	7.40	2			
, , , , , , , , , , , , , , , , , , , ,	2.53	N.P	حد، ج	0	7.0	6.94	2			
MW-4 99/936	3.98	N·18	0.00	0	7.5	7.74	2			

Note: Depth to bottom measured during first quarter unless noted.



Comments:

Project Name:	Tidewater, 4919		akland CA	Well No: MW-1	Date:	121108
Project No:	TMTIDE1, S208			Personnel: 🛵		,
GAUGING DATA Water Level Mea		INTERFACE PRO	OBE	Measuring Point De	escription:	
WELL PURGE VOLUME	Total Depth (feet)	Depth to Water (feet)	Water Column (feet)	Multiplier for Casing Diameter	Casing Volume (gal)	Total Purge Volume (gal)
CALCULATION	6.60 G	) 4/83 ( <del>-</del>	2.57	1 (2) 4 6 0.04 0.16 0.64 1.44	, 4/	1.23
PURGING DATA						
Purge Method:	BAILER		Purge Depth:	Purg	ge Rate:	(gpm)
Time:	1002	/	/			
Volume Purged (gal)	ŗ	1/	1:5/			
Temperature (C)	19.53		/		<u> </u>	
рH	6.63	/	/			
Spec.Cond.(uS/cm)	16657					
(mg/L) DO (%)	5.49 62.1					
ORP (mV)	- 23.7					
Odor (Y/N)	Υ					
Casing Volumes	1	2	3			
Dewatered (Y/N)	~					
Comments/Obser	vations: Þ=₩A1		75 GALLON			
· · · · · · · · · · · · · · · · · · ·	DID	NOT REON	CR 80 %	W 2HRS.		
SAMPLING DA	TA					
Time Sampled:	/2	-30	Approximate Dep	th to Water During Sa	mpling: ラ.お/	(feet)
Comments:						
Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (mL or L)	Turbidity/ Color	Analytical Method
MW-1	7	VOA	HCI	40 mL		SEE COC
Total Purge Vol	······································	(gallons)		Disposal:		
Weather Condit	ions: at					
Problems Encou	untered During Pi	urging and Samp	ling: 4 PE	NATE PEFE		



Project Name:	Tidewater, 4919	Tidewater Ave, Oa	akland CA	Well No: MW-2	Date:	12-11-08
Project No:	TMTIDE1, S208			Personnel: AGY		
GAUGING DATA Water Level Mea		INTERFACE PRO	)RE	Measuring Point De	scription:	
VVater Level Med	I secowedesia varada			Carallania (Constantino de Constantino de Constantino de Constantino de Constantino de Constantino de Constanti		
WELL PURGE VOLUME	Total Depth (feet)	Depth to Water (feet)	Water Column (feet)	Multiplier for Casing Diameter	Casing Volume (gal)	Total Purge Volume (gal)
CALCULATION	7.40	3.2/	) 4:19 (	1 2 4 6 0.04 0.16 0.64 1.44	.67	20/
PURGING DATA	A					
Purge Method:	BAILER		Purge Depth:	Purg	e Rate:	(gpm)
Time;	1039	1043	1047			
Volume Purged (gal	) /	2	3			
Temperature (C)	1982	19.89	19.85			1
pH	6.40	6.43	Ç.41			
Spec.Cond.(uS/cm)	1	433&	4347			
DO (%)	3.40	976 35.1	2.45			
ORP (mV)	44-6	-41.5	-38.9			
Odor (Y/N)	Y	Y	λ			
Casing Volumes	1	2	3			
Dewatered (Y/N)	ν	~	N			
Comments/Obse	rvations:					
			1			
SAMPLING DA	ТА					
Time Sampled:	1140		Approximate Dept	h to Water During Sar	392 mpling:	(feet)
Comments:						
	Number of			Volume Filled		Analytical
Sample Number	Containers	Container Type	Preservative	(mL or L)	Turbidity/ Color	Method
MW-2	7	VOA	HCI	40 mL		SEE COC
Total Purge Vo	lume: 공	(gallons)		Disposal:		
Weather Condi						
Problems Enco	untered During Pu	urging and Sampli	ng: MMF			
Comments:						



Project Name:	Tidewater, 4919	Tidewater Ave, O	akland CA	Well No: MW-3 Date: /2 -// C				
Project No:	TMTIDE1, S208	.,	**************************************	Personnel: Aux				
GAUGING DAT	A							
Water Level Mea	asuring Method:	INTERFACE PRO	OBE	Measuring Point D	escription:	was the standing of the school to the school to the school to		
WELL PURGE VOLUME	Total Depth (feet)	Depth to Water (feet)	Water Column (feet)	Multiplier for Casing Diameter	Casing Volume (gal)	Total Purge Volume (gal)		
CALCULATION	6.94	) <sup>2</sup> .53 (	) 4·41 ( <b>x</b>	1 2 4 6 0.04 0.16 0.64 1.44	,70	) z·11		
PURGING DATA       Purge Method: BAILER     Purge Depth:     Purge Rate: (gpm)								
Time:	1014	/o / <sup>*</sup> 7	16 20					
Volume Purged (gal	Ì	2	(3)					
Temperature (C)	17.41	17.59	17.57	<u></u>				
Hq	4.51	6.50	G.58					
Spec.Cond.(uS/cm)	.]	3942	3939					
DO (mg/L) (%)	5 40 57.2	457 48.4	4.29 45.6					
ORP (mV)	-46.1	-58·z	-61.6					
Odor (Y/N)	Υ	Y	Ÿ	· · · ·				
Casing Volumes	1	2	3			walka kana		
Dewatered (Y/N)	~	~	N					
Comments/Obse	rvations:			and the state of t				
WIN-100-00-00-00-00-00-00-00-00-00-00-00-00		<u>,,,,,,</u>	<u> </u>					
SAMPLING DA	TA j	30			<i>z.</i>			
Time Sampled:			Approximate Dept	h to Water During Sa	mpling:	(feet)		
Comments:								
Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (mL or L)	Turbidity/ Color	Analytical Method		
MW-3	7	VOA	HCI	40 mL	·	SEE COC		
Total Purge Vol	lume:	(gallons)	]	L Disposal:				
Weather Condi	tions: ᄷ							
	untered During Pu	irging and Sampl	ing: NOVE					
Comments:								



Project Name:	Tidewater, 4919	Tidewater Ave, O	akland CA	Well No: MW-4 Date: /2-//\s								
Project No:	TMTIDE1, S208			Personnel: Aux								
GAUGING DAT	A asuring Method:	INTERFACE PRO	OBE	Measuring Point De	escription:							
WELL PURGE VOLUME	Total Depth (feet)	Depth to Water (feet)	Water Column (feet)	Multiplier for Casing Diameter	Casing Volume (gal)	Total Purge Volume (gal)						
CALCULATION	7.74	3.98	3.70 Q	1 ② 4 6 0.04 0.16 0.64 1.44	· 60 (	) /· &o						
PURGING DAT. Purge Method:	A BAILER		Purge Depth:	Purg	e Rate:	(gpm)						
Time:	1059	1103	1108									
Volume Purged (gal	j	2.	3									
Temperature (C)	1832	16.82	16.81									
pH	¢ 74	4-77	6.78									
Spec.Cond.(uS/cm)		13346	13448									
(mg/L) (%)	3.2/34.1	3.02	2.99									
ORP (mV)	-84.8	-88-4	-87.7									
Odor (Y/N)	Ŋ	Ą	Ą									
Casing Volumes	1	2	3									
Dewatered (Y/N)	~	N	~									
Comments/Obser	vations:											
SAMPLING DA Time Sampled: Comments:	TA /2/0		Approximate Dept	h to Water During San	グ・チンnpling:	(feet)						
Sample Number	Number of Containers	Container Type	Preservative	Volume Filled (mL or L)	Turbidity/ Color	Analytical Method						
MW-4	7	VOA	HCI	40 mL		SEE COC						
Total Purge Vol	ume: 🛂	(gallons)		Disposal:								
Weather Condit			NONE		•••••••••••••••••••••••••••••••••••••••							
Comments:	untered During Pu	irging and Sampli	ng:	· · · · · · · · · · · · · · · · · · ·	····							

### Appendix B

**Laboratory Analytical Report and Chain-of-Custody Documentation** 



Date: 12/22/2008

Maura Dougherty ETIC Engineering, Inc 2285 Morello Avenue Pleasant Hill, CA 94523

Subject: 5 Water Samples Project Name: Tidewater

Project Number: TMTIDE1, S208

Dear Ms. Dougherty,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,



Project Name: Tidewater

Project Number: TMTIDE1, S208

Report Number: 66474

Date: 12/22/2008

Sample: MW-1 Matrix: Water Lab N

Lab Number : 66474-01

Sample Date :12/11/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/16/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/16/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/16/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/16/2008
Methyl-t-butyl ether (MTBE)	6.3	0.50	ug/L	EPA 8260B	12/16/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/16/2008
1,2-Dichloroethane-d4 (Surr)	98.0		% Recovery	EPA 8260B	12/16/2008
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	12/16/2008
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/19/2008
Octacosane (Silica Gel Surr)	78.2		% Recovery	M EPA 8015	12/19/2008

Sample: MW-2

Matrix : Water

Lab Number : 66474-02

Sample Date :12/11/2008

The second of th		Method		•	
Parameter	Measured Value	Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Methyl-t-butyl ether (MTBE)	2.7	0.50	ug/L	EPA 8260B	12/17/2008
TPH as Gasoline	200	50	ug/L	EPA 8260B	12/17/2008
1,2-Dichloroethane-d4 (Surr)	99.2		% Recovery	EPA 8260B	12/17/2008
Toluene - d8 (Surr)	98.9		% Recovery	EPA 8260B	12/17/2008
TPH as Diesel (Silica Gel)	3700	50	ug/L	M EPA 8015	12/19/2008
Octacosane (Silica Gel Surr)	84.0		% Recovery	M EPA 8015	12/19/2008



Project Name: Tidewater

Project Number: TMTIDE1, S208

Sample: MW-3

Matrix: Water

Lab Number: 66474-03

Report Number: 66474 Date: 12/22/2008

Sample Date :12/11/2008

Sample Date :12/11/2008		Method			
Parameter	Measured Value	Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Methyl-t-butyl ether (MTBE)	25	0.50	ug/L	EPA 8260B	12/17/2008
TPH as Gasoline	250	50	ug/L	EPA 8260B	12/17/2008
1,2-Dichloroethane-d4 (Surr)	97.2		% Recovery	EPA 8260B	12/17/2008
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	12/17/2008
TPH as Diesel (Silica Gel)	14000	50	ug/L	M EPA 8015	12/19/2008
Octacosane (Silica Gel Surr)	79.2	÷	% Recovery	M EPA 8015	12/19/2008

Sample: MW-4

Matrix: Water

Lab Number : 66474-04

Sample Date :12/11/2008

Gample Date .12/11/2000	Measured	Method Reporting		Analysis	Date
Parameter	Value	Limit	Units	Method	Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
TPH as Gasoline	200	50	ug/L	EPA 8260B	12/17/2008
1,2-Dichloroethane-d4 (Surr)	97.6		% Recovery	EPA 8260B	12/17/2008
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	12/17/2008
TPH as Diesel (Silica Gel)	4000	50	ug/L	M EPA 8015	12/20/2008
Octacosane (Silica Gel Surr)	109		% Recovery	M EPA 8015	12/20/2008



Project Name: Tidewater

Project Number: TMTIDE1, S208

Sample: QCTB Matrix: Water Lab Number: 66474-05

Sample Date :12/11/2008

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Total Xylenes	< 0.50		ug/L	EPA 8260B	12/17/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/17/2008
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	12/17/2008
Toluene - d8 (Surr) 101			% Recovery	EPA 8260B	12/17/2008

Report Number: 66474 Date: 12/22/2008

Date: 12/22/2008

QC Report : Method Blank Data

Project Name: Tidewater

Project Number: TMTIDE1, S208

		Method			
_	Measured	Reporting	•	Analysis	Date
<u>Parameter</u>	Value	Limit	Units	Method	Analyzed
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	12/17/2008
Octacosane (Silica Gel Surr)	81.2		%	M EPA 8015	12/17/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/16/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/16/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/16/2008
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	12/16/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/16/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/16/2008
1,2-Dichloroethane-d4 (Surr)	91.1		%	EPA 8260B	12/16/2008
Toluene - d8 (Surr)	96.6		%	EPA 8260B	12/16/2008
Benzene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Toluene	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
Total Xylenes	< 0.50	0,50	ug/L	EPA 8260B	12/17/2008
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	12/17/2008
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	12/17/2008
1,2-Dichloroethane-d4 (Surr)	103		%	EPA 8260B	12/17/2008
Toluene - d8 (Surr)	103		%	EPA 8260B	12/17/2008

•		Method	Í		
	Measured	Reporti	ing	Analysis	Date
Parameter	Value	Limit	Units	Method	Analyzed

Date: 12/22/2008

Project Name: Tidewater

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Number: TMTIDE1, S208

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	e Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.		Relative	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH-D (Si Gel)	BLANK	<50	1000	1000	887	787	ug/L	M EPA 8015	12/17/08	88.7	78.7	12.0	70-130	25
Benzene	66473-02	<0.50	38.9	39.0	38.7	39.2	ug/L	EPA 8260B			100	0.837	70-130	25
Methyl-t-butyl ether	r 66473-02	<0.50	39.1	39.3	42.6	40.8	ug/L	EPA 8260B	12/16/08	109	104	4.69	70-130	25
Toluene	66473-02	<0.50	39.7	39.8	40.9	41.2	ug/L	EPA 8260B	12/16/08	103	103	0.255	70-130	25
Benzene	66449-01	<0.50	39.3	39.3	38.1	38.0	ug/L	EPA 8260B	12/17/08	96.8	96.7	0.106	70-130	25
Methyl-t-butyl ether	r 66449-01	<0.50	39.6	39.6	36.4	36.3	ug/L	EPA 8260B	12/17/08	92.0	91.8	0.207	70-130	25
Toluene	66449-01	<0.50	40.1	40.1	42.2	42.9	ug/L	EPA 8260B	12/17/08	105	107	1.58	70-130	25

Date: 12/22/2008

Project Name: Tidewater

Project Number: TMTIDE1, S208

QC Report : Laboratory Control Sample (LCS)

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit	
Benzene	39.3	ug/L	EPA 8260B	12/16/08	100	70-130	
Methyl-t-butyl ether	39.6	ug/L	EPA 8260B	12/16/08	109	70-130	
Toluene	40.1	ug/L	EPA 8260B	12/16/08	103	70-130	
Benzene	40.2	·ug/L	EPA 8260B	12/17/08	97.0	70-130	
Methyl-t-butyl ether	39.8	ug/L	EPA 8260B	12/17/08	90.4	70-130	
Toluene	40.2	ug/L	EPA 8260B	12/17/08	103	70-130	

KIFF (			A 95616	300	300										SRG	6#/l	_ab	No.	(-	<u> </u>	<u>ر</u> ک	<del>'</del> <del>(</del>		27	f		-				Pa	ge	1	of	1
Project Contact (Hardcopy or Maura Dougherty	PDF	To):		Ca	liforn	ia El	)FR	epor	rt?		J	Yes			No		T		(	Cha	in-c	f-C	us	ody	/ R	ecc	ord	and	i A	nal	ysis	Red	juest		
Address: 2285 Morello Aven Pleasant Hill, CA 94523	ue		***************************************	Sampling Company Log Code: TMTIDE1, S108						Analysis Request											T/	AT													
Phone: 925-602-4710	Fax	925-602-	4720	Global ID: T0600100451 및						6.0 ppb									12	hr.															
Project #: TMTIDE1, S208	P.C	). #;	<u>,</u>	EDF Deliverable To (Email Address): mdougherty@eticeng.com, eticlabreports@eticeng.com						n S	5			-		8260B)	6	8260B)	inking Wate	(EPA 8015M) w/ silica gel cleanup		d (EPA 8010)		***************************************		Ic	]   hr	For Lab Use Only							
Project Name: Tidewater				Sai	mple	r Sigi	natur	re:		N	-	حمد	4	<i>ا</i> لم			FPA 8024	5 200			(ao	(90	DB-EPA	PA 8260	ist (EPA	524.2 Dr	15M) w/	\ 8015M	yze-Les						or Lab
Project Address: 4919 Tidewater Avenue		Sam	pling		) F	ontai	ner		[	Pre	serv	ative	)	,	Mati	rix	] 8	₹ €		(8)	826	828	A&E	ns (E		EPA	A 80	(EP/	ana	6			48	3hr	Li.
Oakland, CA				40-ml HCL VOA	Sieeve	res. Poly.	SS			)3	9			er			MTRE (FPA 8260B)	MTBE (EPA 8260B) @ 0.5 mh	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	5 Oxygenates (EPA 8260B)	7 Oxygenates (EPA 8260B)	Lead Scav.(1,2 DCA & EDB-EPA 8260B)	Volatile Hatocarbons (EPA 8260B)	Volatile Organics Full List (EPA 82608)	Volatile Organics (EPA 524.2 Drinking Water)	TPH as Diesel (EF	TPH as Motor Oil (EPA 8015M)	Filter & acidify then analyze-Lead	W.E.T. Lead (STLC)				] 2 hr	
Sample Designation	~	Date	Time	40-r	Sec	Onpre	Tedlar		오	S. S.	None			Water	ß:	¥	Z E E	MTB	BTE	된	Ş.	7 O.X	Lead	Volat	Volai	Volai	HH	TPH	Filter	W.E.			[] 1	wk	
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Received by Laborato

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Bill to: ETIC Engineering, Inc., 2285 Morello Avenue, Pleasant Hill, CA 94523

Date

124508

Sample Receipt

Therm. ID#

Coolant Fresent

(Yes / No

Time

For Lab Use Only:

Initials

ADE

Temp °C

Distribution: White - Lab; Pink - Originator Rev: 051805

Relinquished by: