

# *Tom Edwards & Associates, LLC*

## **An Environmental Consulting Firm**

November 13, 2013

Mr. Kevin Gillis

**FIRST REPUBLIC BANK**

111 Pine Street

San Francisco, CA 94111

**Subject:** Revised Report for Limited Phase II Investigation Report for 729 45th Ave., Oakland  
**Tom Edwards & Associates (TEA) Proj. No.** 13-3793

Dear Mr. Gillis,

This report presents the results of the limited Phase II investigation (Phase II) conducted at 729 45th Ave., Oakland, CA (see [Figure 1](#)) to determine if contamination exists in the soils or groundwater from **on-site** sources. The Phase II was conducted in accordance with American Society for Testing and Material (ASTM) and general environmental assessing standards. Soil sampling was conducted based on the recommendations from the *Phase I Environmental Site Assessment Report, 729 45th Ave., Oakland, CA* (Phase I ESA Report) (TEA, 2013).

### **Site History**

The documents reviewed during the Phase I ESA show that the subject property was occupied by industries that used and stored hazardous waste/materials onsite as part of operations and maintenance. The industries that have occupied the subject property are:

- Oil refining, storage, and/or sales company from at least 1928 to 1964 when at least three 15,000 to 20,000 gallon gasoline aboveground storage tanks (ASTs) were on site.
- Freight Company in 1967.
- Steel Erection and Sign Company from 1969 to 1972.
- Equipment fabrication from 1972 to present.
- Three 500-gallon underground storage tanks (USTs) are known to have been located on site. It is unclear from documentation whether the USTs were removed or abandoned in-place.

## **Limited Phase II Investigation Approach**

**Step 1:** Conducted a geophysical (GPR) survey to confirm the removal of the three 500-gallon USTs. The GPR survey indicated that the three 500-gallon USTs have been removed from the site.

**Step 2:** Collected soil samples using a limited access rig or hand auger. Advanced six boreholes to depths ranging from 1.5 to 20 feet below ground surface (bgs) (see Figure 1). A total of 9 samples were selected and analyzed for analysis. Soil samples were analyzed for Total Petroleum Hydrocarbon (TPH) gasoline, diesel, and motor oil (EPA Method 8015), metals (EPA Method 6010B), volatile organic compounds (VOCs) (EPA Method 8260), Hexavalent Chromium (EPA Method 7196), and Total Cyanide (EPA Method 9014). The results for the 7 soil and 2 grab water samples are shown on Tables 1 and 2, respectively.

The following soil sampling approach was taken:

- Drilled one soil boring (EFC01) at the northern portion between two former buildings from when the subject property was used as an oil sale and distribution company. EFC01 was advanced to 20 feet bgs. The objective was to collect a groundwater sample however none was encountered.
- Hand-augered (EFC02) to 1.5 feet at a location where a drainage canal was noted to exist from the paint storage to the edge of the concrete onto soil.
- Drilled two soil borings (EFC03 and 05) adjacent to and downgradient of the three former UST locations. EFC03 was stopped at 8 feet bgs due to refusal. EFC05 was advanced to 14 feet bgs, however there was no soil recovery from 5 to 14 feet bgs, instead a sludge-like material and water was recovered. After multiple attempts, a grab sample of the sludge-like material and water was collected and sent to the laboratory for analysis.
- Drilled one soil boring (EFC04) at the front of the subject property where water from the subject property drains and discharges to the surface.
- Drilled one soil boring (EFC06) downgradient of the former ASTs from when the subject property was used as an oil sale and distribution company.

Boring logs EFC01 to 06 are attached.

## **Analytical Results**

Analytical results for both soil and water samples were compared to the Commercial/ Industrial Land use Environmental Screening Levels (ESLs) from Table B. ESLs, Shallow Soils ( $\leq 3$  m bgs), Groundwater is not a Current or Potential Source of Drinking Water, [http://www.waterboards.ca.gov/rwqcb2/water\\_issues/programs/esl.shtml](http://www.waterboards.ca.gov/rwqcb2/water_issues/programs/esl.shtml) (California Regional Water Quality Control Board). Tables 1 and 2 show the analytical results and their respective ESLs.

## **Soil Samples**

Table 1 shows the results for the 7 soil samples selected for analysis. There are two locations (EFC04 and 05) where contamination appears to exist based on the limited sampling conducted.

EFC04 was advanced at the location where all the drains from inside the subject property discharges to the surface. Zinc and total cyanide were detected in the soil sample collected from 1.5 feet bgs.

EFC05 is downgradient of the former UST location. TPH as diesel and motor oil, VOCs as benzene and total cyanide were detected at 1.75 feet bgs. Lead and zinc were detected in the grab sample accumulated from 5 to 10 feet bgs where recovery was extremely difficult.

Arsenic was present in all soil samples at concentrations higher than the ESL, however naturally-occurring concentrations of Arsenic in Oakland soils are higher than the thresholds calculated by risk-based models. Based on this, remediation to the risk-based threshold is unlikely since the observed concentrations are likely to represent ambient conditions.

## **Grab Water Samples**

Table 2 shows the results for the 2 grab water samples collected from EFC-04 and EFC-05 for analysis. The grab water samples show detections exceeding the ESLs for the following:

- EFC-04 - TPH as gasoline, VOCs as ethylbenzene, xylene, and naphthalene, and Metals as arsenic, barium, chromium, cobalt, copper, lead, nickel, vanadium, and zinc.
- EFC-05 - TPH as gasoline and diesel, VOCs as ethylbenzene, xylene, and naphthalene, and Metals as barium, cobalt, copper, lead, nickel, vanadium, and zinc.

## **Conclusion and Recommendation**

There is limited soil contamination at the property based on the Phase II results which appears to be focused at two locations (EFC04 and 05). Groundwater contamination is present based on the results of the grab water samples collected from EFC04 and 05.

EFC04 was advanced at the location where all the drains from inside the subject property discharges to the surface. Zinc and total cyanide were detected in the soil sample collected from 1.5 feet bgs. TPH as gasoline, VOCs as ethylbenzene, xylene, and naphthalene, and Metals as arsenic, barium, chromium, cobalt, copper, lead, nickel, vanadium, and zinc were detected in the grab water sample collected from this location.

EFC05 is downgradient of the former UST location. TPH diesel and motor oil, benzene, and total cyanide were detected in the soil samples collected from 1.75 feet bgs. Lead and zinc were detected in the grab sample accumulated from 5 to 10 feet bgs where recovery was extremely difficult. TPH as gasoline and diesel, VOCs as ethylbenzene, xylene, and naphthalene, and

Metals as barium, cobalt, copper, lead, nickel, vanadium, and zinc were detected in the grab water sample collected from this location.

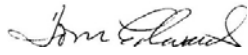
Additional investigation (Phase III) in the vicinity of the two locations will be required to delineate the vertical and horizontal extent of contamination.

If you should have any questions or comments concerning this memo, please contact us at your convenience.

Respectfully yours,  
Tom Edwards & Associates

A handwritten signature in black ink, appearing to read "Jen Moser". The signature is stylized and somewhat cursive.

Jen Moser, P.G.

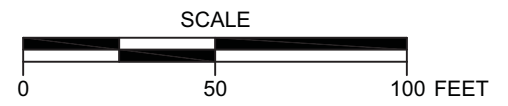
A handwritten signature in black ink, appearing to read "Tom Edwards". The signature is cursive and fluid.

Tom Edwards



**LEGEND**

- BOREHOLES
- BUILDINGS (FORMER) - APPROXIMATE BASED ON OLD FIRE INSURANCE MAP AND AERIAL PHOTOGRAPHS



Tom Edwards and Associates  
Environmental Consulting

Project Number: 13-3793  
Project Address: 729 45th Avenue, Oakland, CA

Figure 1  
Boring Location Map

**Table 1**  
**Analytical Results for Soil Samples with Detections and Environmental Screening Levels<sup>1</sup>**

Compound	ESL	EFC02-1'	EFC03-3'	EFC03-8'	EFC04-1.5'	EFC04-5'	EFC05-1.75'	EFC05-10'Grab
<b>EPA Method 8015 (Total Petroleum Hydrocarbons)</b>								
gasoline	500	ND	2.2	ND	ND	ND	4.3	156
diesel	500	ND	110	ND	ND	ND	<b>1,500</b>	ND
motor oil	2,500	ND	75	ND	ND	150	<b>2,700</b>	165
<b>EPA Method 8260 (Volatile Organic Compounds)</b>								
Benzene	1.2	ND	0.002	ND	ND	ND	<b>1.6</b>	ND
Toluene	9.3	ND	ND	ND	ND	ND	0.13	ND
Ethylbenzene	4.7	ND	0.04	ND	ND	ND	0.26	3.8
Total Xylene	110	ND	0.004	ND	ND	ND	1.1	5.2
Naphthalene	4.8	ND	0.13	ND	ND	ND	0.051	0.35
<b>EPA Method 7196A (Hexavalent Chromium)</b>								
Hexavalent Chromium	8	ND	ND	ND	0.21	ND	0.28	0.55
<b>EPA Method 6010B/7471A (CAM 17 Metals)</b>								
Arsenic	0.96	<b>2.6</b>	<b>2.5</b>	<b>1.6</b>	<b>4.5</b>	<b>2.8</b>	<b>1.5</b>	<b>8.4</b>
Barium	1,500	139	107	117	151	49.1	55.6	217
Cadmium	12	ND	ND	ND	2.1	ND	ND	4.1
Chromium	750	27.1	18.9	13.1	19.7	10.2	11.5	34.1
Cobalt	80	6.3	6.4	4	7.3	3.9	3.5	9
Copper	230	13.7	9.4	6.7	25.5	12.5	58.3	148
Lead	320	6.8	25.9	4.3	116	5.5	210	<b>848</b>
Mercury	10	ND	ND	ND	0.21	ND	0.28	0.35
Nickel	150	41.2	18.8	16.9	35.8	20.7	20	60.6
Vanadium	200	24.8	19.2	18.4	20.5	14.6	9.4	28.4
Zinc	600	46.7	20.4	10.2	<b>828</b>	34.5	237	<b>1,160</b>
<b>EPA Method 9014 (Total Cyanide)</b>								
Total Cyanide	0.0036	ND	ND	ND	<b>0.12</b>	ND	<b>0.1</b>	ND

Notes:

All analytical results are in mg/kg (parts per million)

1 Commercial/Industrial Land use ESL from Table B. Environmental Screening Levels (ESLs), Shallow Soils (≤3 m bgs), Groundwater is not a Current or Potential Source of Drinking Water, [http://www.waterboards.ca.gov/rwqcb2/water\\_issues/programs/esl.shtml](http://www.waterboards.ca.gov/rwqcb2/water_issues/programs/esl.shtml) (California Regional Water Quality Control Board)

**848** concentration exceeds the Commercial/Industrial Land use ESL

Table 2  
Analytical Results for Water Samples  
with Detections and Environmental Screening Levels<sup>1</sup>

Compound	ESL	EFC04	EFC05
<b>EPA Method 8015 (Total Petroleum Hydrocarbons)</b>			
gasoline	500	<b>137,000</b>	<b>4,400</b>
diesel	640	ND	<b>105,000</b>
motor oil	640	ND	ND
<b>EPA Method 8260 (Volatile Organic Compounds)</b>			
Ethylbenzene	43	<b>2,100</b>	<b>2,400</b>
Total Xylene	100	<b>2,240</b>	<b>2,910</b>
Naphthalene	24	<b>878</b>	<b>64</b>
<b>EPA Method 7196A (Hexavalent Chromium)</b>			
Hexavalent Chromium	11	ND	ND
<b>EPA Method 6010B/7471A (CAM 17 Metals)</b>			
Arsenic	36	<b>40</b>	ND
Barium	1,000	<b>3,400</b>	<b>3,700</b>
Chromium	180	<b>410</b>	20
Cobalt	3	<b>150</b>	<b>25</b>
Copper	3.1	<b>400</b>	<b>160</b>
Lead	2.5	<b>200</b>	<b>110</b>
Nickel	8.2	<b>1,300</b>	<b>130</b>
Vanadium	19	<b>410</b>	<b>21</b>
Zinc	81	<b>870</b>	<b>260</b>
<b>EPA Method 9014 (Total Cyanide)</b>			
Total Cyanide	1	ND	ND

Notes:

- All analytical results are in ug/L (parts per billion)
- 1 Commercial/Industrial Land use ESL from Table B. Environmental Screening Levels (ESLs), Shallow Soils (≤3 m bgs), Groundwater is not a Current or Potential Source of Drinking Water, [http://www.waterboards.ca.gov/rwqcb2/water\\_issues/programs/esl.shtml](http://www.waterboards.ca.gov/rwqcb2/water_issues/programs/esl.shtml) (California Regional Water Quality Control Board)
- 848 concentration exceeds the Commercial/Industrial Land use ESL

# Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street  
Hayward, CA 94544-1395  
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 09/16/2013 By jamesy

Permit Numbers: W2013-0800  
Permits Valid from 09/20/2013 to 09/20/2013

Application Id: 1378424959736  
Site Location: 729 45th Ave, Oakland, CA  
Project Start Date: 09/20/2013  
Assigned Inspector: Contact Balance Hydrologics, Inc at (510) 473-5663 or acwells@balancehydro.com

City of Project Site:Oakland

Completion Date:09/20/2013

Applicant: Tom Edwards and Associates - Jen Moser  
1900 E Ocean Blvd, #1214, Long Beach, CA 90802

Phone: 510-376-5771

Property Owner: Mike Kochan  
729 45th Ave, Oakland, CA 94601

Phone: --

Client: \*\* same as Property Owner \*\*

Receipt Number: WR2013-0356 Total Due: \$265.00  
Payer Name : Jen Moser Total Amount Paid: \$265.00  
Paid By: VISA PAID IN FULL

## Works Requesting Permits:

Borehole(s) for Investigation-Contamination Study - 6 Boreholes  
Driller: Gregg DRilling - Lic #: 485165 - Method: DP

Work Total: \$265.00

## Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2013-0800	09/16/2013	12/19/2013	6	2.00 in.	15.00 ft

## Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.
2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
4. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.
5. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting,







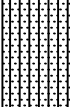
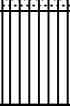
## **Alameda County Public Works Agency - Water Resources Well Permit**

once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

6. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

7. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.



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

DEPTH	SAMPLE	BLOWS/6"	RECOVERY	REMARKS	USCS	PROFILE	FIELD GEOLOGIST	J. Moser	COORDINATES:
							DATE STARTED	10/4/2013	N
							DATE COMPLETED	10/4/2013	E
							TOTAL DEPTH	20.0 ft.	ELEV.
									CORE SIZE
									1.5" dia.
							CONCRETE		
							FILL, BASE ROCK: dark brown to black from, CLAY to GRAVEL.		0.5'
1				Hand Auger			CLAY: dark brown to green, high plasticity, increasing silt with depth.		1.0'
2									
3									
4									
5	EFC01-5'			Geoprobe					
6									
7									
8					CL				
9									
10									
11									
12	EFC01-12'								
13									
14									14.0'
					ML		CLAYEY SILT; brown, soft and wet like putty.		
15									14.75'
					GM		SANDY SILTY GRAVEL; greenish brown, dry.		
16									16.0'
					ML		CLAYEY SILT: brown, soft and wet, putty.		

Tom Edwards and Associates  
Environmental Consulting

Project Number: 13-3793  
Project Address: 729 45th Avenue, Oakland, CA

BORING EFC01  
SHEET 1 OF 2

DEPTH	SAMPLE	BLOWS/6"	RECOVERY	REMARKS	USCS	PROFILE	FIELD GEOLOGIST		COORDINATES:	
							J. Moser		N	
							DATE STARTED	10/4/2013	E	
							DATE COMPLETED	10/4/2013	ELEV.	
							TOTAL DEPTH	20.0 ft.	CORE SIZE	1.5" dia.
				Geoprobe ↓	GM		SANDY SILTY GRAVEL; greenish brown, dry.			17.25'
-18					CL		CLAY: brown, high plasticity, hard, dry.			
-19							TOTAL DEPTH OF BORING = 20.0 FEET			
-20										
-21										
-22										
-23										
-24										
-25										
-26										
-27										
-28										
-29										
-30										
-31										
-32										
-33										

DEPTH	SAMPLE	BLOWS/6"	RECOVERY	REMARKS	USCS	PROFILE	FIELD GEOLOGIST <u>J. Moser</u>		COORDINATES:	
							DATE STARTED <u>10/4/2013</u>	DATE COMPLETED <u>10/4/2013</u>	N <u>                    </u>	E <u>                    </u>
				Hand Auger ↓						
1	EFC02-1'				FILL		FILL/TOP SOIL: dark brown, silt, sand, organics, loose.			
					CL		SILTY CLAY: gray, stiff. 1.0'			
-2							TOTAL DEPTH OF BORING = 1.5 FEET			
-3										
-4										
-5										
-6										
-7										
-8										
-9										
-10										
-11										
-12										
-13										
-14										
-15										
-16										
				Project Number: 13-3793 Project Address: 729 45th Avenue, Oakland, CA			BORING EFC02			
Tom Edwards and Associates Environmental Consulting										





DEPTH	SAMPLE	BLOWS/6"	RECOVERY	REMARKS	USCS	PROFILE	FIELD GEOLOGIST <u>J. Moser</u>		COORDINATES:		
							DATE STARTED <u>10/4/2013</u>	DATE COMPLETED <u>10/4/2013</u>	N <u>                    </u>	E <u>                    </u>	
							TOTAL DEPTH <u>18.0 ft.</u>	ELEV. <u>                    </u>	CORE SIZE <u>1.5" dia.</u>		
				Hand Auger ↓	FILL	ASPHALT				0.16'	
					FILL	GRAVEL FILL					0.66'
1							CLAYEY-SAND: dark brown.				1.5'
	EFC04-1.5'						CLAYEY-SILT: dark brown and green.				2.0'
2											2.5'
							CLAY and GRAVEL				3.0'
3							CLAYEY-SILT: dark brown and turning more green.				3.5'
							CLAY: grayish green.				5.0'
4											5.5'
5	EFC04-5'						CLAY: grayish green.				5.5'
							CLAY: green.				8.0'
6						CL					8.0'
							CLAY: green.				10.0'
7											10.0'
	EFC04-9.5'						CLAY: green with light brown.				13.0'
8											13.0'
						GRAVELLY-SAND: greenish brown, damp, has an oily sheen, petroleum odor.				14.5'	
9					GM					14.5'	
						CLAYEY-SILT: green, damp, loose.				15.0'	
10					ML					15.0'	
	EFC04-14.5'					CLAY: green, hard.				15.5'	
11					CL					15.5'	
						SANDY GRAVEL				15.75'	
12					GM					15.75'	
						CLAYEY-SILT with GRAVEL: green, wet, softer than putty.				16.5'	
13					GC					16.5'	
						SILTY, CLAYEY, SAND with GRAVEL: fine grain, wet.				16.5'	
					SM					16.5'	

Tom Edwards and Associates  
Environmental Consulting

Project Number: 13-3793  
Project Address: 729 45th Avenue, Oakland, CA


BORING EFC04  
SHEET 1 OF 2

DEPTH	SAMPLE	BLOWS/6"	RECOVERY	REMARKS	USCS	PROFILE	FIELD GEOLOGIST	J. Moser	COORDINATES:
							DATE STARTED	10/4/2013	N
							DATE COMPLETED	10/4/2013	E
							TOTAL DEPTH	18.0 ft.	ELEV.
									CORE SIZE
									1.5" dia.
				Groundwater encountered at 17'. 					
18	EFC04-18'				SM				
							TOTAL DEPTH OF BORING = 18.0 FEET		
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									
31									
32									
33									



Tom Edwards and Associates  
Environmental Consulting

Project Number: 13-3793  
Project Address: 729 45th Avenue, Oakland, CA

BORING EFC04  
SHEET 2 OF 2

DEPTH	SAMPLE	BLOWS/6"	RECOVERY	REMARKS	USCS	PROFILE	FIELD GEOLOGIST	J. Moser	COORDINATES:	
							DATE STARTED	10/4/2013	N	
							DATE COMPLETED	10/4/2013	E	
							TOTAL DEPTH	14.0 ft.	ELEV.	
									CORE SIZE	
									1.5" dia.	
					FILL	CONCRETE WITH REBAR			0.5'	
1				Hand Auger	FILL	FILL, GRAVELLY SAND: dark brown to black, @20" - ±1 inch layer of tar (?), degraded oil-type material, strong petroleum odor. At 1.5': fragments of brick.			2.5'	
2	EFC05-1.75'									
3					CL	CLAY: dark brown to black, stiff, hard.			4.5'	
4	EFC05-3'									
5				Water(?) encountered at 4.75'. 		CLAY: dark brown to black, soft and plastic, damp-wet, strong odor.			5.0'	
6										
7										
8										
9										
10	EFC05-10' GRAB				NR	NO RECOVERY- poor				
11										
12										
13										
14						NO RECOVERY- poor			13.5'	
15										
16										
							TOTAL DEPTH OF BORING = 14.0 FEET			



DEPTH	SAMPLE	BLOWS/6"	RECOVERY	REMARKS	USCS	PROFILE	FIELD GEOLOGIST	J. Moser	COORDINATES:				
							DATE STARTED	10/4/2013	N				
							DATE COMPLETED	10/4/2013	E				
							TOTAL DEPTH	12.0 ft.	ELEV.				
									CORE SIZE				
									1.5" dia.				
1				Hand Auger ↓	FILL		TOPSOIL/FILL: dark brown, loose, organics.						
2												2.5'	
3					CL		CLAY: green/brown, dry, hard, tight.						
4													
5	EFC06-5'												
6													
7													
8							CLAY and small GRAVEL: green and brown, dry, hard.			8.0'			
9							CLAY: green and brown, dry, hard.			9.0'			
10													
11													
12	EFC06-12'												
13							TOTAL DEPTH OF BORING = 12.0 FEET						
14													
15													
16													

# *ABC Environmental Laboratories*

Jen Moser  
Tom Edwards & Associates  
22693 Sunset Ridge Drive  
Auburn, CA 95602

10/15/2013

Project: EFC  
Project Site: EFC  
Sample Date: 10/4/2013  
Lab Job No.: TE13J004

Dear Jen Moser,

Enclosed please find the analytical report for the samples received by ABC Environmental Laboratories on 10/8/2013 and analyzed by the following EPA methods:

EPA 8260B (VOCs & Oxygenates)  
EPA 8015M (TPH-Gasoline, Diesel & Oil)  
EPA 7196A (Hexavalent Chromium)  
EPA 6010B/7471A (CAM 17 Metals)  
EPA 9014 (Total Cyanide)

All analyses have met the QA/QC criteria of this laboratory.

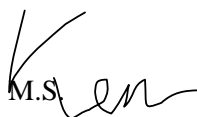
The sample(s) arrived in good conditions (i.e., chilled, intact) and with a chain of custody record attached.

ABC Environmental Laboratories is certified by the CA DHS (Certificate No.2584). Thank you for giving us the opportunity to serve you.

Please feel free to call me at (909)923-8628 if our laboratory can be of further service to you.

Respectfully,

ABC Environmental Laboratories

Ken Zheng, M.S.   
Laboratory Director

Enclosures

This cover letter is an integral part of this analytical report.

# ABC Environmental Laboratories

Client:	Tom Edwards & Associates	Lab Job No.:	TE13J004
Project:	EFC	Date Sampled:	10/4/2013
Project Site:	EFC	Date Received:	10/8/2013
Matrix:	Soil	Date Analyzed: TPH-G	10/10/2013
Batch No.:	AJ10-GS4	Date Analyzed: TPH-D	10/10/2013
Batch No.:	BJ10-DS	Date Reported:	10/15/2013

## EPA 8015M (TPH-Gasoline, Diesel & Oil)

Reporting Unit: mg/kg (PPM)

Client Sample ID	Lab ID	Gasoline	Diesel	Oil
		C4-C12	C13-C24	C25-C40
	Reporting Limit	1.0	10	50
EFC02-1'	TE13J004-1	ND	ND	ND
EFC03-3'	TE13J004-2	2.2	110	75
EFC03-8'	TE13J004-3	ND	ND	ND
EFC04-5'	TE13J004-4	ND	ND	150
EFC05-1.75'	TE13J004-5	4.3	1500	2700
EFC05-10'Grab	TE13J004-6	156	ND	165
EFC04-1.5'	TE13J004-7	ND	ND	ND

ND: Not Detected (Below Reporting Limit).

# ABC Environmental Laboratories

Client: Tom Edwards & Associates  
 Project: EFC  
 Project Site: EFC  
 Matrix: Soil  
 Batch No.: 1010-VOAS4

Lab Job No.: TE13J004  
 Date Sampled: 10/4/2013  
 Date Received: 10/8/2013  
 Date Analyzed: 10/10/2013  
 Date Reported: 10/15/2013

## EPA 8260B (VOCs & Oxy.) by GC/MS, Page 1 of 2

Reporting Unit: mg/kg (PPM)

Date Analyzed		10/10/13	10/10/13	10/10/13	10/10/13	10/10/13
Dilution Factor		1	1	1	1	5
Lab Sample I.D.		TE13J004-1	TE13J004-2	TE13J004-3	TE13J004-4	TE13J004-5
Client Sample I.D.		EFC02-1'	EFC03-3'	EFC03-8'	EFC04-5'	EFC05-1.75'
Compound	RL					
Dichlorodifluoromethane	0.005	ND	ND	ND	ND	ND
Chloromethane	0.005	ND	ND	ND	ND	ND
Vinyl Chloride	0.005	ND	ND	ND	ND	ND
Bromomethane	0.005	ND	ND	ND	ND	ND
Chloroethane	0.005	ND	ND	ND	ND	ND
Trichlorofluoromethane	0.005	ND	ND	ND	ND	ND
1,1-Dichloroethene	0.005	ND	ND	ND	ND	ND
Carbon disulfide	0.005	ND	ND	ND	ND	ND
Methylene chloride	0.005	ND	ND	ND	ND	ND
Trans-1,2-Dichloroethene	0.005	ND	ND	ND	ND	ND
1,1-Dichloroethane	0.005	ND	ND	ND	ND	ND
2,2-Dichloropropane	0.005	ND	ND	ND	ND	ND
Cis-1,2-Dichloroethene	0.002	ND	ND	ND	ND	ND
Bromochloromethane	0.005	ND	ND	ND	ND	ND
Chloroform	0.005	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	0.005	ND	ND	ND	ND	ND
Vinyl acetate	0.005	ND	ND	ND	ND	ND
Carbontetrachloride	0.005	ND	ND	ND	ND	ND
1,1-Dichloropropene	0.005	ND	ND	ND	ND	ND
1,2-Dichloroethane	0.005	ND	ND	ND	ND	ND
Benzene	0.001	ND	0.002	ND	ND	1.6
Trichloroethene	0.002	ND	ND	ND	ND	ND
1,2-Dichloropropane	0.005	ND	ND	ND	ND	ND
Methyl methacrylate	0.005	ND	ND	ND	ND	ND
Dibromomethane	0.005	ND	ND	ND	ND	ND
Bromodichloromethane	0.005	ND	ND	ND	ND	ND
2-Chloroethyl Vinyl Ether	0.005	ND	ND	ND	ND	ND
Cis-1,3-Dichloropropene	0.005	ND	ND	ND	ND	ND
Toluene	0.001	ND	ND	ND	ND	0.13
Trans-1,3-Dichloropropene	0.005	ND	ND	ND	ND	ND
Ethylmethacrylate	0.005	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	0.005	ND	ND	ND	ND	ND
Dibromochloromethane	0.005	ND	ND	ND	ND	ND
1,2-Dibromoethane (EDB)	0.005	ND	ND	ND	ND	ND
Tetrachloroethene	0.002	ND	ND	ND	ND	ND
1,3-Dichloropropane	0.005	ND	ND	ND	ND	ND
Chlorobenzene	0.005	ND	ND	ND	ND	ND

RL: Reporting Limit.  
 ND: Not Detected (Below Reporting Limit x Dilution Factor).

# ABC Environmental Laboratories

Client: Tom Edwards & Associates  
 Project: EFC  
 Project Site: EFC  
 Matrix: Soil  
 Batch No.: 1010-VOAS4

Lab Job No.: TE13J004  
 Date Sampled: 10/4/2013  
 Date Received: 10/8/2013  
 Date Analyzed: 10/10/2013  
 Date Reported: 10/15/2013

## EPA 8260B (VOCs & Oxy.) by GC/MS, Page 2 of 2

Reporting Unit: mg/kg (PPM)

Date Analyzed		10/10/13	10/10/13	10/10/13	10/10/13	10/10/13
Dilution Factor		1	1	1	1	5
Lab Sample I.D.		TE13J004-1	TE13J004-2	TE13J004-3	TE13J004-4	TE13J004-5
Client Sample I.D.		EFC02-1'	EFC03-3'	EFC03-8'	EFC04-5'	EFC05-1.75'
Compound	RL					
1,1,1,2-Tetrachloroethane	0.005	ND	ND	ND	ND	ND
Ethylbenzene	0.001	ND	0.04	ND	ND	0.26
Total Xylene	0.002	ND	0.004	ND	ND	1.1
Styrene	0.005	ND	ND	ND	ND	ND
Bromoform	0.005	ND	ND	ND	ND	ND
Isopropyl benzene	0.005	ND	0.034	ND	ND	0.016
Bromobenzene	0.005	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	0.005	ND	ND	ND	ND	ND
1,1,2,2,-Tetrachloroethane	0.005	ND	ND	ND	ND	ND
Trans-1,4-dichloro-2-butene	0.005	ND	ND	ND	ND	ND
2-Chlorotoluene	0.005	ND	ND	ND	ND	ND
n-Propyl benzene	0.005	ND	0.11	ND	ND	0.014
4-Chlorotoluene	0.005	ND	ND	ND	ND	ND
1,3,5-Trimethyl benzene	0.005	ND	ND	ND	ND	0.012
tert-Butylbenzene	0.005	ND	ND	ND	ND	ND
p-Isopropyl toluene	0.005	ND	ND	ND	ND	ND
1,2,4-Trimethyl benzene	0.005	ND	0.02	ND	ND	0.038
sec-Butylbenzene	0.005	ND	0.016	ND	ND	ND
1,3-Dichlorobenzene	0.005	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	0.005	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	0.005	ND	ND	ND	ND	ND
n-Butylbenzene	0.005	ND	0.06	ND	ND	ND
1,2-Dibromo-3-chloropropan	0.005	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	0.005	ND	ND	ND	ND	ND
Hexachlorobutadiene	0.005	ND	ND	ND	ND	ND
Naphthalene	0.005	ND	0.13	ND	ND	0.051
1,2,3-Trichlorobenzene	0.005	ND	ND	ND	ND	ND
Aceton	0.050	ND	ND	ND	ND	ND
2-Butanone(MEK)	0.025	ND	ND	ND	ND	ND
MTBE	0.001	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone (MIBK)	0.050	ND	ND	ND	ND	ND
Ethyl-t-butyl Ether(ETBE)	0.002	ND	ND	ND	ND	ND
Diisopropyl ether (DIPE)	0.002	ND	ND	ND	ND	ND
TAME	0.002	ND	ND	ND	ND	ND
t-Butanol	0.020	ND	ND	ND	ND	ND

RL: Reporting Limit.

ND: Not Detected (Below Reporting Limit x Dilution Factor).

# ABC Environmental Laboratories

Client: Tom Edwards & Associates  
 Project: EFC  
 Project Site: EFC  
 Matrix: Soil  
 Batch No.: 1010-VOAS4

Lab Job No.: TE13J004  
 Date Sampled: 10/4/2013  
 Date Received: 10/8/2013  
 Date Analyzed: 10/10/2013  
 Date Reported: 10/15/2013

## EPA 8260B (VOCs & Oxy.) by GC/MS, Page 1 of 2

Reporting Unit: mg/kg (PPM)

Date Analyzed		10/10/13	10/10/13			
Dilution Factor		50	1			
Lab Sample I.D.		TE13J004-6	TE13J004-7			
Client Sample I.D.		EFC05-10'Grab	EFC04-1.5'			
Compound	RL					
Dichlorodifluoromethane	0.005	ND	ND			
Chloromethane	0.005	ND	ND			
Vinyl Chloride	0.005	ND	ND			
Bromomethane	0.005	ND	ND			
Chloroethane	0.005	ND	ND			
Trichlorofluoromethane	0.005	ND	ND			
1,1-Dichloroethene	0.005	ND	ND			
Carbon disulfide	0.005	ND	ND			
Methylene chloride	0.005	ND	ND			
Trans-1,2-Dichloroethene	0.005	ND	ND			
1,1-Dichloroethane	0.005	ND	ND			
2,2-Dichloropropane	0.005	ND	ND			
Cis-1,2-Dichloroethene	0.002	ND	ND			
Bromochloromethane	0.005	ND	ND			
Chloroform	0.005	ND	ND			
1,1,1-Trichloroethane	0.005	ND	ND			
Vinyl acetate	0.005	ND	ND			
Carbontetrachloride	0.005	ND	ND			
1,1-Dichloropropene	0.005	ND	ND			
1,2-Dichloroethane	0.005	ND	ND			
Benzene	0.001	ND	ND			
Trichloroethene	0.002	ND	ND			
1,2-Dichloropropane	0.005	ND	ND			
Methyl methacrylate	0.005	ND	ND			
Dibromomethane	0.005	ND	ND			
Bromodichloromethane	0.005	ND	ND			
2-Chloroethyl Vinyl Ether	0.005	ND	ND			
Cis-1,3-Dichloropropene	0.005	ND	ND			
Toluene	0.001	ND	ND			
Trans-1,3-Dichloropropene	0.005	ND	ND			
Ethylmethacrylate	0.005	ND	ND			
1,1,2-Trichloroethane	0.005	ND	ND			
Dibromochloromethane	0.005	ND	ND			
1,2-Dibromoethane (EDB)	0.005	ND	ND			
Tetrachloroethene	0.002	ND	ND			
1,3-Dichloropropane	0.005	ND	ND			
Chlorobenzene	0.005	ND	ND			

RL: Reporting Limit.

ND: Not Detected (Below Reporting Limit x Dilution Factor).

# ABC Environmental Laboratories

Client: Tom Edwards & Associates  
 Project: EFC  
 Project Site: EFC  
 Matrix: Soil  
 Batch No.: 1010-VOAS4

Lab Job No.: TE13J004  
 Date Sampled: 10/4/2013  
 Date Received: 10/8/2013  
 Date Analyzed: 10/10/2013  
 Date Reported: 10/15/2013

## EPA 8260B (VOCs & Oxy.) by GC/MS, Page 2 of 2

Reporting Unit: mg/kg (PPM)

Date Analyzed		10/10/13	10/10/13			
Dilution Factor		50	1			
Lab Sample I.D.		TE13J004-6	TE13J004-7			
Client Sample I.D.		EFC05-10'Grab	EFC04-1.5'			
<b>Compound</b>	<b>RL</b>					
1,1,1,2-Tetrachloroethane	0.005	ND	ND			
Ethylbenzene	0.001	3.8	ND			
Total Xylene	0.002	5.2	ND			
Styrene	0.005	ND	ND			
Bromoform	0.005	ND	ND			
Isopropyl benzene	0.005	1.6	ND			
Bromobenzene	0.005	ND	ND			
1,2,3-Trichloropropane	0.005	ND	ND			
1,1,2,2,-Tetrachloroethane	0.005	ND	ND			
Trans-1,4-dichloro-2-butene	0.005	ND	ND			
2-Chlorotoluene	0.005	ND	ND			
n-Propyl benzene	0.005	1.3	ND			
4-Chlorotoluene	0.005	ND	ND			
1,3,5-Trimethyl benzene	0.005	ND	ND			
tert-Butylbenzene	0.005	ND	ND			
p-Isopropyl toluene	0.005	ND	ND			
1,2,4-Trimethyl benzene	0.005	0.6	ND			
sec-Butylbenzene	0.005	0.3	ND			
1,3-Dichlorobenzene	0.005	ND	ND			
1,4-Dichlorobenzene	0.005	ND	ND			
1,2-Dichlorobenzene	0.005	ND	ND			
n-Butylbenzene	0.005	1.1	ND			
1,2-Dibromo-3-chloropropan	0.005	ND	ND			
1,2,4-Trichlorobenzene	0.005	ND	ND			
Hexachlorobutadiene	0.005	ND	ND			
Naphthalene	0.005	0.35	ND			
1,2,3-Trichlorobenzene	0.005	ND	ND			
Aceton	0.050	ND	ND			
2-Butanone(MEK)	0.025	ND	ND			
MTBE	0.001	ND	ND			
4-Methyl-2-Pentanone (MIBK)	0.050	ND	ND			
Ethyl-t-butyl Ether(ETBE)	0.002	ND	ND			
Diisopropyl ether (DIPE)	0.002	ND	ND			
TAME	0.002	ND	ND			
t-Butanol	0.020	ND	ND			

RL: Reporting Limit.

ND: Not Detected (Below Reporting Limit x Dilution Factor).

# ABC Environmental Laboratories

Client: Tom Edwards & Associates Lab Job No.: TE13J004  
Project: EFC Date Sampled: 10/4/2013  
Project Site: EFC Date Received: 10/8/2013  
Matrix: Soil Date Analyzed: 10/10/2013  
Batch No.: 1010-CRS Date Reported: 10/15/2013

## EPA 7196A (Hexavalent Chromium)

Report Units: mg/kg (PPM)

Client Sample ID	Lab Sample ID	Hexavalent Chromium	Reporting Limit
EFC02-1'	TE13J004-1	ND	0.2
EFC03-3'	TE13J004-2	ND	0.2
EFC03-8'	TE13J004-3	ND	0.2
EFC04-5'	TE13J004-4	ND	0.2
EFC05-1.75'	TE13J004-5	0.28	0.2
EFC05-10'Grab	TE13J004-6	0.55	0.2
EFC04-1.5'	TE13J004-7	0.21	0.2

ND: Not Detected (Below Reporting Limit).



# *ABC Environmental Laboratories*

Client:	Tom Edwards & Associates	Lab Job No.:	TE13J004
Project:	EFC	Date Sampled:	10/4/2013
Project Site:	EFC	Date Received:	10/8/2013
Matrix:	Soil	Date Digested:	10/11/2013
Digestion Method:	3050	Date Analyzed:	10/11/2013
Batch No.:	1011-MTS	Date Reported:	10/15/2013

## EPA 6010B/7471A (CAM 17 Metals)

Report Units: mg/kg (PPM)

Element	EPA Method	TE13J004-1	TE13J004-2	TE13J004-3	J12A001-4	Report Limit
		EFC02-1'	EFC03-3'	EFC03-8'	EFC04-5'	
Antimony (Sb)	6010B	ND	ND	ND	ND	5
Arsenic (As)	6010B	2.6	2.5	1.6	2.8	0.5
Barium (Ba)	6010B	139	107	117	49.1	5.0
Beryllium (Be)	6010B	ND	ND	ND	ND	1
Cadmium (Cd)	6010B	ND	ND	ND	ND	1
Chromium (Cr)	6010B	27.1	18.9	13.1	10.2	1
Cobalt (Co)	6010B	6.3	6.4	4	3.9	1
Copper (Cu)	6010B	13.7	9.4	6.7	12.5	1
Lead (Pb)	6010B	6.8	25.9	4.3	5.5	1
Mercury (Hg)	7471A	ND	ND	ND	ND	0.1
Molybdenum (Mo)	6010B	ND	ND	ND	ND	2
Nickel (Ni)	6010B	41.2	18.8	16.9	20.7	1
Selenium (Se)	6010B	ND	ND	ND	ND	1
Silver (Ag)	6010B	ND	ND	ND	ND	1
Thallium (Tl)	6010B	ND	ND	ND	ND	2.5
Vanadium (V)	6010B	24.8	19.2	18.4	14.6	5
Zinc (Zn)	6010B	46.7	20.4	10.2	34.5	1

ND: Not Detected (Below Reporting Limit).

# *ABC Environmental Laboratories*

Client:	Tom Edwards & Associates	Lab Job No.:	TE13J004
Project:	EFC	Date Sampled:	10/4/2013
Project Site:	EFC	Date Received:	10/8/2013
Matrix:	Soil	Date Digested:	10/11/2013
Digestion Method:	3050	Date Analyzed:	10/11/2013
Batch No.:	1011-MTS	Date Reported:	10/15/2013

## EPA 6010B/7471A (CAM 17 Metals)

Report Units: mg/kg (PPM)

Element	EPA Method	TE13J004-5	TE13J004-6	TE13J004-7	Report Limit
		EFC05-1.75'	EFC05-10'Grab	EFC04-1.5'	
Antimony (Sb)	6010B	ND	ND	ND	5
Arsenic (As)	6010B	1.5	8.4	4.5	0.5
Barium (Ba)	6010B	55.6	217	151	5.0
Beryllium (Be)	6010B	ND	ND	ND	1
Cadmium (Cd)	6010B	ND	4.1	2.1	1
Chromium (Cr)	6010B	11.5	34.1	19.7	1
Cobalt (Co)	6010B	3.5	9	7.3	1
Copper (Cu)	6010B	58.3	148	25.5	1
Lead (Pb)	6010B	210	848	116	1
Mercury (Hg)	7471A	0.28	0.35	0.21	0.1
Molybdenum (Mo)	6010B	ND	ND	ND	2
Nickel (Ni)	6010B	20	60.6	35.8	1
Selenium (Se)	6010B	ND	ND	ND	1
Silver (Ag)	6010B	ND	ND	ND	1
Thallium (Tl)	6010B	ND	ND	ND	2.5
Vanadium (V)	6010B	9.4	28.4	20.5	5
Zinc (Zn)	6010B	237	1160	828	1

ND: Not Detected (Below Reporting Limit).

# ABC Environmental Laboratories

Client: Tom Edwards & Associates  
Project : EFC  
Matrix: Soil  
Batch No.: 1013-CNS

Lab Job No.: TE13J004  
Date Sampled: 10/4/2013  
Date Received: 10/8/2013  
Date Analyzed: 10/13/2013  
Date Reported: 10/15/2013

## EPA 9014 (Cyanide, Total)

Reporting Unit: mg/kg (PPM)

Client Sample ID	Lab ID	Dilution Factor	Cyanide, Total		
	Reporting Limit		0.1		
EFC02-1'	TE13J004-1	ND	ND		
EFC03-3'	TE13J004-2	ND	ND		
EFC03-8'	TE13J004-3	ND	ND		
EFC04-5'	TE13J004-4	ND	ND		
EFC05-1.75'	TE13J004-5	ND	0.1		
EFC05-10'Grab	TE13J004-6	ND	ND		
EFC04-1.5'	TE13J004-7	ND	0.12		

ND: Not Detected (Below Reporting Limit).

# ***ABC Environmental Laboratories***

Client:	Tom Edwards & Associates	Lab Job No.:	TE13J004
Project:	EFC	Date Sampled:	10/4/2013
Project Site:	EFC	Date Received:	10/8/2013
Matrix:	Water	Date Analyzed: TPH-G	10/11/2013
Batch No.:	AJ11-GW4	Date Analyzed: TPH-D	10/11/2013
Batch No.:	BJ11-DW	Date Reported:	10/15/2013

## **EPA 8015M (TPH-Gasoline, Diesel & Oil)**

Reporting Unit: mg/L (PPM)

Client Sample ID	Lab ID	Gasoline	Diesel	Oil
		C4-C12	C13-C24	C25-C40
	Reporting Limit	0.1	0.5	2
EFC04	TE13J004-8	137	ND	ND
EFC05	TE13J004-9	4.4	105	ND

ND: Not Detected (Below Reporting Limit).

# *ABC Environmental Laboratories*

Client:	Tom Edwards & Associates	Lab Job No.:	TE13J004
Project:	EFC	Date Sampled:	10/4/2013
Project Site:	EFC	Date Received:	10/8/2013
Matrix:	Water	Date Analyzed:	10/8/2013
Batch No.:	1008-CRW	Date Reported:	10/15/2013

## **EPA 7196A (Hexavalent Chromium)**

Report Units: mg/L (PPM)

Client Sample ID	Lab Sample ID	Hexavalent Chromium	Reporting Limit
EFC04	TE13J004-8	ND	0.02
EFC05	TE13J004-9	ND	0.02

ND: Not Detected (Below Reporting Limit).

# ABC Environmental Laboratories

Client: Tom Edwards & Associates  
 Project: EFC  
 Project Site: EFC  
 Matrix: Water  
 Batch No.: 1011-VOAW4

Lab Job No.: TE13J004  
 Date Sampled: 10/4/2013  
 Date Received: 10/8/2013  
 Date Analyzed: 10/11/2013  
 Date Reported: 10/15/2013

## EPA 8260B (VOCs & Oxy.) by GC/MS, Page 1 of 2

Reporting Unit: ug/L (PPB)

Date Analyzed		10/11/13	10/11/13		
Dilution Factor		250	100		
Lab Sample I.D.		TE13J004-8	TE13J004-9		
Client Sample I.D.		EFC04	EFC05		
<b>Compound</b>	<b>RL</b>				
Dichlorodifluoromethane	0.5	ND	ND		
Chloromethane	0.5	ND	ND		
Vinyl Chloride	0.5	ND	ND		
Bromomethane	0.5	ND	ND		
Chloroethane	0.5	ND	ND		
Trichlorofluoromethane	0.5	ND	ND		
1,1-Dichloroethene	0.5	ND	ND		
Carbon disulfide	0.5	ND	ND		
Methylene chloride	0.5	ND	ND		
Trans-1,2-Dichloroethene	0.5	ND	ND		
1,1-Dichloroethane	0.5	ND	ND		
2,2-Dichloropropane	0.5	ND	ND		
Cis-1,2-Dichloroethene	0.5	ND	ND		
Bromochloromethane	0.5	ND	ND		
Chloroform	0.5	ND	ND		
1,1,1-Trichloroethane	0.5	ND	ND		
Vinyl acetate	0.5	ND	ND		
Carbontetrachloride	0.5	ND	ND		
1,1-Dichloropropene	0.5	ND	ND		
1,2-Dichloroethane	0.5	ND	ND		
Benzene	0.5	ND	ND		
Trichloroethene	0.5	ND	ND		
1,2-Dichloropropane	0.5	ND	ND		
Methyl methacrylate	1	ND	ND		
Dibromomethane	0.5	ND	ND		
Bromodichloromethane	0.5	ND	ND		
2-Chloroethyl Vinyl Ether	0.5	ND	ND		
Cis-1,3-Dichloropropene	0.5	ND	ND		
Toluene	0.5	ND	ND		
Trans-1,3-Dichloropropene	0.5	ND	ND		
Ethylmethacrylate	0.5	ND	ND		
1,1,2-Trichloroethane	0.5	ND	ND		
Dibromochloromethane	0.5	ND	ND		
1,2-Dibromoethane (EDB)	0.5	ND	ND		
Tetrachloroethene	0.5	ND	ND		
1,3-Dichloropropane	0.5	ND	ND		
Chlorobenzene	0.5	ND	ND		

RL: Reporting Limit.

ND: Not Detected (Below Reporting Limit x Dilution Factor).

# ABC Environmental Laboratories

Client: Tom Edwards & Associates  
 Project: EFC  
 Project Site: EFC  
 Matrix: Water  
 Batch No.: 1011-VOAW4

Lab Job No.: TE13J004  
 Date Sampled: 10/4/2013  
 Date Received: 10/8/2013  
 Date Analyzed: 10/10/2013  
 Date Reported: 10/15/2013

## EPA 8260B (VOCs & Oxy.) by GC/MS, Page 2 of 2

Reporting Unit: ug/L (PPB)

Date Analyzed		10/11/13	10/11/13			
Dilution Factor		250	100			
Lab Sample I.D.		TE13J004-8	TE13J004-9			
Client Sample I.D.		EFC04	EFC05			
<b>Compound</b>	<b>RL</b>					
1,1,1,2-Tetrachloroethane	0.5	ND	ND			
Ethylbenzene	0.5	2100	2400			
Total Xylene	0.5	2240	2910			
Styrene	0.5	ND	ND			
Bromoform	0.5	ND	ND			
Isopropyl benzene	0.5	628	282			
Bromobenzene	0.5	ND	ND			
1,2,3-Trichloropropane	0.5	ND	ND			
1,1,2,2,-Tetrachloroethane	0.5	ND	ND			
Trans-1,4-dichloro-2-butene	0.5	ND	ND			
2-Chlorotoluene	0.5	ND	ND			
n-Propyl benzene	0.5	945	181			
4-Chlorotoluene	0.5	ND	ND			
1,3,5-Trimethyl benzene	0.5	1020	50			
tert-Butylbenzene	0.5	ND	ND			
p-Isopropyl toluene	0.5	545	ND			
1,2,4-Trimethyl benzene	0.5	3030	149			
sec-Butylbenzene	0.5	253	ND			
1,3-Dichlorobenzene	0.5	ND	ND			
1,4-Dichlorobenzene	0.5	ND	ND			
1,2-Dichlorobenzene	0.5	ND	ND			
n-Butylbenzene	0.5	375	50			
1,2-Dibromo-3-chloropropan	0.5	ND	ND			
1,2,4-Trichlorobenzene	0.5	ND	ND			
Hexachlorobutadiene	1	ND	ND			
Naphthalene	0.5	878	64			
1,2,3-Trichlorobenzene	0.5	ND	ND			
Acetone	5	ND	ND			
2-Butanone(MEK)	5	ND	ND			
MTBE	0.5	ND	ND			
Methyl Isobutyl Ketone	5	ND	ND			
Ethyl-t-butyl Ether(ETBE)	0.5	ND	ND			
Diisopropyl ether (DIPE)	0.5	ND	ND			
TAME	0.5	ND	ND			
t-Butanol	5	ND	ND			

RL: Reporting Limit.

ND: Not Detected (Below Reporting Limit x Dilution Factor).

# *ABC Environmental Laboratories*

Client:	Tom Edwards & Associates	Lab Job No.:	TE13J004
Project:	EFC	Date Sampled:	10/4/2013
Project Site:	EFC	Date Received:	10/8/2013
Matrix:	Water	Date Digested:	10/11/2013
Digestion Method:	3010C	Date Analyzed:	10/11/2013
Batch No.:	1011-MTW	Date Reported:	10/15/2013

## EPA 6010B/7471A (CAM 17 Metals)

Report Units: mg/L (PPM)

Element	EPA Method	TE13J004-8	TE13J004-9			Report Limit
		EFC04	EFC05			
Antimony (Sb)	6010B	ND	ND			0.05
Arsenic (As)	6010B	0.04	ND			0.02
Barium (Ba)	6010B	3.4	3.7			0.02
Beryllium (Be)	6010B	ND	ND			0.02
Cadmium (Cd)	6010B	ND	ND			0.02
Chromium (Cr)	6010B	0.41	0.02			0.02
Cobalt (Co)	6010B	0.15	0.025			0.02
Copper (Cu)	6010B	0.4	0.16			0.02
Lead (Pb)	6010B	0.2	0.11			0.02
Mercury (Hg)	7471A	ND	ND			0.005
Molybdenum (Mo)	6010B	ND	ND			0.02
Nickel (Ni)	6010B	1.3	0.13			0.02
Selenium (Se)	6010B	ND	ND			0.02
Silver (Ag)	6010B	ND	ND			0.02
Thallium (Tl)	6010B	ND	ND			0.02
Vanadium (V)	6010B	0.41	0.021			0.02
Zinc (Zn)	6010B	0.87	0.26			0.02

ND: Not Detected (Below Reporting Limit).



# *ABC Environmental Laboratories*

Client: Tom Edwards & Associates  
Project : EFC  
Matrix: Water  
Batch No.: 1013-CNW

Lab Job No.: TE13J004  
Date Sampled: 10/4/2013  
Date Received: 10/8/2013  
Date Analyzed: 10/13/2013  
Date Reported: 10/15/2013

## **EPA 9014 (Cyanide, Total)**

Reporting Unit: mg/L (PPM)

Client Sample ID	Lab ID	Dilution Factor	Cyanide, Total		
	Reporting Limit		0.01		
EFC04	TE13J004-8	1	ND		
EFC05	TE13J004-9	1	ND		

RL=Reporting Limit; ND=Not Detected (Below RL).

# ABC Environmental Laboratories

## EPA 8015M (TPH-Gasoline)

### Batch QA/QC Report

Client: Tom Edwards & Associates

Lab Job No.: TE13J004

Project: EFC

Lab Sample ID: TE13J004-1

Matrix: Soil

Date Analyzed: 10/10/2013

Batch No.: AJ10-GS4

Date Reported: 10/15/2013

#### I. MB/LCS Report

Unit: mg/kg

Analyte	Method	Report	True	Rec.%	Accept
	Blank	Value	Value		Limit
TPH-G	ND	0.95	1.0	95	80-120

#### II. MS/MSD Report

Unit: mg/kg

Analyte	Sample	Spike	MS	MSD	MS	MSD	%RPD	%RPD	%Rec
	Conc.	Conc.			%Rec.	%rec.		Accept	Accept
								Limit	Limit
TPH-G	ND	1.0	1.12	0.94	112	94	17	≤30	70--130

ND: Not Detected (Below Reporting Limit).

# ABC Environmental Laboratories

## EPA 8015M (TPH-Diesel)

### Batch QA/QC Report

Client: Tom Edwards & Associates

Lab Job No.: TE13J004

Project: EFC

Lab Sample ID: TE13J004-1

Matrix: Soil

Date Analyzed: 10/10/2013

Batch No.: BJ10-DS

Date Reported: 10/15/2013

#### I. MB/LCS Report

Unit: mg/kg (PPM)

Analyte	Method	Report	True	Rec.%	Accept
	Blank	Value	Value		Limit
TPH-D	ND	435	500	87	80-120

#### II. MS/MSD Report

Unit: mg/kg (PPM)

Analyte	Sample	Spike	MS	MSD	MS	MSD	%RPD	%RPD	%Rec
	Conc.	Conc.			%Rec.	%rec.		Accept	Accept
								Limit	Limit
TPH-D	ND	500	445	405	89	81	9	≤30	70-130

ND: Not Detected (Below Reporting Limit).









**Environmental  
Laboratories, Inc.**

1640B S. Grove Ave., Ontario, CA 91761

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Lab Job Number TE13J004

**CHAIN OF CUSTODY**

Client Name <b>TOM EDWARDS &amp; ASSOCIATES</b>				Sample Receipt Conditions		Analyses Requested											Turn Around Time Requested										
Address <b>22693 SUNSET RIDGE DR, AUBURN, CA 95602</b>				<input checked="" type="checkbox"/> Chilled		<input type="checkbox"/> Intact <input type="checkbox"/> Sample Seal											<input type="checkbox"/> Rush 8 12 24 48 Hours <input checked="" type="checkbox"/> Normal										
Report Attention	Phone # Fax: #	Sampled By <b>J MOSER</b>																									
Project No./ Name	Project Site <b>EFC</b>																										
Client Sample ID	Lab Sample ID	Sample Collection		Matrix Type	Sample Preserve	No., type* & size of container	EPA8260B (VOCs & Oxygenates)	EPA8260B (BTEX & Oxygenates)	EPA8021B (BTEX & MTBE)	EPA8015M / 8015B (Gasoline)	EPA8015M / 8015B (Diesel)	EPA8081A (Organochlorine Pesticides)	EPA 8082 (PCBs)	EPA418.1 (TRPH)	EPA8015M (Carbon Chain)	EPA 7000s (Metals)	CAM 17 Metals	<b>GOLD B METALS</b>			<b>HEX CR 7196</b>			<b>9014 Total Cupride</b>			Remarks
		Date	Time																								
EFC01-5'		10/4	10:25	Soil	ice	6" sl	X								X				X	X	X						HOLD
EFC01-12'			10:48				X								X				X	X	X						HOLD
EFC02-1'	TE13J004-1		11:10				X								X				X	X	X						
<del>EFC03-2.5'</del>			13:00																								
EFC03-3'	-2		13:15				X								X				X	X	X						
EFC03-8'	-3		14:45				X								X				X	X	X						
EFC04-5'	-4		13:25				X								X				X	X	X						<del>Hold</del>
EFC04-10'			13:30				X								X				X	X	X						HOLD
EFC04-15'			14:00				X								X				X	X	X						HOLD
EFC04	-8		14:10	Water		3 VOA 1 pl bott.	X								X				X	X	X						
EFC05-1.75'	-5		13:20	Soil		6" sl	X								X				X	X	X						
<del>EFC05-3'</del>			13:40																								
EFC05-10' GRAB	-6		15:42				X								X				X	X	X						
EFC05	-9		15:50	Water		3 VOA 1 pl bott.	X								X				X	X	X						
Relinquished By	Company	Date	Time	Received By	Company	Date	Time	Note: Samples are discarded 30 days after results are reported unless other arrangements are made.																			
<i>[Signature]</i>	TEA	10/6	9:30	<i>[Signature]</i>	ABC	10-8-13	11:00																				
Relinquished By	Company	Date	Time	Received By	Company	Date	Time																				

Matrix Code:	DW=Drinking Water GW=Ground Water WW=Waste Water SD=Solid Waste	SI=Sludge SS=Soil/Sediment AR=Air PP=Pure Product	Preservative Code	IC=Ice HC=HCl HN=HNO <sub>3</sub>	SH=NaOH ST=Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub> HS=H <sub>2</sub> SO <sub>4</sub>	* Sample Container Types: T=Tedlar Air Bag G=Glass Container ST=Steel Tube	B=Brass Tube P=Plastic Bottle V=VOA Vial	E=EnCore
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