

# **TANK AND PIPELINE REMOVAL NARRATIVE**

**1000 N. Vasco Road Livermore, California**

**January 21, 2011 and January 27, 2011**

## **I. Methods and Protocols**

Sampling and laboratory testing followed the Tri-Regional Board staff recommendations (RWQCB, 2004, 1990) as instructed in the field by the Livermore-Pleasanton Fire Department inspector, Danielle Stefani. The appropriateness of the Tri-Regional Board staff recommendations (Appendix A, Table #2) was confirmed specifically by telephone communication with Mr. Jerry Wickham, Alameda County DHS. A total of 23 soil samples were collected, including four (4) from the gasoline storage tank pit (TP1), four (4) from the diesel tank pit (TP2), twelve (12) from the trenches, one (1) from the base of the vent pipe rack below elbow depth, and two (2) from soil stockpiles (STK-PL2 and STK-PL3).

Each soil sample was collected using a slide hammer and sample spoon loaded with a new 2-inch diameter by 6-inch long brass sleeve. Tank pit soil samples were collected off the backhoe bucket with effort to 1) obtain sample from just above the water surface and 2) obtain sample from the side tooth of the backhoe bucket used to scrape the sidewall of the tank pit.

Soil samples were capped with Teflon sheet and plastic end caps, labeled, and placed in an ice chest with abundant water ice. Samples were delivered by the sampler with a completed chain-of-custody form, within approximately 2 hours of sample collection.

Two pit water samples were collected. Water samples were collected using new polyethylene bailers with bottom emptying tubes, and new line, one set-up for each tank pit. A 1-Liter amber glass bottle was filled with water collected from TP2, and triplicate VOAs were filled with water collected from TP1. Ms. Stefani observed and confirmed presence of a meniscus and absence of headspace or air bubbles in each of the three VOAs. Samples were labeled and placed in an ice chest with abundant water ice. Samples were delivered by the sampler with a completed chain-of-custody form, within 2-5 hours of sample collection.

McC Campbell Analytical (Pittsburg, CA) performed all of the analytical testing. McC Campbell Analytical, Inc., is a California DHS-certified test laboratory (ELAP Certification #1644) certified to perform the testing by U.S. EPA analytical methods reported herein.

## **II. Sampling and Test Results for Tank Pit Sidewall Sampling on February 21, 2011**

On Friday, January 21, 2011, M. Papineau sampled the tank pits as witnessed by Inspector Danielle Stefani, Livermore-Pleasanton Fire Department. Eight (8) soil samples and two (2) pit water samples were collected and were submitted by the sampling technician for testing by McC Campbell Analytical (Pittsburg, CA) in accordance with Tri-Regional Boards recommendations (1990, 2004). The Tri-Regional Boards guidance, Appendix A, Table #2, lists EPA Method 8260B analysis of soil and ground water samples for underground gasoline storage tanks including the following analytes: BTEX, MtBE, DIPE, EtBE, TAME, TBA, 1,2-DCA, and EDB. The list of analytes was confirmed with Mr. Jerry Wickham on Friday, January 21, 2011, and amended the

testing indicated on the Chain of Custody by telephone call and email to the laboratory.

#### **Soil Samples Collected from Pit Sidewalls**

Soil samples were collected off the excavator or backhoe bucket from soil at or near the water level. The pit water level was 9.3 feet below grade surface. Diesel and gasoline tank pit sidewall sample test results are "clean" ("ND" for gasoline, "ND" for diesel, and "ND" for BTEX, listed oxygenates, and additives).

#### **PID Measurements**

During February 21, 2011, one PID response was noted near the east end of the diesel tank pit (TP2). The PID response was 30 ppmv off the bucket (TP2-E2) and 117-184 ppmv in a Ziplok plastic bag containing a handful of the soil. The PID on February 21 was a Thermo Analytical 580B with a 10.6 eV lamp (Environmental instruments ID#187) calibrated to 100 ppmv isobutylene.

#### **Pit Water Samples Collected from Tank Pits**

Pit water samples were collected from the pits by casting a bailer on line and trawling to retrieve a sample. The bailer was observed to fill as it tilted about 15 degrees from horizontal and partially submerged at the end (bottom-emptying device end). Neither pit was de-watered and allowed to re-charge before sampling. The water surface was noted in both as having floating scum. D. Stefani noted sheen in TP1. M. Papineau noted this was limited to the edge of the pit TP1 at the water line. TP2 was not noted as having scum but not sheen.

For the gasoline tank pit water sample (TP1-gas-W) McCampbell Analytical reported concentrations of 240 micrograms/liter (same as 240 ppb) as TPHg, 0.98 ppb as MtBE, 5 ppb as TBA, and non-detected benzene (<0.5 ppb). Concentrations of benzene (ND, <0.5 ppb), MtBE (0.98 ppb), TBA, (5 ppb), toluene (6.3-7.6 ppb), ethylbenzene (3.8-4.6 ppb), and xylenes (38-41 ppb).

The diesel tank pit water sample (TP2-diesel-W) has reported concentrations of 540,000 ppb as TPHd, 190 ppb as ethyl benzene, 800 ppb as toluene, 1500 ppb as xylenes, and non-detected (<12 ppb) benzene.

### **III. Sampling and Test Results for Product Line Trench and Vent Pipe Bracket Sampling on February 27, 2011**

On Thursday, January 27, 2011, M. Papineau sampled the product line trenches as witnessed by Inspector Paul Smith, Livermore-Pleasanton Fire Department. At each sample location pea gravel backfill was pot-holed with a backhoe to expose the top of native soil at the backfill interface with native soil. Three trenches labeled as PL1, PL2 and PL3 were sampled. Samples were generally collected under the former dispensers or every 20 feet. Thirteen soil samples were collected from the pot holes. Two additional soil samples were collected from temporary soil stockpiles located adjacent to trenches PL2 and PL3 (see Section IV).

The three product line trenches were labeled as PL1 (front along Vasco Road), PL2 (1 diesel product line and two (2) vent lines between tank pits TP1 and TP2), and PL3 (diesel- only lines on the north side of the service station and restaurant building. The last sample was collected from the vent pipe rack (VP), at the base of the vent pipe rack. This also is located on the north side of the building. About 3-5 feet of vent pipe

remains underground under the curb from the south wall of the diesel tank pit (TP2). See Diagram, page 5.

#### **Soil Samples Collected from Trenches and Vent Pipe Rack Test Pit**

Before sampling the product line and vent pipe trenches, pot-holing was performed at each sample location to remove additional pea gravel and expose native soil under the dispensers. There were no observed areas of gross contamination, free product or PID response greater than 10 ppmv. Minor staining was observed at locations PL1-S1, PL3-S10, and PL3-S12. Minor staining means the native soil, generally brown (Munsell soil color 10YR 5/3), had a grayish-brown color, but without noticeable petroleum odor or Photoionization Detector (PID) response.

Minor soil staining without petroleum odor or PID response was noted at locations PL1-S1, PL3-S10, and PL3-S12. Predominant soil color is Munsell 10YR 5/3. Staining was noted by sampling technician as Munsell 2.5 Y 4.5/2. Similar staining was not noted at PL1-S2 through PL1-S5, PL2-S6 through PL2-S8, PL3-S9, or PL3-S11.

Laboratory test results for product line trenches confirm general clean status for the two trenches named PL1 and PL2. A minor TPH gasoline range concentration (2.9 mg/Kg without BTEX or MtBE) and minor TPH diesel range concentration (4.0 mg/Kg) were reported for soil sample PL1-S1. This is consistent with minor staining (but no odor or PID response observed) at the PL1-S1 location. Soil samples PL1-S3 and PL1-S4 also were reported to contain minor TPH diesel range concentrations of 1.5 mg/Kg (PL1-S3) and 1.3 mg/Kg (PL1-S4). Results are also clean (ND) for soil samples PL1-S2, PL1-S5, PL2-S6 through PL2-S8, PL3-S9, and vent pipe rack soil sample VP-S13.

Three soil samples (PL3-S10, PL3-S11, and PL3-S12) collected from the diesel-only product line trench were reported by McCampbell Analytical to contain detectable diesel concentrations of 1400 mg/Kg, 3200 mg/Kg, and 2700 mg/Kg. Reported results are generally consistent with observations of minor staining noted at PL3-S10 and PL3-S12. The above units, milligrams per kilogram (mg/Kg), are the same as parts per million.

#### **PID Measurements**

The PID on February 27, 2011, was a RAE 2000 with a 10.6 eV lamp (Environmental Instruments ID# 236) calibrated to 100 ppmv isobutylene. A 100 ppmv isobutylene span gas mini-canister was used in the field as a span check, and the field test showed the PID was functioning normally. Measurements in the trenches did not have any significant PID response.

#### **IV. Sampling and Test Results for Soil Stockpile Sampling on February 27, 2011**

Soil excavated from the product line and vent pipe trenches consisted primarily of pea gravel. There was minor amount of native soil in the stockpiles and, where present, the native soil sandy silt, silt-sand, and clayey sandy silt originated from the sidewalls. Before sampling the product line and vent pipe trenches, pot-holing was performed at each sample location to remove additional pea gravel and expose native soil under the dispensers; therefore, the temporary stockpiles were mainly pea gravel with limited soil cut from the sidewalls.

A minor diesel concentration (1.2 mg/Kg) was reported for stockpile soil sample STK-PL2. A diesel concentration of 380 mg/Kg was reported for stockpile soil sample STK-PL3.

#### **V. Comparison to Screening Levels (ESLs)**

The San Francisco Bay RWQCB has published screening levels for diesel and gasoline in soil and ground water. For gasoline and diesel in shallow soils (<10 feet), where ground water is a current or potential drink water source, the ESL is 83 mg/Kg (83 ppm) for both diesel and gasoline, for residential or commercial/industrial land use.

Laboratory test results for product line trench PL1 samples PL1-S1, PL1-S3, and PL1-S4, and soil stockpile sample STK-PL2, therefore, are well under the ESL. The results for diesel product line trench PL3 soil samples PL3-S10, PL3-S11, and PL3-S12, and trench stockpile STK-PL3 are above the ESL.

For tank pit water, from Tables F-1a/Table F-1b, ESLs where ground water IS/IS NOT a potential drinking water source are: 1/46 ppb for benzene, 30/43 ppb for ethylbenzene, 40/130 ppb for toluene, 20/100 ppb for xylenes. Also, from Tables F-1a/Table F-1b, ESLs where ground water IS/IS NOT a potential drinking water source are: 100/210 ppb for gasoline and 100/210 ppb for diesel. The ESL for benzene is 1 ppb (based on toxicity) where ground water IS a current or potential source of drinking water, or 46 ppb where ground water IS NOT a current or potential source of drinking water. Where ground water IS a current or potential source of drinking water, the ESLs are 5 ppb for MtBE and 12 ppb for TBA (RWQCB, 2008).

Gasoline and xylenes concentrations in the pit water sample (TP1-gas-W) are marginally above the ESLs. Laboratory results for the diesel tank pit water sample (TP2-diesel-W) are above the ESLs. Neither pit was de-watered and allowed to re-charge before sampling.

#### **References**

RWQCB, 2008. *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater.*

[http://www.swrcb.ca.gov/rwqcb2/water\\_issues/available\\_documents/ESL\\_May\\_2008.pdf](http://www.swrcb.ca.gov/rwqcb2/water_issues/available_documents/ESL_May_2008.pdf)

Tri-Regional Boards, 2004. *Tri-Regional Boards Staff Recommendations for Preliminary Investigation and Evaluation of Tank Sites*, April 16, 2004, Appendix A, Table #2, p. 11 or 24.

[http://www.swrcb.ca.gov/rwqcb5/water\\_issues/underground\\_storage\\_tanks/tri-regionals\\_appendix\\_a.pdf](http://www.swrcb.ca.gov/rwqcb5/water_issues/underground_storage_tanks/tri-regionals_appendix_a.pdf)

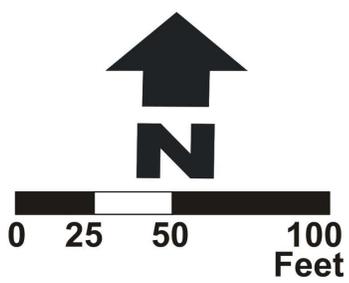
Tri-Regional Boards, 1990. *Tri-Regional Boards Staff Recommendations for Preliminary Investigation and Evaluation of Tank Sites*, August 10, 1990.

[http://www.swrcb.ca.gov/rwqcb5/water\\_issues/underground\\_storage\\_tanks/usttri-reg.pdf](http://www.swrcb.ca.gov/rwqcb5/water_issues/underground_storage_tanks/usttri-reg.pdf)



Soil Sample	Depth (Feet)	TPHg (mg/Kg)	TPHd (mg/Kg)	BTEX (mg/Kg)
TP1-E1	9.3	ND	---	ND
TP1-E2	9.3	ND	---	ND
TP1-C1	9.3	ND	---	ND
TP1-W1	9.3	ND	---	ND
TP2-E1	9.3	---	ND	ND
TP2-E2	9.3	---	ND	ND
TP2-W1	9.3	---	ND	ND
TP2-W2	9.3	---	ND	ND
PL1-S1	3.4	ND	4.0	ND
PL1-S2	2.8	ND	ND	ND
PL1-S3	2.7	ND	1.5	ND
PL1-S4	3.0	ND	1.3	ND
PL1-S5	3.0	ND	ND	ND
PL2-S6	3.3	---	ND	ND
PL2-S7	3.7	---	ND	ND
PL2-S8	3.8	---	ND	ND
PL3-S9	3.2	---	ND	ND
PL3-S10	3.2	---	1400	<0.10
PL3-S11	3.0	---	3200	<0.05
PL3-S12	2.8	---	2700	<0.05
VP-S13	2.7	ND	ND	ND
Reporting Limit		1.0	1.0	0.005

unless otherwise indicated as less than "<" limit quantity.



## Underground Tank and Line Removal 1000 N. Vasco Road Livermore, California

Tank pit sampling: January 21, 2011  
 Product and vent line trench sampling: January 27, 2011  
 Performed by: M. Papineau

Last revised: 2/10/2011

## **LABORATORY RESULTS**



**McC Campbell Analytical, Inc.**

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

Environmental Service  5789 Gold Creek Drive  Castro Valley, CA 94552	Client Project ID: #2010-035; 1000 N. Vasco Rd	Date Sampled: 01/21/11
		Date Received: 01/21/11
	Client Contact: Marc Papineau	Date Reported: 01/25/11
	Client P.O.:	Date Completed: 01/25/11

**WorkOrder: 1101510**

January 25, 2011

Dear Marc:

Enclosed within are:

- 1) The results of the **10** analyzed samples from your project: **#2010-035; 1000 N. Vasco Rd,**
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
Laboratory Manager  
McC Campbell Analytical, Inc.





# McC Campbell Analytical, Inc.



1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1101510

ClientCode: ENVC

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  Fax   
 Email   
 HardCopy   
 ThirdParty   
 J-flag

Report to:

Marc Papineau  
Environmental Service  
5789 Gold Creek Drive  
Castro Valley, CA 94552  
510-881-8574    FAX 510-581-7204

Email: marc\_p@sbcglobal.net  
cc:  
PO:  
ProjectNo: #2010-035; 1000 N. Vasco Rd

Bill to:

Marc Papineau  
Environmental Services  
5789 Gold Creek Drive  
Castro Valley, CA 94552

Requested TAT: 3 days

Date Received: 01/21/2011

Date Printed: 01/24/2011

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1101510-001	TP2-Diesel-W	Water	1/21/2011 11:23	<input type="checkbox"/>	A							A				
1101510-002	TP1-Gas-W	Water	1/21/2011 11:40	<input type="checkbox"/>			A		B							
1101510-003	TP2-E1	Soil	1/21/2011 12:37	<input type="checkbox"/>		A				A						
1101510-004	TP2-E2	Soil	1/21/2011	<input type="checkbox"/>		A				A						
1101510-005	TP2-W1	Soil	1/21/2011 12:49	<input type="checkbox"/>		A				A						
1101510-006	TP2-W2	Soil	1/21/2011 12:54	<input type="checkbox"/>		A				A						
1101510-007	TP1-E1	Soil	1/21/2011 13:09	<input type="checkbox"/>		A		A								
1101510-008	TP1-W1	Soil	1/21/2011 13:25	<input type="checkbox"/>		A		A								
1101510-009	TP1-C1	Soil	1/21/2011 13:32	<input type="checkbox"/>		A		A								
1101510-010	TP1-E2	Soil	1/21/2011 13:09	<input type="checkbox"/>		A		A								

Test Legend:

1	8260VOC_W	2	G-MBTX_S	3	G-MBTX_W	4	MBTEXOXPBSCV-8260B_S	5	MBTEXOXPBSCV-8260B_V
6	TPH(D)_S	7	TPH(D)_W	8		9		10	
11		12							

Prepared by: Melissa Valles

Comments: BTEX, MTBE, DIPE, TAME, TBA, 1,2-DCA, and EDB added to samples TP1-gas-W, TP1-E1, TP1-W1, TP1-C1, and TP1-E2 1/24/11 per email

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
Hazardous samples will be returned to client or disposed of at client expense.



**Sample Receipt Checklist**

Client Name: **Environmental Service**

Date and Time Received: **1/21/2011 3:15:59 PM**

Project Name: **#2010-035; 1000 N. Vasco Rd**

Checklist completed and reviewed by: **Melissa Valles**

WorkOrder N°: **1101510** Matrix Soil/Water

Carrier: Client Drop-In

**Chain of Custody (COC) Information**

- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Sample IDs noted by Client on COC? Yes  No
- Date and Time of collection noted by Client on COC? Yes  No
- Sampler's name noted on COC? Yes  No

**Sample Receipt Information**

- Custody seals intact on shipping container/cooler? Yes  No  NA
- Shipping container/cooler in good condition? Yes  No
- Samples in proper containers/bottles? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No

**Sample Preservation and Hold Time (HT) Information**

- All samples received within holding time? Yes  No
- Container/Temp Blank temperature Cooler Temp: 7°C NA
- Water - VOA vials have zero headspace / no bubbles? Yes  No  No VOA vials submitted
- Sample labels checked for correct preservation? Yes  No
- Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA
- Samples Received on Ice? Yes  No

(Ice Type: WET ICE )

\* NOTE: If the "No" box is checked, see comments below.

-----

Client contacted:

Date contacted:

Contacted by:

Comments: BTEX by 8260 for sample TP2-Diesel-W was not received in a VOA. Ok to pour from liter per M.P.



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Environmental Service  5789 Gold Creek Drive  Castro Valley, CA 94552	Client Project ID: #2010-035; 1000 N. Vasco Rd	Date Sampled: 01/21/11
	Client Contact: Marc Papineau	Date Received: 01/21/11
	Client P.O.:	Date Extracted: 01/24/11
		Date Analyzed: 01/24/11

### Volatile Organics by P&T and GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1101510

Lab ID	1101510-001A				Reporting Limit for DF =1	
Client ID	TP2-Diesel-W					
Matrix	W					
DF	25					

Compound	Concentration				ug/kg	µg/L
Benzene	ND<12				NA	0.5
Ethylbenzene	190				NA	0.5
Toluene	800				NA	0.5
Xylenes	1500				NA	0.5

### Surrogate Recoveries (%)

%SS1:	82				
%SS2:	99				
%SS3:	85				

<b>Comments</b>	b6				
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\* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or surrogate coelutes with another peak.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor

b6) lighter than water immiscible sheen/product is present



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	Client Contact: Marc Papineau	Date Received: 01/21/11
	Client P.O.:	Date Extracted: 01/21/11-01/22/11
		Date Analyzed: 01/21/11-01/22/11

## Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE\*

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 1101510

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
002A	TP1-Gas-W	W	240	ND	ND	6.3	3.8	38	1	106	d2
007A	TP1-E1	S	ND	ND	ND	ND	ND	ND	1	86	
008A	TP1-W1	S	ND	ND	ND	ND	ND	ND	1	89	
009A	TP1-C1	S	ND	ND	ND	ND	ND	ND	1	80	
010A	TP1-E2	S	ND	ND	ND	ND	ND	ND	1	91	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	0.005	mg/Kg

\* water and vapor samples are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts in mg/L.

# cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference.

%SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

d2) heavier gasoline range compounds are significant (aged gasoline?)





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	Client Contact: Marc Papineau	Date Extracted: 01/24/11
	Client P.O.:	Date Analyzed: 01/24/11

### Oxygenates, MBTEX & Lead Scavengers by GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1101510

Lab ID	1101510-007A	1101510-008A	1101510-009A	1101510-010A	Reporting Limit for DF =1	
Client ID	TP1-E1	TP1-W1	TP1-C1	TP1-E2		
Matrix	S	S	S	S		
DF	1	1	1	1		

Compound	Concentration				mg/kg	ug/L
	tert-Amyl methyl ether (TAME)	ND	ND	ND	ND	0.005
Benzene	ND	ND	ND	ND	0.005	NA
t-Butyl alcohol (TBA)	ND	ND	ND	ND	0.05	NA
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	0.004	NA
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND	ND	0.004	NA
Diisopropyl ether (DIPE)	ND	ND	ND	ND	0.005	NA
Ethanol	ND	ND	ND	ND	0.5	NA
Ethylbenzene	ND	ND	ND	ND	0.005	NA
Ethyl tert-butyl ether (ETBE)	ND	ND	ND	ND	0.005	NA
Methanol	ND	ND	ND	ND	5.0	NA
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	0.005	NA
Toluene	ND	ND	ND	ND	0.005	NA
Xylenes	ND	ND	ND	ND	0.005	NA

### Surrogate Recoveries (%)

%SS1:	77	77	80	80		
%SS2:	109	107	106	106		
Comments						

\* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



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	Client Contact: Marc Papineau	Date Received: 01/21/11
	Client P.O.:	Date Extracted: 01/25/11
		Date Analyzed: 01/25/11

### Oxygenates, MBTEX & Lead Scavengers by GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1101510

Lab ID	1101510-002B				Reporting Limit for DF =1
Client ID	TP1-Gas-W				
Matrix	W				
DF	1				

Compound	Concentration				ug/kg	µg/L
	tert-Amyl methyl ether (TAME)	ND				NA
Benzene	ND				NA	0.5
t-Butyl alcohol (TBA)	5.0				NA	2.0
1,2-Dibromoethane (EDB)	ND				NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND				NA	0.5
Diisopropyl ether (DIPE)	ND				NA	0.5
Ethanol	ND				NA	50
Ethylbenzene	4.6				NA	0.5
Ethyl tert-butyl ether (ETBE)	ND				NA	0.5
Methanol	ND				NA	500
Methyl-t-butyl ether (MTBE)	0.98				NA	0.5
Toluene	7.6				NA	0.5
Xylenes	41				NA	0.5

### Surrogate Recoveries (%)

%SS1:	90			
%SS2:	93			
%SS3:	100			

### Comments

\* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

%SS = Percent Recovery of Surrogate Standard  
DF = Dilution Factor







**QC SUMMARY REPORT FOR SW8260B**

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 55671

WorkOrder 1101510

Analyte	Extraction SW5030B			Spiked Sample ID: 1101490-001A								
	Sample µg/L	Spiked µg/L	MS % Rec.	MSD % Rec.	MS-MSD % RPD	LCS % Rec.	LCSD % Rec.	LCS-LCSD % RPD	Acceptance Criteria (%)			
tert-Amyl methyl ether (TAME)	ND<5.0	10	89.1	91.1	2.24	82.9	82.2	0.853	70 - 130	30	70 - 130	30
Benzene	ND<5.0	10	97.4	100	2.75	96.7	94.8	2.04	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND<20	50	92.4	89.6	3.05	96	87.4	9.35	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND<5.0	10	102	102	0	105	104	1.42	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND<5.0	10	102	103	1.61	89.3	86.3	3.44	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND<5.0	10	103	106	2.87	101	97.4	3.09	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND<5.0	10	99.7	102	2.08	95.8	95.5	0.307	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND<5.0	10	110	109	0.714	109	106	2.60	70 - 130	30	70 - 130	30
Toluene	ND<5.0	10	92.6	93.6	1.05	102	98.4	3.23	70 - 130	30	70 - 130	30
%SS1:	97	25	81	81	0	88	88	0	70 - 130	30	70 - 130	30
%SS2:	97	25	102	101	1.18	94	93	1.21	70 - 130	30	70 - 130	30
%SS3:	81	2.5	91	89	1.74	99	98	1.52	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

BATCH 55671 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1101510-001A	01/21/11 11:23 AM	01/24/11	01/24/11 6:01 PM	1101510-002B	01/21/11 11:40 AM	01/25/11	01/25/11 4:01 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

\* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.  
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 55672

WorkOrder 1101510

EPA Method SW8260B	Extraction SW5030B								Spiked Sample ID: 1101393-001A			
	Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)		
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	0.050	78.9	75.4	4.49	78.5	78.3	0.183	70 - 130	30	70 - 130	30
Benzene	ND	0.050	107	97.1	10.1	112	111	0.846	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	0.25	87.7	83.8	4.58	79.7	81.2	1.88	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	0.050	91.5	87.3	4.68	90.9	91.2	0.412	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	0.050	97.2	90.4	7.29	98.9	98.3	0.619	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	0.050	113	104	8.64	117	115	2.24	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	0.050	98.8	91.5	7.67	100	99.5	0.906	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	105	98.2	6.90	105	104	0.734	70 - 130	30	70 - 130	30
Toluene	ND	0.050	112	101	9.97	116	113	2.80	70 - 130	30	70 - 130	30
%SS1:	85	0.13	92	94	2.29	94	95	0.768	70 - 130	30	70 - 130	30
%SS2:	99	0.13	106	105	0.648	105	103	1.73	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 55672 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1101510-007A	01/21/11 1:09 PM	01/24/11	01/24/11 2:48 PM	1101510-008A	01/21/11 1:25 PM	01/24/11	01/24/11 3:27 PM
1101510-009A	01/21/11 1:32 PM	01/24/11	01/24/11 4:06 PM	1101510-010A	01/21/11 1:09 PM	01/24/11	01/24/11 4:44 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



**QC SUMMARY REPORT FOR SW8021B/8015Bm**

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 55669

WorkOrder 1101510

Analyte	EPA Method SW8021B/8015Bm		Extraction SW5030B						Spiked Sample ID: 1101386-001A			
	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) <sup>f</sup>	ND	60	109	107	2.01	107	109	1.57	70 - 130	20	70 - 130	20
MTBE	ND	10	109	109	0	110	110	0	70 - 130	20	70 - 130	20
Benzene	ND	10	99.4	97.7	1.78	100	98.7	1.30	70 - 130	20	70 - 130	20
Toluene	ND	10	94.3	93.4	0.874	97.3	97.1	0.195	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	98.6	95.8	2.83	98	97.7	0.354	70 - 130	20	70 - 130	20
Xylenes	ND	30	101	98.1	2.81	101	101	0	70 - 130	20	70 - 130	20
%SS:	112	10	96	96	0	97	96	0.236	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

BATCH 55669 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1101510-002A	01/21/11 11:40 AM	01/22/11	01/22/11 1:16 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.



**QC SUMMARY REPORT FOR SW8021B/8015Bm**

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 55736

WorkOrder 1101510

Analyte	EPA Method SW8021B/8015Bm		Extraction SW5030B						Spiked Sample ID: 1101485-001A			
	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) <sup>f</sup>	ND	0.60	119	112	6.30	120	126	4.78	70 - 130	20	70 - 130	20
MTBE	ND	0.10	115	112	2.95	116	116	0	70 - 130	20	70 - 130	20
Benzene	ND	0.10	96.9	94.6	2.39	94.8	93.6	1.29	70 - 130	20	70 - 130	20
Toluene	ND	0.10	93.8	91.7	2.18	92.6	90.4	2.34	70 - 130	20	70 - 130	20
Ethylbenzene	ND	0.10	93.7	91.2	2.71	93	90.6	2.59	70 - 130	20	70 - 130	20
Xylenes	ND	0.30	93.5	90.6	3.18	92.8	90.5	2.57	70 - 130	20	70 - 130	20
%SS:	77	0.10	99	96	2.49	93	93	0	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

BATCH 55736 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1101510-003A	01/21/11 12:37 PM	01/21/11	01/22/11 8:13 AM	1101510-004A	01/21/11	01/21/11	01/22/11 8:43 AM
1101510-005A	01/21/11 12:49 PM	01/21/11	01/22/11 9:13 AM	1101510-006A	01/21/11 12:54 PM	01/21/11	01/22/11 9:43 AM
1101510-007A	01/21/11 1:09 PM	01/21/11	01/21/11 11:04 PM	1101510-008A	01/21/11 1:25 PM	01/21/11	01/21/11 11:34 PM
1101510-009A	01/21/11 1:32 PM	01/21/11	01/22/11 12:04 AM	1101510-010A	01/21/11 1:09 PM	01/21/11	01/22/11 12:34 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



**QC SUMMARY REPORT FOR SW8015B**

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 55729

WorkOrder 1101510

Analyte	EPA Method SW8015B			Extraction SW3550B					Spiked Sample ID: 1101471-007A			
	Sample mg/Kg	Spiked mg/Kg	MS % Rec.	MSD % Rec.	MS-MSD % RPD	LCS % Rec.	LCSD % Rec.	LCS-LCSD % RPD	Acceptance Criteria (%)			
TPH-Diesel (C10-C23)	33	40	87.6	106	10.4	92.1	92.9	0.863	70 - 130	30	70 - 130	30
%SS:	111	25	106	121	13.0	97	96	0.808	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

BATCH 55729 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1101510-003A	01/21/11 12:37 PM	01/21/11	01/22/11 1:41 AM	1101510-004A	01/21/11	01/21/11	01/24/11 2:53 PM
1101510-005A	01/21/11 12:49 PM	01/21/11	01/22/11 3:56 AM	1101510-006A	01/21/11 12:54 PM	01/21/11	01/22/11 5:03 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



### QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 55668

WorkOrder 1101510

EPA Method SW8015B		Extraction SW3510C							Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	118	124	4.62	N/A	N/A	70 - 130	30
%SS:	N/A	625	N/A	N/A	N/A	102	100	2.15	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 55668 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1101510-001A	01/21/11 11:23 AM	01/21/11	01/24/11 10:09 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.  
 % Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).  
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.  
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.  
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



**McC Campbell Analytical, Inc.**

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

Environmental Service  5789 Gold Creek Drive  Castro Valley, CA 94552	Client Project ID: #2010-035; 1000 N. Vasco	Date Sampled: 01/27/11
		Date Received: 01/27/11
	Client Contact: Marc Papineau	Date Reported: 02/03/11
	Client P.O.:	Date Completed: 02/10/11

**WorkOrder: 1101651**

February 10, 2011

Dear Marc:

Enclosed within are:

- 1) The results of the **13** analyzed samples from your project: **#2010-035; 1000 N. Vasco**,
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
Laboratory Manager  
McC Campbell Analytical, Inc.





**TABLE #2 RECOMMENDED MINIMUM VERIFICATION ANALYSES  
FOR UNDERGROUND STORAGE TANK INVESTIGATIONS**

(See explanation on following page.)

Tank Contents (Carbon Range)	Gasoline by 8015M or 8260B	Diesel by 8015M	BTEX by 8021B or 8260B	VOCs by 8260B <sup>(1)</sup>	Semi-VOCs by 8270C <sup>(2)</sup>	Oil & Grease by 1664A	PCBs by 8082	Total Lead by 7421	Title 22 Metals <sup>(3)</sup>
Unknown Fuel (C4-C36)	X	X		X				X	
Gasoline (C4-C20)	X			X				X	
Diesel (C10-C36)		X	X	X					
Jet Fuel/Kerosene (C9-C20)		X	X						
Heating Oil (C10-C32)		X	X						
Stoddard Solvent (C8-C20) (Non-Chlorinated)		X		X					
Chlorinated Solvents				X	X				
Waste Oil or Unknown Contents	X	X		X	X	X	X		X

Notes:

1. EPA Method 8260B analyses must include all analytes listed in the method plus fuel oxygenates methyl-tertiary-butyl ether (MTBE), diisopropyl ether (DIPE), ethyl-tertiary-butyl ether (EtBE), tertiary-amyl-methyl ether (TAME), tertiary-butanol (TBA), methanol and ethanol and fuel additives 1,2-dichloroethane (1,2-DCA) and ethylene dibromide (EDB or 1,2-dibromoethane).
2. If pentachlorophenol (PCP) is identified, analyze the soil and/or water sample for dioxins and furans by EPA Method 8290 and pesticides by EPA Method 8081A.
3. Method 6010B may be used for all but the following metals, for which individual AA methods are required: Antimony & Arsenic by 7062, Cadmium by 7131A, Lead by 7421, Mercury by 7471A, Nickel by 7521, Selenium by 7742, and Thallium by 7841.
4. Non-proprietary, performance based analytical methods may be used with approval of Regional Board staff

# McC Campbell Analytical, Inc.



1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1101651

ClientCode: ENVC

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  Fax   
 Email   
 HardCopy   
 ThirdParty   
 J-flag

**Report to:**

Marc Papineau  
Environmental Service  
5789 Gold Creek Drive  
Castro Valley, CA 94552  
510-881-8574    FAX 510-581-7204

Email: marc\_p@sbcglobal.net  
cc:  
PO:  
ProjectNo: #2010-035; 1000 N. Vasco

**Bill to:**

Rick Jeffery  
R&B Equipment  
2215 Dunn Road  
Hayward, CA 94545

**Requested TAT: 5 days**

**Date Received: 01/27/2011**

**Date Printed: 01/27/2011**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1101651-001	PL1-S1	Soil	1/27/2011 10:07	<input type="checkbox"/>		A											
1101651-002	PL1-S2	Soil	1/27/2011 10:16	<input type="checkbox"/>		A											
1101651-003	PL1-S3	Soil	1/27/2011 10:21	<input type="checkbox"/>		A											
1101651-004	PL1-S4	Soil	1/27/2011 10:30	<input type="checkbox"/>		A											
1101651-005	PL1-S5	Soil	1/27/2011 10:44	<input type="checkbox"/>		A											
1101651-006	PL2-S6	Soil	1/27/2011 10:59	<input type="checkbox"/>	A		A										
1101651-007	PL2-S7	Soil	1/27/2011 11:11	<input type="checkbox"/>	A		A										
1101651-008	PL2-S8	Soil	1/27/2011 11:30	<input type="checkbox"/>	A		A										
1101651-009	PL3-S9	Soil	1/27/2011 11:53	<input type="checkbox"/>	A		A										
1101651-010	PL3-S10	Soil	1/27/2011 12:10	<input type="checkbox"/>	A		A										
1101651-011	PL3-S11	Soil	1/27/2011 12:32	<input type="checkbox"/>	A		A										
1101651-012	PL3-S12	Soil	1/27/2011 12:43	<input type="checkbox"/>	A		A										
1101651-013	VP-S13	Soil	1/27/2011 13:23	<input type="checkbox"/>	A		A										

**Test Legend:**

1	G-MBTX S	2	GAS8260 S	3	TPH(D) S	4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A, 003A, 004A, 005A contain testgroup.

**Prepared by: Maria Venegas**

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
Hazardous samples will be returned to client or disposed of at client expense.



### Sample Receipt Checklist

Client Name: **Environmental Service**

Date and Time Received: **1/27/2011 3:30:05 PM**

Project Name: **#2010-035; 1000 N. Vasco**

Checklist completed and reviewed by: **Maria Venegas**

WorkOrder N°: **1101651** Matrix Soil

Carrier: Client Drop-In

#### Chain of Custody (COC) Information

- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Sample IDs noted by Client on COC? Yes  No
- Date and Time of collection noted by Client on COC? Yes  No
- Sampler's name noted on COC? Yes  No

#### Sample Receipt Information

- Custody seals intact on shipping container/cooler? Yes  No  NA
- Shipping container/cooler in good condition? Yes  No
- Samples in proper containers/bottles? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No

#### Sample Preservation and Hold Time (HT) Information

- All samples received within holding time? Yes  No
  - Container/Temp Blank temperature Cooler Temp: 2.8°C NA
  - Water - VOA vials have zero headspace / no bubbles? Yes  No  No VOA vials submitted
  - Sample labels checked for correct preservation? Yes  No
  - Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA
  - Samples Received on Ice? Yes  No
- (Ice Type: WET ICE )

\* NOTE: If the "No" box is checked, see comments below.

-----

Client contacted:

Date contacted:

Contacted by:

Comments:



# McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

Environmental Service  5789 Gold Creek Drive  Castro Valley, CA 94552	Client Project ID: #2010-035; 1000 N. Vasco	Date Sampled: 01/27/11
	Client Contact: Marc Papineau	Date Received: 01/27/11
	Client P.O.:	Date Extracted: 01/27/11
		Date Analyzed: 01/28/11-01/31/11

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE\*

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 1101651

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
006A	PL2-S6	S	---	---	ND	ND	ND	ND	1	77	
007A	PL2-S7	S	---	---	ND	ND	ND	ND	1	78	
008A	PL2-S8	S	---	---	ND	ND	ND	ND	1	77	
009A	PL3-S9	S	---	---	ND	ND	ND	ND	1	88	
010A	PL3-S10	S	---	---	ND<0.10	ND<0.10	ND<0.10	ND<0.10	20	84	d7
011A	PL3-S11	S	---	---	ND<0.050	ND<0.050	ND<0.050	ND<0.050	10	77	d7
012A	PL3-S12	S	---	---	ND<0.050	ND<0.050	ND<0.050	ND<0.050	10	78	d7
013A	VP-S13	S	---	---	ND	ND	ND	ND	1	84	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	ug/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg

\* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts in mg/L.

# cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference.

%SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram







# McC Campbell Analytical, Inc.

"When Quality Counts"

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Telephone: 877-252-9262 Fax: 925-252-9269

Environmental Service  5789 Gold Creek Drive  Castro Valley, CA 94552	Client Project ID: #2010-035; 1000 N. Vasco	Date Sampled: 01/27/11
		Date Received: 01/27/11
	Client Contact: Marc Papineau	Date Extracted: 01/27/11
	Client P.O.:	Date Analyzed: 01/28/11-02/02/11

### Oxygenates, MBTEX & Lead Scavengers by GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1101651

Lab ID	1101651-001A	1101651-002A	1101651-003A	1101651-004A	Reporting Limit for DF =1	
Client ID	PL1-S1	PL1-S2	PL1-S3	PL1-S4		
Matrix	S	S	S	S		
DF	1	1	1	1		

Compound	Concentration				mg/kg	ug/L
	tert-Amyl methyl ether (TAME)	ND	ND	ND	ND	0.005
Benzene	ND	ND	ND	ND	0.005	NA
t-Butyl alcohol (TBA)	ND	ND	ND	ND	0.05	NA
1,2-Dibromoethane (EDB)	ND	ND	ND	ND	0.004	NA
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND	ND	0.004	NA
Diisopropyl ether (DIPE)	ND	ND	ND	ND	0.005	NA
Ethanol	ND	ND	ND	ND	0.5	NA
Ethylbenzene	ND	ND	ND	ND	0.005	NA
Ethyl tert-butyl ether (ETBE)	ND	ND	ND	ND	0.005	NA
Methanol	ND	ND	ND	ND	5.0	NA
Methyl-t-butyl ether (MTBE)	ND	ND	ND	ND	0.005	NA
Toluene	ND	ND	ND	ND	0.005	NA
Xylenes	ND	ND	ND	ND	0.005	NA

### Surrogate Recoveries (%)

%SS1:	92	97	99	98	
%SS2:	106	108	105	105	

### Comments

\* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor



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Environmental Service  5789 Gold Creek Drive  Castro Valley, CA 94552	Client Project ID: #2010-035; 1000 N. Vasco	Date Sampled: 01/27/11
	Client Contact: Marc Papineau	Date Received: 01/27/11
	Client P.O.:	Date Extracted: 01/27/11
		Date Analyzed: 01/28/11-02/02/11

### Oxygenates, MBTEX & Lead Scavengers by GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1101651

Lab ID	1101651-005A				Reporting Limit for DF =1
Client ID	PL1-S5				
Matrix	S				
DF	1				

Compound	Concentration				mg/kg	ug/L
	tert-Amyl methyl ether (TAME)	ND				0.005
Benzene	ND				0.005	NA
t-Butyl alcohol (TBA)	ND				0.05	NA
1,2-Dibromoethane (EDB)	ND				0.004	NA
1,2-Dichloroethane (1,2-DCA)	ND				0.004	NA
Diisopropyl ether (DIPE)	ND				0.005	NA
Ethanol	ND				0.5	NA
Ethylbenzene	ND				0.005	NA
Ethyl tert-butyl ether (ETBE)	ND				0.005	NA
Methanol	ND				5.0	NA
Methyl-t-butyl ether (MTBE)	ND				0.005	NA
Toluene	ND				0.005	NA
Xylenes	ND				0.005	NA

### Surrogate Recoveries (%)

%SS1:	97			
%SS2:	104			

### Comments

\* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

%SS = Percent Recovery of Surrogate Standard

DF = Dilution Factor





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Environmental Service  5789 Gold Creek Drive  Castro Valley, CA 94552	Client Project ID: #2010-035; 1000 N. Vasco	Date Sampled: 01/27/11
	Client Contact: Marc Papineau	Date Received: 01/27/11
	Client P.O.:	Date Extracted: 01/27/11
		Date Analyzed 01/29/11-02/01/11

### Total Extractable Petroleum Hydrocarbons\*

Extraction method SW3550B

Analytical methods: SW8015B

Work Order: 1101651

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS	Comments
1101651-006A	PL2-S6	S	ND	1	117	
1101651-007A	PL2-S7	S	ND	1	116	
1101651-008A	PL2-S8	S	ND	1	115	
1101651-009A	PL3-S9	S	ND	1	115	
1101651-010A	PL3-S10	S	1400	10	99	e1
1101651-011A	PL3-S11	S	3200	20	102	e1
1101651-012A	PL3-S12	S	2700	20	97	e1
1101651-013A	VP-S13	S	ND	1	109	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA
	S	1.0	mg/Kg

\* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

# cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

%SS = Percent Recovery of Surrogate Standard. DF = Dilution Factor

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

e1) unmodified or weakly modified diesel is significant



**QC SUMMARY REPORT FOR SW8021B/8015Bm**

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 55830

WorkOrder 1101651

Analyte	EPA Method SW8021B/8015Bm		Extraction SW5030B						Spiked Sample ID: 1101628-001A			
	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) <sup>f</sup>	ND	0.60	114	122	6.57	114	116	1.74	70 - 130	20	70 - 130	20
MTBE	ND	0.10	116	118	2.21	109	114	4.39	70 - 130	20	70 - 130	20
Benzene	ND	0.10	93.6	95.1	1.55	92.5	95.5	3.21	70 - 130	20	70 - 130	20
Toluene	ND	0.10	90.3	91.5	1.32	89.3	92	2.99	70 - 130	20	70 - 130	20
Ethylbenzene	ND	0.10	90.1	91.3	1.33	89.3	91.6	2.48	70 - 130	20	70 - 130	20
Xylenes	ND	0.30	89	90.3	1.36	88.9	92.1	3.50	70 - 130	20	70 - 130	20
%SS:	103	0.10	76	80	4.90	86	86	0	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

BATCH 55830 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1101651-006A	01/27/11 10:59 AM	01/27/11	01/28/11 8:53 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



**QC SUMMARY REPORT FOR SW8021B/8015Bm**

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 55865

WorkOrder 1101651

EPA Method SW8021B/8015Bm		Extraction SW5030B							Spiked Sample ID: 1101648-002A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) <sup>£</sup>	ND	0.60	99.9	89.5	11.0	97.2	95.4	1.82	70 - 130	20	70 - 130	20
MTBE	ND	0.10	121	117	3.33	112	114	1.16	70 - 130	20	70 - 130	20
Benzene	ND	0.10	97.5	99.9	2.49	103	101	1.80	70 - 130	20	70 - 130	20
Toluene	ND	0.10	94.6	97.2	2.70	99.1	98.1	1.09	70 - 130	20	70 - 130	20
Ethylbenzene	ND	0.10	95.9	98.5	2.66	100	98.6	1.77	70 - 130	20	70 - 130	20
Xylenes	ND	0.30	99	101	2.15	103	101	1.94	70 - 130	20	70 - 130	20
%SS:	86	0.10	99	102	3.40	102	105	2.77	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

BATCH 55865 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1101651-007A	01/27/11 11:11 AM	01/27/11	01/28/11 9:54 PM	1101651-008A	01/27/11 11:30 AM	01/27/11	01/28/11 11:55 PM
1101651-009A	01/27/11 11:53 AM	01/27/11	01/29/11 4:25 AM	1101651-010A	01/27/11 12:10 PM	01/27/11	01/31/11 7:28 PM
1101651-011A	01/27/11 12:32 PM	01/27/11	01/31/11 9:59 PM	1101651-012A	01/27/11 12:43 PM	01/27/11	01/31/11 10:59 PM
1101651-013A	01/27/11 1:23 PM	01/27/11	01/29/11 2:25 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 55870

WorkOrder 1101651

Analyte	Extraction SW5030B								Spiked Sample ID: 1101651-005A			
	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	0.050	79.1	78.4	0.883	76.6	76.7	0.189	70 - 130	30	70 - 130	30
Benzene	ND	0.050	113	114	0.921	115	113	1.58	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	0.25	86.2	85.7	0.606	93.6	95.9	2.42	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	0.050	102	102	0	101	100	0.827	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	0.050	97.4	97.5	0.0152	93.5	87.7	6.31	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	0.050	103	103	0	110	107	2.90	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	0.050	92.9	92.2	0.722	94	91.7	2.45	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	98.3	98.2	0.105	102	101	1.40	70 - 130	30	70 - 130	30
Toluene	ND	0.050	119	118	0.370	128	123	3.79	70 - 130	30	70 - 130	30
%SS1:	97	0.13	88	88	0	96	97	0.430	70 - 130	30	70 - 130	30
%SS2:	104	0.13	111	110	0.435	104	103	1.39	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 55870 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1101651-001A	01/27/11 10:07 AM	01/27/11	01/28/11 3:58 PM	1101651-001A	01/27/11 10:07 AM	01/27/11	02/02/11 2:05 PM
1101651-001A	01/27/11 10:07 AM	01/27/11	02/02/11 9:06 PM	1101651-002A	01/27/11 10:16 AM	01/27/11	01/28/11 4:40 PM
1101651-002A	01/27/11 10:16 AM	01/27/11	01/28/11 4:40 PM	1101651-003A	01/27/11 10:21 AM	01/27/11	01/28/11 5:22 PM
1101651-003A	01/27/11 10:21 AM	01/27/11	01/28/11 5:22 PM	1101651-004A	01/27/11 10:30 AM	01/27/11	01/28/11 6:05 PM
1101651-004A	01/27/11 10:30 AM	01/27/11	01/28/11 6:05 PM	1101651-005A	01/27/11 10:44 AM	01/27/11	01/28/11 6:47 PM
1101651-005A	01/27/11 10:44 AM	01/27/11	01/28/11 6:47 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / (MS + MSD) \* 2.

MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery. The LCS and LCSD are spikes into a clean, known, similar matrix and they and the surrogate standards reflect the overall validity of their extraction batch. Our control limits are 70-130% recovery and a 30% RPD for the LCS-LCSD and for the Surrogate Standards.



### QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 55831

WorkOrder 1101651

EPA Method SW8015B		Extraction SW3550B							Spiked Sample ID: 1101603-001A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	190	40	116	124	1.43	117	116	0.502	70 - 130	30	70 - 130	30
%SS:	93	25	99	108	8.76	82	80	1.50	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 55831 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1101651-006A	01/27/11 10:59 AM	01/27/11	01/30/11 6:26 AM	1101651-007A	01/27/11 11:11 AM	01/27/11	01/29/11 11:09 PM
1101651-008A	01/27/11 11:30 AM	01/27/11	01/30/11 12:22 AM	1101651-009A	01/27/11 11:53 AM	01/27/11	01/30/11 1:35 AM
1101651-010A	01/27/11 12:10 PM	01/27/11	02/01/11 2:22 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



**QC SUMMARY REPORT FOR SW8015B**

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 55869

WorkOrder 1101651

EPA Method SW8015B		Extraction SW3550B							Spiked Sample ID: 1101651-013A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	2.8	40	90.1	90.2	0.0600	117	117	0	70 - 130	30	70 - 130	30
%SS:	105	25	106	106	0	81	80	0.892	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

BATCH 55869 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1101651-011A	01/27/11 12:32 PM	01/27/11	02/01/11 5:18 AM	1101651-012A	01/27/11 12:43 PM	01/27/11	02/01/11 6:57 AM
1101651-013A	01/27/11 1:23 PM	01/27/11	02/01/11 5:47 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



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Telephone: 877-252-9262 Fax: 925-252-9269

Environmental Service  5789 Gold Creek Drive  Castro Valley, CA 94552	Client Project ID: #2010-035; 1000 N. Vasco	Date Sampled: 01/27/11
		Date Received: 01/27/11
	Client Contact: Marc Papineau	Date Reported: 02/03/11
	Client P.O.:	Date Completed: 02/07/11

**WorkOrder: 1101651 A**

February 10, 2011

Dear Marc:

Enclosed within are:

- 1) The results of the **5** analyzed samples from your project: **#2010-035; 1000 N. Vasco**,
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
Laboratory Manager  
McC Campbell Analytical, Inc.





# McC Campbell Analytical, Inc.



1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD

WorkOrder: **1101651 A** ClientCode: **ENVC**

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  Fax   
 Email   
 HardCopy   
 ThirdParty   
 J-flag

**Report to:**

Marc Papineau  
Environmental Service  
5789 Gold Creek Drive  
Castro Valley, CA 94552  
510-881-8574    FAX 510-581-7204

Email: marc\_p@sbcglobal.net  
cc:  
PO:  
ProjectNo: #2010-035; 1000 N. Vasco

**Bill to:**

Rick Jeffery  
R&B Equipment  
2215 Dunn Road  
Hayward, CA 94545

**Requested TAT: 5 days**

**Date Received: 01/27/2011**

**Date Add-On: 02/03/2011**

**Date Printed: 02/03/2011**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1101651-001	PL1-S1	Soil	1/27/2011 10:07	<input type="checkbox"/>	A												
1101651-002	PL1-S2	Soil	1/27/2011 10:16	<input type="checkbox"/>	A												
1101651-003	PL1-S3	Soil	1/27/2011 10:21	<input type="checkbox"/>	A												
1101651-004	PL1-S4	Soil	1/27/2011 10:30	<input type="checkbox"/>	A												
1101651-005	PL1-S5	Soil	1/27/2011 10:44	<input type="checkbox"/>	A												

**Test Legend:**

1	TPH(D)_S	2		3		4		5	
6		7		8		9		10	
11		12							

**Prepared by: Maria Venegas**

**Comments:**    TPH(d) added 2/3/11 5 day per email

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
Hazardous samples will be returned to client or disposed of at client expense.



# McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mccampbell.com E-mail: main@mccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

Environmental Service  5789 Gold Creek Drive  Castro Valley, CA 94552	Client Project ID: #2010-035; 1000 N. Vasco	Date Sampled: 01/27/11
	Client Contact: Marc Papineau	Date Received: 01/27/11
	Client P.O.:	Date Extracted: 02/03/11
		Date Analyzed 02/03/11-02/05/11

### Total Extractable Petroleum Hydrocarbons\*

Extraction method SW3550B

Analytical methods: SW8015B

Work Order: 1101651

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	DF	% SS	Comments
1101651-001A	PL1-S1	S	4.0	1	119	e2,e4
1101651-002A	PL1-S2	S	ND	1	118	
1101651-003A	PL1-S3	S	1.5	1	115	e2
1101651-004A	PL1-S4	S	1.3	1	110	e7
1101651-005A	PL1-S5	S	ND	1	117	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA
	S	1.0	mg/Kg

\* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

# cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

%SS = Percent Recovery of Surrogate Standard. DF = Dilution Factor

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation:

e2) diesel range compounds are significant; no recognizable pattern  
e4) gasoline range compounds are significant.  
e7) oil range compounds are significant



### QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 55921

WorkOrder 1101651

EPA Method SW8015B		Extraction SW3550B							Spiked Sample ID: 1101733-010A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	ND	40	122	124	1.98	112	112	0	70 - 130	30	70 - 130	30
%SS:	118	25	86	86	0	97	97	0	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 55921 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1101651-001A	01/27/11 10:07 AM	02/03/11	02/04/11 8:03 PM	1101651-002A	01/27/11 10:16 AM	02/03/11	02/04/11 9:15 PM
1101651-003A	01/27/11 10:21 AM	02/03/11	02/05/11 12:42 AM	1101651-004A	01/27/11 10:30 AM	02/03/11	02/03/11 8:59 PM
1101651-005A	01/27/11 10:44 AM	02/03/11	02/04/11 11:34 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



**McC Campbell Analytical, Inc.**

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

Environmental Service  5789 Gold Creek Drive  Castro Valley, CA 94552	Client Project ID: #2010-035; 1000 N. Vasco	Date Sampled: 01/27/11
		Date Received: 01/27/11
	Client Contact: Marc Papineau	Date Reported: 02/03/11
	Client P.O.:	Date Completed: 01/31/11

**WorkOrder: 1101653**

February 03, 2011

Dear Marc:

Enclosed within are:

- 1) The results of the 2 analyzed samples from your project: #2010-035; 1000 N. Vasco,
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
Laboratory Manager  
McC Campbell Analytical, Inc.

1101653



**McCAMPBELL ANALYTICAL, INC.**

1534 WILLOW PASS ROAD  
PITTSBURG, CA 94565-1701

Website: [www.mccampbell.com](http://www.mccampbell.com) Email: [main@mccampbell.com](mailto:main@mccampbell.com)  
Telephone: (877) 252-9262 Fax: (925) 252-9269

**CHAIN OF CUSTODY RECORD**

TURN AROUND TIME

RUSH  24 HR  48 HR  72 HR  5 DAY

GeoTracker EDF  PDF  Excel  Write On (DW)

Check if sample is effluent and "J" flag is required

Report To: M. PAPINEAU Bill To: R & B EQUIPMENT  
Company: environmental servce HAYWARD, CA  
5789 GOLD CREEK DR.  
CASTRO VALLEY CA E-Mail: marc.p@sbglobal.net  
Tele: (510) 881-8574 Fax: (510) 581-7204  
Project #: 2100035 Project Name: 1000 N. VASCO  
Project Location: 1000 N. VASCO RD. LIVERMORE, CA  
Sampler Signature: Marc Papineau (MP)

**Analysis Request**

**Other** **Comments**

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				BTEX & TPH as Gas (602 / 8021 + 8015) / MTBE TPH as Diesel (8015)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	AHHB / BTEX ONLY (EPA 602 / 8021)	EPA 505/ 608 / 8081 (CI Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic CI Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)	Lead (200.7 / 200.8 / 6010 / 6020)	EPA 8260 Gas/BTEX/MISC		Filter Samples for Metals analysis: Yes / No			
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO <sub>3</sub>	Other																					
STK-PL3	stockpile	1-27-11	1301	1	B	✓					✓																								
STK-PL2	stockpile	1-27-11	1306	1	B	✓					✓																								

Relinquished By: [Signature] Date: 1-27-11 Time: 1507 Received By: [Signature]  
Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_  
Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_

ICE/# 28 COMMENTS:  
GOOD CONDITION ✓ B = 2" diameter  
HEAD SPACE ABSENT ✓ x 6" brass sleeve  
DECHLORINATED IN LAB ✓  
APPROPRIATE CONTAINERS ✓  
PRESERVED IN LAB ✓  
VOAS O&G METALS OTHER  
PRESERVATION pH<2

# McC Campbell Analytical, Inc.



1534 Willow Pass Rd  
 Pittsburg, CA 94565-1701  
 (925) 252-9262

# CHAIN-OF-CUSTODY RECORD

**WorkOrder: 1101653**

**ClientCode: ENVC**

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  Fax   
 Email   
 HardCopy   
 ThirdParty   
 J-flag

<b>Report to:</b>		<b>Bill to:</b>	<b>Requested TAT: 5 days</b>
Marc Papineau	Email: marc_p@sbcglobal.net	Rick Jeffery	
Environmental Service	cc:	R&B Equipment	<i>Date Received: 01/27/2011</i>
5789 Gold Creek Drive	PO:	2215 Dunn Road	<i>Date Printed: 01/27/2011</i>
Castro Valley, CA 94552	ProjectNo: #2010-035; 1000 N. Vasco	Hayward, CA 94545	
510-881-8574    FAX 510-581-7204			

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1101653-001	STK-PL3	Soil	1/27/2011 13:01	<input type="checkbox"/>	A	A											
1101653-002	STK-PL2	Soil	1/27/2011 13:06	<input type="checkbox"/>	A	A											

**Test Legend:**

1	G-MBTX_S	2	TPH(D)_S	3		4		5	
6		7		8		9		10	
11		12							

**Prepared by: Maria Venegas**

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
 Hazardous samples will be returned to client or disposed of at client expense.



**Sample Receipt Checklist**

Client Name: **Environmental Service**

Date and Time Received: **1/27/2011 4:06:48 PM**

Project Name: **#2010-035; 1000 N. Vasco**

Checklist completed and reviewed by: **Maria Venegas**

WorkOrder N°: **1101653** Matrix Soil

Carrier: Client Drop-In

**Chain of Custody (COC) Information**

- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Sample IDs noted by Client on COC? Yes  No
- Date and Time of collection noted by Client on COC? Yes  No
- Sampler's name noted on COC? Yes  No

**Sample Receipt Information**

- Custody seals intact on shipping container/cooler? Yes  No  NA
- Shipping container/cooler in good condition? Yes  No
- Samples in proper containers/bottles? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No

**Sample Preservation and Hold Time (HT) Information**

- All samples received within holding time? Yes  No
  - Container/Temp Blank temperature Cooler Temp: 2.8°C NA
  - Water - VOA vials have zero headspace / no bubbles? Yes  No  No VOA vials submitted
  - Sample labels checked for correct preservation? Yes  No
  - Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA
  - Samples Received on Ice? Yes  No
- (Ice Type: WET ICE )

\* NOTE: If the "No" box is checked, see comments below.

-----

Client contacted:

Date contacted:

Contacted by:

Comments:









**QC SUMMARY REPORT FOR SW8021B/8015Bm**

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 55865

WorkOrder 1101653

Analyte	EPA Method SW8021B/8015Bm		Extraction SW5030B						Spiked Sample ID: 1101648-002A			
	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) <sup>f</sup>	ND	0.60	99.9	89.5	11.0	97.2	95.4	1.82	70 - 130	20	70 - 130	20
MTBE	ND	0.10	121	117	3.33	112	114	1.16	70 - 130	20	70 - 130	20
Benzene	ND	0.10	97.5	99.9	2.49	103	101	1.80	70 - 130	20	70 - 130	20
Toluene	ND	0.10	94.6	97.2	2.70	99.1	98.1	1.09	70 - 130	20	70 - 130	20
Ethylbenzene	ND	0.10	95.9	98.5	2.66	100	98.6	1.77	70 - 130	20	70 - 130	20
Xylenes	ND	0.30	99	101	2.15	103	101	1.94	70 - 130	20	70 - 130	20
%SS:	86	0.10	99	102	3.40	102	105	2.77	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

BATCH 55865 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1101653-001A	01/27/11 1:01 PM	01/27/11	01/29/11 3:55 AM	1101653-002A	01/27/11 1:06 PM	01/27/11	01/28/11 11:11 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.



### QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Soil

QC Matrix: Soil

BatchID: 55869

WorkOrder 1101653

EPA Method SW8015B		Extraction SW3550B							Spiked Sample ID: 1101651-013A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	2.8	40	90.1	90.2	0.0600	117	117	0	70 - 130	30	70 - 130	30
%SS:	105	25	106	106	0	81	80	0.892	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

#### BATCH 55869 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1101653-001A	01/27/11 1:01 PM	01/27/11	01/30/11 7:39 AM	1101653-002A	01/27/11 1:06 PM	01/27/11	01/31/11 10:28 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery =  $100 * (MS - Sample) / (Amount Spiked)$ ; RPD =  $100 * (MS - MSD) / ((MS + MSD) / 2)$ .

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.