# RECEIVED

9:21 am, Jun 30, 2009

Alameda County Environmental Health

Phone: 925-226-5845 Fax: 925-226-5990 jeff.brown@safeway.com

SAFEWAY ()

June 24, 2009

Paresh C. Khatri ALAMEDA COUNTY ENVIRONMENTAL HEALTH 131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

Project No. 33108-0086470.00

Subject: Groundwater Monitoring Report – Second Quarter 2009 Former Quest Laboratory 6511 Golden Gate Drive Dublin, California (Fuel Leak Case No. RO0002860)

Dear Mr. Khatri:

On behalf of Safeway, Bureau Veritas North America, Inc. has prepared the attached *Groundwater Monitoring Report – Second Quarter 2009* for the above site in Dublin, California. I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

If you have any comments or questions regarding the report please contact me at (925) 226-5845 or at jeff.brown @safeway.com.

Sincerely,

Jeffrey Brown, CIH Director, Environmental Affairs

enclosure



June 23, 2009

Paresh C. Khatri ALAMEDA COUNTY ENVIRONMENTAL HEALTH 131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

Project No. 33108-0086470.00

Subject: Groundwater Monitoring Report – Second Quarter 2009 Former Quest Laboratory 6511 Golden Gate Drive Dublin, California (Fuel Leak Case No. RO0002860)

Dear Mr. Khatri:

Bureau Veritas North America, Inc. is pleased to present the attached *Groundwater Monitoring Report* – *Second Quarter 2009* for the above site in Dublin, California. The report summarizes the findings of our investigation.

Bureau Veritas is pleased to be of service to Alameda County Environmental Health and Safeway Inc. Please contact me at 925.426.2679 or by email at don.ashton@us.bureauveritas.com, if you have any questions or comments.

Sincerely,

Of fighton

Donald Ashton Senior Geologist Environmental Services

cc: Kevin Thompson – Safeway Inc. Jeff Brown – Safeway Inc.

# Bureau Veritas North America, Inc.

Health, Safety, and Environmental Services 2430 Camino Ramon, Suite 122 San Ramon, CA 94583 Main: (925) 426-2600 Fax: (925) 426-0106 www.us.bureauveritas.com

# Groundwater Monitoring Report Second Quarter 2009 (Fuel Leak Case No. RO0002860)

Former Quest Laboratory 6511 Golden Gate Drive Dublin, California

> June 23, 2009 Project No. 33108-008647.00

> > Prepared for Safeway Inc. Pleasanton, California



For the benefit of business and people

Bureau Veritas North America, Inc.

2430 Camino Ramon, Suite 122 San Ramon, California 94583 925.426.2600 www.us.bureauveritas.com



# CONTENTS

<u>Secti</u>	on Pa	ge
1.0	INTRODUCTION	1
2.0	BACKGROUND	1
3.0	SCOPE OF WORK	1
	<ul> <li>3.1 GROUNDWATER MONITORING AND SAMPLING ACTIVITIES</li> <li>3.1.1 Well Monitoring and Sampling</li> </ul>	2 2
4.0	LABORATORY ANALYSIS	2
50	FINDINGS	2
5.0		ייי ב
	5.2 GROUNDWATER	3
6.0	CONCLUSION	3
7.0	RECOMMENDATIONS	3
8.0	LIMITATIONS	4
<u>Table</u>	<u>s</u>	
1	Groundwater Elevation Data	
2	Summary of Groundwater Analytical Results	
<u>Figur</u>	es	
1	Site Location Map	
2	Site Plan with Sample Locations	
3	Groundwater Elevation Map 4-16-09	
<u>Appe</u>	ndices	

- A Groundwater Sampling Data Sheets
- B Laboratory Analytical Data Sheets and Chain-of-Custody Record



# 1.0 INTRODUCTION

Safeway Inc. (Safeway) retained Bureau Veritas North America, Inc. (Bureau Veritas) to perform groundwater monitoring for the second 2009 quarterly event at the former Quest Laboratory property located at 6511 Golden Gate Drive in Dublin, California (the Site, Figure 1). This work was performed regarding Alameda County Environmental Health (ACEH) Fuel Leak Case No. RO0002860 in response to a letter from the ACEH, dated September 16, 2008.

# 2.0 BACKGROUND

In 2003, prior to purchasing the site, Safeway retained Clayton Group Services, Inc. (now Bureau Veritas) to conduct Phase I and II Environmental Site Assessments. The Phase I ESA found that the Site had been used for agriculture from at least 1954 to about 1981, when the current facility was constructed. The facility was used as a biomedical laboratory from 1982 to late 2003, when Quest Laboratory vacated the facility and sold the property to Safeway. A former gasoline UST existed at the north property boundary and was removed in 1989, receiving closure by ACEH in 1990. Clayton's *Phase II Environmental Investigation at the Former Quest Laboratory 6511 Golden Gate Drive, Dublin, California*, dated April 26, 2004 (Clayton 2004) reports the finding of petroleum hydrocarbons in groundwater in a limited number of samples collected below and downgradient of the former UST. On October 7, 2004, Clayton submitted a copy of its 2004 Phase II report to ACEH disclosing the petroleum hydrocarbon findings at the request of Safeway.

ACEH notified Safeway that the site had been re-opened as a Fuel Leak Case (Geotracker Global ID: T06019799610) requiring additional investigation, in a letter dated July 3, 2008. Bureau Veritas conducted an additional investigation, installed three groundwater-monitoring wells, and submitted a report summarizing its findings entitled: *Additional Soil and Groundwater Investigation at Former Quest Laboratory*, dated March 13, 2009. Groundwater in two wells was found to contain low concentrations of petroleum hydrocarbons that slightly exceeded the Environmental Screening Levels (ESLs) established by the San Francisco Bay Regional Water Quality Control Board (RWQCB). To further characterize the local groundwater quality, a subsequent quarterly monitoring event was conducted, and the findings are summarized in this report.

# 3.0 SCOPE OF WORK

Bureau Veritas performed the following scope of work:

- Conducted groundwater depth monitoring and collected groundwater samples from each well.
- Analyzed groundwater samples for petroleum hydrocarbons.
- Prepared this technical report that documents the field activities, findings, with conclusions.



• Submitted data to the State Water Resources Control Board (SWRCB) GeoTracker program (following completion of final report).

# 3.1 GROUNDWATER MONITORING AND SAMPLING ACTIVITIES

### 3.1.1 Well Monitoring and Sampling

On the day of sampling (April 16, 2009), the well casings were opened allowing the groundwater levels to stabilize. The depth to water and the total depth of the water column were measured in each casing, and the volume of the water columns calculated. The wells were then purged using a 'low-flow purging technique' and the water quality parameters were monitored. A peristaltic pump with new tubing was used to purge groundwater from each monitoring well at a 'low flow' rate of approximately 300 milliliters or less per minute. Water quality parameters (pH, specific conductivity, temperature, turbidity, oxidation-reduction potential (ORP), and dissolved oxygen) were recorded onto well monitoring data sheets at timed intervals, and the data was recorded onto sampling data sheets (Appendix A).

Upon purging sufficient water from the monitoring wells and allowing for sufficient recovery, groundwater samples were collected for laboratory analysis. The sample container size, type, and sample preservative corresponded to the requested analytical method. Sample containers were sealed, labeled with identifying information, logged onto the chain-of custody, and temporarily stored in a chilled ice-chest for transportation to the laboratory. Groundwater removed from monitoring wells during development and purging was stored onsite in a sealed and labeled 55-gallon drum meeting Department of Transportation requirements, pending proper disposal.

# 4.0 LABORATORY ANALYSIS

Bureau Veritas submitted three (3) groundwater samples for laboratory analysis by the following United States Environmental Protection Agency (USEPA) approved methods:

- USEPA Method 8015C Modified for Purgable Total Petroleum Hydrocarbons as gasoline (TPH-G), and Extractable Petroleum Hydrocarbons as diesel and motor oil (TPH-D and TPH-O).
- USEPA Method 8260B for Aromatic Organic Compounds (Benzene, Toluene, Ethylbenzene, and Xylenes BTEX) and Fuel Oxygenates [OYX as: Diisopropyl ether (DIPE), Ethyl tert-butyl ether (ETBE), Methyl-t-butyl ether (MTBE), t-Butyl alcohol (TBA), tert-Amyl methyl ether (TAME)].

Groundwater samples were analyzed by McCampbell Analytical, Inc. of Pittsburg, California, a state certified laboratory. The laboratory prepared the generated data in the required electronic deliverable data (EDD) format for uploading into GeoTracker database.

#### 5.0 FINDINGS

A summary of the findings from this investigation is presented below.



# 5.1 GROUNDWATER ELEVATION MONITORING

On April 16, 2009 the groundwater elevation was found to range between 327.72 feet (MW-2) and 328.13 feet (MW-1) above mean sea level. Groundwater elevations are presented in Table 1. This data was used to produce a groundwater elevation map with contours (Figure 3). Groundwater flow interpreted from this data is to the east at a gradient of 0.003 feet per foot.

# 5.2 GROUNDWATER

Analytical results for the three analyzed groundwater samples (MW-1, MW-2 and MW-3) were found to be below the laboratory reporting limits for TPH ranged compounds and BTEX-OXY compounds. The analytical results for the groundwater samples are summarized in Table 2.

# 6.0 CONCLUSION

The easterly groundwater gradient measured for this monitoring event follows the regional topography. Concentrations of TPH and BTEX-OXY compounds were not detected in groundwater and appear to indicate that the aged on site fuel release has degraded significantly. The relatively flat groundwater gradient indicates that groundwater is migrating at a slow rate.

#### 7.0 RECOMMENDATIONS

Bureau Veritas recommends continued groundwater monitoring to further demonstrate the groundwater quality at the Site per ACEH's request.



#### 8.0 LIMITATIONS

The information and opinions included in this report were given in response to a specific scope of work and should be considered and implemented only in light of that particular scope of work. The services provided by Bureau Veritas in completing this project have been provided in a manner consistent with the normal standards of the profession. No other warranty, expressed or implied, is made.

This report was prepared by:

Donald A. Ashton, P.G. Senior Geologist Environmental Services

Pad DONALD A. ASHTO NO. 5993

This report was reviewed by:

Jon A. Rosso, P.E. Director Environmental Services San Francisco Regional Office June 23, 2009



TABLES

# TABLE 1Groundwater Elevation Data6511 Golden Gate Drive, Dublin, CAProject No. 33108-0086470.00

Monitoring Well	Measurement Date	Top of Casing (TOC) Elevation * (ft) NGVD 29	Depth to Groundwater (ft) from TOC	Groundwater Elevation (ft)	Change from Previous Measurement (ft)
<b>MW-1</b>	1/15/2009 4/16/2009	342.68	15.59 14.55	327.09 328.13	First Event 1.04
MW-2	1/15/2009 4/16/2009	342.53	15.79 14.81	326.74 327.72	First Event 0.98
MW-3	1/15/2009 4/16/2009	342.99	16.21 15.21	326.78 327.78	First Event 1.00

#### Legend

\* = Well Casing survey conducted on January 28, 2009 by Virgil Chavez Land Surveying (Geotracker ID: T06019799610)

NGVD 29 = National Geodetic Vertical Datum - 1929

Well Screen intervals: 10' to 20' bgs (installed January 8, 2009).

# TABLE 2Summary of Groundwater Analytical Results - TPH and VOCs6511 Golden Gate Drive, Dublin, CAProject No. 33108-008647.00

Sample ID	Date	Units	TPH-g	TPH-d	TPH-mo	Aromatics BTEX	Oxygenates: MTBE, TAME, DIPE, ETBE	Oxygenate TBA	EDB & 1,2-DCA	sec-Butyl benzene	4-Isopropyl toluene
MW-1	1/15/2009	ug/L	99	89	<250	<0.5	<0.5	<2.0	<0.5	0.53	<0.5
	4/16/2009	ug/L	<50	<50	<250	<0.5	<0.5	<2.0			
MW-2	1/15/2009	ug/L	<50	<50	<250	<0.5	<0.5	<2.0	<0.5	<0.5	0.62
	4/16/2009	ug/L	<50	<50	<250	<0.5	<0.5	<2.0			
MW-3	1/15/2009	ug/L	140	85	<250	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5
	4/16/2009	ug/L	<50	<50	<250	<0.5	<0.5	<2.0			
ESLs - Tie	er 1 - Table A	ug/L	100	100	100	1	Varies	NE	Varies	NE	NE

#### Notes:

ug/L = micrograms per liter

TPH = Total Petroleum Hydrocarbons, compound range as gasoline (-g) by EPA Method 8015C

TPH = Total Petroleum Hydrocarbons, compound ranges as diesel (-d) and motor oil (-mo) by EPA Method 8015C with Silica Gel Cleanup

Aromatic volatiles = BTEX: benzene, toluene, ethylbenzene, & xylenes by EPA Method 8260B

Oygenates: MTBE (methyl t-butyl ether), TAME (tert-Amyl methyl ether), DIPE (Diisopropyl ether), & ETBE (Ethyl tert-butyl ether) by EPA Method 8260B Oxygenate: TBA (Tert-butyl alcohol)

EDB & 1,2-DCA = lead scavengers: ethylene dibromide & 1,2-dichloroethane

<0.5 = Analyte concentration below the indicated laboratory reporting level

-- = Not Analyzed

NE = Not established

ESLs = Environmental Screening Level: Screening For Environmental Concerns At Sites with Contaminated Soil and Groundwater, RWQCB Interim Final - November 2007; Table A: Groundwater (<3 meter bgs) is a potential source of drinking water



FIGURES









# APPENDIX A

# SAMPLING DATA SHEETS



		GROUND	<b>WATER</b>	SAMPLING DAT	A SHE	ET						
F	Project Name:	Safeway		Well ID Number:	MW-1							
	Project No .:	33108-008647	.00	Sample ID Number:		Ν	/W-1					
Pro	ject Location:	Dublin, CA	**	Date Gauged:	4 / 16 /2009							
Fiel	d Technician:	Jeremy Wilson		Date Purged:	l: 4 / 16 /2009							
Weathe	er Conditions:	mostly clear / mi	<u>nd</u>	Date Sampled:		4/1	<b>1</b> /2009					
Top of Casing	Elevation (ft, msl)	342.6.8		Casing Diameter	(inches):		1.0					
Depth to V	vater (ft, btoc):	15-11 14.	55	Wellhead C	Condition:	OX	*					
Groundwater	Elevation (ft, msl):	North 328,	13	Presence of Wellhea	ad Gases:	No						
Depth to Wei	Bottom (ft, btoc):	25.13		Vapor Readir	ng (ppm):	AU A						
Water Colu	ımn Height (ft):	10,58		Presence	e of SPH:	No						
Calculated P	urge Volume (gal):	0.92		Thickness of	SPH (ft):	NA						
Actual Purg	e Volume (gal):	Gallons Per Foot	1"=0.04 2"	CC	omments:	= r2 x 0 163		V DOBE DISCOUT				
			PURGI		TS	- 12 x 0.103						
		Specific										
Time	Volume	Conductivity	Temp	Dissolved	PH (STD	Turbidity	ORP	Odor/Comment				
1 11116	(gal)	(Range: mS/cm -	(°C)	/%)	(STD units)		(mV)	s				
1010	(9)	uS/cm)			unitor	120 g, 2						
13 45	0	1.62	21.13	6.43	25 .?	993	11.4	No				
1351	0.4	1.38	19.96	6.4.13	6.62	269	13.2	No				
1357	0,4	1.23	19.70	3,33	6.56	118	12,3	No				
1403	0.4	1.16	19.46	3.02	6,73	198	8.4	NO				
1409	0.4	1.13	19.32	3.00	6.73	1 390	9.1	NO				
1415	0.4	1.08	19.44	3.21	6.67	334	10.0	NO				
1421	0.4	6.99	19.24	3,36	6.00	201	10:10	NO				
1427	0.4	0,99	19.25	3,40	6.66	93,3	10.9	NO				
1433	0,4	1,03	19.26	3.37	6.67	t3N54	11.0	NO				
		**************************************										
Water Level Inc	dicator Model & No.:	ENDER SUDDI		Purge Method:	Perrosta	Hir Pump						
pH/Cond/Ter	np Meter Model:	Horbo 4-22		Purge Equipment Used:	Pernista	the Pump						
Turbidity	Meter Model:	Horiba 4-22		Purge Rate (gpm):	Werer,	millions H	ete mola	n 0.06 gpm				
Acceptable	e GW recover	y = 0.80 x water colum	in height:	DTW at sampling:	14.	860						
Sample Co	llection Time:	1435	;	Chemical Laboratory:	Мо	Campbell Ana	lytical 92	5-252-9262				
Sample Coll	ection Method:	Peristaltiz Pump		Chemical Analysis:		TPH-d, g	, mo, VO	Cs,				
Sample Co	ntainers Used:	1L hcl an	nber, 3 VC	)As hcl	2.4							
Other Field	Observations:											
		. <u>.</u>	4									



		GROUND	WATER	SAMPLING DAT	A SHE	ET		-				
F	Project Name:	Safeway		Well ID Number:		MW-2						
	Project No .:	33108-008647	.00	Sample ID Number:		Ν	1W-2					
Pro	ject Location:	Dublin, CA	_	Date Gauged:	4/ 16/2009							
Fiel	ld Technician:	Jerem, Wilson		Date Purged:		4/1	/2009					
Weathe	er Conditions:	Mostly clear 1mil	d	Date Sampled: 4 / 1 / 2009								
Top of Casing	g Elevation (ft, msl):	342,53		Casing Diameter	(inches):		1.0					
Depth to V	Vater (ft, btoc):	14 81		Wellhead C	ondition:	OK						
Groundwater	r Elevation (ft, msl):	321.72		Presence of Wellhea	ad Gases:	No						
Depth to We	Il Bottom (ft, btoc):	19.06		Vapor Readir	ng (ppm):	N A						
Water Colu	umn Height (ft):	4.25		Presence	e of SPH:	NO						
Calculated P	Purge Volume (gal):	0.1.1		Thickness of	SPH (ff):	NA						
Actual Purg	ge Volume (gal):	Gallons Per Foot	1"=0.04_2"	CC =0 17 3"=0 37 4"=0 66 6	mments:	$= r^2 \times 0.163$						
			PURGI	NG MEASUREMEN	TS							
	Volumo	Specific		Discolved		Turbidity						
Time	Removed	Conductivity	Temp	Oxygen (mg/)	(STD	(NTUS) or	ORP	Odor/Comment				
	(gal)	(Range: mS/cm)-	(°C)	/%)	units)	TDS g/L	(mV)	S				
12Ja	A 10		10.07	472		Dai	ic H					
1275		1.20	20.70	-1,73	6,38	-14.0	15.7	NU				
12.31		1.18	20.63	4,19	6.47	48.6	15.7	ND				
1300	0.1.1	1.1.7	20,51	3.91	6.48	51,2	15.9	No				
1303	0.11	1.17	20.43	3.82	6.49	31.5	15.3	NO				
1306	0.17	1.10	20,42	3.69	6.54	31.9	15,0	NO				
1309	0.17	1.19	20,34	3,89	6.49	3118202	15.4	NO				
1312	0.17	1,19	20,25	3,51	6,50	175,0	15.2	No				
1315	0,17	1.19	20,22	3.39	6.63	37.8	14.4	NO				
1318	0,17	1,20	20,24	3.40	6.68	35.0	14.0	NO				
Water Level In	dicator Model & No.	Emprosupply		Purge Method:	Pernistal	tiz Pump						
pH/Cond/Te	mp Meter Model:	Horiba 4-22		Purge Equipment Used:	foristal	to Pump						
Turbidity	Meter Model:	Horiby U-22		Purge Rate (gpm):	HAGE TH	WAAN ADDI	OIO XO	6 gpm				
Acceptabl	e GW recover	y = 0.80 x water colum	nn height:	DTW at sampling:	<u>15.12</u>			<i>y</i>				
Sample Co	ollection Time:	1325		Chemical Laboratory:	Mo	Campbell Ana	lytical 92	5-252-9262				
Sample Col	lection Method:	Porristaltic Kump		Chemical Analysis:		TPH-d, g	, mo, VO	Cs,				
Sample Co	ontainers Used:	1L hcl ar	nber, 3 VC	DAs hcl	<b> </b>							
Other Field	l Ohaan in ting - :		· ···				***					
Uner Field	Observations:											
				20								
			•									



		GROUND	WATER	SAMPLING DAT	A SHE	ET				
F	Project Name:	Safeway		Well ID Number:		۱ ۱	NW-3			
	Project No.:	33108-008647	.00	Sample ID Number:		N	/W-3			
Pro	ject Location:	Dublin, CA		Date Gauged:	,	4 / 10 /2009				
Fiel	d Technician:	Joromy Wilso	1	Date Purged:						
Weathe	er Conditions:	A mostly clear	/mild	Date Sampled:		y /1	<mark>し</mark> /2009			
		, <u> </u>								
Top of Casing	g Elevation (ft, msl)	342,99		Casing Diameter	(inches):		1.0			
Depth to V	Vater (ft, btoc):	15.21		Wellhead C	Condition:	OK				
Groundwater	Elevation (ft, msl):	327.78		Presence of Wellhea	ad Gases:	No				
Depth to We	Il Bottom (ft, btoc):	1011 19.29		Vapor Readir	ng (ppm):	NA				
Water Colu	umn Height (ft):	4.08		Presence	e of SPH:	NO				
Calculated P	Purge Volume (gal):	0.10		I hickness of	SPH (ff):	A VA				
Actual Purg	je volume (gal):	Gallons Per Foot	: 1"=0.04, 2"	00 =0.17, 3"=0.37, 4"=0.66, 6	omments: 6"=1.5. other	= r2 x 0.163				
			PURGI	NG MEASUREMEN	TS					
	Volume	Specific		Dissolved	лH	Turbidity	1			
Time	Removed	Conductivity	Temp	Oxygen (mg/L	(STD	(NTUs) or	ORP	Odor/Comment		
	(gal)	(Range: mS/cm -	(°C)	/%)	units)	TDS g/L	(mV)	S		
1454	0		19.04	6,64	655	75.0	149	No		
1357	0.17	1.15	18.21	4.45	6.14	44.2	161	NU		
1500	0,17	1.14	18:11	4.22	6.08	43.8	162	NO		
1503	0.17	1.12	18:10	3.48	6.12	42.5	4293	S NO		
150%	0.17							DRIED		
	· · ·									
	4									
			)							
-										
						• .	•			
				Duran a Mathemati				l		
Water Level In	dicator Model & No.:	GANTOSUPPLY		Purge Method:	for stal	tre pump				
Turbidity	Meter Model:	ther by -4-00		Purge Equipment Used: Purge Rate (apm):	Ken Stal	Fr prop	0			
Acceptable	e GW recover	v = 0.80  x water colum	n height:	DTW at sampling:	15.8	<u>s y</u>				
Sample Co	ollection Time:	WAR 1540		Chemical Laboratory:	M	Campbell Ana	lytical 92	5-252-9262		
Sample Col	lection Method:	B Perstel to EV	~ 0	Chemical Analysis:		TPH-d, g	i, mo, VO	Cs,		
Sample Co	ntainers Used:	1L hcl an	nber, 3 VC	As hci,						
Other Field	Observations:	1506 WEH PU	rged d	My Saar Ma. 7	ed to	r rechurge	to a	507.		
Sampled	following	fecharge	•	J 1 - W						
	/									



# APPENDIX B

# LABORATORY ANALYTICAL DATA SHEETS AND CHAIN-OF-CUSTODY RECORD

McCampbell An "When Ouality	nalytical, Inc.	1534 Will Web: www.mc Telepho	ow Pass Road, Pittsburg, campbell.com E-mail: m one: 877-252-9262 Fax:	CA 94565-1701 nain@mccampbell.com 925-252-9269
Bureau Veritas	Client Project ID: #33108-	008647.00;	Date Sampled:	04/16/09
2430 Camino Ramon, Suite 122	Galeway Bivd, Dublin CA		Date Received:	04/16/09
San Ramon, CA 94583	Client Contact: Don Asht	ton	Date Reported:	04/22/09
	Client P.O.:		Date Completed:	04/21/09

#### WorkOrder: 0904420

April 22, 2009

Dear Don:

Enclosed within are:

- 1) The results of the **3** analyzed samples from your project: **#33108-008647.00; Gateway Blvd, D**
- 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

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

# CHAIN OF CUSTODY

X



Page \_ of \_.

Lab: McCampbell Analytical 925-252-9262

0904420

Report results to:								1	V4	9/					925-25	2-9262	
Name		Don As	shton						182	8					TAT: Standa	rd	
Company		Bureau \	/eritas					B	URE	EAU	1						
Mailing Address	6920 Koll	Center Park	kway, Ste.	216	32			V	ERI	TAS					Project Information		
City, State, Zip	Pleasanto	n, California	a 94566				A	naly	ses R	Reaue	ested	1	_	_	Project No. 33108-008647.00		
Telephone No.	(925) 426-	2679	Cell:260-3	102				1	1			-			Name Gateway Blvd.		
Fax No.	(925) 426-	0106	• • • • • • • • • • • • • • • • • • • •												Location Dublin, CA		
Email:	don.ashton	@us.burea	uveritas.co	m		w)											
				0200	15	ate											
Special instructions and/or s	specific regulator	ry requirement	s:		S S	gen									Sample Condition/Commer	Its	
GeoTracker Global II	D: T06019799	9610			Hg, d, mo	EX - Oxy											
EDD Format for Geot	tracker if che	ecked:	X	1	đ	81										ative	
	Date	Time	Matrix/	No. of	1 Co	8										erve	
Sample Identification	Sampled	Sampled	Media	Conts	301	326										res	
MW-1	4-16-2009	1435	Water	1 Amh I	X	1	-	+	-	-		-	_			LICI	
	4-16-2009	1435	Water	3 VOA	1	x	-	-	-		$\vdash$	-	_			HCI	
MW-2	4-16-2000	1325	Water	1 Amh I	V	L^	-	-	-			-	-			HO	
11111-2	4-16-2009	1225	Water	2 VOA	-		+	-	-			-	_			HCI	
-	4-10-2009	1500	vvaler	SVUA		-	-	-	-			-	_			HCI	
MIVV-3	4-16-2009	1510	Water	1 Amb L	X		$\rightarrow$	-	_			$\rightarrow$	_			HCI	
	4-16-2009	1540	Water	3 VOA		X	_						_	,		HCI	
			Water									-		4	-		
			Water									9	1				
			Water							G	000	CON	DITI	DN	APPROPRIATE		
			Water							H	EADS	PAC	EA	BSE	T CONTAINERS		
			Water							- "	eun p	UKI	AIR	VO	AS IO A CLIMETAL SLOTHER		
			Water				-	-		1	TESP	RVA.	-ON		TO O & G MEINES OTHER		
			Water				-	-	-			+	-				
			Water		-		-	-	-			+	-	-			
			water		-		-	-	-		-	+	-	_			
			water				-	-	_	+		$\rightarrow$	_				
			Water														
Collected by:	Jeremy in	Hilson		4-16-09				Colle	ector's	s Sigi	natui	re:	h	A	HO .		
Relinguished by:	1.Mar	1	Date/Time	4-16-09	10	10		Rece	eived I	by:			1	~	Date/Tir	ne Willog	
Relinguished by:	1000	~	Date/Time	Willie	1	118	-	Rece	ived l	by:	-	-	T	E.	Destern Til Date/Tir	4/11/09	17:18
Mathad of Shinmant	-	Turko	al al	1009	17			C	ale O	oy.		6	-	e	UN OTECTOTICE Daterni	in the	1110
wethod of Shipment:	Env	111078	ch #/	402	17	12		Sam	ple Co	onditi	ion o	n R	cpt				
SGCU: Silica Gel Clea	anup prior to a	8015C anal	ysis	<u></u>										(	M Reling.	isted: W	V6:20m
														4	& Mays	face	IVSD

1534 Willow Pass Rd

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Pittsburg, CA 94565-1701 (925) 252-9262					WorkO	rder:	: 09044	420	(	ClientC	ode: BV	/P					
		WriteO	n 🗹 EDF		Excel	l	Fax	[	🖌 Email		HardC	Сору	Thirc	lParty	٦	-flag	
Report to:					В	ill to:						Requ	uested <sup>-</sup>	ΓΑΤ:	5	day	S
Don Ashton	Email:	don.ashton@	@us.bureauveritas	.com		Jo	an Mille	er									
Bureau Veritas	CC:					Bu	reau Ve	eritas				_		_			~
2430 Camino Ramon, Suite 122	PO:					24	30 Carr	nino Ra	amon, S	uite 12	2	Date	e Recei	ved:	04/16/	/200	9
San Ramon, CA 94583	ProjectNo	#33108-0086	647.00; Gateway I	3lvd,		Sa	n Ramo	on, CA	94583			Date	e Printe	ed:	04/16/	/200	9
(925) 426-2600 FAX (925) 426-0106		Dublin CA				joa	an.millei	r@us.b	oureauv	eritas.c	om						
								Req	uested	Tests (	See leg	end be	elow)		<u> </u>		
Lab ID Client ID		Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	1	2

				•								
0904420-001	MW-1	Water	4/16/2009 14:35		А	В	А					
0904420-002	MW-2	Water	4/16/2009 13:25		А	В						
0904420-003	MW-3	Water	4/16/2009 15:40		А	В						

#### Test Legend:

1	G-MBTEX_W	:	2	MBTEXOX
6			7	
11		1	2	

(Y-8260B\_W

3	PREDF REPORT
8	

4	
9	

5	
10	

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

Prepared by: Ana 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.



"When Ouality Counts"

# Sample Receipt Checklist

Client Name:	Bureau Veritas					Date	e and	Time Received:	4/16/2009	7:21:14 PM
Project Name:	#33108-008647.0	0;Gatev	way Blvd,	Dubli	n CA	Che	cklist	t completed and re	eviewed by:	Ana Venegas
WorkOrder N°:	0904420	Matrix	Water			Car	rier:	<u>Courier</u>		
			<u>Chair</u>	n of Cus	stody (C	OC) Infori	natio	<u>on</u>		
Chain of custody	present?			Yes		No	]			
Chain of custody	signed when relinquis	shed and	I received?	Yes	✓	No	]			
Chain of custody	agrees with sample la	abels?		Yes	✓	No	]			
Sample IDs noted	by Client on COC?			Yes		No	]			
Date and Time of	collection noted by Cli	ent on CC	CC?	Yes	✓	No	]			
Sampler's name r	noted on COC?			Yes	✓	No	]			
			<u>s</u>	ample	Receipt	Informati	<u>on</u>			
Custody seals int	tact on shipping contai	iner/coole	er?	Yes		No	]		NA 🔽	
Shipping containe	er/cooler in good cond	ition?		Yes	✓	No	]			
Samples in prope	er containers/bottles?			Yes	✓	No	]			
Sample containe	rs intact?			Yes	✓	No	]			
Sufficient sample	volume for indicated	test?		Yes		No	]			
		<u>Sar</u>	mple Prese	rvation	and Ho	ld Time (F	<del>IT) Ir</del>	nformation		
All samples recei	ved within holding time	e?		Yes	✓	No	]			
Container/Temp E	Blank temperature			Coole	r Temp:	9.4°C			NA 🗆	
Water - VOA vial	s have zero headspac	ce / no bu	ubbles?	Yes		No	] N	o VOA vials submi	itted 🗆	
Sample labels ch	necked for correct pres	servation	?	Yes	✓	No	]			
TTLC Metal - pH	acceptable upon recei	pt (pH<2)	)?	Yes		No	]		NA 🗹	
Samples Receive	ed on Ice?			Yes	✓	No	]			
			(Ice Typ	e: OTH	HERS )	)				
* NOTE: If the "N	lo" box is checked, se	e comme	ents below.							

Client contacted:

Date contacted:

Contacted by:

Comments:

	McCampbell Analyti "When Ouality Counts"	cal, Inc.	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					
Bureau Ver	itas	Client Project ID:	#33108-008647.00;	/09				
2430 Camir	no Ramon, Suite 122	Galeway Bivd, Du	bin CA	Date Received: 04/16	/09			
		Client Contact: D	on Ashton	/09-04/2	20/09			
San Ramon	, CA 94583	Client P.O.:		Date Analyzed 04/18	/09-04/2	20/09		
Extraction mothe	Gasoline Ra	nge (C6-C12) Vola	tile Hydrocarbons as G	asoline*	Indon 00	04420		
Lab ID	Client ID	Matrix	TPH	(g)	DF	% SS		
001A	MW-1	W	NI	)	1	100		
002A	MW-2	W	NI	)	1	99		
003A	MW-3	W	NI	)	1	101		
						<u> </u>		
					-			
	Reporting Limit for DF =1;	W	50	)	μ	g/L		
ľ	above the reporting limit	S	NA	Α	N	IA		

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

# cluttered chromatogram; sample peak coelutes with surrogate peak.

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

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell An "When Ouality	When Ouality 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						
Bureau Veritas	Client Project ID: #33108-008647.00; Date Sample						04/16/09						
2430 Camino Ramon Suite 122	2430 Camino Ramon, Suite 122						04/16/09						
2450 Camino Ramon, Suite 122	-	Client Co	ontact: D	on Ash	iton	Date Extracted:	04/17/09-04	4/18/09					
San Ramon, CA 94583	-	Client P.C	D.:			Date Analyzed:	04/17/09-04	4/18/09					
	L	y GC/MS*											
Extraction Method: SW5030B		Anal	ytical Method	l: SW826	0B		Work Order:	0904420					
Lab ID	Lab ID         0904420-001B         0904420-002B         0904420-003B												
Client ID	M	W-1	Reporting	Limit for									
Matrix	Matrix W W W							=1					
DF		1	1		1		S	W					
Compound		Concentration						μg/L					
tert-Amyl methyl ether (TAME)	Ν	١D	ND		ND		NA	0.5					
Benzene	Ν	١D	ND		ND		NA	0.5					
t-Butyl alcohol (TBA)	Ν	١D	ND		ND		NA	2.0					
Diisopropyl ether (DIPE)	Ν	١D	ND		ND		NA	0.5					
Ethylbenzene	Ν	١D	ND		ND		NA	0.5					
Ethyl tert-butyl ether (ETBE)	Ν	ND	ND		ND		NA	0.5					
Methyl-t-butyl ether (MTBE)	Ν	ND	ND		ND		NA	0.5					
Toluene	Ν	١D	ND		ND		NA	0.5					
Xylenes	Ν	١D	ND		ND		NA	0.5					
		Surro	ogate Rec	overies	s (%)		<u> </u>						
%SS1:	,	77	76		78								
%SS2:		88	87		86		<u> </u>						
Comments													
* water and vapor samples are reported in extracts are reported in mg/L, wipe sample ND means not detected above the reporting	μg/L, soi es in μg/v ng limit;	l/sludge/so vipe. N/A means	lid samples s analyte no	in mg/kg t applica	g, product/oil/non-a	queous liquid sample	s and all TC	LP & SPLP					

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

	Campbell Analyti "When Ouality Counts"	ical, Inc.		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					
Bureau Veritas		Client Project I	D: #	#33108-008647.00; Date Sampled: 04/16/09					
2430 Camino R	Pamon Suite 122	Gateway Blvd,	, Dub	lin CA	Date	Received: 04	/16/09		
2450 Camilio N	amon, Suite 122	Client Contact	t: D	on Ashton	Date	Extracted: 04	/16/09		
San Ramon, CA	A 94583		Date	Analyzed: 04	/18/09-04/	21/09			
Extraction method:	Total Extracta SW3510C/3630C	<b>ble Petroleum H</b> Analytica	<b>Iydro</b> al metho	ocarbons with Silica (	Gel Clean	-Up* w	ork Order: 0	904420	
Lab ID	Client ID	TPH-Diesel (C10-C23)	TPH	-Motor Oil (C18-C36)	DF	% SS			
0904420-001A	MW-1	W		ND		ND	1	97	
0904420-002A	MW-2	W		ND		ND	1	98	
0904420-003A	MW-3	W		ND		ND	1	98	

Reporting Limit for $DF = 1$ ;	W	50	250	μg/L
ND means not detected at or above the reporting limit	S	NA	NA	mg/Kg

\* water samples are reported in  $\mu$ g/L, wipe samples in  $\mu$ g/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  $\mu$ g/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; &) low or no surrogate due to matrix interference.

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

DHS ELAP Certification 1644





"When Ouality Counts"

# QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water		BatchID: 42684 WorkOrder 0904420										
EPA Method SW8015Bm	Extra	ction SW	5030B					5	Spiked San	nple ID	: 0904375-0	011A
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acce	eptance	e Criteria (%)	)
7 tildiyte	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex <sup>f</sup> )	ND	60	88.5	92.3	4.16	92.5	89.2	3.58	70 - 130	20	70 - 130	20
MTBE	ND	10	102	103	0.786	100	103	2.73	70 - 130	20	70 - 130	20
Benzene	ND	10	90	95.1	5.50	104	104	0	70 - 130	20	70 - 130	20
Toluene	ND	10	88.1	94.5	7.02	99.6	100	0.868	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	86.3	93.3	7.73	104	105	1.37	70 - 130	20	70 - 130	20
Xylenes	ND	30	86.5	94.3	8.64	105	106	1.22	70 - 130	20	70 - 130	20
%SS:	104	10	98	98	0	96	100	4.52	70 - 130	20	70 - 130	20
All target compounds in the Method H NONE	alank of this	extraction	batch we	re ND les	s than the	method R	L with th	e following	exceptions:			

#### BATCH 42684 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0904420-001A	04/16/09 2:35 PM	04/18/09	04/18/09 12:29 AM	0904420-002A	04/16/09 1:25 PM	04/18/09	04/18/09 12:59 AM
0904420-003A	04/16/09 3:40 PM	04/20/09	04/20/09 8:13 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, or inconsistency in sample containers.





"When Ouality Counts"

# QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water		BatchID: 42717 WorkOrder: 0904420												
EPA Method SW8260B	SW8260B Extraction SW5030B									Spiked Sample ID: 0904420-003B				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acc	eptance	Criteria (%)			
Analyte	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD		
tert-Amyl methyl ether (TAME)	ND	10	92.9	92.7	0.150	99	97	1.98	70 - 130	30	70 - 130	30		
Benzene	ND	10	114	115	1.39	111	109	2.37	70 - 130	30	70 - 130	30		
t-Butyl alcohol (TBA)	ND	50	81.8	78.1	4.71	86.9	82.8	4.81	70 - 130	30	70 - 130	30		
1,2-Dibromoethane (EDB)	ND	10	107	111	4.27	110	109	0.508	70 - 130	30	70 - 130	30		
1,2-Dichloroethane (1,2-DCA)	ND	10	96.2	95.8	0.433	103	101	2.54	70 - 130	30	70 - 130	30		
Diisopropyl ether (DIPE)	ND	10	94.3	94.9	0.587	94.7	91.3	3.74	70 - 130	30	70 - 130	30		
Ethyl tert-butyl ether (ETBE)	ND	10	107	107	0	107	104	3.38	70 - 130	30	70 - 130	30		
Methyl-t-butyl ether (MTBE)	ND	10	100	100	0	101	95.4	5.73	70 - 130	30	70 - 130	30		
Toluene	ND	10	120	121	1.01	118	117	1.47	70 - 130	30	70 - 130	30		
%SS1:	78	25	87	87	0	77	76	1.87	70 - 130	30	70 - 130	30		
%SS2:	86	25	103	104	0.782	105	103	1.48	70 - 130	30	70 - 130	30		

#### BATCH 42717 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0904420-001B	04/16/09 2:35 PM	04/17/09	04/17/09 11:07 PM	0904420-002B	04/16/09 1:25 PM	04/17/09	04/17/09 11:49 PM
0904420-003B	04/16/09 3:40 PM	04/18/09	04/18/09 12:32 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.

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





"When Quality Counts"

### QC SUMMARY REPORT FOR SW8015B

QC Matrix: Water BatchID: 42716 WorkOrder: 0904420 W.O. Sample Matrix: Water EPA Method: SW8015B Extraction: SW3510C/3630C Spiked Sample ID: N/A Sample Spiked MS MSD MS-MSD LCS LCSD LCS-LCSD Acceptance Criteria (%) Analyte µg/L µg/L % Rec. % Rec. % RPD % Rec. % Rec. % RPD MS / MSD RPD \_CS/LCSD RPD TPH-Diesel (C10-C23) N/A 1000 N/A 103 95.9 7.10 N/A 70 - 130 30 N/A N/A N/A %SS: N/A 2500 N/A N/A N/A 103 102 1.32 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 42716 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0904420-001A	04/16/09 2:35 PM	04/16/09	04/18/09 2:36 AM	0904420-002A	04/16/09 1:25 PM	04/16/09	04/18/09 3:45 AM
0904420-003A	04/16/09 3:40 PM	04/16/09	04/21/09 5:06 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.

DHS ELAP Certification 1644

