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9:36 am, Oct 20, 2010

Alameda County  
Environmental Health

**Aaron Costa**  
Project Manager  
Marketing Business Unit

**Chevron Environmental  
Management Company**  
6111 Bollinger Canyon Road  
San Ramon, CA 94583  
Tel (925) 543-2961  
Fax (925) 543-2324  
acosta@chevron.com

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

Re: Chevron Service Station 9-0290  
1802 Webster Street  
Alameda, California

I have reviewed the attached report dated October 19, 2010.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by Conestoga-Rovers & Associates, upon whose assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,

A handwritten signature in black ink that reads "Thomas K. Bauhs".

Thomas K. Bauhs  
Project Manager

Attachment: Report



**CONESTOGA-ROVERS  
& ASSOCIATES**

5900 Hollis Street, Suite A  
Emeryville, California 94608  
Telephone: (510) 420-0700 Fax: (510) 420-9170  
www.CRAworld.com

## TRANSMITTAL

DATE: October 19, 2010 REFERENCE NO.: 311594  
 PROJECT NAME: Chevron 9-0290  
 TO: Mr. Robert Weston ACEHS RO#195  
Alameda County Health Agency  
Department of Environmental Health  
1131 Harbor Bay Parkway  
Alameda, California 94502-6577

Please find enclosed:  Draft  Final  
 Originals  Other  
 Prints  
 Sent via:  Mail  Same Day Courier  
 Overnight Courier  Other ..ftp upload, GeoTracker Upload

QUANTITY	DESCRIPTION
1	Used Oil Underground Storage Tank Removal and Groundwater Sampling Report

As Requested  For Review and Comment  
 For Your Use  For Review and Signature  
 \_\_\_\_\_

**COMMENTS:**  
 Please contact Nathan Lee at (510) 420-3333 if you have any questions or require additional information.

Copy to: Mr. Timothy J. Dahl, Chevron Mr. Dave Patten, Chevron

Completed by: Nathan Lee Signed: *Nathan Lee*  
[Please Print]

Filing: **Correspondence File**



# USED OIL UNDERGROUND STORAGE TANK REMOVAL AND GROUNDWATER SAMPLING REPORT

**Chevron Service Station 9-0290  
1802 Webster Street  
Alameda, California**

**Prepared for:**

**Mr. Robert Weston  
Senior Hazardous Materials Specialist  
Alameda County Health Agency  
Department of Environmental Health  
1131 Harbor Bay Parkway  
Alameda, California 94502-6577**

**Prepared by:  
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**OCTOBER 22, 2010**

**REF. NO. 311594 (8)**

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# USED OIL UNDERGROUND STORAGE TANK REMOVAL AND GROUNDWATER SAMPLING REPORT

Chevron Service Station 9-0290  
1802 Webster Street  
Alameda, California

David Grunat

Nathan Lee, PG 8486



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## 1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) is submitting this *Used Oil Underground Storage Tank Removal and Groundwater Sampling Report* on behalf of Chevron Products Company (Chevron) for the Chevron Service Station located at 1802 Webster Street in Alameda, California (Figure 1). This site is an active ACEH Fuel Leak Case (RO 0143). On September 21, 2010, CRA observed the removal of one 1,000-gallon double-walled fiberglass used oil underground storage tank (UST) and associated piping. Site background information, a description of sampling activities, and analytical results are discussed below.

### 1.1 SITE DESCRIPTION

The site is currently an active Chevron station located at the northeast corner of Webster Street (State Highway 61) and Buena Vista Avenue in Alameda, California (Figure 1). A 76 service station (former BP and open Alameda County Environmental Health (ACEH) fuel leak case RO0000281) is located upgradient, across Buena Vista Avenue to the south. Land use in the area is mixed commercial and residential.

Chevron purchased the property in 1925 and has operated a service station onsite since at least the late 1940s. Chevron purchased two additional parcels in 1964 and leased the additional parcels in 1969. The service station was remodeled into its current configuration in 1969 and currently operates four 10,000-gallon gasoline USTs and four fuel dispenser islands under a common canopy (Figure 2). A summary of previous investigation and remediation is included in Appendix A.

### 1.2 SITE GEOLOGY AND HYDROGEOLOGY

#### *Site Geology*

Soil encountered beneath the site consists primarily of dune sands and silty sands of Holocene and Pleistocene age to the total depth explored of 20 feet below grade (fbg).

#### *Hydrogeology*

The site is located on the island of Alameda, in the East Bay Plain Sub-basin of the Santa Clara Valley Groundwater Basin. The Oakland Inner Harbor is approximately 0.75 miles to the north and the San Francisco Bay is approximately 1.5 miles to the south of the site. The nearest surface water body is Oakland-Alameda Estuary, approximately 0.25 miles north of the site. Site elevation is approximately 10 to 13 feet above mean sea

level and the topography slopes gently to the north. Groundwater monitoring has been conducted at the site since 1991. Average historical depth to groundwater ranges from 4 to 6 fbg and flows north-northwest at a gradient of 0.003 to 0.01.

## **2.0 UNDERGROUND STORAGE TANK REMOVAL AND COMPLIANCE SAMPLING**

On September 21, 2010, CRA observed and documented the removal of the used oil UST and associated piping. Under the direction of ACEH, one grab-groundwater sample was collected from within the UST pit. No soil samples were collected from the UST pit or pea gravel stockpile due to native soil being encountered and no visual signs of hydrocarbons. A site plan illustrating the grab-groundwater sample location is presented on Figure 2.

### ***Personnel***

Gettler-Ryan Inc. of Dublin, California completed UST preparation and removal activities. CRA personnel David Grunat, under the supervision of California Professional Geologist Nathan Lee, PG 8486, observed the UST removal and performed compliance groundwater sampling. City of Alameda Fire Inspector Ken Jeffery and ACEH representative Robert Weston observed the UST removal and directed compliance groundwater sampling. Ecology Control Industries (ECI) transported the inert fuel system components, including the USTs and piping, for proper disposal.

### ***UST Removal***

The UST was rendered inert using 40 pounds of dry ice and removed under ACEH permit SR0017696 (Appendix B). No visual holes, cracks, or staining were noted on the UST or piping.

### ***Compliance Sampling***

Grab-groundwater sample WOT-1 was collected from within the UST pit. The sample was collected utilizing a disposable bailer, decanted into clean laboratory-approved containers, properly sealed, and labeled. The sample was logged on a chain-of-custody, preserved on ice, and delivered to McCampbell Analytical, Inc. (McCampbell) of Pittsburg, California for analysis. CRA's *Standard Field Procedures for Compliance Sampling* is included in Appendix C.



### *Chemical Analysis*

The sample was analyzed for the following constituents:

- Total recoverable petroleum hydrocarbons (TRPH) with silica gel cleanup by Environmental Protection Agency (EPA) method E418.1
- Total petroleum hydrocarbons as diesel (TPHd) and total petroleum hydrocarbons as gasoline (TPHg) by EPA method 8015Bm
- Benzene, toluene, ethylbenzene, xylenes (BETX), and methyl tertiary butyl ether (MTBE) by EPA method 8021B
- Volatile organic compounds, including BTEX and MTBE by EPA method 8260B
- Polychlorinated biphenyls (PCBs) by EPA Method SW8082
- Semi-volatile organic compound, including pentachlorophenol (PCP), poly nucleated aromatics (PNAs), and creosote by EPA method 8270
- Cadmium (Cd), chromium (Cr), lead (Pb), nickel (Ni), and zinc (Zn) by EPA method E200.8

### *Waste Disposal*

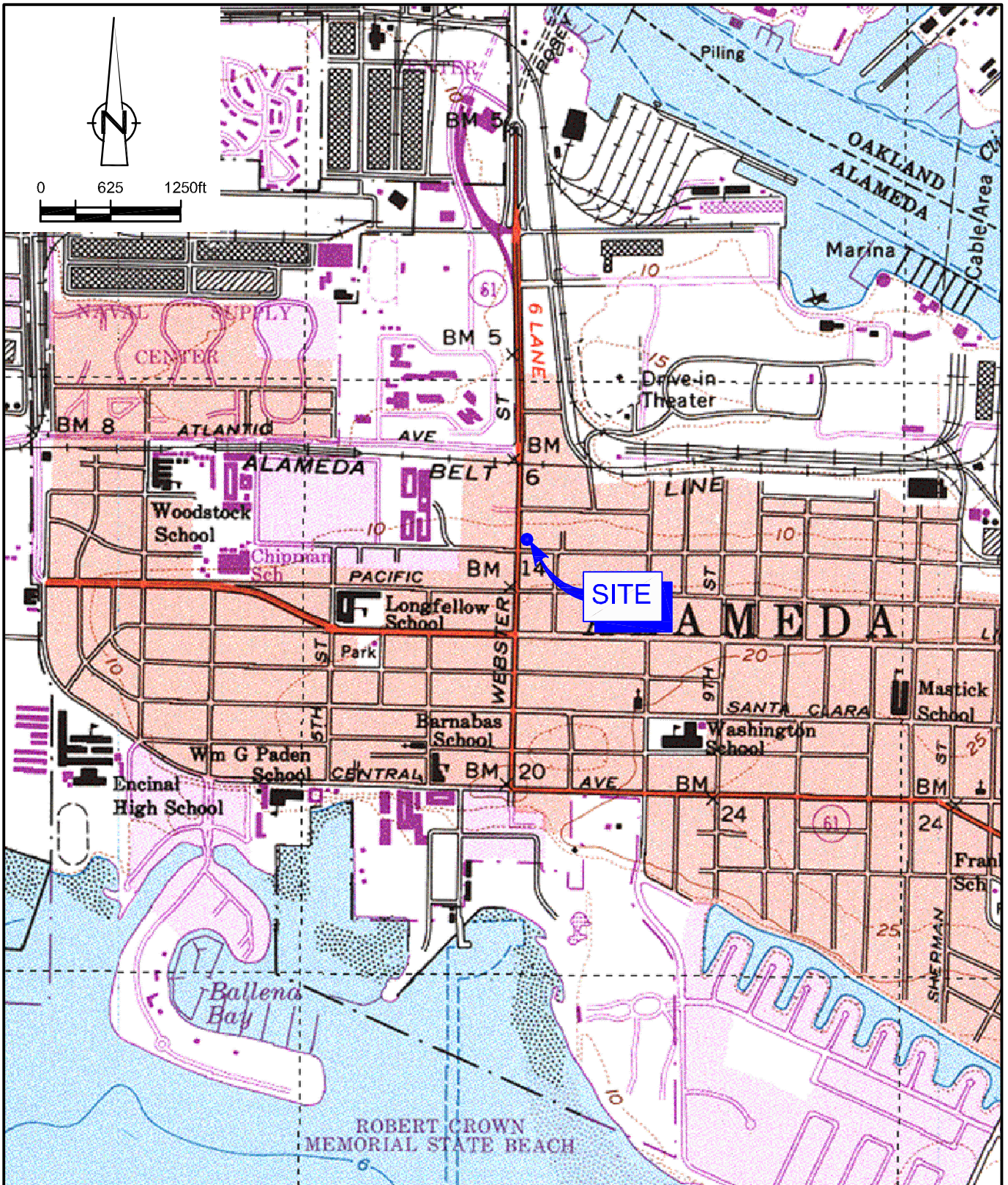
All fuel system components (piping, tank and rinsate) were shipped under manifest to ECI of Richmond, California facility. Copies of the disposal manifest are included in Appendix D.

Pea gravel removed from the UST pit was temporarily stockpiled onsite. After the UST was removed the pea gravel was placed back into the UST excavation with ACEH approval.

## **3.0 GROUNDWATER ANALYTICAL RESULTS**

No hydrocarbons or other organic compounds were detected in the grab-groundwater sample collected from within the UST pit (Table 1). The groundwater sample for the metals analysis was accidentally not filtered prior to preservation with acid; therefore, the results are reflective of total metal concentrations, not dissolved concentrations. The metals detected in groundwater were 0.63 micrograms per liter ( $\mu\text{g/L}$ ) cadmium, 140  $\mu\text{g/L}$  chromium, 61  $\mu\text{g/L}$  lead, 230  $\mu\text{g/L}$  nickel and 250  $\mu\text{g/L}$  zinc (Table 2). Based on the lack of hydrocarbons detected in the UST pit, these metal concentrations are related to background concentrations and not related to Chevron's operations. The groundwater laboratory analytical report is included in Appendix E.

## FIGURES



SOURCE: TOPO! MAPS.

Figure 1  
 VICINITY MAP  
 CHEVRON SERVICE STATION 9-0290  
 1802 WEBSTER STREET  
 Alameda, California



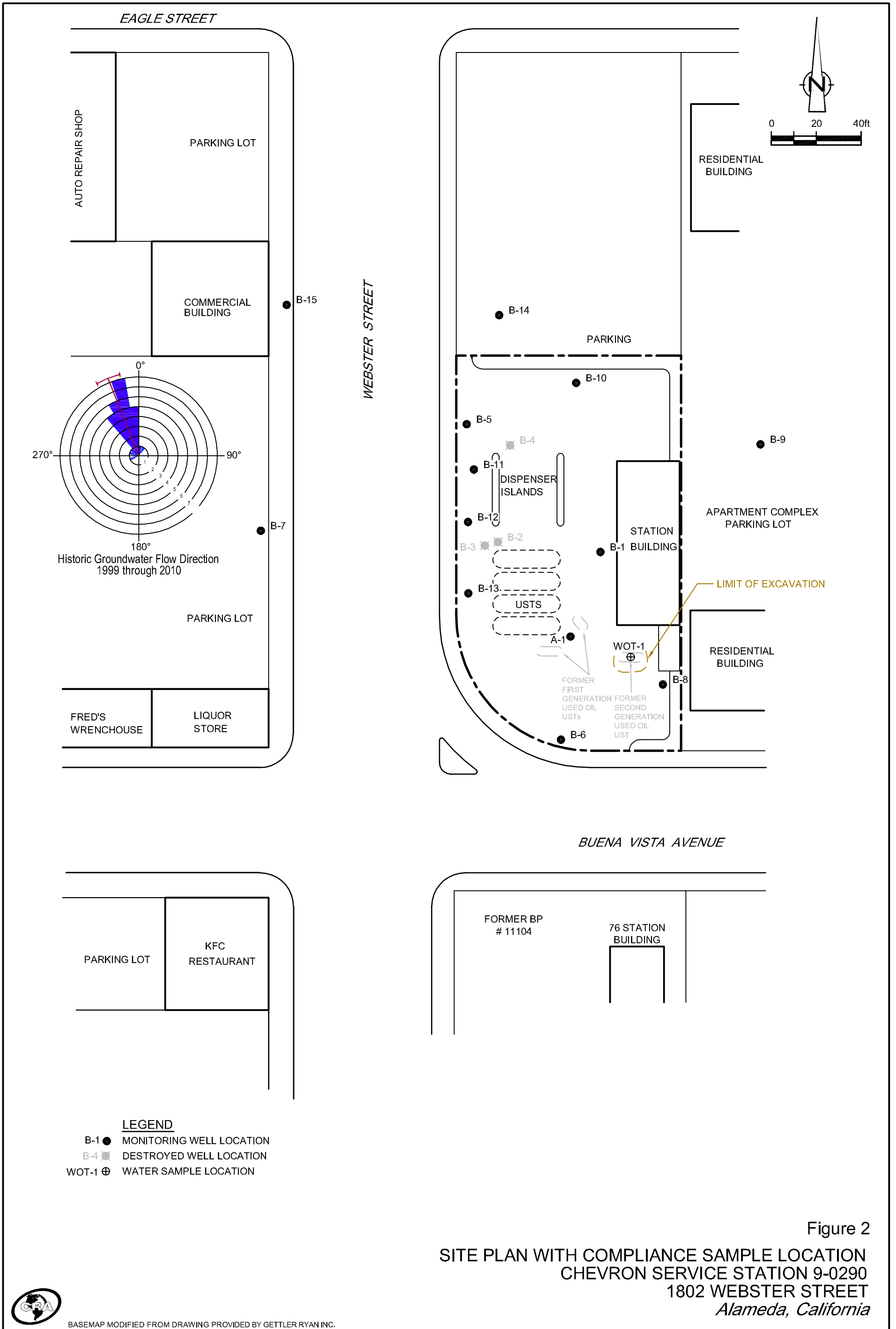


Figure 2  
 SITE PLAN WITH COMPLIANCE SAMPLE LOCATION  
 CHEVRON SERVICE STATION 9-0290  
 1802 WEBSTER STREET  
 Alameda, California



BASEMAP MODIFIED FROM DRAWING PROVIDED BY GETTLER RYAN INC.

## TABLES

**TABLE 1**  
**GRAB-GROUNDWATER ANALYTICAL DATA, HYDROCARBONS**  
**CHEVRON SERVICE STATION 9-0290**  
**1802 WEBSTER STREET, ALAMEDA, CALIFORNIA**

Sample ID	Date	TRPH	TPHd	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB	HVOCs	Total PCBs	1,4- Dioxane	SVOCs
<i>ESLs - Groundwater</i>	--	100	100	100	1	40	30	20	5	12	NE	NE	NE	0.5	0.05	NE	NE	3	NE
WOT-1	09/21/10	<1,000	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<2	<0.5	<0.5	<0.5	<0.5	<0.5	ND	<0.5	<2.0	ND

Notes:

Total Recoverable Hydrocarbons (TRPH) by EPA Method E418.1 with Silica Gel Clean-Up

Total petroleum hydrocarbons as diesel (TPHd) analyzed by EPA Method 8015B with silica gel cleanup

Total petroleum hydrocarbons as gasoline (TPHg) analyzed by EPA Method 8015B modified.

Benzene, toluene, ethylbenzene, and xylenes (BTEX); methyl tertiary-butyl ether (MTBE); t-butyl alcohol (TBA); di-isopropyl ether (DIPE); ethyl tertiary-butyl ether (ETBE); t-amyl methyl ether (TAME); 1,2-dichloroethane (1,2-DCA); 1,2-dibromoethane (EDB)

Halogenated Volatile Organics (HVOCs) by EPA Method 8260B

Poly-Chlorinated Biphenyls (PCBs) by EPA Method 8082

1,4-Dioxane by EPA Method 8260B

Semi-Volatile Organics (SVOCs) by EPA Method 8270

ESLs - Groundwater = Environmental Screening Levels for groundwater that is a current or potential source of drinking water (Table F-1a) from *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater* prepared by the California Regional Water Quality Control Board

<x = Not detected at reporting limit

ND = No constituents detected above laboratory detection limit.

NE = Not Established/Not Applicable

**TABLE 2**  
**GRAB-GROUNDWATER ANALYTICAL DATA, METALS**  
**CHEVRON SERVICE STATION 9-0290**  
**1802 WEBSTER STREET, ALAMEDA, CALIFORNIA**

<i>Sample ID</i>	<i>Date</i>	<i>Cd</i>	<i>Cr</i>	<i>Pb</i>	<i>Ni</i>	<i>Zn</i>
Reported in micrograms per liter ( $\mu\text{g/L}$ )						
WOT-1	9/21/2010	0.63	140	61	230	250

Notes:

LUFT 5 Metals (Cadmium (Cd), Chromium (Cr), Lead (Pb), Nickel (Ni), and Zinc (Zn)) by EPA Method 200.8

APPENDIX A

PREVIOUS ENVIRONMENTAL INVESTIGATION AND REMEDIATION



## PREVIOUS ENVIRONMENTAL INVESTIGATION AND REMEDIATION

**1982 Monitoring Well Installation:** In January 1982, IT Enviroscience (ITE) installed onsite groundwater monitoring wells B-1 through B-6 to assess the extent of hydrocarbons resulting from a release of approximately 50 gallons of gasoline. Additional information is available in ITE's February 8, 1982 *Progress Report #1*.

**1982 UST Replacement and Backfill Wells:** In early 1982, the gasoline underground storage tanks (USTs) were removed and replaced. A gauge stick hole was observed in the bottom of the Regular gasoline UST during removal. A new diesel UST and used-oil UST were installed in the same tank pit. Backfill wells A-1 and A-2 were installed with the new USTs. Groundwater monitoring well B-2 was destroyed to accommodate the new USTs. Additional information is available in Gettler-Ryan's (G-R's) *Well Installation Report* dated December 29, 1995.

**1991 Diesel Spill:** On September 19, 1991 approximately 1,400 gallons of diesel were accidentally pumped into tank backfill well A-1 during UST testing activities. Approximately 1,600 gallons of light non-aqueous phase liquids (LNAPL) were removed from well A-1 immediately after the release. A NAPL recovery program removed an additional 346 gallons from September 1991 through July 1992. Laboratory analysis of the LNAPL suggested that used oil must also have been inadvertently disposed of in well A-1. A groundwater sampling program was initiated in September 1991. Additional information is available in GTI's *Additional Environmental Assessment Report* dated May 26, 1993.

**1992 Monitoring Well Installation:** On July 8, 1992 Hydro Environmental Technologies, Inc. (Hydro) installed monitoring wells MW-1, MW-2 and MW-3. Additional information is available in Hydro's *Phase I Report* dated August 21, 1992.

**1993 Monitoring Wells:** In March 1993, Groundwater Technology, Inc. installed monitoring wells B-7 through B-9. Additional information is available in GTI's *Additional Environmental Assessment Report* dated May 26, 1993.

**1994 Used-Oil UST and Product Piping Removal:** In April and May 1994 Touchstone Development removed one 1,000-gallon single-walled fiberglass used-oil UST, one 350-gallon steel used-oil UST, and associated product piping. Approximately 1,500 gallons of water were pumped from the 1,000-gallon UST pit and disposed of offsite. A total of approximately 700 cubic yards of soil was excavated from the used-oil tank pits and from beneath the product lines. Monitoring wells A-2, B-3, and B-4 were destroyed during UST removals. Additional

information is available in Touchstone's *UST Removal, Product Line Replacement and Sampling Report* dated July 21, 1994 and in Pacific Environmental Group's *Well Destruction* dated July 27, 1994.

**1995 Monitoring Well Installation:** In October 1995, G-R installed monitoring wells B-10 through B-13. Additional information is available in G-R's *Well Installation Report* dated December 29, 1995.

**2000 Site Conceptual Model:** Delta Environmental Consultants (Delta) concluded that hydrocarbon impacted soil appears to be present within the smear zone between 2 and 8 fbg. The dissolved hydrocarbon plume has been decreasing with the exception of upgradient well B-6. An upgradient source may be a potential secondary source of hydrocarbon impact beneath the southern portion of the Chevron site. Intrinsic bioremediation appears to be occurring in groundwater beneath the site, facilitating decreases in hydrocarbon concentrations and limiting hydrocarbon migration. Additional information is available in Delta's *Site Conceptual Model* dated October 24, 2000.

**2001 Soil Borings and Well Survey:** In May 2001, G-R advanced borings SB-1 and SB-2 were advanced onsite and borings SB-4, SB-6, and SB-8 offsite. Three irrigation wells are located within a ½-mile radius of the site; two are located 1,400 feet west of the site and one is located 2,800 feet southwest of the site. The irrigation wells are located either crossgradient or downgradient of the site. Additional information is available in Delta's *Limited Subsurface Investigation Report* dated August 6, 2001.

**2002 Monitoring Well Installation:** In August 2002, Delta installed monitoring wells B-14 and B-15 and advanced soil boring SB-12. Additional information is available in Delta's *Monitoring Well Installation Report* dated December 13, 2002.

**2005 Soil Borings:** In December 2005, Cambria Environmental Technology, Inc. (Cambria), now Conestoga-Rovers & Associates (CRA), advanced soil borings SB-15 through SB-18 and collected a grab-groundwater sample from the bottom of a nearby electrical utility vault. Additional information is available in CRA's *Down-gradient Hydrocarbon Plume Investigation Report* dated April 17, 2007.

APPENDIX B

UST REMOVAL PERMIT

10-058071.1

ALAMEDA COUNTY  
DEPARTMENT OF ENVIRONMENTAL HEALTH  
1131 HARBOR BAY PARKWAY  
ALAMEDA, CA 94502-6577  
PHONE (510) 567-6700

**ACCEPTED**

Background Storage Tank Closure Permit Application  
Alameda County Division of Hazardous Materials  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

These abatement/removal plans have been received and found to be acceptable and essentially meet the requirements of State and Local Health Laws. Changes to your closure plans indicated by this Department are to assure compliance with State and local laws. The project proposed herein is not assessed for issuance of any required building permits or construction/demolition.

One copy of this accepted plan must be (a) the job and available to all contractors and craftsmen involved with the removal.

Any changes or alterations of these plans and specifications must be submitted to this Department and to the Risk and Building Inspections Department to determine if such changes meet the requirements of State and local laws. Notify this Department at least 72 hours prior to the following required inspections:

- Removal of Tank(s) and Piping
- Sampling
- Final Inspections

Issuance of a) permits to operate, b) permanent site closure, is dependent on compliance with accepted plans and all applicable laws and regulations.

**THERE IS A FINANCIAL PENALTY FOR NOT OBTAINING THESE INSPECTIONS.**

Contact Specialist

ROBERT WESTON  
September 10, 2010

See Table 2 for Used oil analysis methods  
Please be prepared to sample water

**UNDERGROUND STORAGE TANK CLOSURE PLAN**

\*\*\* Complete closure plan according to instructions \*\*\*

1. Name of Business CHEVRON 9-0290  
Business Owner or Contact Person (PRINT) TIM DAHL
2. Site Address 1802 WEBSTER STREET  
City, State ALAMEDA, CA Zip 94501 Phone \_\_\_\_\_
3. Mailing Address \_\_\_\_\_  
City, State \_\_\_\_\_ Zip \_\_\_\_\_ Phone \_\_\_\_\_
4. Property Owner CHEVRON USA INC.  
Business Name (if applicable) CHEVRON PRODUCTS COMPANY  
Address 6001 BOLLINGER CANYON RD.  
City, State SAN RAMON, CA Zip 94583 Phone 925.842.3075
5. Generator name under which tank will be manifested  
CHEVRON PRODUCTS COMPANY  
EPA I.D. No. under which tank(s) will be manifested CA R0011 6509
6. Contractor GETTLER RYAN INC.  
Address 647 SIERRA COURT SUITE J

September 10, 2010

**SR0017696**

City, State DUBLIN, CA. Zip 94568 Phone 925.551.7555

License Type GENERAL CONTRACTOR ID# 220793

7. Consultant (if applicable) CRA

Address 5900 HOLLIS ST. STE A

City, State EMERYVILLE Zip 94608 Phone 510.420.6700

8. Main Contact Person for Investigation (if applicable)

Name TIM DAHL Title PROJECT MANAGER

Company CHEVRON PRODUCTS COMPANY

Phone 925.842.3075

9. Number of underground tanks being closed with this plan ONE 1,000 GAL. W/10

Length of piping being removed under this plan 0

Total number underground tanks at this facility (confirmed with owner or operator) 4

10. State Registered Hazardous Waste Transporters/Facilities (See Instructions).

a) Product/Residual Sludge/Rinsate Transporter

Name EVERGREEN OIL EPA I.D. No. CAD980887418

Hauler License No. \_\_\_\_\_ License Exp. Date \_\_\_\_\_

Address 6880 SMITH AVE.

City, State NEWARK, CA. Zip 94801

b) Product/Residual Sludge/Rinsate Disposal Site

Name EVERGREEN OIL EPA I.D. No. CAD980887418

Address 6880 SMITH AVE

City, State NEWARK CA. Zip 94801

c) Tank and Piping Transporter

Name ECI EPA I.D. No. CAD982030173

Hauler License No. \_\_\_\_\_ License Exp. Date \_\_\_\_\_

Address 255 PARR BLVD.

City, State RICHMOND, CA. Zip \_\_\_\_\_

d) Tank and Piping Disposal Site

Name ECI EPA I.D. No. CAD009446392

Address 255 PARR BLVD.

City, State RICHMOND, CA. Zip \_\_\_\_\_

11. Sample Collector

Name NATHAN LEE

Company WONESTOGA - POWERS & ASSOC., INC.

Address 5900 HOLLIS ST. SUITE A

City, State EMERYVILLE, CA. Zip 94608 Phone 510.420.0700

12. Laboratory

Name MC CAMPBELL ANALYTICAL, INC

Address 1534 WILLOW PASS ROAD

City, State PITTSBURG, CA Zip 94565-1701

State Certification No. 1644

13. Have tank(s) or piping leaked in the past? Yes [ ] No  Unknown | |

If yes, describe: \_\_\_\_\_

\_\_\_\_\_

14. Describe method(s) to be used for rendering tank(s) inert:

PLACE 50 LBS. ICE TO INERT TANK.

\_\_\_\_\_

**Before tank(s) are pumped out and inerted, all associated piping must be flushed back into the tank(s). All accessible piping must then be removed. Inaccessible piping must be permanently plugged using grout.**

The Bay Area Air Quality Management District, (415) 771-6000, along with local Fire and Building Departments, must also be contacted for tank removal permits. Fire departments typically require the use of a combustible gas indicator to verify tank inertness. **It is the contractor's responsibility to have a functional combustible gas indicator on-site to verify that the tank(s) is inerted.**

15. Tank History and Sampling Information (See Instructions)

Tank		Material to be sampled (tank contents, soil, groundwater)	Location and Depth of Sample(s)
Capacity (gallons)	Use History include date last used (estimated)		
1,000	WASTE OIL	PEA GRAVEL AND/OR SOIL	BELOW TANK FILL & SIDEWALK

**One soil sample must be collected for every 20 linear feet of underground piping that is removed. A groundwater sample must be collected if any groundwater is present in the excavation.**

Excavated/Stockpiled Soil	
<p>Stockpiled Soil Volume (estimated)</p> <p>16 YRDS (ESTIMATED)</p>	<p>Sampling Plan</p>

**Stockpiled soil must be placed on bermed plastic and must be completely covered by plastic sheeting.**

Will the excavated soil be returned to the excavation immediately after tank removal?  yes [ ] no [ ] unknown

If yes, explain reasoning YES WITH THE APPROVAL FROM  
ALAMEDA COUNTY

If unknown at this point in time, please be aware that excavated soil may not be returned to the excavation without prior approval from this office. This means that the contractor, consultant, or responsible party must communicate with the Specialist IN ADVANCE of backfilling activities.



**TABLE #2**  
**REVISED 21 NOVEMBER 2003**

**RECOMMENDED MINIMUM VERIFICATION ANALYSES FOR  
UNDERGROUND TANK LEAKS**

<u>HYDROCARBON LEAK</u>	<u>SOIL ANALYSIS</u> (SW-846 METHOD)		<u>WATER ANALYSIS</u> (Water/Waste Water Method)	
<b>Gasoline (Leaded and Unleaded)</b>	TPHG	8015M or 8260	TPHG	8015M or 524.2/624 (8260)
	BTEX	8260	BTEX	524.2/624 (8260)
	EDB and EDC	8260	EDB and EDC	524.2/624 (8260)
	MTBE, TAME, ETBE, DIPE, TBA, and EtOH by 8260 for soil and 524.2/624 (8260) for water			
	TOTAL LEAD	AA	TOTAL LEAD	AA
		--Optional--		
	Organic Lead	DHS-LUFT	Organic Lead	DHS-LUFT
<b>Unknown Fuel</b>	TPHG	8015M or 8260	TPHG	8015M or 524.2/624 (8260)
	TPHD	8015M or 8260	TPHD	8015M or 524.2/624 (8260)
	BTEX	8260	BTEX	524.2/624 (8260)
	EDB and EDC	8260	EDB and EDC	524.2/624 (8260)
	MTBE, TAME, ETBE, DIPE, TBA, and EtOH by 8260 for soil and 524.2/624 (8260) for water			
	TOTAL LEAD	AA	TOTAL LEAD	AA
	--Optional--			
	Organic Lead	DHS-LUFT	Organic Lead	DHS-LUFT
<b>Diesel, Jet Fuel, Kerosene, and Fuel/Heating Oil</b>	TPHD	8015M or 8260	TPHD	8015M or 524.2/624 (8260)
	BTEX	8260	BTEX	524.2/624 (8260)
	EDB and EDC	8260	EDB and EDC	524.2/624 (8260)
	MTBE, TAME, ETBE, DIPE, TBA, and EtOH by 8260 for soil and 524.2/624 (8260) for water			
<b>Chlorinated Solvents</b>	CL HC	8260	CL HC	524.2/624 (8260)
	BTEX	8260 or 8021	BTEX	524.2/624 (8260) or 502.2/602 (8021)
	1,4-Dioxane	8270M	1,4-Dioxane	8270M
<b>Non-chlorinated Solvents</b>	TPHD	8015M or 8260	TPHD	8015M or 524.2/624 (8260)
	BTEX	8260 or 8021	BTEX	524.2/624 (8260) or 502.2/602 (8021)
<b>Waste, Used, or Unknown Oil</b>	TPHG	8015M or 8260	TPHG	8015M or 524.2/624 (8260)
	TPHD	8015M or 8260	TPHD	8015M or 524.2/624 (8260)
	O&G	9070	O&G	418.1
	BTEX	8260	BTEX	524.2/624 (8260)
	CL HC	8260	CL HC	524.2/624 (8260)
	1,4-Dioxane	8270M	1,4-Dioxane	8270M
	EDB and EDC	8260	EDB and EDC	524.2/624 (8260)
	MTBE, TAME, ETBE, DIPE, TBA, and EtOH by 8260 for soil and 524.2/624 (8260) for water			
	METALS (Cd, Cr, Pb, Ni, Zn) by ICAP or AA for soil water			
	PCB*, PCP*, PNA, CREOSOTE by 8270 for soil and 524/625 (8270) for water			
If found, analyze for dibenzofurans (PCBs) or dioxins (PCP)				

**NOTES:**

1. 8021 replaces old methods 8020 and 8010
2. 8260 replaces old method 8240
3. Reference: Table B-1 in Appendix B of "Expedited Site Assessment Tools for Underground Storage Tank Sites: A Guide for Regulators" (EPA 510-B-97-001).

16. Chemical methods and associated detection limits to be used for analyzing sample(s):

**The Tri-Regional Board recommended minimum verification analyses and practical quantitation reporting limits shall be followed.**

See Table 2, Recommended Minimum Verification Analyses for Underground Tank Leaks.

Contaminant Sought	EPA or Other Sample Preparation Method Number	EPA or Other Analysis Method Number	Method Detection Limit
	907/B		

17. Submit Site Health and Safety Plan (See Instructions)  
 18. Submit copy of Worker's Compensation Certificate

Name of Insurer TRAVELER'S PROPERTY INS.

19. Submit Plot Plan (See Instructions)  
 20. Enclose Fee (See Instructions)  
 21. **Report all leaks or contamination to this office within 5 days of discovery.**  
 The written report shall be made on an Underground Storage Tank Unauthorized Leak/Contamination Site Report (URL) form.  
 22. Submit a closure report to this office within 60 days of the tank removal. The closure report must contain all information listed in item 22 of the instructions.  
 23. Submit State (Underground Storage Tank Permit Application) Forms A and B (one-B form for each UST to be removed) (mark box 8 for "Tank Removed" in the upper right hand corner, if applicable).

I declare that to the best of my knowledge and belief that the statements and information provided above are correct and true.

I understand that information, in addition to that provided above, may be needed in order to obtain approval from the Department of Environmental Health and that no work is to begin on this project until this closure plan has been approved.

I understand that any changes in design, materials, or equipment will void this plan if prior approval is not obtained.

I understand that all work performed during this project will be done in compliance with all applicable OSHA (Occupational Safety and Health Administration) requirements concerning personnel health and safety. I understand that site and worker safety are solely the responsibility of the property owner or his agent and that this responsibility is not shared nor assumed by the County of Alameda.

Once I have received my stamped, accepted closure plan, I will contact the project Hazardous Materials Specialist at least three working days in advance of site work to schedule the required inspections.

**CONTRACTOR INFORMATION**

Name of Business Gettier-Ryan Inc.  
Name of Individual DENNIS GAN  
Signature *Dennis Gan* Date 9/8/2010

PROPERTY OWNER OR  MOST RECENT TANK OWNER (Check one)

Name of Business Chevron Facility # 90290  
Name of Individual Timothy Dah  
Signature *Timothy Dah* Date 9/9/2010  
For Chevron USA

APPENDIX C

CRA'S STANDARD FIELD PROCEDURES FOR COMPLIANCE SAMPLING

## STANDARD FIELD PROCEDURES FOR COMPLIANCE SAMPLING

This document describes Conestoga-Rovers and Associates' (CRA) standard operating procedures for collecting compliance soil and groundwater samples during underground storage tank (UST) facility removal and excavation. These procedures ensure that the samples are collected, handled, and documented in compliance with California Administration Code Title 23: Waters; Chapter 3: Water Resources Control Board; Subchapter 16: Underground Storage Tank Regulations (Title 23). CRA's sampling procedures are also based on guidelines contained in the California State Regional Water Quality Control Board Tri-Regional Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites dated August 10, 1990.

The objective of sample collection during underground storage tank facility removal or excavation is to evaluate surrounding soils. Excavated soils are typically screened using an organic vapor analyzer (i.e., PID or FID) to determine the presence of petroleum hydrocarbons or other constituents of concern. Additional soil samples may also be collected based on visual observations. The quantity and location of samples will be based on governing regulatory requirements and field observations.

The soil samples are collected in steam cleaned brass or steel tubes from either a slide-hammer type sampler or the bucket of a backhoe. When a backhoe is used, approximately three inches of soil are scraped from the surface and the tube is driven into the exposed soil. Upon removal from the sampler or the backhoe, the samples are trimmed flush, capped with Teflon sheets and plastic end caps, labeled, logged, placed on ice or refrigerated, and transported under chain of custody to a State certified laboratory.

Groundwater samples are collected using new disposable bailers and decanted into laboratory provided containers, labeled, logged, placed on ice or refrigerated, and transported under chain of custody to a State certified laboratory.

APPENDIX D

WASTE MANIFESTS

**CERTIFICATE  
CERTIFIED SERVICES COMPANY**

255 Parr Boulevard · Richmond, California 94801  
Phone # 510-235-1393

**CUSTOMER:** GETTLER & RYAN

**JOB NO:** 52T4147

**GENERATOR:** CHEVRON STATION # 90290  
1802 WEBSTER ST ALAMEDA, CA. 94501

**FOR:** ECOLOGY CONTROL INDUSTRIES      **TANK NO.:** 34107

**LOCATION:** RICHMOND      **DATE:** 10/14/2010

**LAST PRODUCT:** WASTE OIL      **TEST METHOD:** VISUAL GASTECH/1314 SMPN

This is to certify that I have personally determined that this is in accordance with the American Petroleum Institute and have found the condition to be in accordance with its assigned designation. This certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

**TANK SIZE :** 1000 GALLONS

**CONDITION:** SAFE FOR FIRE

**REMARKS:**

OXYGEN 20.9% LOWER EXPLOSIVE LIMIT LESS THAN 0.1% ECOLOGY CONTROL INDUSTRIES

HEREBY CERTIFIES THAT THE ABOVE NUMBERED TANK HAS BEEN CUT OPEN, PROCESSED

AND THEREFORE, DESTROYED AT OUR PERMITTED HAZARDOUS WASTE FACILITY.

ECOLOGY CONTROL INDUSTRIES HAS THE APPROPRIATE PERMITS FOR AND HAS ACCEPTED

THE TANK SHIPPED TO US FOR PROCESSING.

In the event of any physical or atmospheric changes affecting the gas-free conditions of the above tanks, or it in any doubt, immediately stop all hot work and contact the undersigned. This permit is valid for 24 hours if no physical or atmospheric changes occur.

**STANDARD SAFETY DESIGNATION**

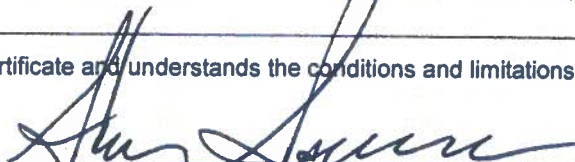
**SAFE FOR MEN:** Means that in the compartment or space so designated (a) The oxygen content of the atmosphere is at least 19.5 percent by volume; and that (b) Toxic materials in the atmosphere are within permissible concentrations; and (c) In the judgment of the Inspector's certificate.

**SAFE FOR FIRE:** Means that in the compartment so designated (a) The concentration of flammable materials in the atmosphere is below 10 percent of the lower explosive limit; and that (b) in the judgment of the Inspector, the residues are not capable of producing a higher concentration that permitted under existing atmospheric conditions in the presence of fire and while maintained as directed on the Inspector's certificate, and further, (c) All adjacent spaces have either been cleaned sufficiently to prevent the spread of fire, are satisfactorily inerted, or in the case of fuel tanks, have been treated as deemed necessary by the Inspector.

The undersigned representative acknowledges receipt of this certificate and understands the conditions and limitations under which it was issued.

  
REPRESENTATIVE

TITLE

  
INSPECTOR

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number CAR000116600	2. Page 1 of	3. Emergency Response Phone 800-921-5479	4. Manifest Tracking Number <b>002135738 JJK</b>		
5. Generator's Name and Mailing Address CHEVRON STATION # 90296 PO BOX 5004 SAN RAMON, CA 94583 Generator's Phone: 925-242-5033				Generator's Site Address (if different than mailing address) 1802 WEBSTER ST ALAMEDA, CA 94501			
6. Transporter 1 Company Name Ecology Control Industries				U.S. EPA ID Number CA0002030173			
7. Transporter 2 Company Name				U.S. EPA ID Number			
8. Designated Facility Name and Site Address ECOLGY CONTROL INDUSTRIES 255 PARR BOULEVARD RICHMOND, CA 94801 Facility's Phone: 510-235-1382				U.S. EPA ID Number CA0000445300			
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
		No.	Type				
1.	NON-RCRA HAZARDOUS WASTE SOLID (EMPTY STORAGE TANK)	001	FP	500	P	612	
2.				0			
3.				0			
4.				0			
14. Special Handling Instructions and Additional Information ECI JOB #5212147 TANK#1107 WEAR PROPER PPE WHEN HANDLING // WEIGHTS AND VOLUMES ARE APPROXIMATE							
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.							
Generator's/Offeror's Printed/Typed Name Richard McNamee, Ec Control Ind				Signature <i>[Signature]</i>		Month Day Year 01/31/10	
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____ Transporter signature (for exports only): _____							
17. Transporter Acknowledgment of Receipt of Materials							
Transporter 1 Printed/Typed Name Mark T. Cranch				Signature <i>[Signature]</i>		Month Day Year 01/31/10	
Transporter 2 Printed/Typed Name				Signature		Month Day Year	
18. Discrepancy							
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection							
18b. Alternate Facility (or Generator) _____ Manifest Reference Number: _____ U.S. EPA ID Number _____							
18c. Signature of Alternate Facility (or Generator) _____ Month Day Year _____							
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)							
1.		2.		3.		4.	
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a							
Printed/Typed Name				Signature		Month Day Year	

GENERATOR

TRANSPORTER INT'L

DESIGNATED FACILITY





4600 Malat Street • Oakland, CA 94601  
 (510) 533-9353 • Fax (510) 533-3002

411 Old County Rd. • Belmont, CA 94002  
 (650) 593-1838 • Fax (650) 593-1518

25308

REMIT TO:  
 P.O. BOX 23804  
 OAKLAND, CA 94623-0804

DELIVERY TICKET

DOC.# 37399 DATE 9/21/2010 PG.# 1

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 OAKLAND  
 COD-SALE CA

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COD SALES  
 OAKLAND  
 COD-SALE CA

FAX 510- -

CUSTOMER P.O. #	RELEASE #	TERMS	SHIPPED FROM
C/C		UPON RECEIPT	ALLIANCE GAS-MALAT P
SHIP VIA	ORDER DATE	REFERENCE	
WILL CALL	9/21/10	1 36 -2 -00 -11 - CPL 2	P0/00 00/3 05

CYLINDERS			QUANTITIES			U/M	DESCRIPTION	UNIT PRICE	EXTENDED PRICE
DEL.	RET.	ORDERED	SHIPPED	BACK ORDERED					
		40	40		LB	ALL-DIR DRY ICE RICE	.Y 1.00	40.00	
							SUB TOTAL	40.00	
							09/21/10 09:43:10	9.75% SALES TAX	3.90
							CAALAMEDA		

SPECIAL INSTRUCTIONS

\*\* TOTAL ORDER \*\* 43.90

1

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. By Alliance Gas Products  <b>CAUTION: USE NO OIL OR LUBRICANT OF ANY KIND ON CYLINDERS, VALVES, GAUGES, REGULATORS OR ANY OTHER FITTINGS, AS SUCH USE IS DANGEROUS AND MAY CAUSE EXPLOSION.</b>	<b>EMERGENCY RESPONSE</b> <b>1 (800) 633-8253</b>	PLACARDS: <input type="checkbox"/> ACCEPTED <input type="checkbox"/> REFUSED Terms & Conditions THE CUSTOMER HEREIN CONSENTS TO AND ACCEPTS THE ABOVE PRODUCTS SUBJECT TO ALL THE CONDITIONS AS SET FORTH ON REVERSE SIDE HEREOF AND THE EXISTING CONTRACT BETWEEN BOTH PARTIES.
	SHIPPED BY:	RECEIVED BY: X
		DATE
		PRINT NAME: X

APPENDIX E

LABORATORY ANALYTICAL REPORT



**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

Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #311594-2010-P10; 9-0290	Date Sampled: 09/21/10
		Date Received: 09/22/10
	Client Contact: Nathan Lee	Date Reported: 09/28/10
	Client P.O.:	Date Completed: 09/28/10

**WorkOrder: 1009607**

September 29, 2010

Dear Nathan:

Enclosed within are:

- 1) The results of the **1** analyzed sample from your project: **#311594-2010-P10; 9-0290**,
- 2) A QC report for the above sample,
- 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.



Waste, Used, or Unknown Oil

~~TPHG~~ ~~8015M or 8260~~  
~~TPHD~~ ~~8015M or 8260~~  
~~O&G~~ ~~9070~~  
~~BTEX~~ ~~8260~~  
~~CLHC~~ ~~8260~~  
~~1,4-Dioxane~~ ~~8270M~~  
~~EDB and EDC~~ ~~8260~~

TPHG 8015M or 524.2/624 (8260)  
 TPHD 8015M or 524.2/624 (8260)  
 O&G TRPH 418.1  
 BTEX 524.2/624 (8260)  
 CL HC 524.2/624 (8260)  
 1,4-Dioxane 8270M  
 EDB and EDC 524.2/624 (8260)

Soil

Water

MTBE, TAME, ETBE, DIPE, TBA, and EtOH by ~~8260 for soil~~ 524.2/624 (8260) for water  
 METALS (Cd, Cr, Pb, Ni, Zn) by ICAP or AA for soil water  
 PCB, PCP, PNA, CREOSOTE by ~~8270 for soil~~ and 524/625 (8270) for water  
 If found, analyze for dibenzofurans (PCBs) or dioxins (PCP)

← 2 additional L

NOTES:

1. 8021 replaces old methods 8020 and 8010
2. 8260 replaces old method 8240
3. Reference: Table B-1 in Appendix B of "Expedited Site Assessment Tools for Underground Storage Tank Sites: A Guide for Regulators" (EPA 510-B-97-001).

# McC Campbell Analytical, Inc.



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

# CHAIN-OF-CUSTODY RECORD

**WorkOrder: 1009607**

**ClientCode: CETE**

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  Fax   
  Email   
  HardCopy   
  ThirdParty   
  J-flag

<b>Report to:</b>		<b>Bill to:</b>	<b>Requested TAT: 5 days</b>
Nathan Lee	Email: nlee@croworld.com	Accounts Payable	
Conestoga-Rovers & Associates	cc: dgrunat@croworld.com, dohare@croworl	Conestoga-Rovers & Associates	<i>Date Received: 09/22/2010</i>
5900 Hollis St, Suite A	PO:	5900 Hollis St, Ste. A	<i>Date Printed: 09/23/2010</i>
Emeryville, CA 94608	ProjectNo: #311594-2010-P10; 9-0290	Emeryville, CA 94608	
(510) 420-3369    FAX (510) 420-9170			

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	
1009607-001	WOT-1	Water	9/21/2010 14:20	<input type="checkbox"/>	C	B	D	E	E	A	E	A					

**Test Legend:**

1	1,4-DIOXANE_W	2	418_SG_W	3	8010BMS_W	4	8082A_PCB_W	5	8270D_W
6	G-MBTEX_W	7	LUFTMS_W	8	PREDF REPORT	9		10	
11		12							

The following SampID: 001A contains testgroup.

**Prepared by: Melissa Valles**

**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: **Conestoga-Rovers & Associates**

Date and Time Received: **9/22/2010 6:01:20 PM**

Project Name: **#311594-2010-P10; 9-0290**

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

WorkOrder N°: **1009607** Matrix Water

Carrier: Rob Pringle (MAI Courier)

**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: 4.6°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: pH for total metals had to be adjusted to <2. After preservation sample had to sit for 24hrs prior to extracting and analyzing. Micro-Ext ok per N.L.



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

Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #311594-2010-P10; 9-0290	Date Sampled: 09/21/10
	Client Contact: Nathan Lee	Date Received: 09/22/10
	Client P.O.:	Date Extracted: 09/24/10
		Date Analyzed: 09/24/10

**1,4-Dioxane by P&T and GC/MS SIM Mode\***

Extraction method SW5030B

Analytical methods SW8260B

Work Order: 1009607

Lab ID	Client ID	Matrix	1,4-Dioxane	DF	% SS	Comments
001C	WOT-1	W	ND	1	86	

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	2.0	µg/L
	S	NA	NA

\* 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; %SS means Percent Recovery of Surrogate Standard; DF means Dilution Factor

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





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Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #311594-2010-P10; 9-0290	Date Sampled: 09/21/10
	Client Contact: Nathan Lee	Date Received: 09/22/10
	Client P.O.:	Date Extracted: 09/23/10
		Date Analyzed 09/27/10

### Total Recoverable Petroleum Hydrocarbons with Silica Gel Clean-Up by IR Spectrometry\*

Extraction method E418.1

Analytical methods E418.1

Work Order: 1009607

Lab ID	Client ID	Matrix	TRPH	DF	% SS	Comments
1009607-001B	WOT-1	W	ND	1	113	

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

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

DF = dilution factor (may be raised to dilute target analyte or matrix interference).

%SS = Percent Recovery of Surrogate Standard

# surrogate diluted out of range or not applicable to this sample.



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Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #311594-2010-P10; 9-0290	Date Sampled: 09/21/10
	Client Contact: Nathan Lee	Date Received: 09/22/10
	Client P.O.:	Date Extracted: 09/24/10
		Date Analyzed: 09/24/10

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 1009607

Lab ID	1009607-001D
Client ID	WOT-1
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
tert-Amyl methyl ether (TAME)	ND	1.0	0.5	Benzene	ND	1.0	0.5
Bromodichloromethane	ND	1.0	0.5	Bromoform	ND	1.0	0.5
Bromomethane	ND	1.0	0.5	t-Butyl alcohol (TBA)	ND	1.0	2.0
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	Chloroform	ND	1.0	0.5
Chloromethane	ND	1.0	0.5	Dibromochloromethane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	1,2-Dichlorobenzene	ND	1.0	0.5
1,3-Dichlorobenzene	ND	1.0	0.5	1,4-Dichlorobenzene	ND	1.0	0.5
Dichlorodifluoromethane	ND	1.0	0.5	1,1-Dichloroethane	ND	1.0	0.5
1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5	1,1-Dichloroethene	ND	1.0	0.5
cis-1,2-Dichloroethene	ND	1.0	0.5	trans-1,2-Dichloroethene	ND	1.0	0.5
1,2-Dichloropropane	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Freon 113	ND	1.0	10
Diisopropyl ether (DIPE)	ND	1.0	0.5	Ethanol	ND	1.0	50
Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5	Methyl-t-butyl ether (MTBE)	ND	1.0	0.5
Methylene chloride	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	Vinyl Chloride	ND	1.0	0.5
Xylenes	ND	1.0	0.5				

### Surrogate Recoveries (%)

%SS1:	93	%SS2:	100
%SS3:	82		

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

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



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Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #311594-2010-P10; 9-0290	Date Sampled: 09/21/10
	Client Contact: Nathan Lee	Date Received: 09/22/10
	Client P.O.:	Date Extracted: 09/23/10
		Date Analyzed: 09/23/10

### Polychlorinated Biphenyls (PCBs) Aroclors by GC-ECD\*

Extraction Method: SW3510C

Analytical Method: SW8082

Work Order: 1009607

Lab ID	1009607-001E				Reporting Limit for DF =1	
Client ID	WOT-1					
Matrix	W					
DF	1					

Compound	Concentration				ug/kg	µg/L
Aroclor1016	ND				NA	0.5
Aroclor1221	ND				NA	0.5
Aroclor1232	ND				NA	0.5
Aroclor1242	ND				NA	0.5
Aroclor1248	ND				NA	0.5
Aroclor1254	ND				NA	0.5
Aroclor1260	ND				NA	0.5
PCBs, total	ND				NA	0.5

### Surrogate Recoveries (%)

%SS:	101			
Comments	b1			

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

b1) aqueous sample that contains greater than ~1 vol. % sediment



# McC Campbell Analytical, Inc.

"When Quality Counts"

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Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #311594-2010-P10; 9-0290	Date Sampled: 09/21/10
	Client Contact: Nathan Lee	Date Received: 09/22/10
	Client P.O.:	Date Extracted: 09/23/10
		Date Analyzed: 09/25/10

### Semi-Volatile Organics by GC/MS\*

Extraction Method: SW3510C

Analytical Method: SW8270C

Work Order: 1009607

Lab ID	1009607-001E
Client ID	WOT-1
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acenaphthene	ND<100	10	10	Acenaphthylene	ND<100	10	10
Anthracene	ND<100	10	10	Benzo(a)anthracene	ND<100	10	10
Benzo(b)fluoranthene	ND<100	10	10	Benzo(k)fluoranthene	ND<100	10	10
Benzo(g,h,i)perylene	ND<100	10	10	Benzo(a)pyrene	ND<100	10	10
Chrysene	ND<100	10	10	Dibenzo(a,h)anthracene	ND<100	10	10
Fluoranthene	ND<100	10	10	Fluorene	ND<100	10	10
Indeno (1,2,3-cd) pyrene	ND<100	10	10	2-Methylnaphthalene	ND<100	10	10
Naphthalene	ND<100	10	10	Pentachlorophenol	ND<500	10	50
Phenanthrene	ND<100	10	10	Pyrene	ND<100	10	10

### Surrogate Recoveries (%)

%SS1:	93	%SS2:	---#
%SS3:	95	%SS4:	96
%SS5:	81	%SS6:	120

Comments: a3,b1

\* water samples 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 are reported in mg/L.

ND means not detected at or above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS means Percent Recovery of Surrogate Standard; DF means Dilution Factor

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

a3) sample diluted due to high organic content.

b1) aqueous sample that contains greater than ~1 vol. % sediment



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Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #311594-2010-P10; 9-0290	Date Sampled: 09/21/10
	Client Contact: Nathan Lee	Date Received: 09/22/10
	Client P.O.:	Date Extracted: 09/25/10
		Date Analyzed: 09/25/10

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Bm

Work Order: 1009607

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	WOT-1	W	ND	ND	ND	ND	ND	ND	1	99	

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:



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Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #311594-2010-P10; 9-0290	Date Sampled: 09/21/10
		Date Received: 09/22/10
	Client Contact: Nathan Lee	Date Extracted: 09/23/10
	Client P.O.:	Date Analyzed: 09/28/10

### LUFT 5 Metals\*

Extraction method: E200.8

Analytical methods: E200.8

Work Order: 1009607

Lab ID	Client ID	Matrix	Extraction Type	Cadmium	Chromium	Lead	Nickel	Zinc	DF	% SS	Comments
001E	WOT-1	W	TOTAL	0.63	140	61	230	250	1	100	b1

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TOTAL	0.25	0.5	0.5	0.5	5.0	µg/L
	S	TOTAL	NA	NA	NA	NA	NA	NA

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

# means surrogate diluted out of range; ND means not detected above the reporting limit/method detection limit; N/A means not applicable to this sample or instrument.

TOTAL = Hot acid digestion of a representative sample aliquot.  
TRM = Total recoverable metals is the "direct analysis" of a sample aliquot taken from its acid-preserved container.  
DISS = Dissolved metals by direct analysis of 0.45 µm filtered and acidified sample.

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

b1) aqueous sample that contains greater than ~1 vol. % sediment





### QC SUMMARY REPORT FOR SW8270C

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 53305

WorkOrder 1009607

Analyte	EPA Method SW8270C Extraction SW3510C								Spiked Sample ID: N/A			
	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
Acenaphthene	N/A	50	N/A	N/A	N/A	74.9	76	1.46	N/A	N/A	30 - 130	20
4-Chloro-3-methylphenol	N/A	100	N/A	N/A	N/A	96.1	97.6	1.51	N/A	N/A	30 - 130	20
2-Chlorophenol	N/A	100	N/A	N/A	N/A	82.9	80.8	2.49	N/A	N/A	30 - 130	20
1,4-Dichlorobenzene	N/A	50	N/A	N/A	N/A	56.6	56.7	0.106	N/A	N/A	30 - 130	20
2,4-Dinitrotoluene	N/A	50	N/A	N/A	N/A	90.8	88.4	2.69	N/A	N/A	30 - 130	20
4-Nitrophenol	N/A	100	N/A	N/A	N/A	56.4	57	1.05	N/A	N/A	30 - 130	20
N-Nitrosodi-n-propylamine	N/A	50	N/A	N/A	N/A	95.4	81.4	15.8	N/A	N/A	30 - 130	20
Pentachlorophenol	N/A	100	N/A	N/A	N/A	103	105	2.12	N/A	N/A	30 - 130	20
Phenol	N/A	100	N/A	N/A	N/A	104	105	1.04	N/A	N/A	30 - 130	20
Pyrene	N/A	50	N/A	N/A	N/A	84.4	88.1	4.31	N/A	N/A	30 - 130	20
1,2,4-Trichlorobenzene	N/A	50	N/A	N/A	N/A	66	66.1	0.288	N/A	N/A	30 - 130	20
%SS1:	N/A	5000	N/A	N/A	N/A	90	81	10.3	N/A	N/A	30 - 130	20
%SS2:	N/A	5000	N/A	N/A	N/A	99	97	2.17	N/A	N/A	30 - 130	20
%SS3:	N/A	5000	N/A	N/A	N/A	98	96	1.51	N/A	N/A	30 - 130	20
%SS4:	N/A	5000	N/A	N/A	N/A	78	76	2.04	N/A	N/A	30 - 130	20
%SS5:	N/A	5000	N/A	N/A	N/A	87	82	5.60	N/A	N/A	30 - 130	20
%SS6:	N/A	5000	N/A	N/A	N/A	93	97	3.62	N/A	N/A	30 - 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 53305 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1009607-001E	09/21/10 2:20 PM	09/23/10	09/25/10 12:37 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 SW8260B**

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 53314

WorkOrder 1009607

EPA Method SW8260B		Extraction SW5030B							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
1,4-Dioxane	N/A	20	N/A	N/A	N/A	99.3	112	11.6	N/A	N/A	70 - 130	20
%SS1:	N/A	25	N/A	N/A	N/A	89	89	0	N/A	N/A	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 53314 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1009607-001C	09/21/10 2:20 PM	09/24/10	09/24/10 3:45 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 E418.1**

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 53313

WorkOrder 1009607

EPA Method E418.1		Extraction E418.1							Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TRPH	N/A	11.85	N/A	N/A	N/A	97.6	98.5	0.947	N/A	N/A	70 - 130	20
%SS:	N/A	10	N/A	N/A	N/A	111	106	4.53	N/A	N/A	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 53313 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1009607-001B	09/21/10 2:20 PM	09/23/10	09/27/10 2:56 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.

# surrogate diluted out of range.



### QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 53291

WorkOrder 1009607

Analyte	EPA Method SW8015B		Extraction SW3510C						Spiked Sample ID: N/A			
	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	113	114	0.906	N/A	N/A	70 - 130	30
%SS:	N/A	625	N/A	N/A	N/A	117	118	0.388	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 53291 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1009607-001A	09/21/10 2:20 PM	09/23/10	09/23/10 8:35 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.



**QC SUMMARY REPORT FOR SW8260B**

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 53308

WorkOrder 1009607

EPA Method SW8260B	Extraction SW5030B								Spiked Sample ID: 1009609-001B			
	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
Chlorobenzene	ND<2.5	10	109	109	0	111	112	1.15	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND<2.5	10	110	110	0	96.7	98.9	2.31	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND<2.5	10	108	106	1.46	106	107	0.792	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND<2.5	10	115	121	5.10	98.9	101	1.65	70 - 130	30	70 - 130	30
Trichloroethene	ND<2.5	10	113	117	2.94	116	116	0	70 - 130	30	70 - 130	30
%SS1:	96	25	89	89	0	94	94	0	70 - 130	30	70 - 130	30
%SS2:	100	25	98	99	0.667	97	97	0	70 - 130	30	70 - 130	30
%SS3:	92	2.5	103	107	3.84	83	81	1.74	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 53308 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1009607-001D	09/21/10 2:20 PM	09/24/10	09/24/10 1:15 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 freon 113 may occasionally appear in the method blank at low levels.



**QC SUMMARY REPORT FOR SW8082**

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 53315

WorkOrder 1009607

EPA Method SW8082		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
Aroclor1260	N/A	3.75	N/A	N/A	N/A	116	117	0.435	N/A	N/A	70 - 130	20
%SS:	N/A	1.25	N/A	N/A	N/A	86	84	2.19	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 53315 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1009607-001E	09/21/10 2:20 PM	09/23/10	09/23/10 3:16 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.



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

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 53304

WorkOrder 1009607

EPA Method SW8021B/8015Bm		Extraction SW5030B							Spiked Sample ID: 1009604-005A			
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(btex) <sup>f</sup>	ND	60	107	106	0.359	114	108	5.27	70 - 130	20	70 - 130	20
MTBE	ND	10	110	115	4.66	114	115	0.191	70 - 130	20	70 - 130	20
Benzene	ND	10	96.2	100	4.29	99.1	97.3	1.83	70 - 130	20	70 - 130	20
Toluene	ND	10	97.5	99.8	2.40	101	98.2	3.10	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	96.2	97.7	1.63	98.5	97.5	1.03	70 - 130	20	70 - 130	20
Xylenes	ND	30	98.3	101	2.34	101	100	1.40	70 - 130	20	70 - 130	20
%SS:	115	10	95	97	2.16	97	94	3.31	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 53304 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1009607-001A	09/21/10 2:20 PM	09/25/10	09/25/10 1:37 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 E200.8**

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 53296

WorkOrder 1009607

EPA Method E200.8		Extraction E200.8							Spiked Sample ID: 1009501-003A			
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
Cadmium	ND	10	94.1	88.8	5.82	101	97.7	3.49	70 - 130	20	85 - 115	20
Chromium	ND	10	98.3	93.2	5.13	98.2	100	2.17	70 - 130	20	85 - 115	20
Lead	ND	10	92.9	89	4.16	99.5	97.2	2.22	70 - 130	20	85 - 115	20
Nickel	8.4	10	87.6	89	0.812	103	94	9.26	70 - 130	20	85 - 115	20
Zinc	16	100	94.9	92.1	2.56	109	103	4.76	70 - 130	20	85 - 115	20
%SS:	100	750	96	99	3.61	101	98	2.78	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 53296 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1009607-001E	09/21/10 2:20 PM	09/23/10	09/28/10 3:52 AM	1009607-001E	09/21/10 2:20 PM	09/23/10	09/28/10 2:45 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 applicable to this method.  
 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.