



2100.26.064

ADEC File No.

Hazard ID No.

## GROUNDWATER MONITORING WELL DECOMMISSIONING REPORT

CHEVRON-BRANDED SERVICE STATION 90932  
2200 WEST DIMOND BOULEVARD  
ANCHORAGE, ALASKA  
FILE ID: 2100.26.064

SEPT. OF ENVIRONMENTAL  
CONSERVATION

DEC 17 2012

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**Prepared For:**

Mr. Robert Weimer

Alaska Department of Environmental Conservation

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Staff Geologist

Siobhan Pritchard P.G.  
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DECEMBER 13, 2012  
REF. NO. 060349 (19)

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## TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION .....	1
2.0 SITE BACKGROUND .....	1
3.0 MONITORING WELL DECOMMISSIONING.....	1
4.0 CONCLUSIONS.....	2

LIST OF FIGURES  
(Following Text)

FIGURE 1	VICINITY MAP
FIGURE 2	SITE PLAN

LIST OF APPENDICES

APPENDIX A	SITE PHOTOGRAPHS
APPENDIX B	ENVIRONMENTAL HISTORY
APPENDIX C	ALASKA DEPARTMENT OF NATURAL RESOURCES WATER WELL LOGS
APPENDIX D	FIELD NOTES

## LIST OF ACRONYMS AND ABBREVIATIONS

ADEC	Alaska Department of Environmental Conservation
CRA	Conestoga-Rovers & Associates
fbg	feet below grade
P.G.	Professional Geologist
UST	underground storage tank
Ref. no.	reference number



## 1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) is submitting this *Groundwater Monitoring Well Decommissioning Report* to the Alaska Department of Environmental Conservation (ADEC) on behalf of Chevron Environmental Management Company (Chevron) for Chevron-branded service station 90932. CRA prepared this report summarizing the May 2012 monitoring well decommissioning. All activities were performed in accordance with CRA's ADEC approved May 17, 2012 *Monitoring Well Decommissioning Workplan*, and in accordance with the ADEC's November 2011 *Monitoring Well Guidance*. Alaska Qualified Personnel in accordance with 18 AAC 75, Article 3, and 18 AAC 78, Article 2, 6, and 9 conducted all project work.

## 2.0 SITE BACKGROUND

### **SITE DESCRIPTION**

The site is an active Chevron-branded service station located at 2200 West Dimond Boulevard on the southeast corner of West Dimond Boulevard and Victor Road in Anchorage, Alaska (Figure 1). The property legal description is Lakeview Terrace TR-A1. The site latitude and longitude are 61.137344° North and 149.920493° West. The site consists of a station building, three underground storage tanks (USTs), four product dispenser islands, and associated piping. Six onsite groundwater monitoring wells are gauged and five are sampled semiannually (Figure 2). Site photographs are presented as Appendix A. The site environmental history is presented as Appendix B.

## 3.0 MONITORING WELL DECOMMISSIONING

CRA and Discover Drilling, Incorporated decommissioned groundwater monitoring well MW-2 on May 23, 2012 due to a damaged well casing. The bottom plug could not be knocked out due to blockage at 6.25 feet below grade (fbg). The evacuated well space collapsed to 4.5 fbg prior to filling with hydrated bentonite chips. The remaining space was filled with hydrated bentonite chips to within approximately 0.7 fbg and then sealed with concrete to match existing grade.

### **Site Safety and Utility Clearance**

CRA prepared a site health and safety plan to inform site workers of known hazards and to provide health and safety guidance. In addition, job safety analyses and a journey management plan were reviewed with site workers to address any safety concerns and

safe traffic routes to be used during site activities. The plans were onsite at all times during field work and signed by all site workers.

The Alaska Digline was notified prior to site activities to clear the borehole location with utility companies.

#### 4.0 CONCLUSIONS

Monitoring well MW-2 was discovered to be damaged during groundwater sampling in 2011. Monitoring well MW-2 did not contain petroleum hydrocarbons above ADEC Table C Cleanup Levels during the last four sampling events and was decommissioned to eliminate the potential for vertical contaminant migration.

## FIGURES

FIGURE 1: VICINITY MAP

FIGURE 2: SITE PLAN



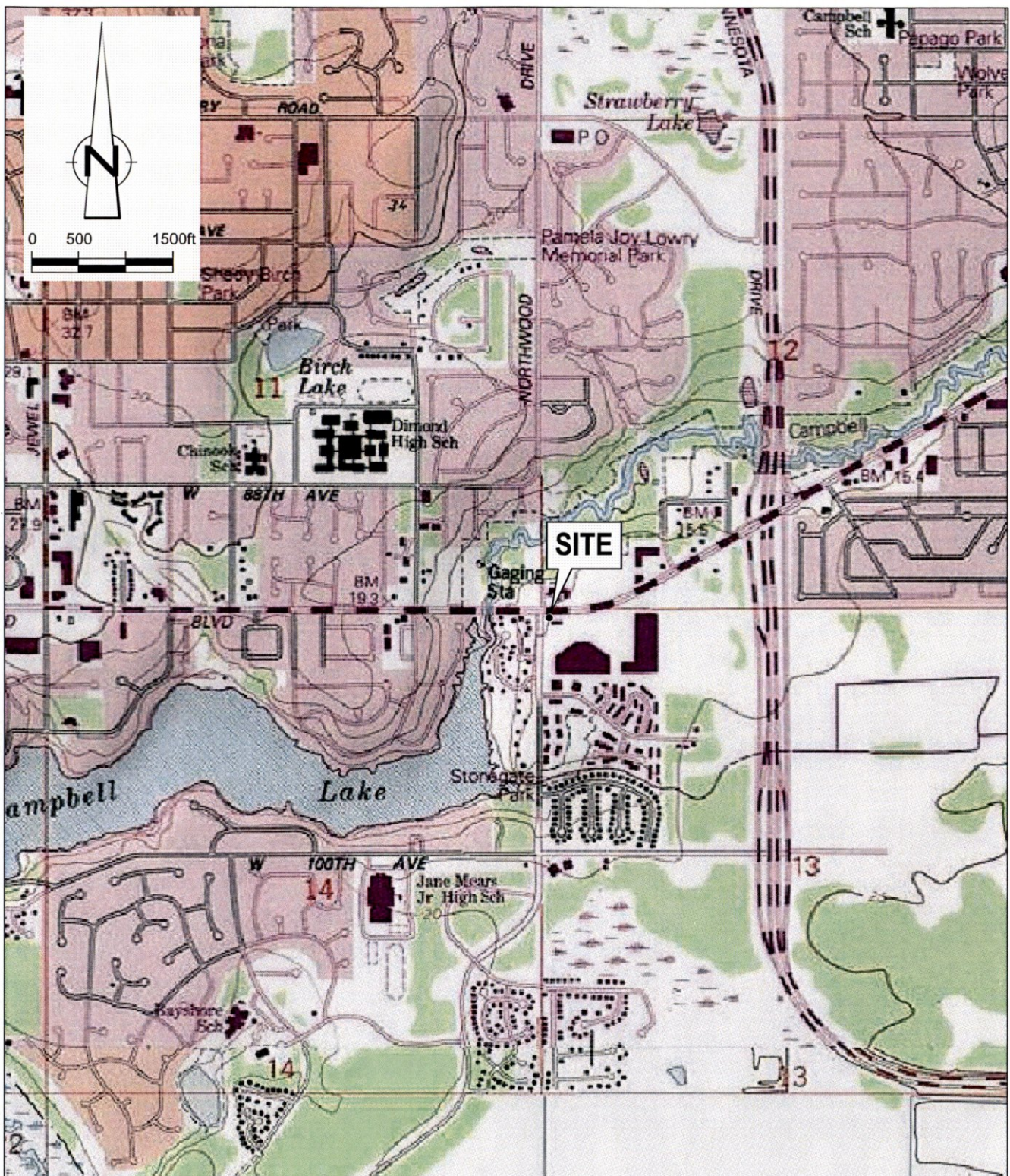
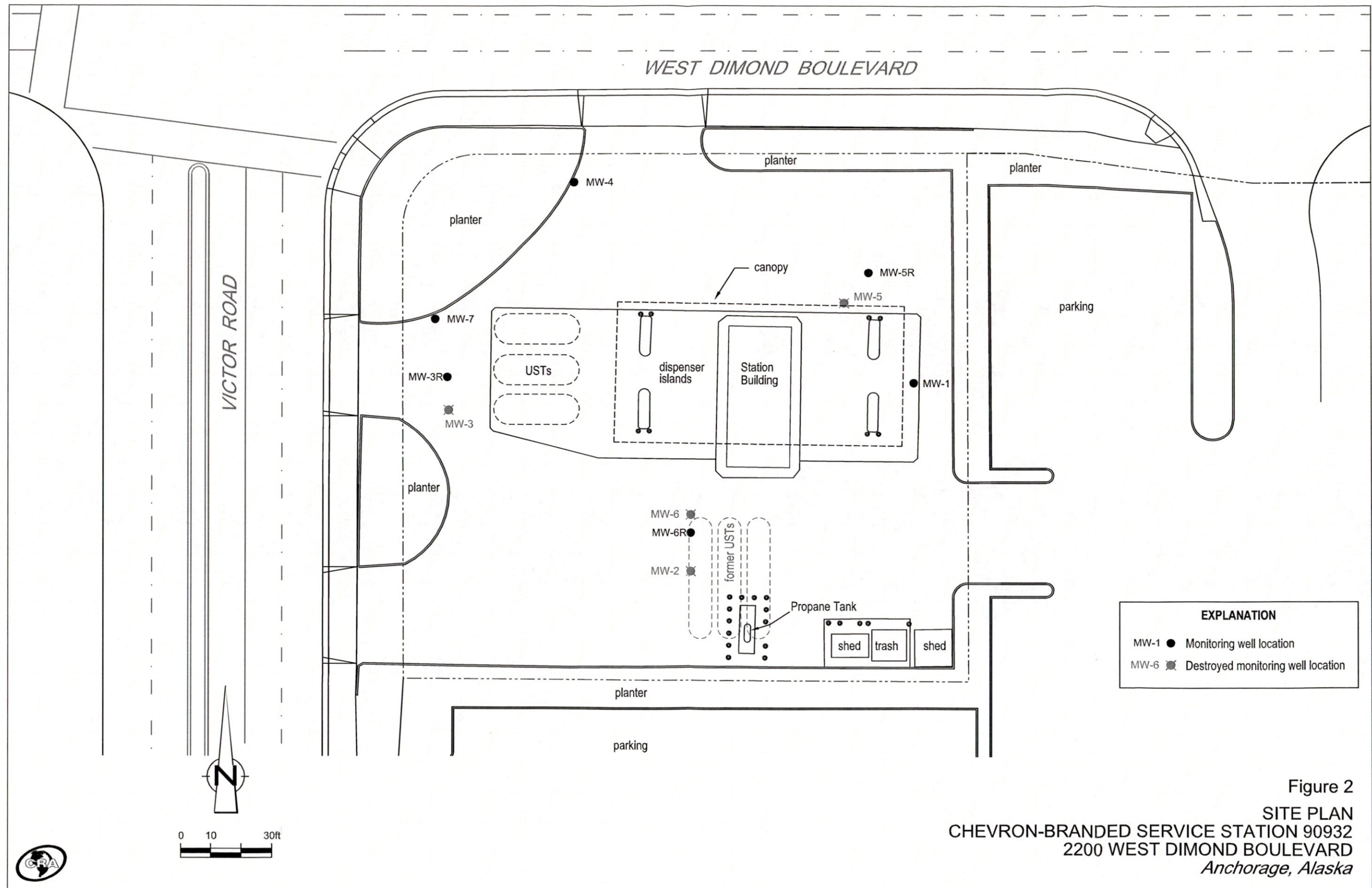


Figure 1

VICINITY MAP  
 CHEVRON SERVICE STATION 9-0932  
 2200 WEST DIMOND BOULEVARD  
 Anchorage, Alaska







APPENDIX A  
SITE PHOTOGRAPHS





1. Photo taken from southwest corner of site facing east.



2. Photo taken from southeast corner of site facing west.



3. Photo taken from northeast corner of site facing west.



4. Photo taken from northwest corner of site facing east.



Appendix A  
 SITE PHOTOGRAPHS  
 CHEVRON-BRANDED SERVICE STATION 90932  
 2200 WEST DIMOND BOULEVARD  
*Anchorage, Alaska*



APPENDIX B

ENVIRONMENTAL HISTORY

**SITE ENVIRONMENTAL HISTORY**  
**CHEVRON SITE 9-0932**

**1996 UST, Product Line, and Dispenser Removal and Excavation**

Hart Crowser, Incorporated (Hart Crowser) removed three 12,000-gallon underground storage tanks (USTs), product lines, and dispensers from the site in August 1996. Details are presented in Hart Crowser's September 18, 1996 *USTs Closure Report*.

**1998 Site Assessment and Well Installation**

SECOR International, Incorporated (SECOR) advanced five soil borings in September 1998. Three soil borings were completed as monitoring wells MW-1, MW-2, and MW-3. Details are presented in SECOR's December 9, 1998 *Site Assessment*.

**2002 Monitoring Well Installation**

SECOR installed groundwater monitoring well MW-4 in June 2002. Details are presented in SECOR's September 27, 2002 *Site Assessment*.

**2006 Site Assessment and Well Installation**

Four soil borings were advanced and groundwater monitoring wells MW-5 and MW-6 were installed in 2006. Details are presented in SECOR's September 29, 2006 *Alternative Cleanup Levels and Request for No Further Remedial Action Planned Status*.

**2010 Site Assessment**

CRA decommissioned and reinstalled monitoring wells MW-3, MW-5 and MW-6 due to submerged screens. Details are presented in CRA's January 10, 2011 *Groundwater Monitoring Well Installation Report*.

**2011 Monitoring Well Installation**

CRA installed monitoring well MW-7 to further assess groundwater quality downgradient of well MW-3R. Details are presented in CRA's January 2, 2012 *Subsurface Investigation Report*.

APPENDIX C

ALASKA DEPARTMENT OF NATURAL RESOURCES  
WATER WELL LOGS



**STATE OF ALASKA**  
**DEPARTMENT OF NATURAL RESOURCES**  
**DIVISION OF MINING, LAND & WATER**  
**WATER WELL LOG**

Drilling Started: 5 / 23 / 2012 Completed: 5 / 23 / 2012

City/Borough:	Subdivision:	BLOCK	LOT	Property Owner Name & Address:
				Cook Inlet Marketing Group INC, PO BOX 231084, Anchorage, Alaska
Meridian _____ Township _____ Range _____ Section _____, _____ 1/4 of _____ 1/4 of _____ 1/4 of _____ 1/4				
<b>BOREHOLE DATA:</b> (from ground surface) Depth				Drilling method: <input type="checkbox"/> Air rotary, <input type="checkbox"/> Cable tool <input type="checkbox"/> Other _____
Material: Type, Color & wetness From To				Well use: <input type="checkbox"/> Public supply, <input type="checkbox"/> Domestic, <input type="checkbox"/> Other _____
Concrete	0	.8		Depth of hole: <u>11.31</u> ft, Casing stickup: _____ ft
Hydrated bentonite chips	.8	4.5		Casing type: <u>PVC</u> Thickness _____ inches
Hole collapsed filled with native soil	4.5	11.31		Casing diameter: <u>2</u> inches Casing depth _____ ft
				Liner type: _____ Diameter: _____ inches Depth: _____ ft
				Note: _____
				Static water (from top of casing): _____ ft on _____ / _____ / _____
				Pumping level & yield: _____ feet after _____ hours at _____ gpm
				Recovery rate: _____ gpm, Method of testing: _____
				Development method: <u>purge and surge</u> Duration: _____
				Well intake opening type: <input type="checkbox"/> Open end <input type="checkbox"/> Open hole, Other <input type="checkbox"/>
				<input type="checkbox"/> Screened; Start: _____ ft, Stopped _____ ft
				Screen type: _____ Slot/mesh size _____
				<input type="checkbox"/> Perforated; Start: _____ ft, Stopped _____ ft
				Start: _____ ft, Stopped _____ ft
				Gravel packed <input type="checkbox"/> Yes <input type="checkbox"/> No From _____ ft to _____ ft
				Note: _____
				Grout type: _____ Volume _____
				Depth: from _____ ft, to _____ ft
				Pump intake depth: _____ ft
				Pump size _____ hp Brand name _____
				Was well disinfected upon completion? <input type="checkbox"/> Yes <input type="checkbox"/> No
				Method of disinfection: _____
				Driller comments/ disclaimers: _____
				_____
				Well driller name: <u>Scott</u>
				Company name: <u>Discovery Drilling Inc.</u>
				Mailing address: <u>11341 Olive Lane</u>
				City: <u>Anchorage</u> State: <u>AK</u> Zip _____
				Phone number: ( <u>907</u> ) <u>334</u> - <u>6431</u>
				Drillers signature: <u>[Signature]</u> for DDI
				Date: <u>11 / 19 / 2012</u>

Alaska state law requires that a copy of this well log be forwarded to the Department of Natural Resources within 45 days (AK statutes 38.05.020, 38.05.035, 41.08.020, 46.15.020 and AK regulations 11 AAC 93.140). Faxes are acceptable.

Alaska DNR, Division of Mining, Land and Water,  
550 W 7<sup>th</sup> Avenue, Suite 1020  
Anchorage, AK 99501-3562

Phone (907)269-8639 and fax (907)269-8947

If the well is within city limits, the City of Anchorage requires that a copy of this well log be forwarded to the city within 60 days and another copy of this log be forwarded to the owner of the property, on which the well is located, within 30 days.

City Permit Number: \_\_\_\_\_  
Date of Issue: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Parcel Identification Number: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_

Is well located at approved permit location? Yes ☐ or No ☐

## APPENDIX D

### FIELD NOTES



CONTAINER COUNT (upon departure): 0 DM 0 BA

Page 1 of 2

CONTAINER COUNT (upon arrival): 0 DM 0 BANEW CONTAINERS GENERATED? YES ( ) NO (X) 0 DM 0 BA

SPACE ENOUGH FOR ANOTHER EVENT? YES ( ) NO ( ) N/A (X)

CONTAINER LOCATION: \_\_\_\_\_

OPERATIONAL MILEAGE: Start \_\_\_\_\_ End \_\_\_\_\_ Total \_\_\_\_\_

CONESTOGA-ROVERS  
& ASSOCIATES

## DAILY FIELD REPORT

Project Name: 9-0932	CRA Mgr: J. Riggi	Field Rep: N. Greco / T. Bunn
Project Number: 060349	Date: 5/23/12	Site Address: 2200 West Diamond Blvd
Scope of Work: Well Decommissioning/Well Vault Repair/ <del>Well Flow</del>		Anchorage, Ak
Initial Weather Conditions: partly cloudy, ~50°F		

Time	Activity/Comments	SWA
0745	Depart for site	
0755	Arrive onsite; Secure vehicle; Discovery Drilling arrive onsite as well; C/I w/ attendant/manager	
0810	Tailgate/H+S Meeting <ul style="list-style-type: none"> <li>• Road construction on adjacent roadway;</li> <li>• be aware of traffic + surroundings</li> <li>• See Tailgate safety Meeting form for meeting details</li> </ul>	
0825	Discovery support truck onsite to deliver internal pipe cutter and bolts; MW-3R + MW-6R found to have damaged vaults; will repair today	
0835	Begin well repair of MW-3R	
0900	Complete well vault repair of MW-3R; 2.3 inches of PVC well casing was cut to allow for vault lid closure	
0905	Begin decommissioning MW-2	
0915	SWA: well casing known to be split, however well casing discovered to be filled w/ sediment to 6.25 feet below TOC; Determined to attempt to pull casing w/o knocking out the bottom and fill open hole w/ hydrated bentonite; Resume work	
0920	SWA: confrontation w/ pedestrian upset w/ work zone; temporarily moved work zone to accommodate angry pedestrian	
0925	Resume work	
0930	Successfully pulled 11.31 feet of PVC well casing; hole collapsed to 4.5 fbg; hole filled w/ hydrated Bentonite chips to ~8" below grade	

SWA Key:	A: Person or People	B: Equipment	C: Environmental
	D: Procedures/Processes/JSA-review/revise	E: Visitors	



CONTAINER COUNT (upon departure): \_\_\_\_\_ DM \_\_\_\_\_ BA \_\_\_\_\_

Page 2 of 2

CONTAINER COUNT (upon arrival): DM BA

NEW CONTAINERS GENERATED? YES( ) NO( ) DM BA

SPACE ENOUGH FOR ANOTHER EVENT? YES ( ) NO ( ) N/A ( )

**CONTAINER LOCATION:**

OPERATIONAL MILEAGE: Start	End	Total
----------------------------	-----	-------



**CONESTOGA-ROVERS  
& ASSOCIATES**

## DAILY FIELD REPORT

Project Name: 90932	CRA Mgr: J. Riggs	Field Rep: NG + TR
Project Number: 060349	Date: 05/23/12	Site Address:
Scope of Work: Well Decommissioning / Well Vault Repair	2200 W. Diamond Blvd. 675 Anchorage, AK	
Initial Weather Conditions: see P. 1		

[illegible]

SWA Key:	A: Person or People	B: Equipment	C: Environmental
	D: Procedures/Processes/JSA-review/revise	E: Visitors	





**CONESTOGA-ROVERS  
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[www.CRAworld.com](http://www.CRAworld.com)

2100.26.064  
**ADEC File No.**

February 25, 2010

Reference No. 060349

Mr. Robert Weimer  
Alaska Department of Environmental Conservation  
555 Cordova Street  
Anchorage, Alaska 99501

Re: Vapor Intrusion Evaluation  
Chevron-branded Service Station 9-0932  
2200 West Dimond Boulevard  
Anchorage, Alaska  
File ID: 2100.26.064

**RECEIVED**

MAR 02 2010

DEPT. OF ENVIRONMENTAL  
CONSERVATION

Dear Mr. Weimer:

Conestoga-Rovers & Associates (CRA) is submitting this *Vapor Intrusion Evaluation* to the Alaska Department of Environmental Conservation (ADEC) on behalf of Chevron Environmental Management Company (Chevron) for the site referenced above. CRA evaluated site conditions to determine if additional vapor intrusion pathway investigation was warranted based on the ADEC's July 2009 *Draft Vapor Intrusion Guidance for Contaminated Sites*. The site background, vapor intrusion evaluation, and conclusions are presented below.

### **Site Background**

This site is an active Chevron-branded service station located at 2200 West Seward Highway on the southeast corner of West Dimond Boulevard and Victor Road in Anchorage, Alaska. The site consists of a station building, three underground storage tanks (USTs), four product dispenser islands, and associated piping. Underground storage tanks and their product lines were removed during a facility upgrade in 1996, and petroleum hydrocarbons were detected in soil and groundwater. Six onsite groundwater monitoring wells are monitored semiannually and four are sampled semiannually.

### **Vapor Intrusion Evaluation**

The ADEC defines vapor intrusion as the migration of volatile chemicals from a subsurface vapor source into overlying buildings. The presence of gasoline range organics (GRO) and benzene in shallow soil above cleanup levels and potential exposure makes inhalation of outdoor air a complete pathway. Inhalation of indoor air is a complete pathway based on the presence of structures within 100 feet (ft) of the volatile petroleum hydrocarbon plume.

Equal  
Employment  
Opportunity Employer



CONESTOGA-ROVERS  
& ASSOCIATES

February 22, 2010

Reference No. 060349

- 2 -

Petroleum hydrocarbons in groundwater have been delineated and are below laboratory detection limits. No volatile chemical concentrations in groundwater exceed the July 2009 *Draft Vapor Intrusion Guidance for Contaminated Sites* Groundwater Target Levels.

### Conclusions

The vapor intrusion pathway is complete but does not warrant additional investigation based on the current soil and groundwater data. CRA recommends no additional vapor intrusion pathway investigation based on available site data. A Conceptual Site Model (CSM) is currently in development. CRA will submit a site-specific CSM to the ADEC prior to field work in 2010. The vapor intrusion evaluation will be revised as needed when new site data is acquired.

We appreciate the opportunity to work with Chevron and ADEC on this project. Please contact Andy Ellsmore at (720) 975-9122 if you have any questions.

Sincerely,  
CONESTOGA-ROVERS & ASSOCIATES

Nicole Taylor

Andy Ellsmore, P.G.

NT/ca/2

cc: Ms. Amy Gilpin, Chevron Environmental Management Company  
Mr. Steve Ellis, Cook Inlet Marketing Group