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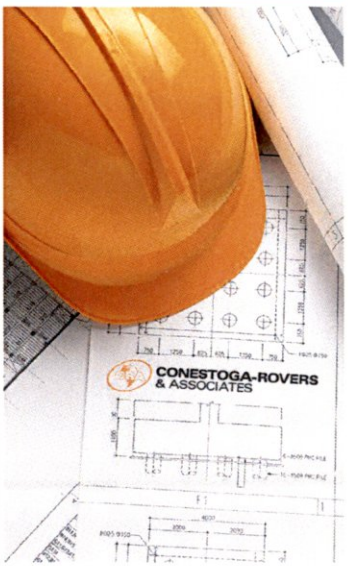

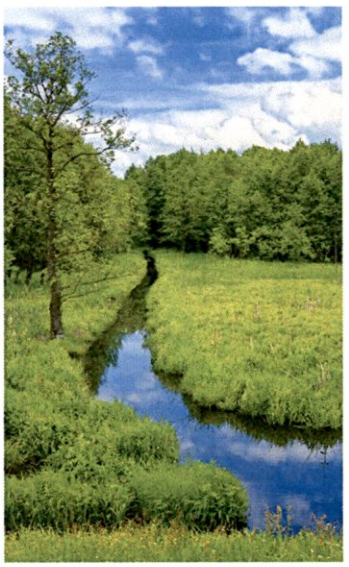
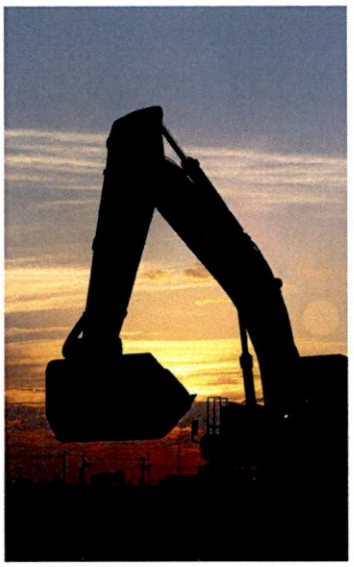


Report

Soil Vapor Decommissioning Report

Chevron Service Station 96489
1304 Airport Heights Drive
Anchorage, Alaska

Prepared for: Alaska Department of Environmental Conservation

Conestoga-Rovers & Associates
14998 West 6th Avenue, Suite 800
Golden, Colorado 80401

9/2014 • 620916 • Report No. 22

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Soil Vapor Probe Decommissioning Report

Chevron Service Station 96489
1304 Airport Heights Drive
Anchorage, Alaska

Prepared for:
Mr. Robert Weimer
Alaska Department of Environmental Conservation

on behalf of Tom Bunn

Tom Bunn
Staff Geologist

Nicholas Greco
Senior Project Geologist

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September 2014 Report No. 22

Partners in Sustainability

List of Figures
(Following Text)

List of Appendices

List Of Acronyms And Abbreviations

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
Chevron	Chevron Environmental Management Company
COPCs	contaminants of potential concern
CRA	Conestoga-Rovers & Associates
CSM	conceptual site model
fbg	feet below grade
GRO	gasoline range organics
UST	underground storage tank

Section 1.0 Introduction

Conestoga-Rovers & Associates (CRA) is submitting this *Soil Vapor Probe Decommissioning Report* to the Alaska Department of Environmental Conservation (ADEC) on behalf of Chevron Environmental Management Company (Chevron) for Chevron-branded service station 96489. The ADEC approved the decommissioning of onsite soil vapor probes in an April 28, 2014 email.

Section 2.0 Site Background

2.1 Site Characterization

The site is an active Chevron-branded service station located at 1304 Airport Heights Drive on the southwest corner of Airport Heights Drive and Debarr Road in Anchorage, Alaska (Figure 1). The property's legal description is SAXTON BLOCK 1 LOT 14A. Site latitude and longitude are 61.209511° North and 149.823313° West. Station facilities include two underground storage tanks (USTs), dispenser islands, product piping and a station building with three auto service bays. Three onsite and three offsite groundwater monitoring wells are currently sampled semiannually. Site photos are presented as Appendix A. Site environmental history is presented as Appendix B.

2.2 Conceptual Site Model

CRA prepared a conceptual site model (CSM) in accordance with ADEC's *Policy Guidance on Developing Conceptual Site Models* and *Draft Vapor Intrusion Guidance for Contaminated Sites*. The CSM was submitted to the ADEC on October 5, 2007. Inhalation of indoor air and outdoor air and soil ingestion were identified as complete exposure pathways. CRA will submit an updated CSM following this *Soil Vapor Probe Decommissioning Report*.

2.3 Contaminants of Potential Concern – Cleanup Levels

Site contaminants of potential concern (COPCs) are gasoline range organics (GRO) and benzene. ADEC Table C Groundwater Cleanup Levels (*Title 18 Alaska Administrative Code (AAC) 75.345*), ADEC Method Two Soil Cleanup Levels, Tables B1 and B2, under 40-inch zone, migration to groundwater (*Title 18 AAC 75.341*), and ADEC Target Levels for Deep Soil Gas (*Vapor Intrusion Guidance, Appendix F)* are the established site groundwater, soil, and soil gas cleanup levels.

Section 3.0 Soil Vapor Probe Decommissioning

3.1 Decommissioning Rationale

No benzene was detected above soil gas target levels in soil gas samples collected from soil vapor probes SVP-1 or SVP-2 at 8 and 16 feet below grade (fbg). Benzene was detected above target levels at 25 fbg in sample SVP-2 (20 milligrams per cubic meter (mg/m^3)); however it is not migrating to the surface based on data collected at 8 and 16 fbg, therefore inhalation from soil gas does not pose a human health risk.

3.2 Site Safety

CRA obtained the necessary permits and coordinated site activities with all contractors, stakeholders, the ADEC, and Chevron. CRA conducted a pre–field safety meeting with Chevron and all appropriate parties prior to the start of field work. A site specific health and safety plan was utilized to inform all site workers of known hazards and provide health and safety guidance. A journey management plan was prepared to address any safety concerns associated with traffic routes and onsite parking. Chevron and CRA safety protocols were reviewed during tailgate health and safety meetings. Alaska Digline was notified prior to decommissioning to clear soil gas probe locations with utility companies.

3.3 Soil Vapor Probe Decommissioning

An Alaska Qualified Person supervised the soil vapor probe decommissioning. CRA field staff attempted to remove the entire length of Teflon tubing from the vapor implant; however subsurface conditions surrounding the tubing prevented the removal of the entire length of tubing. The Teflon tubing stretched and broke at approximately 2 fbg. The remaining portion of the tubing, the vapor implant, and the well vault were left in place. CRA staff backfilled the void that remained after the removal of the tubing and capped the sand pack with hydrated bentonite chips. The borehole was topped with clean gravel to within 0.5 fbg and the surface was sealed with asphalt to match the existing grade.

Section 4.0 Conclusions

CRA requested suspension of soil vapor sampling based on analytical results that indicated no risk to human health or the environment. The ADEC approved the decommissioning of onsite soil vapor probes on April 28, 2014. CRA successfully decommissioned all three increments of each soil vapor probe (SVP-1 and SVP-2) on May 5, 2014.

Figures

Figure 1: Vicinity Map
Figure 2: Site Plan

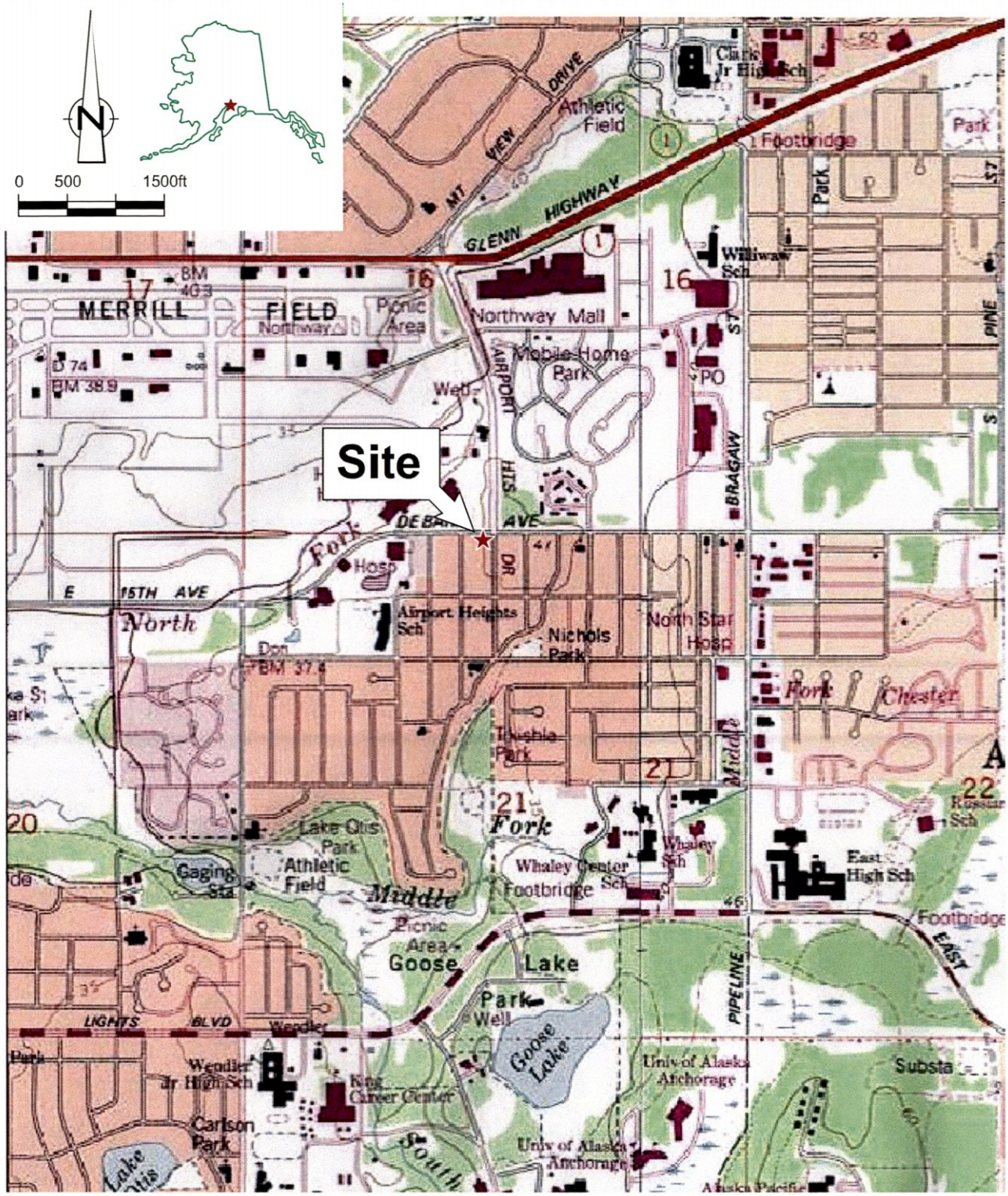


Figure 1

VICINITY MAP
CHEVRON-BRANDED SERVICE STATION 96489
1304 Airport Heights Drive
Anchorage, Alaska

620916-2013(007)GN-EM001 JAN 29/2013

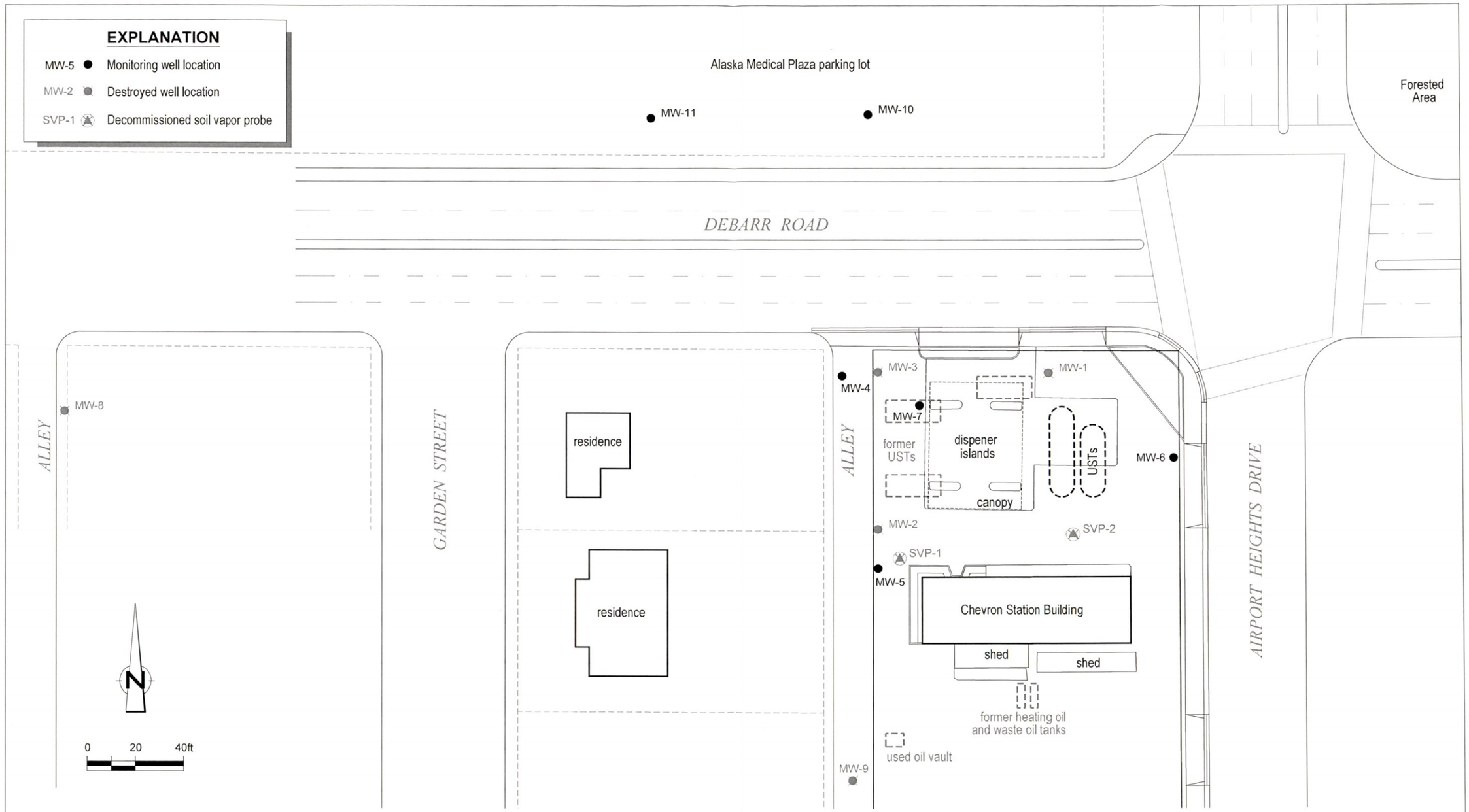


Figure 2

SITE PLAN
CHEVRON-BRANDED SERVICE STATION 96489
1304 AIRPORT HIEGHTS DRIVE
Anchorage, Alaska

620916-DN002 JUL 11/2014

Appendix A

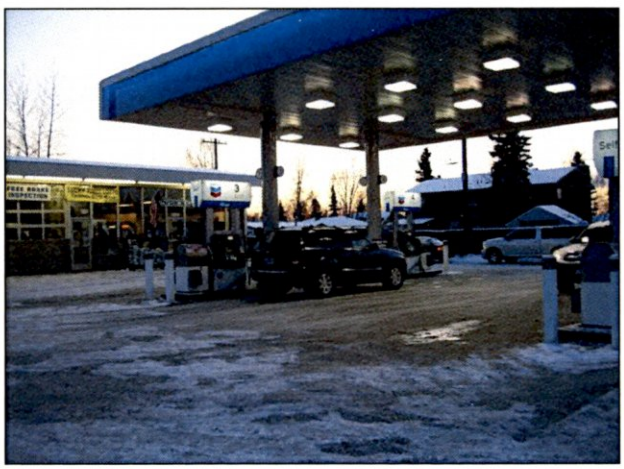
Site Photos

1. Site layout looking NE

2. Site layout looking NW

3. Drum location (behind building)

4. Site layout looking SE



5. Site layout looking SW

Appendix A

PHOTOS
CHEVRON-BRANDED SERVICE STATION 96489
1304 AIRPORT HEIGHTS DRIVE
Anchorage, Alaska

Appendix B

Environmental History

Environmental History
Chevron-Branded Service Station 96489

1997 Well Installation
Groundwater monitoring wells MW-1, MW-2, and MW-3 were installed onsite in August 1997. Details are presented in SECOR International, Incorporated's (SECOR's) May 4, 1999 *Well Abandonment and Removal of USTs and Product Lines* report.

1998 Well Destruction, UST Removal and Excavation
Groundwater monitoring wells MW-1, MW-2, and MW-3 were destroyed prior to station upgrades due to their proximity to the planned excavation. Five USTs and associated product lines were replaced and approximately 150 cubic yards of soil was removed. Details are presented in SECOR's May 4, 1999 *Well Abandonment and Removal of USTs and Product Lines* report.

1999 Site Assessment
Groundwater monitoring wells MW-4 through MW-7 were installed in July 1999. Details are presented in SECOR's September 7, 1999 *Site Assessment* report.

2000 Site Assessment
Groundwater monitoring well MW-8 was installed in August 2000 to further delineate the lateral extent of dissolved phase hydrocarbons offsite. Details are presented in SECOR's April 18, 2001 *Site Assessment* report.

2001 Sensitive Receptor Survey
SECOR conducted a Sensitive Receptor Survey at the request of the ADEC. The survey included a quarter mile radius United States Geological Survey (USGS) well database search and door-to-door well survey. Details are presented in SECOR's November 29, 2001 *Sensitive Receptor Survey Report.*

2002 Site Assessment
Monitoring well MW-9 was installed to further delineate the lateral extent of dissolved phase hydrocarbons. Details are presented in SECOR's July 2, 2003 *Well Installation Report*.

2003 Site Assessment
Groundwater monitoring well MW-10 was installed offsite to evaluate petroleum hydrocarbon migration. Details are presented in SECOR's July 2, 2003 *Well Installation Report*.

2006 Site Assessment

Monitoring well MW-11 was installed offsite to further assess for offsite migration. Details are presented in Cambria Environmental Technology's February 15, 2007 *Subsurface Investigation Report*.

2007 Preliminary Conceptual Site Model

Incidental soil ingestion, inhalation of outdoor air, and inhalation of indoor air were identified as complete exposure pathways. Details are presented in Conestoga-Rovers & Associates, Inc. (CRA's) October 5, 2007 *Preliminary Conceptual Site Model*.

2008 Oxygen Injections

CRA injected oxygen into onsite groundwater monitoring wells MW-4, MW-6, and MW-7 to enhance biodegradation of dissolved petroleum hydrocarbons. Details are presented in CRA's February 24, 2009 *Remedial Actions Report*.

2010 Initial Vapor Intrusion Evaluation Report

CRA recommended soil gas sampling near the station building foundation based on 2010 soil and groundwater data. Details are presented in CRA's February 26, 2010 *Initial Vapor Intrusion Evaluation Report*.

2011 Soil Vapor Probe Installation

CRA installed two multi-increment soil vapor probes near the facility building. Details are presented in CRA's January 3, 2012 *Soil Vapor Assessment Report*.

Appendix C

CRA Field Notes

CONTAINER COUNT (upon departure): _____ DM _____ BA

Page of

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: 0 Miles Operational Hours: 18.5

CONESTOGA-ROVERS & ASSOCIATES

DAILY FIELD REPORT

Project Name: 96489	CRA Mgr:	Field Rep: D. Bonga
Project Number: 620916	Date: 5.5.14	Site Address:
Scope of Work: Ground water monitoring and sampling. SV Decomissioning		
Initial Weather Conditions: cloudy		

Time	Activity/Comments	SWA
0800	CRA and DDI onsite	
	Personnel - Kelly Williams, Daniel Bonga	
	Dick Banzhaf, Derek Dell	
	Task - Decommission Soil vapor Probes and first semiannual	
	groundwater monitoring and sampling.	
0805	Tailgate safety meeting	
	PPE - Modified level D	
0820	Begin decomissioning of SVP-1	
0830	finish decommissioning of SVP-1	
0845	begin decommissioning of SVP-2	
0905	finish decommissioning SVP-2 & clean up	
0910	DDI offsite	
0910	begin gauging monitor wells	
0915	Calibrate YSI SN# 10E101585 with pH 4, 7, 10 buffer	
0940	Gauging complete.	
0950	Set up on MW-11	
1110	collect sample MW-11	
1130	lunch	
1300	back onsite @ MW-10	
1320	starting purging MW-10	
1345	Sample collected @ MW-10	
1410	~~begin pur~~ set up @ MW-5	
1425	Purge	
1450	Collect sample MW-5	
1510	set up on MW-6	
1555	sample MW-6	
1615	Set up on MW-4	

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

CONTAINER COUNT (upon departure): _____ DM _____ BA

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:_____Miles Operational Hours:_____

CONESTOGA-ROVERS & ASSOCIATES

DAILY FIELD REPORT

Project Name: 9L489	CRA Mgr:	Field Rep: D. Bonger
Project Number: 620916	Date: 5·5·14	Site Address:
Scope of Work:		
Initial Weather Conditions:		

Time	Activity/Comments	SWA
1655	Sample MW-4	
1715	Set up on MW-7	
1800	Sample @ MW-7 and DUP-1	
1815	Clear up supplies	
0840	CRA offsite	

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

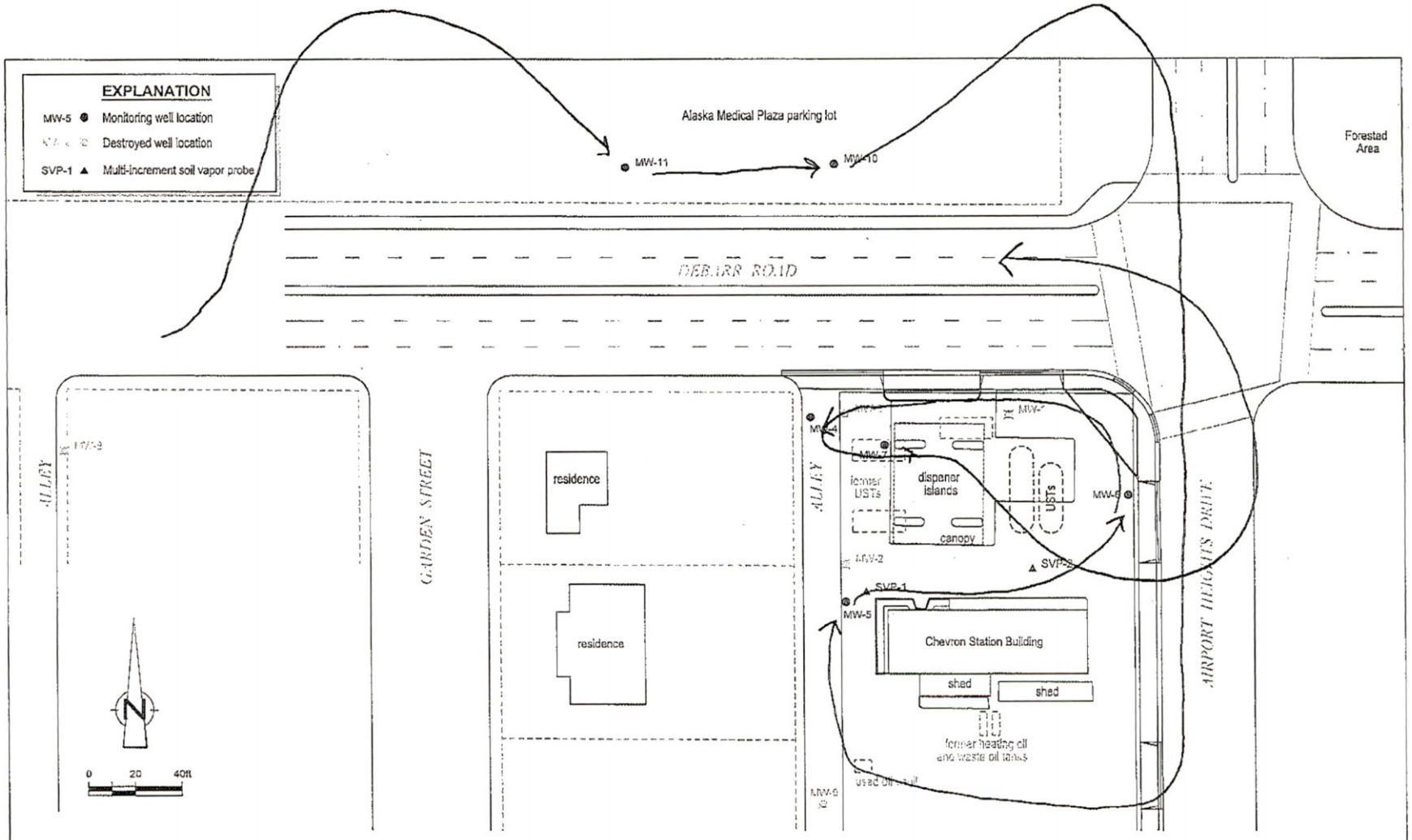


Figure 2

SOIL VAPOR PROBE LOCATIONS
CHEVRON SERVICE STATION 9-6489
1304 AIRPORT HIEGHTS DRIVE
Anchorage, Alaska

620916-DN001.DWG