

GW - 004

2013 AGWMR

VOL 4 OF 5

03 / 11 / 2014



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: DUP6 052213

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-001

Date Collected: 05.22.13 00.00

Date Received: 05.23.13 10.00

Analytical Method: **Inorganic Anions by EPA 300/300.1**

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 914778

Date Prep: 05.24.13 17.00

Prep seq: 638801

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	162	10.0	0.280	mg/L	05.24.13 17:00		10

Analytical Method: **TDS by SM2540C**

Prep Method:

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 915249

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1140	5.00	5.00	mg/L	05.29.13 13:00		1

Analytical Method: **Dissolved Metals per ICP by SW846 6010B**

Prep Method: 3010A

Analyst: KUG

% Moist:

Tech: KUG

Seq Number: 915038

Date Prep: 05.30.13 07.00

Subcontractor: SUB: E871002

Prep seq: 638904

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	05.30.13 17:56	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	05.30.13 17:56	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	05.30.13 17:56	U	1
Manganese	7439-96-5	0.0549	0.0200	0.00291	mg/L	05.30.13 17:56		1

Analytical Method: **Chromium, Hexavalent by SW 7196A**

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 915025

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	05.23.13 10:00	U	1

Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: DUP6 052213

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-001

Date Collected: 05.22.13 00.00

Date Received: 05.23.13 10.00

Analytical Method: TPH By SW8015 Mod

Prep Method: 1005

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 915030

Date Prep: 05.30.13 13.00

Prep seq: 638952

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	1.50	0.988	mg/L	05.30.13 22:34	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	1.50	0.988	mg/L	05.30.13 22:34	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	1.50	0.988	mg/L	05.30.13 22:34	U	1
Total TPH	PHC635	ND		0.988	mg/L	05.30.13 22:34	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	115	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 914531

Date Prep: 05.23.13 10.30

Prep seq: 638611

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	05.23.13 15:51	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	05.23.13 15:51	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	05.23.13 15:51	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	05.23.13 15:51	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	05.23.13 15:51	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	05.23.13 15:51	U	
Total BTEX		ND		0.000500	mg/L	05.23.13 15:51	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	102	80 - 120	%		
4-Bromofluorobenzene	108	80 - 120	%		



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: MW42A 052213

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-002

Date Collected: 05.22.13 10.10

Date Received: 05.23.13 10.00

Analytical Method: **Inorganic Anions by EPA 300/300.1**

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 914778

Date Prep: 05.25.13 15.22

Prep seq: 638801

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	427	10.0	0.280	mg/L	05.25.13 15:22		10

Analytical Method: **TDS by SM2540C**

Prep Method:

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 915249

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1270	5.00	5.00	mg/L	05.29.13 13:00		1

Analytical Method: **Dissolved Metals per ICP by SW846 6010B**

Prep Method: 3010A

Analyst: KUG

% Moist:

Tech: KUG

Seq Number: 915038

Date Prep: 05.30.13 07.00

Subcontractor: SUB: E871002

Prep seq: 638904

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	05.30.13 18:02	U	1
Chromium	7440-47-3	0.0360	0.0100	0.00355	mg/L	05.30.13 18:02		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	05.30.13 18:02	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	05.30.13 18:02	U	1

Analytical Method: **Chromium, Hexavalent by SW 7196A**

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 915025

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.0315	0.0100	0.00500	mg/L	05.23.13 10:00		1



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: MW42A 052213

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-002

Date Collected: 05.22.13 10.10

Date Received: 05.23.13 10.00

Analytical Method: TPH By SW8015 Mod

Prep Method: 1005

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 915030

Date Prep: 05.30.13 13.00

Prep seq: 638952

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Gasoline Range Hydrocarbons	PHCG12	ND	1.50	0.988	mg/L	05.30.13 22:59	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	1.50	0.988	mg/L	05.30.13 22:59	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	1.50	0.988	mg/L	05.30.13 22:59	U	1
Total TPH	PHCG635	ND		0.988	mg/L	05.30.13 22:59	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	105	70 - 135	%		
o-Terphenyl	121	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 914534

Date Prep: 05.23.13 17.00

Prep seq: 638618

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	05.23.13 20:07	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	05.23.13 20:07	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	05.23.13 20:07	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	05.23.13 20:07	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	05.23.13 20:07	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	05.23.13 20:07	U	
Total BTEX		ND		0.000500	mg/L	05.23.13 20:07	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	104	80 - 120	%		
4-Bromofluorobenzene	96	80 - 120	%		

Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: MW35 052213

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-003

Date Collected: 05.22.13 11.30

Date Received: 05.23.13 10.00

Analytical Method: **Inorganic Anions by EPA 300/300.1**

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 914778

Date Prep: 05.25.13 15.44

Prep seq: 638801

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	157	10.0	0.280	mg/L	05.25.13 15:44		10

Analytical Method: **TDS by SM2540C**

Prep Method:

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 915249

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1100	5.00	5.00	mg/L	05.29.13 13:00		1

Analytical Method: **Dissolved Metals per ICP by SW846 6010B**

Prep Method: 3010A

Analyst: KUG

% Moist:

Tech: KUG

Seq Number: 915038

Date Prep: 05.30.13 07.00

Subcontractor: SUB: E871002

Prep seq: 638904

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	05.30.13 18:08	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	05.30.13 18:08	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	05.30.13 18:08	U	1
Manganese	7439-96-5	0.0538	0.0200	0.00291	mg/L	05.30.13 18:08		1

Analytical Method: **Chromium, Hexavalent by SW 7196A**

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 915025

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	05.23.13 10:00	U	1



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: MW35 052213

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-003

Date Collected: 05.22.13 11.30

Date Received: 05.23.13 10.00

Analytical Method: TPH By SW8015 Mod

Prep Method: 1005

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 915030

Date Prep: 05.30.13 13.00

Prep seq: 638952

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	1.50	0.988	mg/L	05.30.13 23:24	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	1.50	0.988	mg/L	05.30.13 23:24	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	1.50	0.988	mg/L	05.30.13 23:24	U	1
Total TPH	PHC635	ND		0.988	mg/L	05.30.13 23:24	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	116	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 914534

Date Prep: 05.23.13 17.00

Prep seq: 638618

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	05.23.13 20:24	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	05.23.13 20:24	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	05.23.13 20:24	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	05.23.13 20:24	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	05.23.13 20:24	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	05.23.13 20:24	U	
Total BTEX		ND		0.000500	mg/L	05.23.13 20:24	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	90	80 - 120	%		
4-Bromofluorobenzene	85	80 - 120	%		



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: RW003 052213

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-004

Date Collected: 05.22.13 10.35

Date Received: 05.23.13 10.00

Analytical Method: **Inorganic Anions by EPA 300/300.1**

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 914778

Date Prep: 05.25.13 16.05

Prep seq: 638801

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	550	20.0	0.560	mg/L	05.25.13 16:05		20

Analytical Method: **TDS by SM2540C**

Prep Method:

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 915249

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	2270	5.00	5.00	mg/L	05.29.13 13:00		1

Analytical Method: **Dissolved Metals per ICP by SW846 6010B**

Prep Method: 3010A

Analyst: KUG

% Moist:

Tech: KUG

Seq Number: 915038

Date Prep: 05.30.13 07.00

Subcontractor: SUB: E871002

Prep seq: 638904

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0362	0.0200	0.00756	mg/L	05.30.13 18:14		1
Chromium	7440-47-3	0.0190	0.0100	0.00355	mg/L	05.30.13 18:14		1
Iron	7439-89-6	4.97	0.200	0.0188	mg/L	05.30.13 18:14		1
Manganese	7439-96-5	1.02	0.0200	0.00291	mg/L	05.30.13 18:14		1

Analytical Method: **Chromium, Hexavalent by SW 7196A**

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 915025

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	05.23.13 10:00	U	1



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: RW003 052213

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-004

Date Collected: 05.22.13 10.35

Date Received: 05.23.13 10.00

Analytical Method: TPH By SW8015 Mod

Prep Method: 1005

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 915376

Date Prep: 06.04.13 12.00

Prep seq: 639170

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	1.50	0.988	mg/L	06.04.13 15:00	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	1.50	0.988	mg/L	06.04.13 15:00	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	1.50	0.988	mg/L	06.04.13 15:00	U	1
Total TPH	PHC635	ND		0.988	mg/L	06.04.13 15:00	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	100	70 - 135	%		
o-Terphenyl	110	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 914534

Date Prep: 05.23.13 17.00

Prep seq: 638618

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	05.23.13 20:40	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	05.23.13 20:40	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	05.23.13 20:40	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	05.23.13 20:40	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	05.23.13 20:40	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	05.23.13 20:40	U	
Total BTEX		ND		0.000500	mg/L	05.23.13 20:40	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	89	80 - 120	%		
4-Bromofluorobenzene	84	80 - 120	%		



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: IW002 052213

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-005

Date Collected: 05.22.13 11.20

Date Received: 05.23.13 10.00

Analytical Method: **Inorganic Anions by EPA 300/300.1**

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 914778

Date Prep: 05.25.13 16.27

Prep seq: 638801

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	534	20.0	0.560	mg/L	05.25.13 16:27		20

Analytical Method: **TDS by SM2540C**

Prep Method:

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 915249

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	3880	5.00	5.00	mg/L	05.29.13 13:00		1

Analytical Method: **Dissolved Metals per ICP by SW846 6010B**

Prep Method: 3010A

Analyst: KUG

% Moist:

Tech: KUG

Seq Number: 915038

Date Prep: 05.30.13 07.00

Subcontractor: SUB: E871002

Prep seq: 638904

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.100	0.0378	mg/L	05.30.13 18:20	U	5
Chromium	7440-47-3	ND	0.0500	0.0177	mg/L	05.30.13 18:20	U	5
Iron	7439-89-6	4.97	1.00	0.0939	mg/L	05.30.13 18:20		5
Manganese	7439-96-5	0.863	0.100	0.0145	mg/L	05.30.13 18:20		5

Analytical Method: **Chromium, Hexavalent by SW 7196A**

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 915025

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.200	0.100	mg/L	05.23.13 10:00	U	20



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: IW002 052213

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-005

Date Collected: 05.22.13 11.20

Date Received: 05.23.13 10.00

Analytical Method: TPH By SW8015 Mod

Prep Method: 1005

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 915376

Date Prep: 06.04.13 12.00

Prep seq: 639170

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Gasoline Range Hydrocarbons	PHCG12	ND	1.50	0.988	mg/L	06.04.13 15:29	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	1.11	1.50	0.988	mg/L	06.04.13 15:29	J	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	1.50	0.988	mg/L	06.04.13 15:29	U	1
Total TPH	PHCG635	1.11		0.988	mg/L	06.04.13 15:29	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	116	70 - 135	%		
o-Terphenyl	128	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 914534

Date Prep: 05.23.13 17.00

Prep seq: 638618

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	05.24.13 01:17	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	05.24.13 01:17	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	05.24.13 01:17	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	05.24.13 01:17	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	05.24.13 01:17	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	05.24.13 01:17	U	
Total BTEX		ND		0.000500	mg/L	05.24.13 01:17	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	102	80 - 120	%		
4-Bromofluorobenzene	88	80 - 120	%		



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: MW46A 052213

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-006

Date Collected: 05.22.13 12.45

Date Received: 05.23.13 10.00

Analytical Method: **Inorganic Anions by EPA 300/300.1**

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 914778

Date Prep: 05.25.13 16.49

Prep seq: 638801

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	323	10.0	0.280	mg/L	05.25.13 16:49		10

Analytical Method: **TDS by SM2540C**

Prep Method:

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 915249

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1460	5.00	5.00	mg/L	05.29.13 13:00		1

Analytical Method: **Dissolved Metals per ICP by SW846 6010B**

Prep Method: 3010A

Analyst: KUG

% Moist:

Tech: KUG

Seq Number: 915038

Date Prep: 05.30.13 07.00

Subcontractor: SUB: E871002

Prep seq: 638904

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	05.30.13 18:26	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	05.30.13 18:26	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	05.30.13 18:26	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	05.30.13 18:26	U	1

Analytical Method: **Chromium, Hexavalent by SW 7196A**

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 915025

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.0573	0.0100	0.00500	mg/L	05.23.13 10:00		1

Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: MW46A 052213

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-006

Date Collected: 05.22.13 12.45

Date Received: 05.23.13 10.00

Analytical Method: TPH By SW8015 Mod

Prep Method: 1005

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 915293

Date Prep: 05.31.13 15.00

Prep seq: 639049

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Gasoline Range Hydrocarbons	PHCG12	ND	1.50	0.988	mg/L	06.01.13 21:48	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	1.50	0.988	mg/L	06.01.13 21:48	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	1.50	0.988	mg/L	06.01.13 21:48	U	1
Total TPH	PHCG635	ND		0.988	mg/L	06.01.13 21:48	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	111	70 - 135	%		
o-Terphenyl	124	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 914534

Date Prep: 05.23.13 17.00

Prep seq: 638618

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	05.23.13 20:56	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	05.23.13 20:56	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	05.23.13 20:56	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	05.23.13 20:56	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	05.23.13 20:56	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	05.23.13 20:56	U	
Total BTEX		ND		0.000500	mg/L	05.23.13 20:56	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	84	80 - 120	%		
4-Bromofluorobenzene	86	80 - 120	%		



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: MW45 052213

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-007

Date Collected: 05.22.13 14.00

Date Received: 05.23.13 10.00

Analytical Method: **Inorganic Anions by EPA 300/300.1**

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 914778

Date Prep: 05.25.13 17.53

Prep seq: 638801

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	134	10.0	0.280	mg/L	05.25.13 17:53		10

Analytical Method: **TDS by SM2540C**

Prep Method:

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 915249

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1190	5.00	5.00	mg/L	05.29.13 13:00		1

Analytical Method: **Dissolved Metals per ICP by SW846 6010B**

Prep Method: 3010A

Analyst: KUG

% Moist:

Tech: KUG

Seq Number: 915038

Date Prep: 05.30.13 07.00

Subcontractor: SUB: E871002

Prep seq: 638904

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	05.30.13 18:32	U	1
Chromium	7440-47-3	0.0115	0.0100	0.00355	mg/L	05.30.13 18:32		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	05.30.13 18:32	U	1
Manganese	7439-96-5	0.248	0.0200	0.00291	mg/L	05.30.13 18:32		1

Analytical Method: **Chromium, Hexavalent by SW 7196A**

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 915025

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	05.23.13 10:00	U	1



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: MW45 052213

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-007

Date Collected: 05.22.13 14.00

Date Received: 05.23.13 10.00

Analytical Method: TPH By SW8015 Mod

Prep Method: 1005

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 915293

Date Prep: 05.31.13 15.00

Prep seq: 639049

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	1.50	0.988	mg/L	06.01.13 22:13	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	1.50	0.988	mg/L	06.01.13 22:13	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	1.50	0.988	mg/L	06.01.13 22:13	U	1
Total TPH	PHC635	ND		0.988	mg/L	06.01.13 22:13	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	107	70 - 135	%		
o-Terphenyl	120	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 914534

Date Prep: 05.23.13 17.00

Prep seq: 638618

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	05.24.13 11:23	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	05.24.13 11:23	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	05.24.13 11:23	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	05.24.13 11:23	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	05.24.13 11:23	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	05.24.13 11:23	U	
Total BTEX		ND		0.000500	mg/L	05.24.13 11:23	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	84	80 - 120	%		
4-Bromofluorobenzene	93	80 - 120	%		



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: MW36 052213

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-008

Date Collected: 05.22.13 15.05

Date Received: 05.23.13 10.00

Analytical Method: **Inorganic Anions by EPA 300/300.1**

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 914778

Date Prep: 05.25.13 18.15

Prep seq: 638801

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	51.7	5.00	0.140	mg/L	05.25.13 18:15		5

Analytical Method: **TDS by SM2540C**

Prep Method:

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 915249

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	795	5.00	5.00	mg/L	05.29.13 13:00		1

Analytical Method: **Dissolved Metals per ICP by SW846 6010B**

Prep Method: 3010A

Analyst: KUG

% Moist:

Tech: KUG

Seq Number: 915038

Date Prep: 05.30.13 07.00

Subcontractor: SUB: E871002

Prep seq: 638904

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.00792	0.0200	0.00756	mg/L	05.30.13 18:38	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	05.30.13 18:38	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	05.30.13 18:38	U	1
Manganese	7439-96-5	0.454	0.0200	0.00291	mg/L	05.30.13 18:38		1

Analytical Method: **Chromium, Hexavalent by SW 7196A**

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 915025

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.100	0.0500	mg/L	05.23.13 10:00	U	10



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: MW36 052213

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-008

Date Collected: 05.22.13 15.05

Date Received: 05.23.13 10.00

Analytical Method: TPH By SW8015 Mod

Prep Method: 1005

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 915293

Date Prep: 05.31.13 15.00

Prep seq: 639049

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Gasoline Range Hydrocarbons	PHC612	3.03	1.50	0.988	mg/L	06.01.13 22:39		1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	1.50	0.988	mg/L	06.01.13 22:39	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	1.50	0.988	mg/L	06.01.13 22:39	U	1
Total TPH	PHC635	3.03		0.988	mg/L	06.01.13 22:39		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	112	70 - 135	%		
o-Terphenyl	125	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 914534

Date Prep: 05.23.13 17.00

Prep seq: 638618

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.0676	0.00100	0.000500	mg/L	05.23.13 21:29		1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	05.23.13 21:29	U	1
Ethylbenzene	100-41-4	0.120	0.00100	0.000700	mg/L	05.23.13 21:29		1
m,p-Xylenes	179601-23-1	0.184	0.00200	0.00140	mg/L	05.23.13 21:29		1
o-Xylene	95-47-6	0.0210	0.00100	0.000700	mg/L	05.23.13 21:29		1
Total Xylenes	1330-20-7	0.205		0.000700	mg/L	05.23.13 21:29		
Total BTEX		0.393		0.000500	mg/L	05.23.13 21:29		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	83	80 - 120	%		
4-Bromofluorobenzene	117	80 - 120	%		



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: Woodell WW 052213

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-009

Date Collected: 05.22.13 16.40

Date Received: 05.23.13 10.00

Analytical Method: **Inorganic Anions by EPA 300/300.1**

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 914778

Date Prep: 05.25.13 18.37

Prep seq: 638801

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	634	20.0	0.560	mg/L	05.25.13 18:37		20

Analytical Method: **TDS by SM2540C**

Prep Method:

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 915249

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	2240	5.00	5.00	mg/L	05.29.13 13:00		1

Analytical Method: **Dissolved Metals per ICP by SW846 6010B**

Prep Method: 3010A

Analyst: KUG

% Moist:

Tech: KUG

Seq Number: 915038

Date Prep: 05.30.13 07.00

Subcontractor: SUB: E871002

Prep seq: 638904

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.00973	0.0200	0.00756	mg/L	05.30.13 18:44	J	1
Chromium	7440-47-3	0.0329	0.0100	0.00355	mg/L	05.30.13 18:44		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	05.30.13 18:44	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	05.30.13 18:44	U	1

Analytical Method: **Chromium, Hexavalent by SW 7196A**

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 915025

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.0299	0.0100	0.00500	mg/L	05.23.13 10:00		1



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: Woodell WW 052213

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-009

Date Collected: 05.22.13 16.40

Date Received: 05.23.13 10.00

Analytical Method: TPH By SW8015 Mod

Prep Method: 1005

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 915293

Date Prep: 05.31.13 15.00

Prep seq: 639049

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	1.50	0.988	mg/L	06.01.13 23:05	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	1.50	0.988	mg/L	06.01.13 23:05	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	1.50	0.988	mg/L	06.01.13 23:05	U	1
Total TPH	PHC635	ND		0.988	mg/L	06.01.13 23:05	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	107	70 - 135	%		
o-Terphenyl	120	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 914534

Date Prep: 05.23.13 17.00

Prep seq: 638618

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	05.23.13 21:46	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	05.23.13 21:46	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	05.23.13 21:46	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	05.23.13 21:46	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	05.23.13 21:46	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	05.23.13 21:46	U	
Total BTEX		ND		0.000500	mg/L	05.23.13 21:46	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	118	80 - 120	%		
4-Bromofluorobenzene	116	80 - 120	%		



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: MW5 052213

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-010

Date Collected: 05.22.13 17.40

Date Received: 05.23.13 10.00

Analytical Method: **Inorganic Anions by EPA 300/300.1**

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 914778

Date Prep: 05.25.13 18.58

Prep seq: 638801

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	210	10.0	0.280	mg/L	05.25.13 18:58		10

Analytical Method: **TDS by SM2540C**

Prep Method:

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 915249

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1300	5.00	5.00	mg/L	05.29.13 13:00		1

Analytical Method: **Dissolved Metals per ICP by SW846 6010B**

Prep Method: 3010A

Analyst: KUG

% Moist:

Tech: KUG

Seq Number: 915038

Date Prep: 05.30.13 07.00

Subcontractor: SUB: E871002

Prep seq: 638904

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	05.30.13 19:01	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	05.30.13 19:01	U	1
Iron	7439-89-6	0.692	0.200	0.0188	mg/L	05.30.13 19:01		1
Manganese	7439-96-5	0.0547	0.0200	0.00291	mg/L	05.30.13 19:01		1

Analytical Method: **Chromium, Hexavalent by SW 7196A**

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 915025

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.100	0.0500	mg/L	05.23.13 10:00	U	10



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: MW5 052213

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-010

Date Collected: 05.22.13 17.40

Date Received: 05.23.13 10.00

Analytical Method: TPH By SW8015 Mod

Prep Method: 1005

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 915293

Date Prep: 05.31.13 15.00

Prep seq: 639049

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Gasoline Range Hydrocarbons	PHC612	4.01	1.50	0.988	mg/L	06.01.13 23:31		1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	4.59	1.50	0.988	mg/L	06.01.13 23:31		1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	1.50	0.988	mg/L	06.01.13 23:31	U	1
Total TPH	PHC635	8.60		0.988	mg/L	06.01.13 23:31		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	112	70 - 135	%		
o-Terphenyl	124	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 914534

Date Prep: 05.23.13 17.00

Prep seq: 638618

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.396	0.00100	0.000500	mg/L	05.24.13 00:29		1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	05.24.13 00:29	U	1
Ethylbenzene	100-41-4	0.222	0.00100	0.000700	mg/L	05.24.13 00:29		1
m,p-Xylenes	179601-23-1	0.00313	0.00200	0.00140	mg/L	05.24.13 00:29		1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	05.24.13 00:29	U	1
Total Xylenes	1330-20-7	0.00313		0.000700	mg/L	05.24.13 00:29		
Total BTEX		0.621		0.000500	mg/L	05.24.13 00:29		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	109	80 - 120	%		
4-Bromofluorobenzene	82	80 - 120	%		



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: TRIP BLANK

Matrix: Water

Sample Depth:

Lab Sample Id: 463662-011

Date Collected: 05.22.13 00.00

Date Received: 05.23.13 10.00

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 914534

Date Prep: 05.23.13 17.00

Prep seq: 638618

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	05.23.13 22:02	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	05.23.13 22:02	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	05.23.13 22:02	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	05.23.13 22:02	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	05.23.13 22:02	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	05.23.13 22:02	U	
Total BTEX		ND		0.000500	mg/L	05.23.13 22:02	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	90	80 - 120	%		
4-Bromofluorobenzene	105	80 - 120	%		

Sample Id: 638611-1-BLK

Matrix: Water

Sample Depth:

Lab Sample Id: 638611-1-BLK

Date Collected:

Date Received:

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 914531

Date Prep: 05.23.13 10.30

Prep seq: 638611

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	05.23.13 11:44	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	05.23.13 11:44	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	05.23.13 11:44	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	05.23.13 11:44	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	05.23.13 11:44	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	116	80 - 120	%		
4-Bromofluorobenzene	114	80 - 120	%		



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: 638618-1-BLK

Matrix: Water

Sample Depth:

Lab Sample Id: 638618-1-BLK

Date Collected:

Date Received:

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 914534

Date Prep: 05.23.13 17.00

Prep seq: 638618

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	05.23.13 19:51	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	05.23.13 19:51	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	05.23.13 19:51	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	05.23.13 19:51	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	05.23.13 19:51	U	1

Surrogate

% Recovery

Limits

Units

Analysis Date

Flag

1,4-Difluorobenzene

108

80 - 120

%

4-Bromofluorobenzene

98

80 - 120

%

Sample Id: 638801-1-BLK

Matrix: Water

Sample Depth:

Lab Sample Id: 638801-1-BLK

Date Collected:

Date Received:

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 914778

Date Prep: 05.24.13 15.12

Prep seq: 638801

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	ND	1.00	0.0280	mg/L	05.24.13 15:12	U	1

Sample Id: 638904-1-BLK

Matrix: Water

Sample Depth:

Lab Sample Id: 638904-1-BLK

Date Collected:

Date Received:

Analytical Method: Dissolved Metals per ICP by SW846 6010B

Prep Method: 3010A

Analyst: KUG

% Moist:

Tech: KUG

Seq Number: 915038

Date Prep: 05.30.13 07.00

Prep seq: 638904

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	05.30.13 16:39	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	05.30.13 16:39	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	05.30.13 16:39	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	05.30.13 16:39	U	1



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: 638952-1-BLK

Matrix: Water

Sample Depth:

Lab Sample Id: 638952-1-BLK

Date Collected:

Date Received:

Analytical Method: TPH By SW8015 Mod

Prep Method: 1005

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 915030

Date Prep: 05.30.13 13.00

Prep seq: 638952

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	1.50	0.988	mg/L	05.30.13 14:07	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	1.50	0.988	mg/L	05.30.13 14:07	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	1.50	0.988	mg/L	05.30.13 14:07	U	1
Total TPH	PHC635	ND		0.988	mg/L	05.30.13 14:07	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	112	70 - 135	%		
o-Terphenyl	126	70 - 135	%		

Sample Id: 639049-1-BLK

Matrix: Water

Sample Depth:

Lab Sample Id: 639049-1-BLK

Date Collected:

Date Received:

Analytical Method: TPH By SW8015 Mod

Prep Method: 1005

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 915293

Date Prep: 05.31.13 15.00

Prep seq: 639049

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	1.50	0.988	mg/L	06.01.13 20:32	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	1.50	0.988	mg/L	06.01.13 20:32	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	1.50	0.988	mg/L	06.01.13 20:32	U	1
Total TPH	PHC635	ND		0.988	mg/L	06.01.13 20:32	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	113	70 - 135	%		
o-Terphenyl	126	70 - 135	%		



Certificate of Analytical Results 463662



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: 639170-1-BLK

Matrix: Water

Sample Depth:

Lab Sample Id: 639170-1-BLK

Date Collected:

Date Received:

Analytical Method: TPH By SW8015 Mod

Prep Method: 1005

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 915376

Date Prep: 06.04.13 12.00

Prep seq: 639170

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	1.50	0.988	mg/L	06.04.13 14:31	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	1.50	0.988	mg/L	06.04.13 14:31	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	1.50	0.988	mg/L	06.04.13 14:31	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	99	70 - 135	%		
o-Terphenyl	107	70 - 135	%		

Sample Id: 915025-1-BLK

Matrix: Water

Sample Depth:

Lab Sample Id: 915025-1-BLK

Date Collected:

Date Received:

Analytical Method: Chromium, Hexavalent by SW 7196A

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 915025

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	05.23.13 10:00	U	1

Sample Id: 915249-1-BLK

Matrix: Water

Sample Depth:

Lab Sample Id: 915249-1-BLK

Date Collected:

Date Received:

Analytical Method: TDS by SM2540C

Prep Method:

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 915249

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	ND	5.00	5.00	mg/L	05.29.13 13:00	U	1

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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(770) 449-8800	(770) 449-5477
(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: North Eunice

Work Orders : 463662,

Project ID: 073018

Lab Batch #: 914531

Sample: 638611-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/23/13 11:11	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0331	0.0300	110	80-120
4-Bromofluorobenzene		0.0312	0.0300	104	80-120

Lab Batch #: 914531

Sample: 638611-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/23/13 11:28	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0327	0.0300	109	80-120
4-Bromofluorobenzene		0.0284	0.0300	95	80-120

Lab Batch #: 914531

Sample: 638611-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/23/13 11:44	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0349	0.0300	116	80-120
4-Bromofluorobenzene		0.0341	0.0300	114	80-120

Lab Batch #: 914531

Sample: 463584-014 S / MS

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/23/13 13:56	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0353	0.0300	118	80-120
4-Bromofluorobenzene		0.0313	0.0300	104	80-120

Lab Batch #: 914531

Sample: 463584-014 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/23/13 14:12	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0273	0.0300	91	80-120
4-Bromofluorobenzene		0.0261	0.0300	87	80-120

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: North Eunice

Work Orders : 463662,

Project ID: 073018

Lab Batch #: 914534

Sample: 638618-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/23/13 19:18	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0300	0.0300	100	80-120
4-Bromofluorobenzene		0.0284	0.0300	95	80-120

Lab Batch #: 914534

Sample: 638618-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/23/13 19:35	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0291	0.0300	97	80-120
4-Bromofluorobenzene		0.0319	0.0300	106	80-120

Lab Batch #: 914534

Sample: 638618-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/23/13 19:51	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0325	0.0300	108	80-120
4-Bromofluorobenzene		0.0294	0.0300	98	80-120

Lab Batch #: 914534

Sample: 463662-011 S / MS

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/23/13 22:19	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0319	0.0300	106	80-120
4-Bromofluorobenzene		0.0330	0.0300	110	80-120

Lab Batch #: 914534

Sample: 463662-011 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/23/13 22:35	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0290	0.0300	97	80-120
4-Bromofluorobenzene		0.0290	0.0300	97	80-120

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: North Eunice

Work Orders : 463662,

Project ID: 073018

Lab Batch #: 915030

Sample: 638952-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 05/30/13 13:13

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.2	10.0	102	70-135	
o-Terphenyl	6.30	5.00	126	70-135	

Lab Batch #: 915030

Sample: 638952-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 05/30/13 13:40

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.9	10.0	109	70-135	
o-Terphenyl	6.17	5.00	123	70-135	

Lab Batch #: 915030

Sample: 638952-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 05/30/13 14:07

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.2	10.0	112	70-135	
o-Terphenyl	6.31	5.00	126	70-135	

Lab Batch #: 915030

Sample: 463662-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 05/30/13 23:49

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.1	10.0	111	70-135	
o-Terphenyl	6.50	5.00	130	70-135	

Lab Batch #: 915293

Sample: 639049-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 06/01/13 19:42

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.5	10.0	115	70-135	
o-Terphenyl	4.33	5.00	87	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: North Eunice

Work Orders : 463662,

Project ID: 073018

Lab Batch #: 915293

Sample: 639049-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 06/01/13 20:07	SURROGATE RECOVERY STUDY			
TPH By SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1-Chlorooctane		11.5	10.0	115	70-135
o-Terphenyl		4.24	5.00	85	70-135

Lab Batch #: 915293

Sample: 639049-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 06/01/13 20:32	SURROGATE RECOVERY STUDY			
TPH By SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1-Chlorooctane		11.3	10.0	113	70-135
o-Terphenyl		6.28	5.00	126	70-135

Lab Batch #: 915293

Sample: 463727-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 06/02/13 03:20	SURROGATE RECOVERY STUDY			
TPH By SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1-Chlorooctane		10.2	10.0	102	70-135
o-Terphenyl		5.89	5.00	118	70-135

Lab Batch #: 915376

Sample: 639170-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 06/04/13 13:34	SURROGATE RECOVERY STUDY			
TPH By SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1-Chlorooctane		10.2	10.0	102	70-135
o-Terphenyl		5.87	5.00	117	70-135

Lab Batch #: 915376

Sample: 639170-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 06/04/13 14:03	SURROGATE RECOVERY STUDY			
TPH By SW8015 Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1-Chlorooctane		10.3	10.0	103	70-135
o-Terphenyl		6.03	5.00	121	70-135

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: North Eunice

Work Orders : 463662,

Project ID: 073018

Lab Batch #: 915376

Sample: 639170-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 06/04/13 14:31

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	9.86	10.0	99	70-135	
o-Terphenyl	5.36	5.00	107	70-135	

Lab Batch #: 915376

Sample: 464318-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 06/04/13 18:22

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	9.25	10.0	93	70-135	
o-Terphenyl	5.51	5.00	110	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Project Name: North Eunice

Work Order #: 463662

Project ID: 073018

Lab Batch #: 915025

Sample: 915025-1-BKS

Matrix: Water

Date Analyzed: 05/23/2013

Date Prepared: 05/23/2013

Analyst: WRU

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Hexavalent Chromium	<0.00500	0.0250	0.0210	84	80-120	

Lab Batch #: 915249

Sample: 915249-1-BKS

Matrix: Water

Date Analyzed: 05/29/2013

Date Prepared: 05/29/2013

Analyst: AMB

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

TDS by SM2540C	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Total dissolved solids	<5.00	1000	1020	102	80-120	

Blank Spike Recovery [D] = $100 \times [C] / [B]$

All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Project Name: North Eunice

Work Order #: 463662

Analyst: DYV

Date Prepared: 05/23/2013

Project ID: 073018

Date Analyzed: 05/23/2013

Lab Batch ID: 914531

Sample: 638611-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000500	0.100	0.0931	93	0.100	0.0967	97	4	70-125	25	
Toluene	<0.00100	0.100	0.119	119	0.100	0.105	105	13	70-125	25	
Ethylbenzene	<0.000700	0.100	0.118	118	0.100	0.113	113	4	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.228	114	0.200	0.216	108	5	70-131	25	
o-Xylene	<0.000700	0.100	0.108	108	0.100	0.105	105	3	71-133	25	

Analyst: DYV

Date Prepared: 05/23/2013

Date Analyzed: 05/23/2013

Lab Batch ID: 914534

Sample: 638618-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000500	0.100	0.118	118	0.100	0.116	116	2	70-125	25	
Toluene	<0.00100	0.100	0.120	120	0.100	0.120	120	0	70-125	25	
Ethylbenzene	<0.000700	0.100	0.119	119	0.100	0.118	118	1	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.234	117	0.200	0.235	118	0	70-131	25	
o-Xylene	<0.000700	0.100	0.119	119	0.100	0.119	119	0	71-133	25	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Project Name: North Eunice

Work Order #: 463662

Analyst: KUG

Date Prepared: 05/30/2013

Project ID: 073018

Date Analyzed: 05/30/2013

Lab Batch ID: 915038

Sample: 638904-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Dissolved Metals per ICP by SW846 6010B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Arsenic	<0.00756	1.00	0.925	93	1.00	0.969	97	5	80-120	20	
Chromium	<0.00355	1.00	0.932	93	1.00	0.977	98	5	80-120	20	
Iron	<0.0188	5.00	4.58	92	5.00	4.72	94	3	80-120	20	
Manganese	<0.00291	1.00	0.936	94	1.00	0.978	98	4	80-120	20	

Analyst: AMB

Date Prepared: 05/24/2013

Date Analyzed: 05/24/2013

Lab Batch ID: 914778

Sample: 638801-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.0280	25.0	24.9	100	25.0	24.9	100	0	80-120	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Project Name: North Eunice

Work Order #: 463662

Analyst: DYV

Date Prepared: 05/30/2013

Project ID: 073018

Date Analyzed: 05/30/2013

Lab Batch ID: 915030

Sample: 638952-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C12 Gasoline Range Hydrocarbons	<0.988	100	111	111	100	102	102	8	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	116	116	100	108	108	7	70-135	25	

Analyst: DYV

Date Prepared: 05/31/2013

Date Analyzed: 06/01/2013

Lab Batch ID: 915293

Sample: 639049-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C12 Gasoline Range Hydrocarbons	<0.988	100	105	105	100	104	104	1	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	118	118	100	117	117	1	70-135	25	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Project Name: North Eunice

Work Order #: 463662

Analyst: DYV

Date Prepared: 06/04/2013

Project ID: 073018

Date Analyzed: 06/04/2013

Lab Batch ID: 915376

Sample: 639170-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C12 Gasoline Range Hydrocarbons	<0.988	100	108	108	100	109	109	1	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	113	113	100	115	115	2	70-135	25	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Project Name: North Eunice

Work Order #: 463662

Lab Batch #: 914778

Date Analyzed: 05/24/2013

Date Prepared: 05/24/2013

Project ID: 073018

Analyst: AMB

QC- Sample ID: 463662-001 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	162	250	405	97	80-120	

Lab Batch #: 914778

Date Analyzed: 05/25/2013

Date Prepared: 05/25/2013

Analyst: AMB

QC- Sample ID: 463727-001 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	1350	500	1800	90	80-120	

Lab Batch #: 915030

Date Analyzed: 05/30/2013

Date Prepared: 05/30/2013

Analyst: DYV

QC- Sample ID: 463662-001 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L

MATRIX / MATRIX SPIKE RECOVERY STUDY						
TPH by SW8015 Mod	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
C6-C12 Gasoline Range Hydrocarbons	<0.988	100	98.1	98	70-135	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	107	107	70-135	

Lab Batch #: 915293

Date Analyzed: 06/02/2013

Date Prepared: 05/31/2013

Analyst: DYV

QC- Sample ID: 463727-001 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L

MATRIX / MATRIX SPIKE RECOVERY STUDY						
TPH by SW8015 Mod	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
C6-C12 Gasoline Range Hydrocarbons	<0.988	100	101	101	70-135	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	107	107	70-135	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
 Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$
 All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS Recoveries



Project Name: North Eunice

Work Order #: 463662

Lab Batch #: 915376

Date Analyzed: 06/04/2013

Date Prepared: 06/04/2013

Project ID: 073018

Analyst: DYV

QC- Sample ID: 464318-001 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L

MATRIX / MATRIX SPIKE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
C6-C12 Gasoline Range Hydrocarbons	<0.988	100	103	103	70-135	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	109	109	70-135	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: North Eunice

Work Order # : 463662

Project ID: 073018

Lab Batch ID: 914531

QC- Sample ID: 463584-014 S

Batch #: 1 Matrix: Water

Date Analyzed: 05/23/2013

Date Prepared: 05/23/2013

Analyst: DYV

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000500	0.100	0.111	111	0.100	0.105	105	6	70-125	25	
Toluene	<0.00100	0.100	0.111	111	0.100	0.112	112	1	70-125	25	
Ethylbenzene	<0.000700	0.100	0.116	116	0.100	0.119	119	3	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.224	112	0.200	0.221	111	1	70-131	25	
o-Xylene	<0.000700	0.100	0.111	111	0.100	0.106	106	5	71-133	25	

Lab Batch ID: 914534

QC- Sample ID: 463662-011 S

Batch #: 1 Matrix: Water

Date Analyzed: 05/23/2013

Date Prepared: 05/23/2013

Analyst: DYV

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000500	0.100	0.117	117	0.100	0.101	101	15	70-125	25	
Toluene	<0.00100	0.100	0.114	114	0.100	0.103	103	10	70-125	25	
Ethylbenzene	<0.000700	0.100	0.115	115	0.100	0.113	113	2	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.238	119	0.200	0.209	105	13	70-131	25	
o-Xylene	<0.000700	0.100	0.114	114	0.100	0.103	103	10	71-133	25	

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries



Project Name: North Eunice

Work Order # : 463662

Project ID: 073018

Lab Batch ID: 915025

QC- Sample ID: 463662-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 05/23/2013

Date Prepared: 05/23/2013

Analyst: WRU

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Hexavalent Chromium	<0.00500	0.250	0.243	97	0.250	0.245	98	1	80-120	20	

Lab Batch ID: 915038

QC- Sample ID: 463744-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 05/30/2013

Date Prepared: 05/30/2013

Analyst: KUG

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Dissolved Metals per ICP by SW846 6010B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Arsenic	<0.00756	1.00	0.962	96	1.00	1.01	101	5	75-125	20	
Chromium	0.00433	1.00	0.891	89	1.00	0.930	93	4	75-125	20	
Iron	1.28	5.00	6.12	97	5.00	6.72	109	9	75-125	20	
Manganese	0.766	1.00	1.62	85	1.00	1.70	93	5	75-125	20	

Matrix Spike Percent Recovery $[D] = 100 * (C - A) / B$
Relative Percent Difference $RPD = 200 * |(C - F) / (C + F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 * (F - A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Project Name: North Eunice

Work Order #: 463662

Lab Batch #: 915025

Project ID: 073018

Date Analyzed: 05/23/2013 10:00

Date Prepared: 05/23/2013

Analyst: WRU

QC- Sample ID: 463662-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

Chromium, Hexavalent by SW 7196A	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Hexavalent Chromium	<0.00500	<0.00500	0	20	U

Lab Batch #: 915249

Date Analyzed: 05/29/2013 13:00

Date Prepared: 05/29/2013

Analyst: AMB

QC- Sample ID: 463662-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	1140	1160	2	30	

Lab Batch #: 915249

Date Analyzed: 05/29/2013 13:00

Date Prepared: 05/29/2013

Analyst: AMB

QC- Sample ID: 463727-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	3070	3080	0	30	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$
 All Results are based on MDL and validated for QC purposes.
 BRL - Below Reporting Limit

Company-City		CRA - Midland		Phone		432-686-0086	
Project Name-Location		Previously done at XENCO		Project ID		1735018	
Proj. State: TX, AL, FL, GA, LA, MS, NC, NJ, PA, SC, TN, UT Other		Proj. Manager (PM)		Mike W. Smith		Fax No: 432-686-0186	
E-mail Results to		☒ PM and					
Invoice to ☐ Accounting ☐ Inc. Invoice with Final Report ☐ Invoice must have a P.O.		Bill to:					
Quote/Pricing:		P.O. No:		☐ Call for P.O.			
Reg Program: UST DRY-CLEAN Land-Fill Waste-Disp NPDES DW TRRP							
QAPP Per-Contract CLP AGCEE NAVY DOE DOD USACE OTHER:							
Special DIs (GW DW QAPP MDIs RIs See Lab PM Included Call PM)							
Sampler Name		Justin Nixon		Signature		[Signature]	
Sample ID	Sampling Date	Time	Depth ft' in" m	Matrix	Composite	Grab	# Containers
1 Dupb052213	5-22-13	1010	1	W			7
2 MW424 052213		1130					
3 MW35 052213		1035					
4 RW003 052213		1120					
5 RW002 052213		1245					
6 MW46A 052213		1400					
7 MW45 052213		1505					
8 MW36 052213		1640					
9 RW001 052213		1740					
10 MW5 052213							
Relinquished by (Initials and Sign)		Date & Time		Relinquished to (Initials and Sign)		Date & Time	
1) Justin Nixon		5-22-13 1830		2) STACCHIOLA		5/22/13	
3) [Signature]				4) [Signature]		5/23/13 10:00	
Preservatives:		Various (V), HCl pH<2 (H), H2SO4 pH<2 (S), HNO3 pH<2 (N), Asbc Acid&NaOH (A), ZnAc&NaOH (Z), (Cool, <4C) (C), None (NA), See Label (L), Other (O)		Cont. Size: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (40), 1L (1), 500ml (5), Tedlar Bag (B), Various (V), Other		Cont. Type: Glass Amb (A), Glass Clear (C), Plastic (P), Various (V)	
Matrix: Air (A), Product (P), Solid (S), Water (W), Liquid (L)							
TAT: ASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d Standard TAT is project specific. It is typically 5-7 Working Days for level II and 10+ Working days for level III and IV data.							
VOA: Full-List BTEX-MTBE EtOH Oxyg VOHS VOAs							
VOA: PP TCL DW Appdx-1 Appdx-2 CALL Other:							
PAHs SIM 8310 8270							
TX-1005 DRO GRO MA EPH MA VPH							
SVOCs: Full-List DW BN&AE TCLP PP Appdx-2 CALL							
OC Pesticides PCBs Herbicides OP Pesticides							
Metals: RCRA-8 RCRA-4 Pb 13PP 23TAL Appdx 1 Appdx2							
SPLP - TCLP (Metals VOCs SVOCs Pest. Herb. PCBs)							
EDB / DBCP							
Method 8021 B BTEX							
Diss Metals method 6010 B							
TDS Sm2540c							
Chlorides E300							
TPH GRO + Dro 8015 mod							
Hex Chrome							
TATASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d							
Addn: PAH above mg/L W, mg/Kg S Highest Hit							
Hold Samples (Surcharges will apply and are pre-approved)							
Sample Clean-ups are pre-approved as needed							
Trip Blank 2 uo's							
5-22-13 8021 B BTEX							
Addn:	Date	Rcv. by:	From:				



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Conestoga Rovers & Associates

Date/ Time Received: 05/23/2013 10:00:00 AM

Work Order #: 463662

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by:

Kelsey Brooks

Date: 05/23/2013

Checklist reviewed by:

Kelsey Brooks

Date: 05/23/2013

Analytical Report 463727

for

Conestoga Rovers & Associates

Project Manager: Mike Wisniowiecki

North Eunice

073018

04-JUN-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



04-JUN-13

Project Manager: **Mike Wisniowiecki**

Conestoga Rovers & Associates

2135 S Loop 250 W

Midland, TX 79703

Reference: XENCO Report No(s): **463727**

North Eunice

Project Address: New Mexico

Mike Wisniowiecki:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 463727. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 463727 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks

Project Manager

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Sample Cross Reference 463727



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
GopWW2 052313	W	05-23-13 09:10		463727-001
Lordww 052313	W	05-23-13 10:20		463727-002
MW038 052313	W	05-23-13 11:25		463727-003
TRIP BLANK	W	05-23-13 00:00		463727-004

Client Name: Conestoga Rovers & Associates**Project Name: North Eunice**Project ID: 073018
Work Order Number(s): 463727Report Date: 04-JUN-13
Date Received: 05/23/2013

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:Batch: LBA-914826 Chromium, Hexavalent by SW 7196A
SW7196A

Batch 914826, Hexavalent Chromium recovered above QC limits in the Matrix Spike Duplicate.
Samples affected are: 463727-003, -001, -002.
The Laboratory Control Sample for Hexavalent Chromium is within laboratory Control Limits



Certificate of Analytical Results 463727



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: **GopWW2 052313**

Matrix: Water

Sample Depth:

Lab Sample Id: **463727-001**

Date Collected: 05.23.13 09.10

Date Received: 05.23.13 15.05

Analytical Method: **Inorganic Anions by EPA 300/300.1**

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 914778

Date Prep: 05.25.13 19.20

Prep seq: 638801

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1350	20.0	0.560	mg/L	05.25.13 19:20	E	20

Analytical Method: **TDS by SM2540C**

Prep Method:

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 915249

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	3070	5.00	5.00	mg/L	05.29.13 13:00		1

Analytical Method: **Dissolved Metals per ICP by SW846 6010B**

Prep Method: 3010A

Analyst: KUG

% Moist:

Tech: KUG

Seq Number: 915038

Date Prep: 05.30.13 07.00

Subcontractor: SUB: E871002

Prep seq: 638904

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	05.30.13 19:07	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	05.30.13 19:07	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	05.30.13 19:07	U	1
Manganese	7439-96-5	1.11	0.0200	0.00291	mg/L	05.30.13 19:07		1

Analytical Method: **Chromium, Hexavalent by SW 7196A**

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 914826

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	05.23.13 16:10	U	1



Certificate of Analytical Results 463727



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: **GopWW2 052313**

Matrix: Water

Sample Depth:

Lab Sample Id: **463727-001**

Date Collected: 05.23.13 09.10

Date Received: 05.23.13 15.05

Analytical Method: **TPH By SW8015 Mod**

Prep Method: 1005

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 915293

Date Prep: 05.31.13 15.00

Prep seq: 639049

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	1.50	0.988	mg/L	06.01.13 23:57	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	1.50	0.988	mg/L	06.01.13 23:57	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	1.50	0.988	mg/L	06.01.13 23:57	U	1
Total TPH	PHC635	ND		0.988	mg/L	06.01.13 23:57	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	112	70 - 135	%		
o-Terphenyl	128	70 - 135	%		

Analytical Method: **BTEX by EPA 8021B**

Prep Method: 5030B

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 914669

Date Prep: 05.24.13 16.30

Prep seq: 638730

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	05.24.13 22:42	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	05.24.13 22:42	U	1
Ethylbenzene	100-41-4	0.00101	0.00100	0.000700	mg/L	05.24.13 22:42		1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	05.24.13 22:42	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	05.24.13 22:42	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	05.24.13 22:42	U	
Total BTEX		0.00101		0.000500	mg/L	05.24.13 22:42		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	105	80 - 120	%		
4-Bromofluorobenzene	84	80 - 120	%		



Certificate of Analytical Results 463727



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: Lordww 052313

Matrix: Water

Sample Depth:

Lab Sample Id: 463727-002

Date Collected: 05.23.13 10.20

Date Received: 05.23.13 15.05

Analytical Method: **Inorganic Anions by EPA 300/300.1**

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 914778

Date Prep: 05.25.13 20.03

Prep seq: 638801

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1430	20.0	0.560	mg/L	05.25.13 20:03	E	20

Analytical Method: **TDS by SM2540C**

Prep Method:

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 915249

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	3330	5.00	5.00	mg/L	05.29.13 13:00		1

Analytical Method: **Dissolved Metals per ICP by SW846 6010B**

Prep Method: 3010A

Analyst: KUG

% Moist:

Tech: KUG

Seq Number: 915038

Date Prep: 05.30.13 07.00

Subcontractor: SUB: E871002

Prep seq: 638904

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	05.30.13 19:13	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	05.30.13 19:13	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	05.30.13 19:13	U	1
Manganese	7439-96-5	0.0539	0.0200	0.00291	mg/L	05.30.13 19:13		1

Analytical Method: **Chromium, Hexavalent by SW 7196A**

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 914826

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.0174	0.0100	0.00500	mg/L	05.23.13 16:10		1



Certificate of Analytical Results 463727



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: Lordww 052313

Matrix: Water

Sample Depth:

Lab Sample Id: 463727-002

Date Collected: 05.23.13 10.20

Date Received: 05.23.13 15.05

Analytical Method: TPH By SW8015 Mod

Prep Method: 1005

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 915293

Date Prep: 05.31.13 15.00

Prep seq: 639049

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	1.50	0.988	mg/L	06.02.13 00:23	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	1.50	0.988	mg/L	06.02.13 00:23	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	1.50	0.988	mg/L	06.02.13 00:23	U	1
Total TPH	PHC635	ND		0.988	mg/L	06.02.13 00:23	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	103	70 - 135	%		
o-Terphenyl	114	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 914669

Date Prep: 05.24.13 16.30

Prep seq: 638730

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	05.24.13 22:58	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	05.24.13 22:58	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	05.24.13 22:58	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	05.24.13 22:58	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	05.24.13 22:58	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	05.24.13 22:58	U	
Total BTEX		ND		0.000500	mg/L	05.24.13 22:58	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	102	80 - 120	%		
4-Bromofluorobenzene	106	80 - 120	%		



Certificate of Analytical Results 463727



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: MW038 052313

Matrix: Water

Sample Depth:

Lab Sample Id: 463727-003

Date Collected: 05.23.13 11.25

Date Received: 05.23.13 15.05

Analytical Method: **Inorganic Anions by EPA 300/300.1**

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 914778

Date Prep: 05.25.13 20.25

Prep seq: 638801

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	147	10.0	0.280	mg/L	05.25.13 20:25		10

Analytical Method: **TDS by SM2540C**

Prep Method:

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 915249

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1020	5.00	5.00	mg/L	05.29.13 13:00		1

Analytical Method: **Dissolved Metals per ICP by SW846 6010B**

Prep Method: 3010A

Analyst: KUG

% Moist:

Tech: KUG

Seq Number: 915038

Date Prep: 05.30.13 07.00

Subcontractor: SUB: E871002

Prep seq: 638904

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.00898	0.0200	0.00756	mg/L	05.30.13 19:19	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	05.30.13 19:19	U	1
Iron	7439-89-6	5.25	0.200	0.0188	mg/L	05.30.13 19:19		1
Manganese	7439-96-5	0.171	0.0200	0.00291	mg/L	05.30.13 19:19		1

Analytical Method: **Chromium, Hexavalent by SW 7196A**

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 914826

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	05.23.13 16:10	U	1

Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: MW038 052313

Matrix: Water

Sample Depth:

Lab Sample Id: 463727-003

Date Collected: 05.23.13 11.25

Date Received: 05.23.13 15.05

Analytical Method: TPH By SW8015 Mod

Prep Method: 1005

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 915293

Date Prep: 05.31.13 15.00

Prep seq: 639049

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	1.50	0.988	mg/L	06.02.13 00:48	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	1.50	0.988	mg/L	06.02.13 00:48	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	1.50	0.988	mg/L	06.02.13 00:48	U	1
Total TPH	PHC635	ND		0.988	mg/L	06.02.13 00:48	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	103	70 - 135	%		
o-Terphenyl	116	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 914669

Date Prep: 05.24.13 16.30

Prep seq: 638730

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.000609	0.00100	0.000500	mg/L	05.24.13 23:14	J	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	05.24.13 23:14	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	05.24.13 23:14	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	05.24.13 23:14	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	05.24.13 23:14	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	05.24.13 23:14	U	
Total BTEX		0.000609		0.000500	mg/L	05.24.13 23:14	J	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	90	80 - 120	%		
4-Bromofluorobenzene	84	80 - 120	%		



Certificate of Analytical Results 463727



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: TRIP BLANK

Matrix: Water

Sample Depth:

Lab Sample Id: 463727-004

Date Collected: 05.23.13 00.00

Date Received: 05.23.13 15.05

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 914669

Date Prep: 05.24.13 16.30

Prep seq: 638730

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	05.24.13 21:04	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	05.24.13 21:04	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	05.24.13 21:04	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	05.24.13 21:04	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	05.24.13 21:04	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	05.24.13 21:04	U	
Total BTEX		ND		0.000500	mg/L	05.24.13 21:04	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	85	80 - 120	%		
4-Bromofluorobenzene	91	80 - 120	%		

Sample Id: 638730-1-BLK

Matrix: Water

Sample Depth:

Lab Sample Id: 638730-1-BLK

Date Collected:

Date Received:

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 914669

Date Prep: 05.24.13 16.30

Prep seq: 638730

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	05.24.13 20:48	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	05.24.13 20:48	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	05.24.13 20:48	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	05.24.13 20:48	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	05.24.13 20:48	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	109	80 - 120	%		
4-Bromofluorobenzene	91	80 - 120	%		



Certificate of Analytical Results 463727



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: 638801-1-BLK

Matrix: Water

Sample Depth:

Lab Sample Id: 638801-1-BLK

Date Collected:

Date Received:

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 914778

Date Prep: 05.24.13 15.12

Prep seq: 638801

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	ND	1.00	0.0280	mg/L	05.24.13 15:12	U	1

Sample Id: 638904-1-BLK

Matrix: Water

Sample Depth:

Lab Sample Id: 638904-1-BLK

Date Collected:

Date Received:

Analytical Method: Dissolved Metals per ICP by SW846 6010B

Prep Method: 3010A

Analyst: KUG

% Moist:

Tech: KUG

Seq Number: 915038

Date Prep: 05.30.13 07.00

Prep seq: 638904

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	05.30.13 16:39	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	05.30.13 16:39	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	05.30.13 16:39	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	05.30.13 16:39	U	1

Sample Id: 639049-1-BLK

Matrix: Water

Sample Depth:

Lab Sample Id: 639049-1-BLK

Date Collected:

Date Received:

Analytical Method: TPH By SW8015 Mod

Prep Method: 1005

Analyst: DYV

% Moist:

Tech: DYV

Seq Number: 915293

Date Prep: 05.31.13 15.00

Prep seq: 639049

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C12 Gasoline Range Hydrocarbons	PHC612	ND	1.50	0.988	mg/L	06.01.13 20:32	U	1
C12-C28 Diesel Range Hydrocarbons	PHCG1028	ND	1.50	0.988	mg/L	06.01.13 20:32	U	1
C28-C35 Oil Range Hydrocarbons	PHCG2835	ND	1.50	0.988	mg/L	06.01.13 20:32	U	1
Total TPH	PHC635	ND		0.988	mg/L	06.01.13 20:32	U	

Surrogate

% Recovery

Limits

Units

Analysis Date

Flag

1-Chlorooctane

113

70 - 135

%

o-Terphenyl

126

70 - 135

%



Certificate of Analytical Results 463727



Conestoga Rovers & Associates, Midland, TX

North Eunice

Sample Id: 914826-1-BLK

Matrix: Water

Sample Depth:

Lab Sample Id: 914826-1-BLK

Date Collected:

Date Received:

Analytical Method: Chromium, Hexavalent by SW 7196A

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 914826

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	05.23.13 16:10	U	1

Sample Id: 915249-1-BLK

Matrix: Water

Sample Depth:

Lab Sample Id: 915249-1-BLK

Date Collected:

Date Received:

Analytical Method: TDS by SM2540C

Prep Method:

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 915249

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	ND	5.00	5.00	mg/L	05.29.13 13:00	U	1

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: North Eunice

Work Orders : 463727,

Project ID: 073018

Lab Batch #: 914669

Sample: 638730-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/24/13 20:15	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0311	0.0300	104	80-120
4-Bromofluorobenzene		0.0309	0.0300	103	80-120

Lab Batch #: 914669

Sample: 638730-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/24/13 20:31	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0321	0.0300	107	80-120
4-Bromofluorobenzene		0.0338	0.0300	113	80-120

Lab Batch #: 914669

Sample: 638730-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/24/13 20:48	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0328	0.0300	109	80-120
4-Bromofluorobenzene		0.0274	0.0300	91	80-120

Lab Batch #: 914669

Sample: 463548-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/24/13 21:37	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0347	0.0300	116	80-120
4-Bromofluorobenzene		0.0304	0.0300	101	80-120

Lab Batch #: 914669

Sample: 463548-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 05/24/13 21:53	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0277	0.0300	92	80-120
4-Bromofluorobenzene		0.0309	0.0300	103	80-120

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: North Eunice

Work Orders : 463727,

Project ID: 073018

Lab Batch #: 915293

Sample: 639049-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 06/01/13 19:42

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.5	10.0	115	70-135	
o-Terphenyl	4.33	5.00	87	70-135	

Lab Batch #: 915293

Sample: 639049-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 06/01/13 20:07

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.5	10.0	115	70-135	
o-Terphenyl	4.24	5.00	85	70-135	

Lab Batch #: 915293

Sample: 639049-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 06/01/13 20:32

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.3	10.0	113	70-135	
o-Terphenyl	6.28	5.00	126	70-135	

Lab Batch #: 915293

Sample: 463727-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 06/02/13 03:20

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.2	10.0	102	70-135	
o-Terphenyl	5.89	5.00	118	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Project Name: North Eunice

Work Order #: 463727

Project ID:

073018

Lab Batch #: 914826

Sample: 914826-1-BKS

Matrix: Water

Date Analyzed: 05/23/2013

Date Prepared: 05/23/2013

Analyst: WRU

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Hexavalent Chromium	<0.00500	0.0250	0.0233	93	80-120	

Lab Batch #: 915249

Sample: 915249-1-BKS

Matrix: Water

Date Analyzed: 05/29/2013

Date Prepared: 05/29/2013

Analyst: AMB

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

TDS by SM2540C	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Total dissolved solids	<5.00	1000	1020	102	80-120	

Blank Spike Recovery [D] = $100 \times [C] / [B]$

All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Project Name: North Eunice

Work Order #: 463727

Analyst: DYV

Date Prepared: 05/24/2013

Project ID: 073018

Date Analyzed: 05/24/2013

Lab Batch ID: 914669

Sample: 638730-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000500	0.100	0.101	101	0.100	0.106	106	5	70-125	25	
Toluene	<0.00100	0.100	0.109	109	0.100	0.116	116	6	70-125	25	
Ethylbenzene	<0.000700	0.100	0.114	114	0.100	0.116	116	2	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.216	108	0.200	0.232	116	7	70-131	25	
o-Xylene	<0.000700	0.100	0.113	113	0.100	0.111	111	2	71-133	25	

Analyst: KUG

Date Prepared: 05/30/2013

Date Analyzed: 05/30/2013

Lab Batch ID: 915038

Sample: 638904-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Dissolved Metals per ICP by SW846 6010B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Arsenic	<0.00756	1.00	0.925	93	1.00	0.969	97	5	80-120	20	
Chromium	<0.00355	1.00	0.932	93	1.00	0.977	98	5	80-120	20	
Iron	<0.0188	5.00	4.58	92	5.00	4.72	94	3	80-120	20	
Manganese	<0.00291	1.00	0.936	94	1.00	0.978	98	4	80-120	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Project Name: North Eunice

Work Order #: 463727

Analyst: AMB

Date Prepared: 05/24/2013

Project ID: 073018

Date Analyzed: 05/24/2013

Lab Batch ID: 914778

Sample: 638801-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.0280	25.0	24.9	100	25.0	24.9	100	0	80-120	20	

Analyst: DYV

Date Prepared: 05/31/2013

Date Analyzed: 06/01/2013

Lab Batch ID: 915293

Sample: 639049-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C12 Gasoline Range Hydrocarbons	<0.988	100	105	105	100	104	104	1	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	118	118	100	117	117	1	70-135	25	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Project Name: North Eunice

Work Order #: 463727

Lab Batch #: 914778

Date Analyzed: 05/24/2013

Date Prepared: 05/24/2013

Project ID: 073018

Analyst: AMB

QC- Sample ID: 463662-001 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	162	250	405	97	80-120	

Lab Batch #: 914778

Date Analyzed: 05/25/2013

Date Prepared: 05/25/2013

Analyst: AMB

QC- Sample ID: 463727-001 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	1350	500	1800	90	80-120	

Lab Batch #: 915293

Date Analyzed: 06/02/2013

Date Prepared: 05/31/2013

Analyst: DYV

QC- Sample ID: 463727-001 S

Batch #: 1

Matrix: Water

Reporting Units: mg/L

MATRIX / MATRIX SPIKE RECOVERY STUDY						
TPH by SW8015 Mod	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
C6-C12 Gasoline Range Hydrocarbons	<0.988	100	101	101	70-135	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	107	107	70-135	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
 Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$
 All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: North Eunice

Work Order # : 463727

Project ID: 073018

Lab Batch ID: 914669

QC- Sample ID: 463548-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 05/24/2013

Date Prepared: 05/24/2013

Analyst: DYV

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000500	0.100	0.114	114	0.100	0.0930	93	20	70-125	25	
Toluene	<0.00100	0.100	0.108	108	0.100	0.104	104	4	70-125	25	
Ethylbenzene	<0.000700	0.100	0.116	116	0.100	0.108	108	7	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.226	113	0.200	0.193	97	16	70-131	25	
o-Xylene	<0.000700	0.100	0.113	113	0.100	0.0961	96	16	71-133	25	

Lab Batch ID: 914826

QC- Sample ID: 463727-003 S

Batch #: 1 Matrix: Water

Date Analyzed: 05/23/2013

Date Prepared: 05/23/2013

Analyst: WRU

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Hexavalent Chromium	<0.00500	0.250	0.255	102	0.250	0.258	103	1	80-120	20	

Lab Batch ID: 915038

QC- Sample ID: 463744-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 05/30/2013

Date Prepared: 05/30/2013

Analyst: KUG

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Dissolved Metals per ICP by SW846 6010B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Arsenic	<0.00756	1.00	0.962	96	1.00	1.01	101	5	75-125	20	
Chromium	0.00433	1.00	0.891	89	1.00	0.930	93	4	75-125	20	
Iron	1.28	5.00	6.12	97	5.00	6.72	109	9	75-125	20	
Manganese	0.766	1.00	1.62	85	1.00	1.70	93	5	75-125	20	

Matrix Spike Percent Recovery $[D] = 100 * (C - A) / B$
Relative Percent Difference $RPD = 200 * |(C - F) / (C + F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 * (F - A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Project Name: North Eunice

Work Order #: 463727

Lab Batch #: 915249

Project ID: 073018

Date Analyzed: 05/29/2013 13:00

Date Prepared: 05/29/2013

Analyst: AMB

QC- Sample ID: 463662-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	1140	1160	2	30	

Lab Batch #: 915249

Date Analyzed: 05/29/2013 13:00

Date Prepared: 05/29/2013

Analyst: AMB

QC- Sample ID: 463727-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	3070	3080	0	30	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$
 All Results are based on MDL and validated for QC purposes.
 BRL - Below Reporting Limit

Company/Client		CEA - Midland		Phone 432-686-0086	
Project Name/Location		N.E. unice		Project ID 073018	
Proj. State: TX, AL, FL, GA, LA, MS, NC, NJ, PA, SC, TN, UT Other		Proj. Manager (PM) Mike Wismidwichei		Fax No: 432-686-0186	
E-mail Results to		☒ PM and			
Invoice to ☐ Accounting ☐ Inc. Invoice with Final Report ☐ Invoice must have a P.O. Bill to:		P.O. No:		☐ Call for P.O.	
Quote/Pricing:					
Reg Program: UST DRY-CLEAN Land-Fill Waste-Disp NPDES DW TRRP					
QAPP Per-Contract CLP AGCEE NAVY DOE DOD USACE OTHER:					
Special DLS (GW DW QAPP MDLs RLS See Lab PM Included Call PM)					
Sampler Name	Justin Nixon		Signature		
Sample ID	Sampling Date	Time	Depth ft' In" m	Matrix	Composite Grab
1 GOWW2053313	5-23-13	910			X 7
2 Loduwo 053313		1020			X 1
3 MW038053313		1125			X 1
4 Trip Blank					X 2
5					
6					
7					
8					
9					
10					
Relinquished by (Initials and Sign)		Date & Time		Relinquished to (Initials and Sign)	
1) [Signature]		5-23-13 1505		2) [Signature]	
3) [Signature]				4) [Signature]	
5) [Signature]				6) [Signature]	
Preservatives: Various (V), HCl pH<2 (H), H2SO4 pH<2 (S), HNO3 pH<2 (N), Aspc Acid&NaOH (A), ZnAc&NaOH (Z), (Cool, <4C) (C), None (NA), See Label (L), Other (O)		Cont. Size: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (40), 1L (1), 500ml (5), Tedlar Bag (B), Various (V), Other			
Matrix: Air (A), Product (P), Solid (S), Water (W), Liquid (L)		Committed to Excellence in Service and Quality			
Notice: Signature of this document and relinquishment of these samples constitutes a valid purchase order from client company to Xenco Laboratories and its affiliates.		subcontractors and assigns under Xenco's standard terms and conditions of service unless previously negotiated under a fully executed client contract.			
Total Containers per COC: 23		Cooler Temp: 1.5 °C		Remarks	
Otherwise agreed on writing. Reports are the Intellectual Property of XENCO until paid. Samples will be held 30 days after final report is e-mailed unless hereby requested. Rush Charges and Collection Fees are pre-approved if needed.					
TATASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d		Addn: PAH above mg/L W, mg/Kg S Highest Hit		Hold Samples (Surcharges will apply and are pre-approved)	
Sample Clean-ups are pre-approved as needed					
Addn: Date Rcv. by: From:					



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Conestoga Rovers & Associates

Date/ Time Received: 05/23/2013 03:05:00 PM

Work Order #: 463727

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	1.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by:


Kelsey Brooks

Date: 05/23/2013

Checklist reviewed by:


Kelsey Brooks

Date: 05/23/2013



MEMORANDUM

TO: Mike Wisniowiecki, Claudia Ramos **REF. NO.:** 073018

FROM: Chris G. Knight/eew/6-NF *CGK/eew* **DATE:** January 21, 2014

RE: **Analytical Results and Reduced Validation
Groundwater Sampling Event
North Eunice / Chevron Environmental Management Company (CEMC)
Eunice, New Mexico
October – November 2013**

1.0 Introduction

The following document details a reduced validation of analytical results for groundwater samples collected at the North Eunice, New Mexico site during October – November 2013. Samples were submitted to Xenco Laboratories, located in Odessa, Texas. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Table 2. A summary of the analytical methodology is presented in Table 3.

Standard Conestoga-Rovers & Associates (CRA) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, duplicate data, recovery data from surrogate spikes, laboratory control samples (LCS), matrix spikes (MS), and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

- i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-99-008, October 1999
- ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", USEPA 540/R-94-013, February 1994

Items i) and ii) will subsequently be referred to as the "Guidelines" in this Memorandum.

2.0 Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in Table 3. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (0-6°C).

3.0 Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

Most method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation. Several method blanks yielded detected results for total dissolved solids (TDS) and dissolved metals analysis. The associated sample results were significantly greater than the concentrations found in the method blanks, or non-detect and no further qualification was necessary.

4.0 Surrogate Spike Recoveries - Organic Analyses

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene, and xylenes (BTEX) determinations were spiked with the appropriate number of surrogate compounds prior to sample analysis.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries met the above criteria.

5.0 Blank Spike (BS) Sample Analyses

BS and/or blank spike sample duplicates (BSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the BS/BSD recoveries is used to evaluate analytical precision.

For this study, BS/BSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

Organic Analyses

The BS/BSD contained all compounds of interest. All BS recoveries and RPDs were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

Inorganic Analyses

The BS/BSD contained all analytes of interest. LCS recoveries were assessed per the "Guidelines". Most BS recoveries and RPDs were within the control limits, demonstrating acceptable analytical accuracy and precision. Two

high chromium VI (hexavalent) recoveries were reported. Detected sample results associated BS recoveries were qualified as estimated (see Table 4).

6.0 Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analyses

To evaluate the effects of sample matrices on the extraction or digestion process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision. If the original sample concentration is significantly greater than the spike concentration, the recovery is not assessed.

MS/MSD analyses were performed as specified in Table 1. The laboratory performed additional site-specific MS/MSD analyses internally.

Organic Analyses

The MS/MSD samples were spiked with all compounds of interest. Most percent recoveries and RPD values were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision. One benzene MS/MSD was reported with low recoveries. The associated sample result was qualified as estimated (see Table 5).

Inorganic Analyses

The MS/MSD samples were spiked with the analytes of interest, and the results were evaluated using the "Guidelines". Most percent recoveries and RPD values were within the control limits, demonstrating acceptable analytical accuracy and precision. One chromium VI (hexavalent) MS/MSD was reported with low recoveries. Associated detected sample results were qualified as estimated. An associated non-detect sample result was rejected because the MS/MSD recoveries were less than 30 percent (see Table 5). One total organic carbon (TOC) MS/MSD was reported with high recoveries. Associated detected sample results were qualified as estimated (see Table 5).

7.0 Duplicate Sample Analyses – Inorganic Analyses

Analytical precision is evaluated based on the analysis of laboratory duplicate samples. For this study, duplicate samples were prepared and analyzed by the laboratory as specified in Table 1. The laboratory performed additional site-specific duplicate analyses internally. The duplicate results were evaluated per the "Guidelines". All duplicate analyses performed were acceptable, demonstrating acceptable analytical precision.

8.0 Field QA/QC Samples

The field QA/QC consisted of five trip blank samples and seven field duplicate sample sets.

Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, four trip blanks were submitted to the laboratory for BTEX analysis. All results were non-detect for the compounds of interest. One trip blank was submitted for metals analysis. All results were non-detect for the metals of interest.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, seven field duplicate samples were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 50 percent for water sample. If the reported concentration in either the investigative sample or its duplicate is less than five times the practical quantitation limit (PQL), the evaluation criterion is one time the PQL value for water and soil samples, respectively.

Most field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision. Two field duplicate sample sets yielded elevated RPDs for various analyses. Detected sample results associated with elevated RPDs were qualified as estimated (see Table 6).

9.0 Analyte Reporting

Non-detect data were reported down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the PQL but greater than the MDL were qualified as estimated (J) in Table 3.

10.0 Conclusion

Based on the assessment detailed in the foregoing, the data summarized in Table 2 are acceptable with the specific exceptions and qualifications noted herein.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters												Comments
					Chloride	Bromide	Orthophosphate	Sulfate	Nitrogen, Ammonia (as N)	TDS	Sulfide	TOC	Metals	Chromium VI (hexavalent)	TPH	BTEX	
Metals Trip Blank	-	water	10/22/2013	-									X				Metals Trip Blank
MW-89SA-102413	MW089SA	water	10/24/2013	11:20		X	X	X	X		X	X	X	X			MS/MSD-P
IW-30-102413	IW030	water	10/24/2013	12:10		X	X	X	X		X	X	X	X			MS/MSD-P
DUP-102413	IW030	water	10/24/2013	12:10		X	X	X	X		X	X	X	X			Field duplicate of IW030
MW-009A-102413	MW009A	water	10/24/2013	13:05		X	X	X	X		X	X	X	X			
MW071SA-103013	MW071SA	water	10/30/2013	09:45	X					X			X	X	X	X	MS/MSD-P
MW24A-103013	MW024A	water	10/30/2013	10:15	X					X			X	X	X	X	MS/MSD-P
MW086SA-103013	MW086SA	water	10/30/2013	11:10	X					X			X	X	X	X	
MW24-103013	MW024	water	10/30/2013	11:15	X					X			X	X	X	X	
MW076SA-103013	MW076SA	water	10/30/2013	13:05	X					X			X	X	X	X	
MW62A-103013	MW062A	water	10/30/2013	13:25	X					X			X	X	X	X	
MW075SA-103013	MW075SA	water	10/30/2013	14:00	X					X			X	X	X	X	
MW63A-103013	MW063A	water	10/30/2013	14:15	X					X			X	X	X	X	MS/MSD-P
MW084SA-103013	MW084SA	water	10/30/2013	14:55	X					X			X	X	X	X	
MW70-103013	MW070	water	10/30/2013	15:50	X					X			X	X	X	X	
Dup1-103013	MW070	water	10/30/2013	15:50	X					X			X	X	X	X	Field duplicate of MW070, MS/MSD-P
MW065SA-103113	MW065SA	water	10/31/2013	08:50	X					X			X	X	X	X	MS/MSD-P
MW58-103113	MW058	water	10/31/2013	09:00	X					X			X	X	X	X	
MW083SA-103113	MW083SA	water	10/31/2013	09:50	X					X			X	X	X	X	
MW30-103113	MW030	water	10/31/2013	09:50	X					X			X	X	X	X	MS/MSD-P

TABLE 1

**SAMPLE COLLECTION AND ANALYSIS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters												Comments
					Chloride	Bromide	Orthophosphate	Sulfate	Nitrogen, Ammonia (as N)	TDS	Sulfide	TOC	Metals	Chromium VI (hexavalent)	TPH	BTEX	
MW085SA-103113	MW085SA	water	10/31/2013	10:55	X					X			X	X	X	X	
MW23-103113	MW023	water	10/31/2013	11:05	X					X			X	X	X	X	
Woodell WW-103113	WoodellWW	water	10/31/2013	12:20	X					X			X	X	X	X	
MW23A-103113	MW023A	water	10/31/2013	12:45	X					X			X	X	X	X	
MW074SA-103113	MW074SA	water	10/31/2013	13:20	X					X			X	X	X	X	
MW059-103113	MW059	water	10/31/2013	14:00	X					X			X	X	X	X	
MW072SA-103113	MW072SA	water	10/31/2013	14:35	X					X			X	X	X	X	MS/MSD-P
MW31-103113	MW031	water	10/31/2013	15:15	X					X			X	X	X	X	
MW066SA-103113	MW066SA	water	10/31/2013	15:35	X					X			X	X	X	X	
MW055SA-103113	MW055SA	water	10/31/2013	16:35	X					X			X	X	X	X	
MW060-103113	MW060	water	10/31/2013	16:40	X					X			X	X	X	X	
Trip Blank	-	water	10/31/2013	-												X	Trip Blank
MW021A-110113	MW021A	water	11/01/2013	08:55	X					X			X	X	X	X	
MW94-110113	MW094	water	11/01/2013	09:40	X					X			X	X	X	X	MS/MSD-P
MW079SA	MW079SA	water	11/01/2013	10:05	X					X			X	X	X	X	
MW067SA	MW067SA	water	11/01/2013	11:05	X					X			X	X	X	X	MS/MSD-P
MW61-110113	MW061	water	11/01/2013	11:15	X					X			X	X	X	X	
DUP2-110413	MW056SA	water	11/04/2013	09:05	X					X			X	X	X	X	Field duplicate of MW056SA, MS/MSD-P
MW056SA-110413	MW056SA	water	11/04/2013	09:05	X					X			X	X	X	X	
IW28-110413	IW028	water	11/04/2013	09:20		X		X	X		X	X	X	X			

TABLE 1

**SAMPLE COLLECTION AND ANALYSIS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters												Comments
					Chloride	Bromide	Orthophosphate	Sulfate	Nitrogen, Ammonia (as N)	TDS	Sulfide	TOC	Metals	Chromium VI (hexavalent)	TPH	BTEX	
MW078SA-110413	MW078SA	water	11/04/2013	10:10	X					X			X	X	X	X	
MW10-110413	MW010	water	11/04/2013	10:40	X					X			X	X	X	X	MS/MSD-P
MW053SA-110413	MW053SA	water	11/04/2013	12:35	X					X			X	X	X	X	MS/MSD-P
MW040A-110413	MW040A	water	11/04/2013	12:55	X					X			X	X	X	X	
MW054SA-110413	MW054SA	water	11/04/2013	13:35	X					X			X	X	X	X	
MW13-110413	MW013	water	11/04/2013	14:25	X					X			X	X	X	X	
MW048SA-110413	MW048SA	water	11/04/2013	14:45	X					X			X	X	X	X	MS/MSD-P
MW020A-110413	MW020A	water	11/04/2013	15:45	X					X			X	X	X	X	
MW13A-110413	MW013A	water	11/04/2013	15:50	X					X			X	X	X	X	
DUP3-110413	MW013A	water	11/04/2013	15:50	X					X			X	X	X	X	Field duplicate of MW013A
Trip Blank	-	water	11/04/2013	-												X	Trip Blank
LordWW-110513	LordWW	water	11/05/2013	09:10	X					X			X	X	X	X	
MW16A-110513	MW016A	water	11/05/2013	09:45	X					X			X	X	X	X	MS/MSD-P
MW19A-110513	MW019A	water	11/05/2013	10:20	X					X			X	X	X	X	
MW15A-110513	MW015A	water	11/05/2013	11:20	X					X			X	X	X	X	
DUP4-110513	MW015A	water	11/05/2013	11:20	X					X			X	X	X	X	Field duplicate of MW015A, MS/MSD-P
MW18-110513	MW018	water	11/05/2013	11:20	X					X			X	X	X	X	MS/MSD-P
MW27-110513	MW027	water	11/05/2013	13:25	X					X			X	X	X	X	
MW15-110513	MW015	water	11/05/2013	14:15	X					X			X	X	X	X	
MW26-110513	MW026	water	11/05/2013	14:45	X					X			X	X	X	X	

TABLE 1

**SAMPLE COLLECTION AND ANALYSIS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

Sample Identification	Location	Matrix	Collection Date (mm/dd/yyyy)	Collection Time (hr:min)	Analysis/Parameters											Comments	
					Chloride	Bromide	Orthophosphate	Sulfate	Nitrogen, Ammonia (as N)	TDS	Sulfide	TOC	Metals	Chromium VI (hexavalent)	TPH		BTEX
DUP5-110513	MW026	water	11/05/2013	14:45	X					X			X	X	X	X	Field duplicate of MW026
MW14-110513	MW014	water	11/05/2013	15:35	X					X			X	X	X	X	
MW14A-110513	MW014A	water	11/05/2013	16:15	X					X			X	X	X	X	
Trip Blank	-	water	11/05/2013	-												X	Trip Blank
MW95-110613	MW095	water	11/06/2013	09:10	X					X			X	X	X	X	MS/MSD-P
MW68-110613	MW068	water	11/06/2013	10:15	X					X			X	X	X	X	MS/MSD-P
MW032-110613	MW032	water	11/06/2013	11:10	X					X			X	X	X	X	
MW038-110613	MW038	water	11/06/2013	13:00	X					X			X	X	X	X	
DUP6-110613	MW038	water	11/06/2013	13:00	X					X			X	X	X	X	Field duplicate of MW038, MS/MSD-P
Trip Blank	-	water	11/06/2013	-												X	Trip Blank

Notes:

N - Nitrogen
 TDS - Total dissolved solids
 TPH - Total petroleum hydrocarbons
 TOC - Total organic carbon
 BTEX - Benzene, toluene, ethylbenzene, and xylenes
 MS/MSD-P - Matrix spike and/or matrix spike duplicate (partial parameters)

TABLE 2

**ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

Sample Location:		MW010	MW013	MW014	MW015	MW018	MW023
Sample ID:		MW10-110413	MW13-110413	MW14-110513	MW15-110513	MW18-110513	MW23-103113
Sample Date:		11/4/2013	11/4/2013	11/5/2013	11/5/2013	11/5/2013	10/31/2013
Parameters	Units						
Volatile Organic Compounds							
Benzene	mg/L	0.00615	0.00405	<0.000500	<0.000500	<0.000500	<0.000500
Ethylbenzene	mg/L	0.00293	0.00184	<0.000700	<0.000700	<0.000700	<0.000700
m&p-Xylenes	mg/L	0.00267	0.00182 J	0.00237	<0.00140	0.00327	<0.00140
o-Xylene	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700
Toluene	mg/L	0.00682	0.00459	<0.00100	<0.00100	<0.00100	<0.00100
Total BTEX	mg/L	0.0186	0.0123	0.00237	<0.000500	0.00327	<0.000500
Xylenes (total)	mg/L	0.00267	0.00182	0.00237	<0.000700	0.00327	<0.000700
Metals							
Arsenic (dissolved)	mg/L	<0.00756	<0.00756	0.0209	0.0120 J	<0.00756	0.0198 J
Chromium	mg/L	--	--	--	--	--	--
Chromium (dissolved)	mg/L	0.0258	1.76	0.0705	0.00624 J	0.00495 J	1.37
Chromium VI (hexavalent)	mg/L	0.0193	1.78	0.0480	<0.00500	<0.00500	1.42 J
Iron	mg/L	--	--	--	--	--	--
Iron (dissolved)	mg/L	<0.0188	<0.0188	<0.0188	<0.0188	<0.0188	<0.0188
Manganese (dissolved)	mg/L	0.0554	<0.00291	0.172	<0.00291	<0.00291	0.0266
Sodium	mg/L	--	--	--	--	--	--
Sodium (dissolved)	mg/L	--	--	--	--	--	--
Petroleum Products							
Total Petroleum Hydrocarbons (C12-28) Diesel	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988
Total Petroleum Hydrocarbons (C6-12) Gas	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988
Total Petroleum Hydrocarbons (C6-C35)	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988

TABLE 2

**ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

<i>Sample Location:</i>		<i>MW010</i>	<i>MW013</i>	<i>MW014</i>	<i>MW015</i>	<i>MW018</i>	<i>MW023</i>
<i>Sample ID:</i>		<i>MW10-110413</i>	<i>MW13-110413</i>	<i>MW14-110513</i>	<i>MW15-110513</i>	<i>MW18-110513</i>	<i>MW23-103113</i>
<i>Sample Date:</i>		<i>11/4/2013</i>	<i>11/4/2013</i>	<i>11/5/2013</i>	<i>11/5/2013</i>	<i>11/5/2013</i>	<i>10/31/2013</i>
<i>Parameters</i>	<i>Units</i>						
General Chemistry							
Ammonia-N	mg/L	--	--	--	--	--	--
Bromide	mg/L	--	--	--	--	--	--
Chloride	mg/L	2430	650	1180	543	1620	762
Orthophosphate	mg/L	--	--	--	--	--	--
Sulfate	mg/L	--	--	--	--	--	--
Sulfide	mg/L	--	--	--	--	--	--
Total dissolved solids (TDS)	mg/L	6240	3230	3600	2250	3960	3680
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--

TABLE 2

**ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

<i>Sample Location:</i>		<i>MW024</i>	<i>MW026</i>	<i>MW026</i>	<i>MW027</i>	<i>MW030</i>	<i>MW031</i>
<i>Sample ID:</i>		<i>MW24-103013</i>	<i>DUP5-110513</i>	<i>MW26-110513</i>	<i>MW27-110513</i>	<i>MW30-103113</i>	<i>MW31-103113</i>
<i>Sample Date:</i>		<i>10/30/2013</i>	<i>11/5/2013 (Duplicate)</i>	<i>11/5/2013</i>	<i>11/5/2013</i>	<i>10/31/2013</i>	<i>10/31/2013</i>
Parameters	Units						
<i>Volatile Organic Compounds</i>							
Benzene	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Ethylbenzene	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700
m&p-Xylenes	mg/L	<0.00140	<0.00140	<0.00140	0.00268	<0.00140	<0.00140
o-Xylene	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700
Toluene	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Total BTEX	mg/L	<0.000500	<0.000500	<0.000500	0.00268	<0.000500	<0.000500
Xylenes (total)	mg/L	<0.000700	<0.000700	<0.000700	0.00268	<0.000700	<0.000700
<i>Metals</i>							
Arsenic (dissolved)	mg/L	0.0133 J	<0.00756	0.00883 J	<0.00756	0.0146 J	0.0124 J
Chromium	mg/L	--	--	--	--	--	--
Chromium (dissolved)	mg/L	0.0699	0.00502 J	0.00598 J	<0.00355	0.00414 J	<0.00355
Chromium VI (hexavalent)	mg/L	0.0658	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Iron	mg/L	--	--	--	--	--	--
Iron (dissolved)	mg/L	<0.0188	<0.0188	<0.0188	<0.0188	<0.0188	<0.0188
Manganese (dissolved)	mg/L	0.0255	<0.00291	<0.00291	<0.00291	0.0793	0.222
Sodium	mg/L	--	--	--	--	--	--
Sodium (dissolved)	mg/L	--	--	--	--	--	--
<i>Petroleum Products</i>							
Total Petroleum Hydrocarbons (C12-28) Diesel	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988
Total Petroleum Hydrocarbons (C6-12) Gas	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988
Total Petroleum Hydrocarbons (C6-C35)	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988

TABLE 2

**ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

<i>Sample Location:</i>		<i>MW024</i>	<i>MW026</i>	<i>MW026</i>	<i>MW027</i>	<i>MW030</i>	<i>MW031</i>
<i>Sample ID:</i>		<i>MW24-103013</i>	<i>DUP5-110513</i>	<i>MW26-110513</i>	<i>MW27-110513</i>	<i>MW30-103113</i>	<i>MW31-103113</i>
<i>Sample Date:</i>		<i>10/30/2013</i>	<i>11/5/2013</i> <i>(Duplicate)</i>	<i>11/5/2013</i>	<i>11/5/2013</i>	<i>10/31/2013</i>	<i>10/31/2013</i>
<i>Parameters</i>	<i>Units</i>						
General Chemistry							
Ammonia-N	mg/L	--	--	--	--	--	--
Bromide	mg/L	--	--	--	--	--	--
Chloride	mg/L	631	528	544	250	315	98.3
Orthophosphate	mg/L	--	--	--	--	--	--
Sulfate	mg/L	--	--	--	--	--	--
Sulfide	mg/L	--	--	--	--	--	--
Total dissolved solids (TDS)	mg/L	2730	2850	3020	1470	1080	761
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--

TABLE 2

ANALYTICAL RESULTS SUMMARY

GROUNDWATER SAMPLING EVENT

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE

EUNICE, NEW MEXICO

OCTOBER - NOVEMBER 2013

<i>Sample Location:</i>		<i>MW032</i>	<i>MW038</i>	<i>MW038</i>	<i>MW058</i>	<i>MW059</i>	<i>MW060</i>
<i>Sample ID:</i>		<i>MW032-110613</i>	<i>DUP6-110613</i>	<i>MW038-110613</i>	<i>MW58-103113</i>	<i>MW059-103113</i>	<i>MW060-103113</i>
<i>Sample Date:</i>		<i>11/6/2013</i>	<i>11/6/2013</i>	<i>11/6/2013</i>	<i>10/31/2013</i>	<i>10/31/2013</i>	<i>10/31/2013</i>
<i>Parameters</i>	<i>Units</i>		<i>(Duplicate)</i>				
<i>Volatile Organic Compounds</i>							
Benzene	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Ethylbenzene	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700
m&p-Xylenes	mg/L	<0.00140	<0.00140	<0.00140	<0.00140	<0.00140	<0.00140
o-Xylene	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700
Toluene	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Total BTEX	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Xylenes (total)	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700
<i>Metals</i>							
Arsenic (dissolved)	mg/L	<0.00756	<0.00756	0.00895 J	0.0210	0.0178 J	0.0110 J
Chromium	mg/L	--	--	--	--	--	--
Chromium (dissolved)	mg/L	<0.00355	0.0176	0.0205	2.70	0.105	<0.00355
Chromium VI (hexavalent)	mg/L	<0.00500	0.0272	0.0243	2.78 J	0.106 J	<0.00500
Iron	mg/L	--	--	--	--	--	--
Iron (dissolved)	mg/L	<0.0188	<0.0188	<0.0188	<0.0188	<0.0188	1.07
Manganese (dissolved)	mg/L	<0.00291	0.131	0.114	0.0151 J	0.0522	1.07
Sodium	mg/L	--	--	--	--	--	--
Sodium (dissolved)	mg/L	--	--	--	--	--	--
<i>Petroleum Products</i>							
Total Petroleum Hydrocarbons (C12-28) Diesel	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988
Total Petroleum Hydrocarbons (C6-12) Gas	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988
Total Petroleum Hydrocarbons (C6-C35)	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988

TABLE 2

**ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

<i>Sample Location:</i>		<i>MW032</i>	<i>MW038</i>	<i>MW038</i>	<i>MW058</i>	<i>MW059</i>	<i>MW060</i>
<i>Sample ID:</i>		<i>MW032-110613</i>	<i>DUP6-110613</i>	<i>MW038-110613</i>	<i>MW58-103113</i>	<i>MW059-103113</i>	<i>MW060-103113</i>
<i>Sample Date:</i>		<i>11/6/2013</i>	<i>11/6/2013</i> <i>(Duplicate)</i>	<i>11/6/2013</i>	<i>10/31/2013</i>	<i>10/31/2013</i>	<i>10/31/2013</i>
<i>Parameters</i>	<i>Units</i>						
General Chemistry							
Ammonia-N	mg/L	--	--	--	--	--	--
Bromide	mg/L	--	--	--	--	--	--
Chloride	mg/L	212	287	296	1070	404	984
Orthophosphate	mg/L	--	--	--	--	--	--
Sulfate	mg/L	--	--	--	--	--	--
Sulfide	mg/L	--	--	--	--	--	--
Total dissolved solids (TDS)	mg/L	1110	1650	1650	4370	543	4040
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--

TABLE 2

**ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

<i>Sample Location:</i>		<i>MW061</i>	<i>MW068</i>	<i>MW070</i>	<i>MW070</i>	<i>MW094</i>	<i>MW095</i>
<i>Sample ID:</i>		<i>MW61-110113</i>	<i>MW68-110613</i>	<i>Dup1-103013</i>	<i>MW70-103013</i>	<i>MW94-110113</i>	<i>MW95-110613</i>
<i>Sample Date:</i>		<i>11/1/2013</i>	<i>11/6/2013</i>	<i>10/30/2013</i> <i>(Duplicate)</i>	<i>10/30/2013</i>	<i>11/1/2013</i>	<i>11/6/2013</i>
<i>Parameters</i>	<i>Units</i>						
<i>Volatile Organic Compounds</i>							
Benzene	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	0.00140	<0.000500
Ethylbenzene	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700
m&p-Xylenes	mg/L	<0.00140	<0.00140	<0.00140	<0.00140	<0.00140	<0.00140
o-Xylene	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700
Toluene	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Total BTEX	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	0.00140	<0.000500
Xylenes (total)	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700
<i>Metals</i>							
Arsenic (dissolved)	mg/L	0.00902 J	0.0166 J	0.0130 J	0.0183 J	0.00855 J	0.0187 J
Chromium	mg/L	--	--	--	--	--	--
Chromium (dissolved)	mg/L	0.423	<0.00355	<0.00355	<0.00355	0.138	4.28
Chromium VI (hexavalent)	mg/L	0.367	<0.00500	<0.00500	<0.00500	0.127	4.31
Iron	mg/L	--	--	--	--	--	--
Iron (dissolved)	mg/L	<0.0188	<0.0188	<0.0188	<0.0188	<0.0188	<0.0188
Manganese (dissolved)	mg/L	0.234	<0.00291	0.0778	0.0445	0.0211	0.0902
Sodium	mg/L	--	--	--	--	--	--
Sodium (dissolved)	mg/L	--	--	--	--	--	--
<i>Petroleum Products</i>							
Total Petroleum Hydrocarbons (C12-28) Diesel	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988
Total Petroleum Hydrocarbons (C6-12) Gas	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988
Total Petroleum Hydrocarbons (C6-C35)	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988

TABLE 2

**ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

<i>Sample Location:</i>		<i>MW061</i>	<i>MW068</i>	<i>MW070</i>	<i>MW070</i>	<i>MW094</i>	<i>MW095</i>
<i>Sample ID:</i>		<i>MW61-110113</i>	<i>MW68-110613</i>	<i>Dup1-103013</i>	<i>MW70-103013</i>	<i>MW94-110113</i>	<i>MW95-110613</i>
<i>Sample Date:</i>		<i>11/1/2013</i>	<i>11/6/2013</i>	<i>10/30/2013</i> <i>(Duplicate)</i>	<i>10/30/2013</i>	<i>11/1/2013</i>	<i>11/6/2013</i>
<i>Parameters</i>	<i>Units</i>						
General Chemistry							
Ammonia-N	mg/L	--	--	--	--	--	--
Bromide	mg/L	--	--	--	--	--	--
Chloride	mg/L	267	111	167	167	226	1150
Orthophosphate	mg/L	--	--	--	--	--	--
Sulfate	mg/L	--	--	--	--	--	--
Sulfide	mg/L	--	--	--	--	--	--
Total dissolved solids (TDS)	mg/L	1710	899	805	829	2030	3940
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--

TABLE 2

ANALYTICAL RESULTS SUMMARY

GROUNDWATER SAMPLING EVENT

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE

EUNICE, NEW MEXICO

OCTOBER - NOVEMBER 2013

<i>Sample Location:</i>		<i>MW009A</i>	<i>MW013A</i>	<i>MW013A</i>	<i>MW014A</i>	<i>MW015A</i>	<i>MW015A</i>
<i>Sample ID:</i>		<i>MW-009A-102413</i>	<i>DUP3-110413</i>	<i>MW13A-110413</i>	<i>MW14A-110513</i>	<i>DUP4-110513</i>	<i>MW15A-110513</i>
<i>Sample Date:</i>		<i>10/24/2013</i>	<i>11/4/2013</i> <i>(Duplicate)</i>	<i>11/4/2013</i>	<i>11/5/2013</i>	<i>11/5/2013</i> <i>(Duplicate)</i>	<i>11/5/2013</i>
<i>Parameters</i>	<i>Units</i>						
<i>Volatile Organic Compounds</i>							
Benzene	mg/L	--	0.00147	0.00275	<0.000500	<0.000500	<0.000500
Ethylbenzene	mg/L	--	0.00101	0.00109	<0.000700	<0.000700	<0.000700
m&p-Xylenes	mg/L	--	0.00695	0.00764	<0.00140	0.00218	<0.00140
o-Xylene	mg/L	--	0.00149	0.00146	<0.000700	<0.000700	<0.000700
Toluene	mg/L	--	0.00177 J	0.00214	<0.00100	<0.00100	<0.00100
Total BTEX	mg/L	--	0.0127	0.0151	<0.000500	0.00218 J	<0.000500
Xylenes (total)	mg/L	--	0.00844	0.00910	<0.000700	0.00218 J	<0.000700
<i>Metals</i>							
Arsenic (dissolved)	mg/L	--	0.0201	0.0199 J	<0.00756	0.0113 J	<0.00756
Chromium	mg/L	0.549	--	--	--	--	--
Chromium (dissolved)	mg/L	--	<0.00355	<0.00355	<0.00355	0.00470 J	<0.00355
Chromium VI (hexavalent)	mg/L	0.552 J	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
Iron	mg/L	<0.0188	--	--	--	--	--
Iron (dissolved)	mg/L	<0.0188	<0.0188	<0.0188	<0.0188	0.0203 J	<0.0188
Manganese (dissolved)	mg/L	--	<0.00291	<0.00291	<0.00291	<0.00291	<0.00291
Sodium	mg/L	287	--	--	--	--	--
Sodium (dissolved)	mg/L	--	--	--	--	--	--
<i>Petroleum Products</i>							
Total Petroleum Hydrocarbons (C12-28) Diesel	mg/L	--	<0.988	<0.988	<0.988	<0.988	<0.988
Total Petroleum Hydrocarbons (C6-12) Gas	mg/L	--	<0.988	<0.988	<0.988	<0.988	<0.988
Total Petroleum Hydrocarbons (C6-C35)	mg/L	--	<0.988	<0.988	<0.988	<0.988	<0.988

TABLE 2

**ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

<i>Sample Location:</i>		<i>MW009A</i>	<i>MW013A</i>	<i>MW013A</i>	<i>MW014A</i>	<i>MW015A</i>	<i>MW015A</i>
<i>Sample ID:</i>		<i>MW-009A-102413</i>	<i>DUP3-110413</i>	<i>MW13A-110413</i>	<i>MW14A-110513</i>	<i>DUP4-110513</i>	<i>MW15A-110513</i>
<i>Sample Date:</i>		<i>10/24/2013</i>	<i>11/4/2013</i> <i>(Duplicate)</i>	<i>11/4/2013</i>	<i>11/5/2013</i>	<i>11/5/2013</i> <i>(Duplicate)</i>	<i>11/5/2013</i>
<i>Parameters</i>	<i>Units</i>						
General Chemistry							
Ammonia-N	mg/L	<0.0115	--	--	--	--	--
Bromide	mg/L	9.60	--	--	--	--	--
Chloride	mg/L	--	63.2	59.6	30.6	1700 J	205 J
Orthophosphate	mg/L	<0.720	--	--	--	--	--
Sulfate	mg/L	611	--	--	--	--	--
Sulfide	mg/L	<1.00	--	--	--	--	--
Total dissolved solids (TDS)	mg/L	--	511	512	313	4020 J	1230 J
Total organic carbon (TOC)	mg/L	3.47	--	--	--	--	--

TABLE 2

**ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

<i>Sample Location:</i>		<i>MW016A</i>	<i>MW019A</i>	<i>MW020A</i>	<i>MW021A</i>	<i>MW023A</i>	<i>MW024A</i>
<i>Sample ID:</i>		<i>MW16A-110513</i>	<i>MW19A-110513</i>	<i>MW020A-110413</i>	<i>MW021A-110113</i>	<i>MW23A-103113</i>	<i>MW24A-103013</i>
<i>Sample Date:</i>		<i>11/5/2013</i>	<i>11/5/2013</i>	<i>11/4/2013</i>	<i>11/1/2013</i>	<i>10/31/2013</i>	<i>10/30/2013</i>
<i>Parameters</i>	<i>Units</i>						
<i>Volatile Organic Compounds</i>							
Benzene	mg/L	0.00306	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Ethylbenzene	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700
m&p-Xylenes	mg/L	0.00302	<0.00140	0.00211	<0.00140	<0.00140	<0.00140
o-Xylene	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700
Toluene	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Total BTEX	mg/L	0.00608	<0.000500	0.00211	<0.000500	<0.000500	<0.000500
Xylenes (total)	mg/L	0.00302	<0.000700	0.00211	<0.000700	<0.000700	<0.000700
<i>Metals</i>							
Arsenic (dissolved)	mg/L	0.00924 J	0.0156 J	<0.00756	0.0107 J	0.0169 J	0.0275
Chromium	mg/L	--	--	--	--	--	--
Chromium (dissolved)	mg/L	0.00397 J	<0.00355	0.00735 J	0.00442 J	0.00591 J	0.0616
Chromium VI (hexavalent)	mg/L	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0598
Iron	mg/L	--	--	--	--	--	--
Iron (dissolved)	mg/L	<0.0188	<0.0188	<0.0188	<0.0188	<0.0188	<0.0188
Manganese (dissolved)	mg/L	<0.00291	<0.00291	<0.00291	<0.00291	0.00877 J	<0.00291
Sodium	mg/L	--	--	--	--	--	--
Sodium (dissolved)	mg/L	--	--	--	--	--	--
<i>Petroleum Products</i>							
Total Petroleum Hydrocarbons (C12-28) Diesel	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988
Total Petroleum Hydrocarbons (C6-12) Gas	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988
Total Petroleum Hydrocarbons (C6-C35)	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988

TABLE 2

**ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

<i>Sample Location:</i>		<i>MW016A</i>	<i>MW019A</i>	<i>MW020A</i>	<i>MW021A</i>	<i>MW023A</i>	<i>MW024A</i>
<i>Sample ID:</i>		<i>MW16A-110513</i>	<i>MW19A-110513</i>	<i>MW020A-110413</i>	<i>MW021A-110113</i>	<i>MW23A-103113</i>	<i>MW24A-103013</i>
<i>Sample Date:</i>		<i>11/5/2013</i>	<i>11/5/2013</i>	<i>11/4/2013</i>	<i>11/1/2013</i>	<i>10/31/2013</i>	<i>10/30/2013</i>
<i>Parameters</i>	<i>Units</i>						
General Chemistry							
Ammonia-N	mg/L	--	--	--	--	--	--
Bromide	mg/L	--	--	--	--	--	--
Chloride	mg/L	541	295	960	2760	45.7	278
Orthophosphate	mg/L	--	--	--	--	--	--
Sulfate	mg/L	--	--	--	--	--	--
Sulfide	mg/L	--	--	--	--	--	--
Total dissolved solids (TDS)	mg/L	1790	1240	3090	6560	1980	956
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--

TABLE 2

ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013

<i>Sample Location:</i>		<i>MW040A</i>	<i>MW048SA</i>	<i>MW053SA</i>	<i>MW054SA</i>	<i>MW055SA</i>	<i>MW056SA</i>
<i>Sample ID:</i>		<i>MW040A-110413</i>	<i>MW048SA-110413</i>	<i>MW053SA-110413</i>	<i>MW054SA-110413</i>	<i>MW055SA-103113</i>	<i>DUP2-110413</i>
<i>Sample Date:</i>		<i>11/4/2013</i>	<i>11/4/2013</i>	<i>11/4/2013</i>	<i>11/4/2013</i>	<i>10/31/2013</i>	<i>11/4/2013</i>
							<i>(Duplicate)</i>
Parameters	Units						
<i>Volatile Organic Compounds</i>							
Benzene	mg/L	<0.000500	<0.000500	0.00113	<0.000500	<0.000500	0.00190 J
Ethylbenzene	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700
m&p-Xylenes	mg/L	<0.00140	0.00678	0.00766	0.00384	<0.00140	0.00463
o-Xylene	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	0.000950 J
Toluene	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	0.00166 J
Total BTEX	mg/L	<0.000500	0.00678	0.00879	0.00384	<0.000500	0.00914
Xylenes (total)	mg/L	<0.000700	0.00678	0.00766	0.00384	<0.000700	0.00558
<i>Metals</i>							
Arsenic (dissolved)	mg/L	0.0183 J	0.0117 J	0.0127 J	0.0107 J	<0.00756	0.0155 J
Chromium	mg/L	--	--	--	--	--	--
Chromium (dissolved)	mg/L	<0.00355	0.475	<0.00355	0.143	0.149	0.432
Chromium VI (hexavalent)	mg/L	<0.00500	0.470	<0.00500	0.142	0.160 J	0.268
Iron	mg/L	--	--	--	--	--	--
Iron (dissolved)	mg/L	<0.0188	<0.0188	<0.0188	<0.0188	<0.0188	<0.0188
Manganese (dissolved)	mg/L	<0.00291	0.0322	<0.00291	<0.00291	<0.00291	<0.00291
Sodium	mg/L	--	--	--	--	--	--
Sodium (dissolved)	mg/L	--	--	--	--	--	--
<i>Petroleum Products</i>							
Total Petroleum Hydrocarbons (C12-28) Diesel	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988
Total Petroleum Hydrocarbons (C6-12) Gas	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988
Total Petroleum Hydrocarbons (C6-C35)	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988

TABLE 2

**ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

<i>Sample Location:</i>		<i>MW040A</i>	<i>MW048SA</i>	<i>MW053SA</i>	<i>MW054SA</i>	<i>MW055SA</i>	<i>MW056SA</i>
<i>Sample ID:</i>		<i>MW040A-110413</i>	<i>MW048SA-110413</i>	<i>MW053SA-110413</i>	<i>MW054SA-110413</i>	<i>MW055SA-103113</i>	<i>DUP2-110413</i>
<i>Sample Date:</i>		<i>11/4/2013</i>	<i>11/4/2013</i>	<i>11/4/2013</i>	<i>11/4/2013</i>	<i>10/31/2013</i>	<i>11/4/2013</i> <i>(Duplicate)</i>
<i>Parameters</i>	<i>Units</i>						
General Chemistry							
Ammonia-N	mg/L	--	--	--	--	--	--
Bromide	mg/L	--	--	--	--	--	--
Chloride	mg/L	48.2	545	314	726	565	1150
Orthophosphate	mg/L	--	--	--	--	--	--
Sulfate	mg/L	--	--	--	--	--	--
Sulfide	mg/L	--	--	--	--	--	--
Total dissolved solids (TDS)	mg/L	488	2390	1320	2540	1920	3620
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--

TABLE 2

ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013

<i>Sample Location:</i>		<i>MW056SA</i>	<i>MW062A</i>	<i>MW063A</i>	<i>MW065SA</i>	<i>MW066SA</i>	<i>MW067SA</i>
<i>Sample ID:</i>		<i>MW056SA-110413</i>	<i>MW62A-103013</i>	<i>MW63A-103013</i>	<i>MW065SA-103113</i>	<i>MW066SA-103113</i>	<i>MW067SA</i>
<i>Sample Date:</i>		<i>11/4/2013</i>	<i>10/30/2013</i>	<i>10/30/2013</i>	<i>10/31/2013</i>	<i>10/31/2013</i>	<i>11/1/2013</i>
<i>Parameters</i>	<i>Units</i>						
<i>Volatile Organic Compounds</i>							
Benzene	mg/L	0.000750 J	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Ethylbenzene	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700
m&p-Xylenes	mg/L	0.00547	<0.00140	<0.00140	<0.00140	<0.00140	<0.00140
o-Xylene	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700
Toluene	mg/L	0.00110 J	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Total BTEX	mg/L	0.00732	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500
Xylenes (total)	mg/L	0.00547	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700
<i>Metals</i>							
Arsenic (dissolved)	mg/L	0.0154 J	0.0185 J	0.0180 J	0.0167 J	0.00999 J	0.0152 J
Chromium	mg/L	--	--	--	--	--	--
Chromium (dissolved)	mg/L	0.412	<0.00355	<0.00355	0.179	<0.00355	<0.00355
Chromium VI (hexavalent)	mg/L	0.290	<0.00500	<0.00500	0.180	<0.00500	<0.00500
Iron	mg/L	--	--	--	--	--	--
Iron (dissolved)	mg/L	<0.0188	<0.0188	<0.0188	<0.0188	<0.0188	<0.0188
Manganese (dissolved)	mg/L	<0.00291	0.0617	0.00768 J	<0.00291	1.13	<0.00291
Sodium	mg/L	--	--	--	--	--	--
Sodium (dissolved)	mg/L	--	--	--	--	--	--
<i>Petroleum Products</i>							
Total Petroleum Hydrocarbons (C12-28) Diesel	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988
Total Petroleum Hydrocarbons (C6-12) Gas	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988
Total Petroleum Hydrocarbons (C6-C35)	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988

TABLE 2

**ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

<i>Sample Location:</i>		<i>MW056SA</i>	<i>MW062A</i>	<i>MW063A</i>	<i>MW065SA</i>	<i>MW066SA</i>	<i>MW067SA</i>
<i>Sample ID:</i>		<i>MW056SA-110413</i>	<i>MW62A-103013</i>	<i>MW63A-103013</i>	<i>MW065SA-103113</i>	<i>MW066SA-103113</i>	<i>MW067SA</i>
<i>Sample Date:</i>		<i>11/4/2013</i>	<i>10/30/2013</i>	<i>10/30/2013</i>	<i>10/31/2013</i>	<i>10/31/2013</i>	<i>11/1/2013</i>
<i>Parameters</i>	<i>Units</i>						
General Chemistry							
Ammonia-N	mg/L	--	--	--	--	--	--
Bromide	mg/L	--	--	--	--	--	--
Chloride	mg/L	1140	56.2	49.5	1020	1290	157
Orthophosphate	mg/L	--	--	--	--	--	--
Sulfate	mg/L	--	--	--	--	--	--
Sulfide	mg/L	--	--	--	--	--	--
Total dissolved solids (TDS)	mg/L	3660	478	469	3670	3580	981
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--

TABLE 2

**ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

<i>Sample Location:</i>		<i>MW071SA</i>	<i>MW072SA</i>	<i>MW074SA</i>	<i>MW075SA</i>	<i>MW076SA</i>	<i>MW078SA</i>
<i>Sample ID:</i>		<i>MW071SA-103013</i>	<i>MW072SA-103113</i>	<i>MW074SA-103113</i>	<i>MW075SA-103013</i>	<i>MW076SA-103013</i>	<i>MW078SA-110413</i>
<i>Sample Date:</i>		<i>10/30/2013</i>	<i>10/31/2013</i>	<i>10/31/2013</i>	<i>10/30/2013</i>	<i>10/30/2013</i>	<i>11/4/2013</i>
<i>Parameters</i>	<i>Units</i>						
<i>Volatile Organic Compounds</i>							
Benzene	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	0.000540 J
Ethylbenzene	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700
m&p-Xylenes	mg/L	<0.00140	<0.00140	<0.00140	<0.00140	<0.00140	0.00373
o-Xylene	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700
Toluene	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100
Total BTEX	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	0.00427
Xylenes (total)	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	0.00373
<i>Metals</i>							
Arsenic (dissolved)	mg/L	0.0215	0.0167 J	0.0128 J	0.0125 J	0.0206	0.0104 J
Chromium	mg/L	--	--	--	--	--	--
Chromium (dissolved)	mg/L	0.00507 J	<0.00355	0.0111	<0.00355	<0.00355	<0.00355
Chromium VI (hexavalent)	mg/L	<0.00500	<0.00500	0.0113	<0.00500	<0.00500	<0.00500
Iron	mg/L	--	--	--	--	--	--
Iron (dissolved)	mg/L	<0.0188	<0.0188	<0.0188	<0.0188	<0.0188	<0.0188
Manganese (dissolved)	mg/L	0.220	0.0345	0.0530	<0.00291	0.0442	0.0180 J
Sodium	mg/L	--	--	--	--	--	--
Sodium (dissolved)	mg/L	--	--	--	--	--	--
<i>Petroleum Products</i>							
Total Petroleum Hydrocarbons (C12-28) Diesel	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988
Total Petroleum Hydrocarbons (C6-12) Gas	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988
Total Petroleum Hydrocarbons (C6-C35)	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	<0.988

TABLE 2

**ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

<i>Sample Location:</i>		<i>MW071SA</i>	<i>MW072SA</i>	<i>MW074SA</i>	<i>MW075SA</i>	<i>MW076SA</i>	<i>MW078SA</i>
<i>Sample ID:</i>		<i>MW071SA-103013</i>	<i>MW072SA-103113</i>	<i>MW074SA-103113</i>	<i>MW075SA-103013</i>	<i>MW076SA-103013</i>	<i>MW078SA-110413</i>
<i>Sample Date:</i>		<i>10/30/2013</i>	<i>10/31/2013</i>	<i>10/31/2013</i>	<i>10/30/2013</i>	<i>10/30/2013</i>	<i>11/4/2013</i>
<i>Parameters</i>	<i>Units</i>						
General Chemistry							
Ammonia-N	mg/L	--	--	--	--	--	--
Bromide	mg/L	--	--	--	--	--	--
Chloride	mg/L	103	320	500	405	358	132
Orthophosphate	mg/L	--	--	--	--	--	--
Sulfate	mg/L	--	--	--	--	--	--
Sulfide	mg/L	--	--	--	--	--	--
Total dissolved solids (TDS)	mg/L	738	1450	2070	2120	2100	793
Total organic carbon (TOC)	mg/L	--	--	--	--	--	--

TABLE 2

**ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

<i>Sample Location:</i>		<i>MW079SA</i>	<i>MW083SA</i>	<i>MW084SA</i>	<i>MW085SA</i>	<i>MW086SA</i>	<i>MW089SA</i>
<i>Sample ID:</i>		<i>MW079SA</i>	<i>MW083SA-103113</i>	<i>MW084SA-103013</i>	<i>MW085SA-103113</i>	<i>MW086SA-103013</i>	<i>MW-89SA-102413</i>
<i>Sample Date:</i>		<i>11/1/2013</i>	<i>10/31/2013</i>	<i>10/30/2013</i>	<i>10/31/2013</i>	<i>10/30/2013</i>	<i>10/24/2013</i>
<i>Parameters</i>	<i>Units</i>						
<i>Volatile Organic Compounds</i>							
Benzene	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	--
Ethylbenzene	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	--
m&p-Xylenes	mg/L	<0.00140	<0.00140	<0.00140	<0.00140	<0.00140	--
o-Xylene	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	--
Toluene	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	--
Total BTEX	mg/L	<0.000500	<0.000500	<0.000500	<0.000500	<0.000500	--
Xylenes (total)	mg/L	<0.000700	<0.000700	<0.000700	<0.000700	<0.000700	--
<i>Metals</i>							
Arsenic (dissolved)	mg/L	0.00919 J	<0.00756	0.0164 J	0.00961 J	0.0199 J	--
Chromium	mg/L	--	--	--	--	--	1.17
Chromium (dissolved)	mg/L	<0.00355	<0.00355	0.0291	<0.00355	<0.00355	--
Chromium VI (hexavalent)	mg/L	<0.00500	<0.00500	0.0239	<0.00500	<0.00500	1.16 J
Iron	mg/L	--	--	--	--	--	<0.0188
Iron (dissolved)	mg/L	<0.0188	0.0594 J	<0.0188	<0.0188	<0.0188	<0.0188
Manganese (dissolved)	mg/L	0.0225	0.246	0.0533	0.707	0.0895	--
Sodium	mg/L	--	--	--	--	--	434
Sodium (dissolved)	mg/L	--	--	--	--	--	--
<i>Petroleum Products</i>							
Total Petroleum Hydrocarbons (C12-28) Diesel	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	--
Total Petroleum Hydrocarbons (C6-12) Gas	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	--
Total Petroleum Hydrocarbons (C6-C35)	mg/L	<0.988	<0.988	<0.988	<0.988	<0.988	--

TABLE 2

**ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

<i>Sample Location:</i>		<i>MW079SA</i>	<i>MW083SA</i>	<i>MW084SA</i>	<i>MW085SA</i>	<i>MW086SA</i>	<i>MW089SA</i>
<i>Sample ID:</i>		<i>MW079SA</i>	<i>MW083SA-103113</i>	<i>MW084SA-103013</i>	<i>MW085SA-103113</i>	<i>MW086SA-103013</i>	<i>MW-89SA-102413</i>
<i>Sample Date:</i>		<i>11/1/2013</i>	<i>10/31/2013</i>	<i>10/30/2013</i>	<i>10/31/2013</i>	<i>10/30/2013</i>	<i>10/24/2013</i>
<i>Parameters</i>	<i>Units</i>						
General Chemistry							
Ammonia-N	mg/L	--	--	--	--	--	<0.0115
Bromide	mg/L	--	--	--	--	--	8.20
Chloride	mg/L	338	729	1060	661	656	--
Orthophosphate	mg/L	--	--	--	--	--	<0.720
Sulfate	mg/L	--	--	--	--	--	1360
Sulfide	mg/L	--	--	--	--	--	5.00
Total dissolved solids (TDS)	mg/L	1360	2870	3030	2770	2190	--
Total organic carbon (TOC)	mg/L	--	--	--	--	--	6.91

TABLE 2

**ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

<i>Sample Location:</i>		<i>IW028</i>	<i>IW030</i>	<i>IW030</i>	<i>LordWW</i>	<i>WoodellWW</i>
<i>Sample ID:</i>		<i>IW28-110413</i>	<i>DUP-102413</i>	<i>IW-30-102413</i>	<i>LordWW-110513</i>	<i>Woodell WW-103113</i>
<i>Sample Date:</i>		<i>11/4/2013</i>	<i>10/24/2013</i> <i>(Duplicate)</i>	<i>10/24/2013</i>	<i>11/5/2013</i>	<i>10/31/2013</i>
Parameters	Units					
<i>Volatile Organic Compounds</i>						
Benzene	mg/L	--	--	--	<0.000500	<0.000500
Ethylbenzene	mg/L	--	--	--	<0.000700	<0.000700
m&p-Xylenes	mg/L	--	--	--	<0.00140	<0.00140
o-Xylene	mg/L	--	--	--	<0.000700	<0.000700
Toluene	mg/L	--	--	--	<0.00100	<0.00100
Total BTEX	mg/L	--	--	--	<0.000500	<0.000500
Xylenes (total)	mg/L	--	--	--	<0.000700	<0.000700
<i>Metals</i>						
Arsenic (dissolved)	mg/L	--	--	--	<0.00756	0.00793 J
Chromium	mg/L	0.0394	0.537 J	0.0168 J	--	--
Chromium (dissolved)	mg/L	0.0394	--	--	<0.00355	0.0866
Chromium VI (hexavalent)	mg/L	0.0302	0.549 J	R	<0.00500	0.0843
Iron	mg/L	<0.0188	<0.0188	118 J	--	--
Iron (dissolved)	mg/L	<0.0188	<0.0188	38.3 J	0.507	<0.0188
Manganese (dissolved)	mg/L	--	--	--	0.261	0.0623
Sodium	mg/L	292	282	206	--	--
Sodium (dissolved)	mg/L	296	--	--	--	--
<i>Petroleum Products</i>						
Total Petroleum Hydrocarbons (C12-28) Diesel	mg/L	--	--	--	<0.988	<0.988
Total Petroleum Hydrocarbons (C6-12) Gas	mg/L	--	--	--	<0.988	<0.988
Total Petroleum Hydrocarbons (C6-C35)	mg/L	--	--	--	<0.988	<0.988

TABLE 2

**ANALYTICAL RESULTS SUMMARY
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

<i>Sample Location:</i>		<i>IW028</i>	<i>IW030</i>	<i>IW030</i>	<i>LordWW</i>	<i>WoodellWW</i>
<i>Sample ID:</i>		<i>IW28-110413</i>	<i>DUP-102413</i>	<i>IW-30-102413</i>	<i>LordWW-110513</i>	<i>Woodell WW-103113</i>
<i>Sample Date:</i>		<i>11/4/2013</i>	<i>10/24/2013</i> <i>(Duplicate)</i>	<i>10/24/2013</i>	<i>11/5/2013</i>	<i>10/31/2013</i>
<i>Parameters</i>	<i>Units</i>					
General Chemistry						
Ammonia-N	mg/L	<0.0115	<0.0115	0.100 J	--	--
Bromide	mg/L	<0.120	9.20 J	291 J	--	--
Chloride	mg/L	--	--	--	1320	775
Orthophosphate	mg/L	--	<0.720	<0.720	--	--
Sulfate	mg/L	500	608 J	<0.920	--	--
Sulfide	mg/L	<1.00	<1.00	<1.00	--	--
Total dissolved solids (TDS)	mg/L	--	--	--	2600	2820
Total organic carbon (TOC)	mg/L	4.24 J	3.36 J	761 J	--	--

Notes:

- Not applicable
- J -Estimated concentration
- R -Rejected

TABLE 3

ANALYTICAL METHODS AND HOLDING TIME CRITERIA

GROUNDWATER SAMPLING EVENT

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE

EUNICE, NEW MEXICO

OCTOBER - NOVEMBER 2013

<i>Parameter</i>	<i>Method</i> ¹	<i>Matrix</i>	<i>Holding Time Collection to Analysis (Days)</i>
Chloride	300/300.1	Water	28
Bomide	300/300.1	Water	28
Orthophosphate	300/300.1	Water	2
Sulfate	300/300.1	Water	28
Nitrogen, Ammonia (as N)	350.1	Water	28
TDS	SM 2540C	Water	7
Sulfide	SM 4500 S2F	Water	7
TOC	SM 5310C	Water	28
Metals	SW-846 6010B	Water	180
Chromium VI (hexavalent)	SW-846 7196A	Water	1
TPH	SW-846 8015	Water	14
BTEX	SW-846 8021	Water	14

Notes:

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

SM - "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992, with subsequent revisions

¹ - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

N -Nitrogen

TDS - Total dissolved solids

TOC - Total organic carbon

TPH - Total petroleum hydrocarbons

BTEX - Benzene, toluene, ethylbenzene, and xylenes

TABLE 4

**QUALIFIED SAMPLE RESULTS DUE TO OUTLYING LABORATORY CONTROL SAMPLE RESULTS
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

<i>Parameter</i>	<i>Analyte</i>	<i>LCS Date</i>	<i>LCS (percent)</i>	<i>Control Limits (percent)</i>	<i>Associated Sample ID</i>	<i>Qualified Results</i>	<i>Units</i>
Metals	Chromium VI (hexavalent)	10/25/2013	123	80-120	DUP-102413	0.549 J	mg/L
					MW-009A-102413	0.552 J	mg/L
					MW-89SA-102413	1.16 J	mg/L
Metals	Chromium VI (hexavalent)	11/1/2013	122	80-120	MW055SA-103113	0.160 J	mg/L
					MW059-103113	0.106 J	mg/L
					MW23-103113	1.42 J	mg/L
					MW58-103113	2.78 J	mg/L

Notes:

LCS -Laboratory control sample

J -Estimated concentration

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

GROUNDWATER SAMPLING EVENT

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE

EUNICE, NEW MEXICO

OCTOBER - NOVEMBER 2013

<i>Parameter</i>	<i>Sample ID</i>	<i>Analyte</i>	<i>MS</i>	<i>MSD</i>	<i>RPD</i>	<i>Control Limits</i>		<i>Qualified Result</i>	<i>Units</i>
			<i>% Recovery</i>	<i>% Recovery</i>	<i>(percent)</i>	<i>% Recovery</i>	<i>RPD</i>		
BTEX	DUP2-110413	Benzene	45	42	3	70-125	25	0.00190 J	mg/L
Metals	MW-009A-102413	Chromium VI (hexavalent)	22	22	1	80-120	20	0.552 J	mg/L
	MW-89SA-102413							1.16 J	mg/L
	IW-30-102413							R	
General Chemistry	IW28-110413	Total organic carbon (TOC)	115	115	0	90-110	20	4.24 J	mg/L

Notes:

MS - Matrix spike
MSD - Matrix spike duplicate
RPD -Relative percent difference
J - Estimated concentration
BTEX - Benzene, toluene, ethylbenzene, and xylenes

TABLE 6

**QUALIFIED SAMPLE DATA DUE TO VARIABILITY IN FIELD DUPLICATE RESULTS
GROUNDWATER SAMPLING EVENT
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY (CEMC) - NORTH EUNICE
EUNICE, NEW MEXICO
OCTOBER - NOVEMBER 2013**

<i>Parameter</i>	<i>Analyte</i>	<i>RPD/Diff</i>	<i>Sample ID</i>	<i>Qualified Result</i>	<i>Field Duplicate Sample ID</i>	<i>Qualified Result</i>	<i>Units</i>
General Chemistry	Ammonia	158	IW-30-102413	0.100 J	DUP-102413	<0.0115 J	mg/L
	Bromide	187		291 J		9.20 J	mg/L
	TOC	198		761 J		3.36 J	mg/L
Metals	Chromium	187		0.0168 J		0.537 J	mg/L
	Chromium VI (hexavalent)	138		R		0.549 J	mg/L
	Iron	199		118 J		<0.0188	mg/L
	Iron (dissolved)	199		38.3 J		<0.0188	mg/L
	Sodium	199		<0.92		608 J	mg/L
General Chemistry	Chloride	156	MW15A-110513	205 J	DUP4-110513	1700 J	mg/L
	TDS	106		1230 J		4020 J	mg/L
BTEX	Xylenes (total)	102		<0.000700		0.00218 J	mg/L
	Total BTEX	125		<0.000500		0.00218 J	mg/L

Notes:

- Diff - Difference (i.e. >1X RL for waters)
- RPD - Relative percent difference
- J - Estimated concentration
- TOC - Total organic carbon
- TDS - Total dissolved solids
- BTEX - Benzene, toluene, ethylbenzene, and xylenes

Analytical Report 472775

for

Conestoga Rovers & Associates

Project Manager: Mike Wisniowiecki

N. Eunice/Eunice

073018

04-NOV-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-13-15-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

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04-NOV-13

Project Manager: **Mike Wisniowiecki**

Conestoga Rovers & Associates

2135 S Loop 250 W

Midland, TX 79703

Reference: XENCO Report No(s): **472775**

N. Eunice/Eunice

Project Address: New Mexico

Mike Wisniowiecki:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 472775. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 472775 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks

Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



Sample Cross Reference 472775



Conestoga Rovers & Associates, Midland, TX

N. Eunice/Eunice

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW-895A-102413	W	10-24-13 11:20		472775-001
IW-30-102413	W	10-24-13 12:10		472775-002
MW-009A-102413	W	10-24-13 13:05		472775-003
DUP-102413	W	10-24-13 00:00		472775-004
Metals Trip Blank	W	10-22-13 09:45		472775-005



CASE NARRATIVE



Client Name: Conestoga Rovers & Associates

Project Name: N. Eunice/Eunice

Project ID: 073018

Work Order Number(s): 472775

Report Date: 04-NOV-13

Date Received: 10/24/2013

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-926075 Total Metals by EPA 6010B
SW6010B

Batch 926075, Sodium recovered below QC limits in the Matrix Spike Duplicate.

Samples affected are: 472775-001, -004, -003, -002, -005.

The Laboratory Control Sample for Sodium is within laboratory Control Limits

Batch: LBA-926124 Chromium, Hexavalent by SW 7196A
SW7196A

Batch 926124, Hexavalent Chromium recovered above QC limits in the laboratory control sample.

Samples affected are: 472775-001, -004, -003, -002.

SW7196A

Batch 926124, Hexavalent Chromium recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.

Samples affected are: 472775-001, -004, -003, -002.

Batch: LBA-926163 Inorganic Anions by EPA 300/300.1
E300

Batch 926163, Ortho-Phosphate recovered above QC limits in the Matrix Spike.

Samples affected are: 472775-001, -004, -003, -002.

The Laboratory Control Sample for Ortho-Phosphate is within laboratory Control Limits



CASE NARRATIVE



Client Name: Conestoga Rovers & Associates

Project Name: N. Eunice/Eunice

Project ID: 073018
Work Order Number(s): 472775

Report Date: 04-NOV-13
Date Received: 10/24/2013



Certificate of Analytical Results

472775



Conestoga Rovers & Associates, Midland, TX

N. Eunice/Eunice

Sample Id: **MW-895A-102413**

Matrix: Water

Sample Depth:

Lab Sample Id: 472775-001

Date Collected: 10.24.13 11.20

Date Received: 10.24.13 16.30

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 926163

Date Prep: 10.25.13 10.00

Prep seq: 646019

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Bromide	24959-67-9	8.20	8.00	0.120	mg/L	10.26.13 02:36		20
Ortho-Phosphate	14265-44-2	ND	8.00	0.720	mg/L	10.26.13 02:36	U	20
Sulfate	14808-79-8	1360	40.0	0.920	mg/L	10.26.13 02:36		20

Analytical Method: TOC by SM 5310C

Prep Method: SM5310P

Analyst: RKO

% Moist:

Tech: RKO

Seq Number: 926309

Date Prep: 10.29.13 10.00

Subcontractor: SUB: E871002

Prep seq: 646103

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total Organic Carbon	7440-44-0	6.91	1.00	0.500	mg/L	10.29.13 14:45		1

Analytical Method: Total Metals by EPA 6010B

Prep Method: 3010A

Analyst: MKO

% Moist:

Tech: MKO

Seq Number: 926075

Date Prep: 10.25.13 11.00

Subcontractor: SUB: E871002

Prep seq: 645946

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chromium	7440-47-3	1.17	0.0100	0.00355	mg/L	10.25.13 17:20		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	10.25.13 17:20	U	1
Sodium	7440-23-5	434	0.500	0.0541	mg/L	10.25.13 17:20		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B

Prep Method: 3010A

Analyst: MKO

% Moist:

Tech: MKO

Seq Number: 926231

Date Prep: 10.28.13 07.10

Subcontractor: SUB: E871002

Prep seq: 646001

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Iron	7439-89-6	ND	0.200	0.0188	mg/L	10.28.13 20:44	U	1



Certificate of Analytical Results

472775



Conestoga Rovers & Associates, Midland, TX

N. Eunice/Eunice

Sample Id: **MW-895A-102413**

Matrix: Water

Sample Depth:

Lab Sample Id: 472775-001

Date Collected: 10.24.13 11.20

Date Received: 10.24.13 16.30

Analytical Method: Nitrogen Ammonia by EPA 350.1

Prep Method: E350.1P

Analyst: DEP

% Moist:

Tech: DEP

Seq Number: 926199

Date Prep: 10.28.13 14.25

Subcontractor: SUB: E871002

Prep seq: 646038

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Nitrogen, Ammonia (as N)	7664-41-7	ND	0.100	0.0115	mg/L	10.28.13 17:05	U	1

Analytical Method: Sulfide by SM4500-S-F-00

Prep Method:

Analyst: DHE

% Moist:

Tech: DHE

Seq Number: 926356

Date Prep:

Subcontractor: SUB: E871002

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Sulfide, total	18496-25-8	5.00	5.00	1.00	mg/L	10.30.13 13:09		1

Analytical Method: Chromium, Hexavalent by SW 7196A

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 926124

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	1.16	0.200	0.100	mg/L	10.25.13 10:30		20



Certificate of Analytical Results

472775



Conestoga Rovers & Associates, Midland, TX

N. Eunice/Eunice

Sample Id: **IW-30-102413**

Matrix: Water

Sample Depth:

Lab Sample Id: 472775-002

Date Collected: 10.24.13 12.10

Date Received: 10.24.13 16.30

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 926163

Date Prep: 10.25.13 10.00

Prep seq: 646019

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Bromide	24959-67-9	291	8.00	0.120	mg/L	10.26.13 02:59	E	20
Ortho-Phosphate	14265-44-2	ND	8.00	0.720	mg/L	10.26.13 02:59	U	20
Sulfate	14808-79-8	ND	40.0	0.920	mg/L	10.26.13 02:59	U	20

Analytical Method: TOC by SM 5310C

Prep Method: SM5310P

Analyst: RKO

% Moist:

Tech: RKO

Seq Number: 926424

Date Prep: 10.30.13 08.17

Subcontractor: SUB: E871002

Prep seq: 646203

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total Organic Carbon	7440-44-0	761	100	50.0	mg/L	10.30.13 13:23		100

Analytical Method: Total Metals by EPA 6010B

Prep Method: 3010A

Analyst: MKO

% Moist:

Tech: MKO

Seq Number: 926075

Date Prep: 10.25.13 11.00

Subcontractor: SUB: E871002

Prep seq: 645946

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chromium	7440-47-3	0.0168	0.0100	0.00355	mg/L	10.25.13 17:26		1
Iron	7439-89-6	118	0.200	0.0188	mg/L	10.25.13 17:26		1
Sodium	7440-23-5	206	0.500	0.0541	mg/L	10.25.13 17:26		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B

Prep Method: 3010A

Analyst: MKO

% Moist:

Tech: MKO

Seq Number: 926231

Date Prep: 10.28.13 07.10

Subcontractor: SUB: E871002

Prep seq: 646001

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Iron	7439-89-6	38.3	0.200	0.0188	mg/L	10.28.13 21:12		1



Certificate of Analytical Results

472775



Conestoga Rovers & Associates, Midland, TX

N. Eunice/Eunice

Sample Id: **IW-30-102413**

Matrix: Water

Sample Depth:

Lab Sample Id: 472775-002

Date Collected: 10.24.13 12.10

Date Received: 10.24.13 16.30

Analytical Method: Nitrogen Ammonia by EPA 350.1

Prep Method: E350.1P

Analyst: DEP

% Moist:

Tech: DEP

Seq Number: 926199

Date Prep: 10.28.13 14.25

Subcontractor: SUB: E871002

Prep seq: 646038

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Nitrogen, Ammonia (as N)	7664-41-7	0.100	0.100	0.0115	mg/L	10.28.13 17:08		1

Analytical Method: Sulfide by SM4500-S-F-00

Prep Method:

Analyst: DHE

% Moist:

Tech: DHE

Seq Number: 926356

Date Prep:

Subcontractor: SUB: E871002

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Sulfide, total	18496-25-8	ND	5.00	1.00	mg/L	10.30.13 13:09	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 926124

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.200	0.100	mg/L	10.25.13 10:30	U	20



Certificate of Analytical Results

472775



Conestoga Rovers & Associates, Midland, TX

N. Eunice/Eunice

Sample Id: **MW-009A-102413**

Matrix: Water

Sample Depth:

Lab Sample Id: 472775-003

Date Collected: 10.24.13 13.05

Date Received: 10.24.13 16.30

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 926163

Date Prep: 10.25.13 10.00

Prep seq: 646019

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Bromide	24959-67-9	9.60	8.00	0.120	mg/L	10.26.13 03:22		20
Ortho-Phosphate	14265-44-2	ND	8.00	0.720	mg/L	10.26.13 03:22	U	20
Sulfate	14808-79-8	611	40.0	0.920	mg/L	10.26.13 03:22		20

Analytical Method: TOC by SM 5310C

Prep Method: SM5310P

Analyst: RKO

% Moist:

Tech: RKO

Seq Number: 926309

Date Prep: 10.29.13 10.00

Subcontractor: SUB: E871002

Prep seq: 646103

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total Organic Carbon	7440-44-0	3.47	1.00	0.500	mg/L	10.29.13 16:37		1

Analytical Method: Total Metals by EPA 6010B

Prep Method: 3010A

Analyst: MKO

% Moist:

Tech: MKO

Seq Number: 926075

Date Prep: 10.25.13 11.00

Subcontractor: SUB: E871002

Prep seq: 645946

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chromium	7440-47-3	0.549	0.0100	0.00355	mg/L	10.25.13 17:32		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	10.25.13 17:32	U	1
Sodium	7440-23-5	287	0.500	0.0541	mg/L	10.25.13 17:32		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B

Prep Method: 3010A

Analyst: MKO

% Moist:

Tech: MKO

Seq Number: 926231

Date Prep: 10.28.13 07.10

Subcontractor: SUB: E871002

Prep seq: 646001

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Iron	7439-89-6	ND	0.200	0.0188	mg/L	10.28.13 21:18	U	1



Certificate of Analytical Results

472775



Conestoga Rovers & Associates, Midland, TX

N. Eunice/Eunice

Sample Id: **MW-009A-102413**

Matrix: Water

Sample Depth:

Lab Sample Id: 472775-003

Date Collected: 10.24.13 13.05

Date Received: 10.24.13 16.30

Analytical Method: Nitrogen Ammonia by EPA 350.1

Prep Method: E350.1P

Analyst: DEP

% Moist:

Tech: DEP

Seq Number: 926199

Date Prep: 10.28.13 14.25

Subcontractor: SUB: E871002

Prep seq: 646038

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Nitrogen, Ammonia (as N)	7664-41-7	ND	0.100	0.0115	mg/L	10.28.13 17:10	U	1

Analytical Method: Sulfide by SM4500-S-F-00

Prep Method:

Analyst: DHE

% Moist:

Tech: DHE

Seq Number: 926356

Date Prep:

Subcontractor: SUB: E871002

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Sulfide, total	18496-25-8	ND	5.00	1.00	mg/L	10.30.13 13:09	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 926124

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.552	0.0100	0.00500	mg/L	10.25.13 10:30		1



Certificate of Analytical Results

472775



Conestoga Rovers & Associates, Midland, TX

N. Eunice/Eunice

Sample Id: **DUP-102413**

Matrix: Water

Sample Depth:

Lab Sample Id: 472775-004

Date Collected: 10.24.13 00.00

Date Received: 10.24.13 16.30

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 926163

Date Prep: 10.25.13 10.00

Prep seq: 646019

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Bromide	24959-67-9	9.20	8.00	0.120	mg/L	10.26.13 03:44		20
Ortho-Phosphate	14265-44-2	ND	8.00	0.720	mg/L	10.26.13 03:44	U	20
Sulfate	14808-79-8	608	40.0	0.920	mg/L	10.26.13 03:44		20

Analytical Method: TOC by SM 5310C

Prep Method: SM5310P

Analyst: RKO

% Moist:

Tech: RKO

Seq Number: 926309

Date Prep: 10.29.13 10.00

Subcontractor: SUB: E871002

Prep seq: 646103

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total Organic Carbon	7440-44-0	3.36	1.00	0.500	mg/L	10.29.13 16:52		1

Analytical Method: Total Metals by EPA 6010B

Prep Method: 3010A

Analyst: MKO

% Moist:

Tech: MKO

Seq Number: 926075

Date Prep: 10.25.13 11.00

Subcontractor: SUB: E871002

Prep seq: 645946

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chromium	7440-47-3	0.537	0.0100	0.00355	mg/L	10.25.13 17:37		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	10.25.13 17:37	U	1
Sodium	7440-23-5	282	0.500	0.0541	mg/L	10.25.13 17:37		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B

Prep Method: 3010A

Analyst: MKO

% Moist:

Tech: MKO

Seq Number: 926231

Date Prep: 10.28.13 07.10

Subcontractor: SUB: E871002

Prep seq: 646001

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Iron	7439-89-6	ND	0.200	0.0188	mg/L	10.28.13 21:35	U	1

Certificate of Analytical Results

472775

Conestoga Rovers & Associates, Midland, TX

N. Eunice/Eunice

Sample Id: **DUP-102413**

Matrix: Water

Sample Depth:

Lab Sample Id: 472775-004

Date Collected: 10.24.13 00.00

Date Received: 10.24.13 16.30

Analytical Method: Nitrogen Ammonia by EPA 350.1

Prep Method: E350.1P

Analyst: DEP

% Moist:

Tech: DEP

Seq Number: 926199

Date Prep: 10.28.13 14.25

Subcontractor: SUB: E871002

Prep seq: 646038

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Nitrogen, Ammonia (as N)	7664-41-7	ND	0.100	0.0115	mg/L	10.28.13 17:11	U	1

Analytical Method: Sulfide by SM4500-S-F-00

Prep Method:

Analyst: DHE

% Moist:

Tech: DHE

Seq Number: 926356

Date Prep:

Subcontractor: SUB: E871002

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Sulfide, total	18496-25-8	ND	5.00	1.00	mg/L	10.30.13 13:09	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 926124

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.549	0.0100	0.00500	mg/L	10.25.13 10:30		1

Sample Id: **Metals Trip Blank**

Matrix: Water

Sample Depth:

Lab Sample Id: 472775-005

Date Collected: 10.22.13 09.45

Date Received: 10.24.13 16.30

Analytical Method: Total Metals by EPA 6010B

Prep Method: 3010A

Analyst: MKO

% Moist:

Tech: MKO

Seq Number: 926075

Date Prep: 10.25.13 11.00

Subcontractor: SUB: E871002

Prep seq: 645946

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	10.25.13 17:43	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	10.25.13 17:43	U	1
Sodium	7440-23-5	ND	0.500	0.0541	mg/L	10.25.13 17:43	U	1



Certificate of Analytical Results

472775



Conestoga Rovers & Associates, Midland, TX

N. Eunice/Eunice

Sample Id: **645946-1-BLK**

Matrix: Water

Sample Depth:

Lab Sample Id: 645946-1-BLK

Date Collected:

Date Received:

Analytical Method: Total Metals by EPA 6010B

Prep Method: 3010A

Analyst: MKO

% Moist:

Tech: MKO

Seq Number: 926075

Date Prep: 10.25.13 11.00

Subcontractor: SUB: E871002

Prep seq: 645946

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	10.25.13 15:38	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	10.25.13 15:38	U	1
Sodium	7440-23-5	ND	0.500	0.0541	mg/L	10.25.13 15:38	U	1

Sample Id: **646001-1-BLK**

Matrix: Water

Sample Depth:

Lab Sample Id: 646001-1-BLK

Date Collected:

Date Received:

Analytical Method: Dissolved Metals per ICP by SW846 6010B

Prep Method: 3010A

Analyst: MKO

% Moist:

Tech: MKO

Seq Number: 926231

Date Prep: 10.28.13 07.10

Subcontractor: SUB: E871002

Prep seq: 646001

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Iron	7439-89-6	ND	0.200	0.0188	mg/L	10.28.13 20:27	U	1

Sample Id: **646019-1-BLK**

Matrix: Water

Sample Depth:

Lab Sample Id: 646019-1-BLK

Date Collected:

Date Received:

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 926163

Date Prep: 10.25.13 10.00

Prep seq: 646019

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Bromide	24959-67-9	ND	0.400	0.00600	mg/L	10.25.13 17:33	U	1
Ortho-Phosphate	14265-44-2	ND	0.400	0.0360	mg/L	10.25.13 17:33	U	1
Sulfate	14808-79-8	ND	2.00	0.0460	mg/L	10.25.13 17:33	U	1



Certificate of Analytical Results

472775



Conestoga Rovers & Associates, Midland, TX

N. Eunice/Eunice

Sample Id: **646038-1-BLK**

Matrix: Water

Sample Depth:

Lab Sample Id: 646038-1-BLK

Date Collected:

Date Received:

Analytical Method: Nitrogen Ammonia by EPA 350.1

Prep Method: E350.1P

Analyst: DEP

% Moist:

Tech: DEP

Seq Number: 926199

Date Prep: 10.28.13 14.25

Subcontractor: SUB: E871002

Prep seq: 646038

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Nitrogen, Ammonia (as N)	7664-41-7	ND	0.100	0.0115	mg/L	10.28.13 16:40	U	1

Sample Id: **646103-1-BLK**

Matrix: Water

Sample Depth:

Lab Sample Id: 646103-1-BLK

Date Collected:

Date Received:

Analytical Method: TOC by SM 5310C

Prep Method: SM5310P

Analyst: RKO

% Moist:

Tech: RKO

Seq Number: 926309

Date Prep: 10.29.13 10.00

Subcontractor: SUB: E871002

Prep seq: 646103

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total Organic Carbon	7440-44-0	ND	1.00	0.500	mg/L	10.29.13 14:04	U	1

Sample Id: **646203-1-BLK**

Matrix: Water

Sample Depth:

Lab Sample Id: 646203-1-BLK

Date Collected:

Date Received:

Analytical Method: TOC by SM 5310C

Prep Method: SM5310P

Analyst: RKO

% Moist:

Tech: RKO

Seq Number: 926424

Date Prep: 10.30.13 08.17

Subcontractor: SUB: E871002

Prep seq: 646203

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total Organic Carbon	7440-44-0	ND	1.00	0.500	mg/L	10.30.13 11:53	U	1

Sample Id: **926124-1-BLK**

Matrix: Water

Sample Depth:

Lab Sample Id: 926124-1-BLK

Date Collected:

Date Received:

Analytical Method: Chromium, Hexavalent by SW 7196A

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 926124

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	10.25.13 10:30	U	1



Certificate of Analytical Results

472775



Conestoga Rovers & Associates, Midland, TX

N. Eunice/Eunice

Sample Id: 926356-1-BLK

Matrix: Water

Sample Depth:

Lab Sample Id: 926356-1-BLK

Date Collected:

Date Received:

Analytical Method: Sulfide by SM4500-S-F-00

Prep Method:

Analyst: DHE

% Moist:

Tech: DHE

Seq Number: 926356

Date Prep:

Subcontractor: SUB: E871002

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Sulfide, total	18496-25-8	ND	5.00	1.00	mg/L	10.30.13 13:09	U	1

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **SQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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 12600 West I-20 East, Odessa, TX 79765
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(813) 620-2000	(813) 620-2033
(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	

Work Order #: 472775

Project ID:

073018

Lab Batch #: 926124

Sample: 926124-1-BKS

Matrix: Water

Date Analyzed: 10/25/2013

Date Prepared: 10/25/2013

Analyst: WRU

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Hexavalent Chromium	<0.0100	0.0200	0.0246	123	80-120	H

Lab Batch #: 926199

Sample: 646038-1-BKS

Matrix: Water

Date Analyzed: 10/28/2013

Date Prepared: 10/28/2013

Analyst: DEP

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Nitrogen Ammonia by EPA 350.1	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Nitrogen, Ammonia (as N)	<0.100	2.50	2.57	103	90-110	

Lab Batch #: 926309

Sample: 646103-1-BKS

Matrix: Water

Date Analyzed: 10/29/2013

Date Prepared: 10/29/2013

Analyst: RKO

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

TOC by SM 5310C	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Total Organic Carbon	<1.00	10.0	10.4	104	90-110	

Lab Batch #: 926424

Sample: 646203-1-BKS

Matrix: Water

Date Analyzed: 10/30/2013

Date Prepared: 10/30/2013

Analyst: RKO

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

TOC by SM 5310C	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Total Organic Carbon	<1.00	10.0	10.1	101	90-110	

Blank Spike Recovery [D] = 100*[C]/[B]

All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Project Name: N. Eunice/Eunice

Work Order #: 472775

Project ID: 073018

Analyst: MKO

Date Prepared: 10/28/2013

Date Analyzed: 10/28/2013

Lab Batch ID: 926231

Sample: 646001-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Dissolved Metals per ICP by SW846 6010B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Iron	<0.200	5.00	4.96	99	5.00	4.91	98	1	80-120	20	

Analyst: AMB

Date Prepared: 10/25/2013

Date Analyzed: 10/25/2013

Lab Batch ID: 926163

Sample: 646019-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Bromide	<0.400	5.00	4.86	97	5.00	4.87	97	0	80-120	20	
Ortho-Phosphate	<0.400	5.00	5.39	108	5.00	5.24	105	3	80-120	20	
Sulfate	<2.00	25.0	24.6	98	25.0	24.5	98	0	80-120	20	

Analyst: DHE

Date Prepared: 10/30/2013

Date Analyzed: 10/30/2013

Lab Batch ID: 926356

Sample: 926356-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Sulfide by SM4500-S-F-00	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Sulfide, total	<5.00	50.0	43.0	86	50.0	43.0	86	0	80-120	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: N. Eunice/Eunice

Work Order #: 472775

Project ID: 073018

Analyst: MKO

Date Prepared: 10/25/2013

Date Analyzed: 10/25/2013

Lab Batch ID: 926075

Sample: 645946-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Total Metals by EPA 6010B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chromium	<0.0100	1.00	1.02	102	1.00	1.01	101	1	80-120	20	
Iron	<0.200	5.00	4.80	96	5.00	4.78	96	0	80-120	20	
Sodium	<0.500	25.0	25.9	104	25.0	25.4	102	2	80-120	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

Project Name: N. Eunice/Eunice



Work Order #: 472775

Lab Batch #: 926163

Date Analyzed: 10/25/2013

QC- Sample ID: 472770-001 S

Reporting Units: mg/L

Date Prepared: 10/25/2013

Batch #: 1

Project ID: 073018

Analyst: AMB

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Bromide	<2.00	25.0	26.0	104	80-120	
Ortho-Phosphate	<2.00	25.0	32.1	128	80-120	X
Sulfate	39.2	125	166	101	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: N. Eunice/Eunice

Work Order # : 472775

Project ID: 073018

Lab Batch ID: 926124

QC- Sample ID: 472775-002 S

Batch #: 1 Matrix: Water

Date Analyzed: 10/25/2013

Date Prepared: 10/25/2013

Analyst: WRU

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Hexavalent Chromium	<0.200	4.00	0.862	22	4.00	0.868	22	1	80-120	20	X

Lab Batch ID: 926231

QC- Sample ID: 472775-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 10/28/2013

Date Prepared: 10/28/2013

Analyst: MKO

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Dissolved Metals per ICP by SW846 6010B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Iron	<0.200	5.00	4.94	99	5.00	4.79	96	3	75-125	20	

Lab Batch ID: 926199

QC- Sample ID: 472599-002 S

Batch #: 1 Matrix: Waste Water

Date Analyzed: 10/28/2013

Date Prepared: 10/28/2013

Analyst: DEP

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Nitrogen Ammonia by EPA 350.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Nitrogen, Ammonia (as N)	0.124	2.50	2.75	105	2.50	2.72	104	1	90-110	20	

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Project Name: N. Eunice/Eunice

Work Order # : 472775

Project ID: 073018

Lab Batch ID: 926199

QC- Sample ID: 472750-001 S

Batch #: 1 **Matrix:** Water

Date Analyzed: 10/28/2013

Date Prepared: 10/28/2013

Analyst: DEP

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Nitrogen Ammonia by EPA 350.1	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Nitrogen, Ammonia (as N)	0.818	2.50	3.47	106	2.50	3.50	107	1	90-110	20	

Lab Batch ID: 926309

QC- Sample ID: 472775-001 S

Batch #: 1 **Matrix:** Water

Date Analyzed: 10/29/2013

Date Prepared: 10/29/2013

Analyst: RKO

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TOC by SM 5310C	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Total Organic Carbon	6.91	10.0	17.2	103	10.0	16.9	100	2	90-110	20	

Lab Batch ID: 926424

QC- Sample ID: 472852-001 S

Batch #: 1 **Matrix:** Water

Date Analyzed: 10/30/2013

Date Prepared: 10/30/2013

Analyst: RKO

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TOC by SM 5310C	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Total Organic Carbon	49.5	100	156	107	100	152	103	3	90-110	20	

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries



Project Name: N. Eunice/Eunice

Work Order # : 472775

Project ID: 073018

Lab Batch ID: 926075

QC- Sample ID: 472685-001 S

Batch #: 1 Matrix: Solid

Date Analyzed: 10/25/2013

Date Prepared: 10/25/2013

Analyst: MKO

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Total Metals by EPA 6010B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chromium	<0.0500	5.00	4.96	99	5.00	4.91	98	1	80-120	20	
Iron	<1.00	25.0	24.2	97	25.0	23.7	95	2	80-120	20	
Sodium	1560	125	1680	96	125	1580	16	6	75-125	20	X

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery [G] = $100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Project Name: N. Eunice/Eunice

Work Order #: 472775

Lab Batch #: 926356

Project ID: 073018

Date Analyzed: 10/30/2013 13:09

Date Prepared: 10/30/2013

Analyst: DHE

QC- Sample ID: 472780-014 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

Sulfide by SM4500-S-F-00 Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Sulfide, total	<5.00	<5.00	0	20	U

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$
 All Results are based on MDL and validated for QC purposes.
 BRL - Below Reporting Limit

(Hygeia SOP-09)



Hygeia Laboratories Inc.

3626 Westchase Drive

Houston, TX 77042

(713) 343-4483 (713) 977-1963 Fax

www.hygeialabsinc.com

Client No.: 30311 Kelsey Brooks Xenco Laboratories (Odessa) 12600 West I-20 East Odessa, TX 79765	Project No.: 1018187 Project Name: Collected: 10/24/2013 Received: 10/25/2013 Analyzed: 10/29/2013
---	--

Hygeia Sample ID	105317	105318	105319
Client Sample ID	472775-001	472775-002	472775-003
Location	MW-895A-102413	IW-30-102413	MW-009A-102413
Sample Type	Water	Water	Water
Sample Amount	0.1 mL	0.1 mL	1 mL
Medium / Method	SM 9215	SM 9215	SM 9215
Dilution Factor(s)	1:1	1:1	1:1

Bacteria Isolated:

[illegible]

(Hygeia SOP-09)



Hygeia Laboratories Inc.

3626 Westchase Drive

Houston, TX 77042

(713) 343-4483 (713) 977-1963 Fax

www.hygeialabsinc.com

Client No.: 30311 Kelsey Brooks Xenco Laboratories (Odessa) 12600 West I-20 East Odessa, TX 79765	Project No.: 1018187 Project Name: Collected: 10/24/2013 Received: 10/25/2013 Analyzed: 10/29/2013
---	--

Hygeia Sample ID	105320	QC	X
Client Sample ID	472775-004		
Location	DUP-102413		
Sample Type	Water		
Sample Amount	1 mL		
Medium / Method	SM 9215		
Dilution Factor(s)	1:1		

Bacteria Isolated:

[illegible]

Quantitative Bacterial Report

Heterotrophic Plate Count

(Hygeia SOP-09)



Hygeia Laboratories Inc.

3626 Westchase Drive

Houston, TX 77042

(713) 343-4483 (713) 977-1963 Fax

www.hygeialabsinc.com

Client No.: 30311

Kelsey Brooks

Xenco Laboratories (Odessa)

12600 West I-20 East

Odessa, TX 79765

Project No.: 1018187

Project Name:

Collected: 10/24/2013

Received: 10/25/2013

Analyzed: 10/29/2013

Analyst

Vanessa Garcia

Lab Director

Crystal Enloe

Thank you for using Hygeia Laboratories Inc. We strive to provide superior quality and service.

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Data in this report are reliable within two significant figures. Sample results are not corrected based on results of blanks. The minimum reporting limit (MRL) is calculated as the lowest dilution tested/volume. Estimates of uncertainty are available upon request. CFU = colony forming units. CFU/unit is calculated as raw count*dilution/sample amount. Total CFU/unit is the sum of individual CFUs/unit and is considered <MRL if no colonies are present.

Confidentiality Notice:

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Guidelines for Interpretation:

Interpretation of the data and information within this document is left to the company, consultant, and/or persons who conducted the fieldwork.

Bacteria have been associated with a variety of health effects and sensitivity varies from person to person. Contact the CDC (www.cdc.gov) for information regarding potential health risks related to exposure in air or on surfaces and the USEPA (www.epa.gov) for existing established standards including regulated water quality standards.

Liability Notice:

Hygeia Laboratories Inc. and its personnel shall not be held liable for any misinformation provided to us by the client regarding these samples or for any misuse or interpretation of information supplied by us. Liability shall extend to providing replicate analyses only. This report relates only to samples submitted and analyzed.

Revision 0 11/01/2013 ce

Analytical Report 473153

for

Conestoga Rovers & Associates

Project Manager: Claudia Ramos

2nd Semi-Annual GW Monitoring

073018-2013-01

07-NOV-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-13-15-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



07-NOV-13

Project Manager: **Claudia Ramos**

Conestoga Rovers & Associates

2135 S Loop 250 W

Midland, TX 79703

Reference: XENCO Report No(s): **473153**

2nd Semi-Annual GW Monitoring

Project Address: New Mexico

Claudia Ramos:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 473153. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 473153 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks

Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

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Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



Sample Cross Reference 473153



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW071SA-103013	W	10-30-13 09:45		473153-001
MW086SA-103013	W	10-30-13 11:10		473153-002
MW24-103013	W	10-30-13 11:15		473153-003
MW24A-103013	W	10-30-13 10:15		473153-004
MW63A-103013	W	10-30-13 14:15		473153-005
MW62A-103013	W	10-30-13 13:25		473153-006
MW70-103013	W	10-30-13 15:50		473153-007
MW084SA-103013	W	10-30-13 14:55		473153-008
MW075SA-103013	W	10-30-13 14:00		473153-009
MW076SA-103013	W	10-30-13 13:05		473153-010
Dup1-103013	W	10-30-13 00:00		473153-011



CASE NARRATIVE



Client Name: *Conestoga Rovers & Associates*

Project Name: *2nd Semi-Annual GW Monitoring*

Project ID: 073018-2013-01
Work Order Number(s): 473153

Report Date: 07-NOV-13
Date Received: 10/30/2013

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results

473153

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW071SA-103013	Matrix: Water	Sample Depth:
Lab Sample Id: 473153-001	Date Collected: 10.30.13 09.45	Date Received: 10.30.13 19.00
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 926815	Date Prep: 11.03.13 10.00	
	Prep seq: 646459	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	103	10.0	0.280	mg/L	11.05.13 05:20		10

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 926856	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	738	5.00	5.00	mg/L	11.03.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 926985	
	% Moist:
	Date Prep: 11.05.13 12.00
Subcontractor: SUB: E871002	Prep seq: 646456

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0215	0.0200	0.00756	mg/L	11.06.13 16:18		1
Chromium	7440-47-3	0.00507	0.0100	0.00355	mg/L	11.06.13 16:18	J	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 16:18	U	1
Manganese	7439-96-5	0.220	0.0200	0.00291	mg/L	11.06.13 16:18		1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 926567	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	10.30.13 19:30	U	1



Certificate of Analytical Results

473153



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW071SA-103013** Matrix: Water Sample Depth:
Lab Sample Id: 473153-001 Date Collected: 10.30.13 09.45 Date Received: 10.30.13 19.00
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926693 Date Prep: 11.01.13 17.00
Prep seq: 646368

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.01.13 22:55	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.01.13 22:55	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.01.13 22:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	102	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926676 Date Prep: 11.01.13 15.00
Prep seq: 646357

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.01.13 17:27	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.01.13 17:27	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.01.13 17:27	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.01.13 17:27	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.01.13 17:27	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.01.13 17:27	U	
Total BTEX		ND		0.000500	mg/L	11.01.13 17:27	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	94	80 - 120	%		
4-Bromofluorobenzene	105	80 - 120	%		



Certificate of Analytical Results

473153



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW086SA-103013** Matrix: Water Sample Depth:
Lab Sample Id: 473153-002 Date Collected: 10.30.13 11.10 Date Received: 10.30.13 19.00
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926815 Date Prep: 11.03.13 10.00
Prep seq: 646459

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	656	20.0	0.560	mg/L	11.05.13 06:06		20

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926856 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	2190	5.00	5.00	mg/L	11.03.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 926985 Date Prep: 11.05.13 12.00
Subcontractor: SUB: E871002 Prep seq: 646456

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0199	0.0200	0.00756	mg/L	11.06.13 16:46	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.06.13 16:46	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 16:46	U	1
Manganese	7439-96-5	0.0895	0.0200	0.00291	mg/L	11.06.13 16:46		1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 926567 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	10.30.13 19:30	U	1



Certificate of Analytical Results

473153



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW086SA-103013**

Matrix: Water

Sample Depth:

Lab Sample Id: 473153-002

Date Collected: 10.30.13 11.10

Date Received: 10.30.13 19.00

Analytical Method: TPH By SW8015B Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926693

Date Prep: 11.01.13 17.00

Prep seq: 646368

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.02.13 00:07	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.02.13 00:07	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.02.13 00:07	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	94	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926676

Date Prep: 11.01.13 15.00

Prep seq: 646357

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.01.13 17:43	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.01.13 17:43	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.01.13 17:43	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.01.13 17:43	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.01.13 17:43	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.01.13 17:43	U	
Total BTEX		ND		0.000500	mg/L	11.01.13 17:43	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	87	80 - 120	%		
4-Bromofluorobenzene	94	80 - 120	%		



Certificate of Analytical Results

473153



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW24-103013** Matrix: Water Sample Depth:
Lab Sample Id: 473153-003 Date Collected: 10.30.13 11.15 Date Received: 10.30.13 19.00
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926815 Date Prep: 11.03.13 10.00
Prep seq: 646459

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	631	20.0	0.560	mg/L	11.05.13 06:28		20

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926856 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	2730	5.00	5.00	mg/L	11.03.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 926985 Date Prep: 11.05.13 12.00
Subcontractor: SUB: E871002 Prep seq: 646456

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0133	0.0200	0.00756	mg/L	11.06.13 17:03	J	1
Chromium	7440-47-3	0.0699	0.0100	0.00355	mg/L	11.06.13 17:03		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 17:03	U	1
Manganese	7439-96-5	0.0255	0.0200	0.00291	mg/L	11.06.13 17:03		1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 926567 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.0658	0.0100	0.00500	mg/L	10.30.13 19:30		1



Certificate of Analytical Results

473153



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW24-103013** Matrix: Water Sample Depth:
Lab Sample Id: 473153-003 Date Collected: 10.30.13 11.15 Date Received: 10.30.13 19.00
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926693 Date Prep: 11.01.13 17.00
Prep seq: 646368

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.02.13 00:30	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.02.13 00:30	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.02.13 00:30	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	100	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926676 Date Prep: 11.01.13 15.00
Prep seq: 646357

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.01.13 17:59	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.01.13 17:59	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.01.13 17:59	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.01.13 17:59	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.01.13 17:59	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.01.13 17:59	U	
Total BTEX		ND		0.000500	mg/L	11.01.13 17:59	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	88	80 - 120	%		
4-Bromofluorobenzene	93	80 - 120	%		

Certificate of Analytical Results

473153

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW24A-103013	Matrix: Water	Sample Depth:
Lab Sample Id: 473153-004	Date Collected: 10.30.13 10.15	Date Received: 10.30.13 19.00
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 926815	Date Prep: 11.03.13 10.00	
	Prep seq: 646459	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	278	10.0	0.280	mg/L	11.05.13 06:51		10

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 926856	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	956	5.00	5.00	mg/L	11.03.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 926985	
	% Moist:
	Date Prep: 11.05.13 12.00
Subcontractor: SUB: E871002	Prep seq: 646456

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0275	0.0200	0.00756	mg/L	11.06.13 17:09		1
Chromium	7440-47-3	0.0616	0.0100	0.00355	mg/L	11.06.13 17:09		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 17:09	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.06.13 17:09	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 926567	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.0598	0.0100	0.00500	mg/L	10.30.13 19:30		1



Certificate of Analytical Results

473153



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW24A-103013**

Matrix: Water

Sample Depth:

Lab Sample Id: 473153-004

Date Collected: 10.30.13 10.15

Date Received: 10.30.13 19.00

Analytical Method: TPH By SW8015B Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926693

Date Prep: 11.01.13 17.00

Prep seq: 646368

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.02.13 00:54	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.02.13 00:54	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.02.13 00:54	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	94	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926676

Date Prep: 11.01.13 15.00

Prep seq: 646357

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.01.13 18:15	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.01.13 18:15	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.01.13 18:15	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.01.13 18:15	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.01.13 18:15	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.01.13 18:15	U	
Total BTEX		ND		0.000500	mg/L	11.01.13 18:15	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	89	80 - 120	%		
4-Bromofluorobenzene	91	80 - 120	%		

Certificate of Analytical Results

473153

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW63A-103013	Matrix: Water	Sample Depth:
Lab Sample Id: 473153-005	Date Collected: 10.30.13 14.15	Date Received: 10.30.13 19.00
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 926815	Date Prep: 11.03.13 10.00	
	Prep seq: 646459	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	49.5	5.00	0.140	mg/L	11.05.13 07:14		5

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 926856	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	469	5.00	5.00	mg/L	11.03.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 926985	
	% Moist:
	Date Prep: 11.05.13 12.00
Subcontractor: SUB: E871002	Prep seq: 646456

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0180	0.0200	0.00756	mg/L	11.06.13 17:14	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.06.13 17:14	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 17:14	U	1
Manganese	7439-96-5	0.00768	0.0200	0.00291	mg/L	11.06.13 17:14	J	1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 926566	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	10.30.13 19:30	U	1



Certificate of Analytical Results

473153



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW63A-103013** Matrix: Water Sample Depth:
Lab Sample Id: 473153-005 Date Collected: 10.30.13 14.15 Date Received: 10.30.13 19.00
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926693 Date Prep: 11.01.13 17.00
Prep seq: 646368

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.02.13 01:18	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.02.13 01:18	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.02.13 01:18	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	106	70 - 135	%		
o-Terphenyl	98	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926676 Date Prep: 11.01.13 15.00
Prep seq: 646357

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.01.13 18:31	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.01.13 18:31	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.01.13 18:31	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.01.13 18:31	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.01.13 18:31	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.01.13 18:31	U	
Total BTEX		ND		0.000500	mg/L	11.01.13 18:31	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	88	80 - 120	%		
4-Bromofluorobenzene	97	80 - 120	%		



Certificate of Analytical Results

473153



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW62A-103013** Matrix: Water Sample Depth:
Lab Sample Id: 473153-006 Date Collected: 10.30.13 13.25 Date Received: 10.30.13 19.00
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926815 Date Prep: 11.03.13 10.00
Prep seq: 646459

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	56.2	5.00	0.140	mg/L	11.05.13 08:22		5

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926856 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	478	5.00	5.00	mg/L	11.03.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 926985 Date Prep: 11.05.13 12.00
Subcontractor: SUB: E871002 Prep seq: 646456

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0185	0.0200	0.00756	mg/L	11.06.13 17:20	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.06.13 17:20	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 17:20	U	1
Manganese	7439-96-5	0.0617	0.0200	0.00291	mg/L	11.06.13 17:20		1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 926566 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	10.30.13 19:30	U	1



Certificate of Analytical Results

473153



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW62A-103013**

Matrix: Water

Sample Depth:

Lab Sample Id: 473153-006

Date Collected: 10.30.13 13.25

Date Received: 10.30.13 19.00

Analytical Method: TPH By SW8015B Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926693

Date Prep: 11.01.13 17.00

Prep seq: 646368

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.02.13 01:41	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.02.13 01:41	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.02.13 01:41	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	107	70 - 135	%		
o-Terphenyl	98	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926676

Date Prep: 11.01.13 15.00

Prep seq: 646357

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.01.13 18:47	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.01.13 18:47	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.01.13 18:47	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.01.13 18:47	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.01.13 18:47	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.01.13 18:47	U	
Total BTEX		ND		0.000500	mg/L	11.01.13 18:47	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	88	80 - 120	%		
4-Bromofluorobenzene	93	80 - 120	%		

Certificate of Analytical Results

473153

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW70-103013	Matrix: Water	Sample Depth:
Lab Sample Id: 473153-007	Date Collected: 10.30.13 15.50	Date Received: 10.30.13 19.00
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 926815	Date Prep: 11.03.13 10.00	
	Prep seq: 646459	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	167	10.0	0.280	mg/L	11.05.13 08:44		10

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 926856	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	829	5.00	5.00	mg/L	11.03.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 926985	
	% Moist:
	Date Prep: 11.05.13 12.00
Subcontractor: SUB: E871002	Prep seq: 646456

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0183	0.0200	0.00756	mg/L	11.06.13 17:26	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.06.13 17:26	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 17:26	U	1
Manganese	7439-96-5	0.0445	0.0200	0.00291	mg/L	11.06.13 17:26		1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 926566	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	10.30.13 19:30	U	1



Certificate of Analytical Results

473153



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW70-103013**

Matrix: Water

Sample Depth:

Lab Sample Id: 473153-007

Date Collected: 10.30.13 15.50

Date Received: 10.30.13 19.00

Analytical Method: TPH By SW8015B Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926693

Date Prep: 11.01.13 17.00

Prep seq: 646368

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.02.13 02:04	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.02.13 02:04	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.02.13 02:04	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	110	70 - 135	%		
o-Terphenyl	103	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926676

Date Prep: 11.01.13 15.00

Prep seq: 646357

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.01.13 19:03	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.01.13 19:03	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.01.13 19:03	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.01.13 19:03	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.01.13 19:03	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.01.13 19:03	U	
Total BTEX		ND		0.000500	mg/L	11.01.13 19:03	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	89	80 - 120	%		
4-Bromofluorobenzene	93	80 - 120	%		

Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW084SA-103013	Matrix: Water	Sample Depth:
Lab Sample Id: 473153-008	Date Collected: 10.30.13 14.55	Date Received: 10.30.13 19.00
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 926815	Date Prep: 11.03.13 10.00	
	Prep seq: 646459	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1060	20.0	0.560	mg/L	11.05.13 09:07		20

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 926856	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	3030	5.00	5.00	mg/L	11.03.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 926985	
	% Moist:
	Date Prep: 11.05.13 12.00
Subcontractor: SUB: E871002	Prep seq: 646456

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0164	0.0200	0.00756	mg/L	11.06.13 17:32	J	1
Chromium	7440-47-3	0.0291	0.0100	0.00355	mg/L	11.06.13 17:32		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 17:32	U	1
Manganese	7439-96-5	0.0533	0.0200	0.00291	mg/L	11.06.13 17:32		1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 926566	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.0239	0.0100	0.00500	mg/L	10.30.13 19:30		1



Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW084SA-103013** Matrix: Water Sample Depth:
Lab Sample Id: 473153-008 Date Collected: 10.30.13 14.55 Date Received: 10.30.13 19.00
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926693 Date Prep: 11.01.13 17.00
Prep seq: 646368

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.02.13 02:28	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.02.13 02:28	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.02.13 02:28	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	110	70 - 135	%		
o-Terphenyl	102	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926676 Date Prep: 11.01.13 15.00
Prep seq: 646357

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.01.13 19:19	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.01.13 19:19	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.01.13 19:19	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.01.13 19:19	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.01.13 19:19	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.01.13 19:19	U	
Total BTEX		ND		0.000500	mg/L	11.01.13 19:19	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	89	80 - 120	%		
4-Bromofluorobenzene	95	80 - 120	%		

Certificate of Analytical Results

473153

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW075SA-103013	Matrix: Water	Sample Depth:
Lab Sample Id: 473153-009	Date Collected: 10.30.13 14.00	Date Received: 10.30.13 19.00
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 926815	Date Prep: 11.03.13 10.00	
	Prep seq: 646459	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	405	20.0	0.560	mg/L	11.05.13 09:30		20

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 926856	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	2120	5.00	5.00	mg/L	11.03.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 926985	
	% Moist:
	Date Prep: 11.05.13 12.00
Subcontractor: SUB: E871002	Prep seq: 646456

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0125	0.0200	0.00756	mg/L	11.06.13 17:37	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.06.13 17:37	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 17:37	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.06.13 17:37	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 926566	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	10.30.13 19:30	U	1



Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW075SA-103013**

Matrix: Water

Sample Depth:

Lab Sample Id: 473153-009

Date Collected: 10.30.13 14.00

Date Received: 10.30.13 19.00

Analytical Method: TPH By SW8015B Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926693

Date Prep: 11.01.13 17.00

Prep seq: 646368

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.02.13 02:51	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.02.13 02:51	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.02.13 02:51	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	106	70 - 135	%		
o-Terphenyl	98	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926676

Date Prep: 11.01.13 15.00

Prep seq: 646357

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.01.13 19:35	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.01.13 19:35	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.01.13 19:35	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.01.13 19:35	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.01.13 19:35	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.01.13 19:35	U	
Total BTEX		ND		0.000500	mg/L	11.01.13 19:35	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	89	80 - 120	%		
4-Bromofluorobenzene	93	80 - 120	%		

Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW076SA-103013	Matrix: Water	Sample Depth:
Lab Sample Id: 473153-010	Date Collected: 10.30.13 13.05	Date Received: 10.30.13 19.00
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 926815	Date Prep: 11.03.13 10.00	
	Prep seq: 646459	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	358	20.0	0.560	mg/L	11.05.13 09:52		20

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 926856	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	2100	5.00	5.00	mg/L	11.03.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 926985	
	% Moist:
	Date Prep: 11.05.13 12.00
Subcontractor: SUB: E871002	Prep seq: 646456

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0206	0.0200	0.00756	mg/L	11.06.13 17:43		1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.06.13 17:43	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 17:43	U	1
Manganese	7439-96-5	0.0442	0.0200	0.00291	mg/L	11.06.13 17:43		1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 926566	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	10.30.13 19:30	U	1



Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW076SA-103013** Matrix: Water Sample Depth:
Lab Sample Id: 473153-010 Date Collected: 10.30.13 13.05 Date Received: 10.30.13 19.00
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926693 Date Prep: 11.01.13 17.00
Prep seq: 646368

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.02.13 03:14	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.02.13 03:14	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.02.13 03:14	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	106	70 - 135	%		
o-Terphenyl	99	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926676 Date Prep: 11.01.13 15.00
Prep seq: 646357

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.01.13 19:51	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.01.13 19:51	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.01.13 19:51	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.01.13 19:51	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.01.13 19:51	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.01.13 19:51	U	
Total BTEX		ND		0.000500	mg/L	11.01.13 19:51	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	91	80 - 120	%		
4-Bromofluorobenzene	94	80 - 120	%		

Certificate of Analytical Results

473153

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: Dup1-103013	Matrix: Water	Sample Depth:
Lab Sample Id: 473153-011	Date Collected: 10.30.13 00.00	Date Received: 10.30.13 19.00
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 926919	Date Prep: 11.05.13 10.00	
	Prep seq: 646510	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	167	10.0	0.280	mg/L	11.05.13 17:04		10

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 926856	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	805	5.00	5.00	mg/L	11.03.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 926985	
	% Moist:
	Date Prep: 11.05.13 12.00
Subcontractor: SUB: E871002	Prep seq: 646456

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0130	0.0200	0.00756	mg/L	11.06.13 17:49	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.06.13 17:49	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 17:49	U	1
Manganese	7439-96-5	0.0778	0.0200	0.00291	mg/L	11.06.13 17:49		1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 926566	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	10.30.13 19:30	U	1



Certificate of Analytical Results

473153



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **Dup1-103013**

Matrix: Water

Sample Depth:

Lab Sample Id: 473153-011

Date Collected: 10.30.13 00.00

Date Received: 10.30.13 19.00

Analytical Method: TPH By SW8015B Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926693

Date Prep: 11.01.13 17.00

Prep seq: 646368

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.02.13 04:24	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.02.13 04:24	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.02.13 04:24	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	97	70 - 135	%		
o-Terphenyl	90	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926676

Date Prep: 11.01.13 15.00

Prep seq: 646357

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.01.13 20:39	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.01.13 20:39	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.01.13 20:39	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.01.13 20:39	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.01.13 20:39	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.01.13 20:39	U	
Total BTEX		ND		0.000500	mg/L	11.01.13 20:39	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	89	80 - 120	%		
4-Bromofluorobenzene	93	80 - 120	%		



Certificate of Analytical Results

473153



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **646357-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646357-1-BLK Date Collected: Date Received:
Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926676 Date Prep: 11.01.13 15.00
Prep seq: 646357

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.01.13 17:11	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.01.13 17:11	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.01.13 17:11	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.01.13 17:11	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.01.13 17:11	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	88	80 - 120	%		
4-Bromofluorobenzene	96	80 - 120	%		

Sample Id: **646368-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646368-1-BLK Date Collected: Date Received:
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926693 Date Prep: 11.01.13 17.00
Prep seq: 646368

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.01.13 22:31	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.01.13 22:31	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.01.13 22:31	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	106	70 - 135	%		
o-Terphenyl	99	70 - 135	%		



Certificate of Analytical Results

473153



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **646456-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646456-1-BLK Date Collected: Date Received:
Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 926985 Date Prep: 11.05.13 12.00
Subcontractor: SUB: E871002 Prep seq: 646456

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	11.06.13 16:01	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.06.13 16:01	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 16:01	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.06.13 16:01	U	1

Sample Id: **646459-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646459-1-BLK Date Collected: Date Received:
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926815 Date Prep: 11.03.13 10.00
Prep seq: 646459

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	ND	1.00	0.0280	mg/L	11.04.13 23:17	U	1

Sample Id: **646510-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646510-1-BLK Date Collected: Date Received:
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926919 Date Prep: 11.05.13 10.00
Prep seq: 646510

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	ND	1.00	0.0280	mg/L	11.05.13 15:56	U	1



Certificate of Analytical Results

473153



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **926566-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 926566-1-BLK Date Collected: Date Received:
Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 926566 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	10.30.13 19:30	U	1

Sample Id: **926567-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 926567-1-BLK Date Collected: Date Received:
Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 926567 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	10.30.13 19:30	U	1

Sample Id: **926856-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 926856-1-BLK Date Collected: Date Received:
Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926856 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	ND	5.00	5.00	mg/L	11.03.13 11:00	U	1

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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(770) 449-8800	(770) 449-5477
(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: 2nd Semi-Annual GW Monitoring

Work Orders : 473153,

Project ID: 073018-2013-01

Lab Batch #: 926676

Sample: 646357-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 11/01/13 15:51		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0265	0.0300	88	80-120
4-Bromofluorobenzene		0.0313	0.0300	104	80-120

Lab Batch #: 926676

Sample: 473153-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 11/01/13 16:23		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0308	0.0300	103	80-120
4-Bromofluorobenzene		0.0316	0.0300	105	80-120

Lab Batch #: 926676

Sample: 473153-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 11/01/13 16:39		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0313	0.0300	104	80-120
4-Bromofluorobenzene		0.0325	0.0300	108	80-120

Lab Batch #: 926676

Sample: 646357-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 11/01/13 17:11		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0263	0.0300	88	80-120
4-Bromofluorobenzene		0.0288	0.0300	96	80-120

Lab Batch #: 926693

Sample: 646368-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L Date Analyzed: 11/01/13 21:42		SURROGATE RECOVERY STUDY			
TPH By SW8015B Mod		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1-Chlorooctane		11.9	10.0	119	70-135
o-Terphenyl		5.44	5.00	109	70-135

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: 2nd Semi-Annual GW Monitoring

Work Orders : 473153,

Project ID: 073018-2013-01

Lab Batch #: 926693

Sample: 646368-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/01/13 22:06

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	12.8	10.0	128	70-135	
o-Terphenyl	6.00	5.00	120	70-135	

Lab Batch #: 926693

Sample: 646368-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/01/13 22:31

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.6	10.0	106	70-135	
o-Terphenyl	4.95	5.00	99	70-135	

Lab Batch #: 926693

Sample: 473153-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/01/13 23:19

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.6	10.0	116	70-135	
o-Terphenyl	5.68	5.00	114	70-135	

Lab Batch #: 926693

Sample: 473153-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/01/13 23:43

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.4	10.0	114	70-135	
o-Terphenyl	5.62	5.00	112	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Work Order #: 473153

Project ID:

073018-2013-01

Lab Batch #: 926676

Sample: 646357-1-BKS

Matrix: Water

Date Analyzed: 11/01/2013

Date Prepared: 11/01/2013

Analyst: ARM

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

BTEX by EPA 8021B	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Benzene	<0.000500	0.100	0.0961	96	70-125	
Toluene	<0.00100	0.100	0.0988	99	70-125	
Ethylbenzene	<0.000700	0.100	0.105	105	71-129	
m,p-Xylenes	<0.00140	0.200	0.211	106	70-131	
o-Xylene	<0.000700	0.100	0.108	108	71-133	

Lab Batch #: 926566

Sample: 926566-1-BKS

Matrix: Water

Date Analyzed: 10/30/2013

Date Prepared: 10/30/2013

Analyst: WRU

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Hexavalent Chromium	<0.00500	0.0200	0.0223	112	80-120	

Lab Batch #: 926567

Sample: 926567-1-BKS

Matrix: Water

Date Analyzed: 10/30/2013

Date Prepared: 10/30/2013

Analyst: WRU

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Hexavalent Chromium	<0.00500	0.0200	0.0223	112	80-120	

Lab Batch #: 926856

Sample: 926856-1-BKS

Matrix: Water

Date Analyzed: 11/03/2013

Date Prepared: 11/03/2013

Analyst: AMB

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

TDS by SM2540C	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Total dissolved solids	<5.00	1000	993	99	80-120	

Blank Spike Recovery [D] = 100*[C]/[B]

All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Project Name: 2nd Semi-Annual GW Monitoring

Work Order #: 473153

Project ID: 073018-2013-01

Analyst: MKO

Date Prepared: 11/05/2013

Date Analyzed: 11/06/2013

Lab Batch ID: 926985

Sample: 646456-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Dissolved Metals per ICP by SW846 6010B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Arsenic	<0.00756	1.00	1.00	100	1.00	1.01	101	1	80-120	20	
Chromium	<0.00355	1.00	1.04	104	1.00	1.05	105	1	80-120	20	
Iron	<0.0188	5.00	5.18	104	5.00	5.25	105	1	80-120	20	
Manganese	<0.00291	1.00	1.01	101	1.00	0.981	98	3	80-120	20	

Analyst: AMB

Date Prepared: 11/03/2013

Date Analyzed: 11/04/2013

Lab Batch ID: 926815

Sample: 646459-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.0280	25.0	23.1	92	25.0	23.4	94	1	80-120	20	

Analyst: AMB

Date Prepared: 11/05/2013

Date Analyzed: 11/05/2013

Lab Batch ID: 926919

Sample: 646510-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.0280	25.0	23.4	94	25.0	23.6	94	1	80-120	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: 2nd Semi-Annual GW Monitoring

Work Order #: 473153

Project ID: 073018-2013-01

Analyst: ARM

Date Prepared: 11/01/2013

Date Analyzed: 11/01/2013

Lab Batch ID: 926693

Sample: 646368-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<0.988	100	119	119	100	129	129	8	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	130	130	100	127	127	2	70-135	25	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

Project Name: 2nd Semi-Annual GW Monitoring



Work Order #: 473153

Lab Batch #: 926815

Date Analyzed: 11/05/2013

QC- Sample ID: 473153-001 S

Reporting Units: mg/L

Date Prepared: 11/03/2013

Batch #: 1

Project ID: 073018-2013-01

Analyst: AMB

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	103	250	356	101	80-120	

Lab Batch #: 926815

Date Analyzed: 11/05/2013

QC- Sample ID: 473167-001 S

Reporting Units: mg/L

Date Prepared: 11/03/2013

Batch #: 1

Analyst: AMB

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	39.1	125	167	102	80-120	

Lab Batch #: 926919

Date Analyzed: 11/05/2013

QC- Sample ID: 473153-011 S

Reporting Units: mg/L

Date Prepared: 11/05/2013

Batch #: 1

Analyst: AMB

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	167	250	438	108	80-120	

Lab Batch #: 926919

Date Analyzed: 11/05/2013

QC- Sample ID: 473208-010 S

Reporting Units: mg/L

Date Prepared: 11/05/2013

Batch #: 1

Analyst: AMB

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	315	250	599	114	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: 2nd Semi-Annual GW Monitoring

Work Order # : 473153

Project ID: 073018-2013-01

Lab Batch ID: 926676

QC- Sample ID: 473153-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/01/2013

Date Prepared: 11/01/2013

Analyst: ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000500	0.100	0.0937	94	0.100	0.0936	94	0	70-125	25	
Toluene	<0.00100	0.100	0.0969	97	0.100	0.0969	97	0	70-125	25	
Ethylbenzene	<0.000700	0.100	0.103	103	0.100	0.103	103	0	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.209	105	0.200	0.209	105	0	70-131	25	
o-Xylene	<0.000700	0.100	0.109	109	0.100	0.110	110	1	71-133	25	

Lab Batch ID: 926566

QC- Sample ID: 473153-005 S

Batch #: 1 Matrix: Water

Date Analyzed: 10/30/2013

Date Prepared: 10/30/2013

Analyst: WRU

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Hexavalent Chromium	<0.00500	0.200	0.207	104	0.200	0.211	106	2	80-120	20	

Lab Batch ID: 926567

QC- Sample ID: 473096-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 10/30/2013

Date Prepared: 10/30/2013

Analyst: WRU

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Hexavalent Chromium	<0.00500	0.200	0.202	101	0.200	0.204	102	1	80-120	20	

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries



Project Name: 2nd Semi-Annual GW Monitoring

Work Order # : 473153

Project ID: 073018-2013-01

Lab Batch ID: 926985

QC- Sample ID: 473153-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/06/2013

Date Prepared: 11/05/2013

Analyst: MKO

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Dissolved Metals per ICP by SW846 6010B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Arsenic	0.0215	1.00	1.05	103	1.00	1.04	102	1	75-125	20	
Chromium	0.00507	1.00	1.03	102	1.00	1.01	100	2	75-125	20	
Iron	<0.0188	5.00	4.93	99	5.00	4.92	98	0	75-125	20	
Manganese	0.220	1.00	1.17	95	1.00	1.23	101	5	75-125	20	

Lab Batch ID: 926693

QC- Sample ID: 473153-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/01/2013

Date Prepared: 11/01/2013

Analyst: ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<0.988	100	125	125	100	123	123	2	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	128	128	100	124	124	3	70-135	25	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery [G] = $100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Project Name: 2nd Semi-Annual GW Monitoring

Work Order #: 473153

Lab Batch #: 926856

Project ID: 073018-2013-01

Date Analyzed: 11/03/2013 11:00

Date Prepared: 11/03/2013

Analyst: AMB

QC- Sample ID: 473153-004 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	956	1090	13	10	F

Lab Batch #: 926856

Date Analyzed: 11/03/2013 11:00

Date Prepared: 11/03/2013

Analyst: AMB

QC- Sample ID: 473292-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	566	576	2	10	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$
 All Results are based on MDL and validated for QC purposes.
 BRL - Below Reporting Limit



CHAIN OF CUSTODY RECORD

Page 1-2
4 of 4LAB W.O.#: 473153
Field billable Hrs:

Company: CRA

Address: 2315 Loop 250W

Phone: 432.686.0086
Fax:

City: Midland

St TX: Zip: 79703

PM/Attn: Claudia Ramos

Project ID/ Location: 1st Semi-Annual GW Monitoring, 073018-2013-01

PO#:

Invoice To: CRA's Niagara Falls Location

Quote #:

TAT Work Days = D Need results by:

Time:

Slid (5-7D) Same Day 1D 2D 3D 4D 5D 7D 10D 14D Other

ANALYSES REQUESTED

Example Volatiles by 8260
BTEX
TPH-GRO & DRO
Dissolved Metals (As, Cr, Fe, Mn)
TDS
Hexavalent Chromium
Chloride

* Container Type Codes	
VA Vial Amber	ES
VC Vial Clear	TS
VP Vial Pre-preserved	AC
GA Glass Amber	TB
GC Glass Clear	ZB
PA Plastic Amber	PC
PC Plastic Clear	
Size(s): 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal	

** Preservative Type Codes

A. None	E. HCL	I. Ice
B. HNO ₃	F. MeOH	J. MCAA
C. H ₂ SO ₄	G. Na ₂ S ₂ O ₈	K. ZnAc ₂ /NaOH
D. NaOH	H. NaHSO ₄	L. Aspic Acid/NaOH

^ Matrix Type Codes

GW Ground Water	S
SW Surface Water	W
DW Drinking Water	A
SWW Surface Water	O
OW Ocean/Sea Water	T
PL Product-Liquid	U
PS Product-Solid	B
SL Sludge	Blood

REMARKS

1	MW 07154-103013	10-30-13	945	GW		6		X	X	X	X	X	X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															</
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FTS Service Centers: Atlanta 770-449-8800 Lakeland 863-646-8526 Tampa 803-543-8099 Philadelphia 610-955-5649 South Carolina 803-543-8099

C.O.C. Serial #

Execution of this document by client creates a legal and binding agreement between client and Xenco for analytical and testing services provided by Xenco to client under Xenco's standard terms and conditions unless previously agreed in writing. Terms of payment are Net 30 days, and all past due amounts shall accrue interest at 1.5% per month until paid in full. All laboratory analytical data and reports generated by Xenco remain the exclusive property of Xenco until invoices for such data are paid in full.
Revision Date: Nov 12, 2009



CHAIN OF CUSTODY RECORD

Page 2-2

LAB W.O. #:

473153

Field billable Hrs.:

Company: CRA Phone: 432.686.0086

Address: 2315 Loop 250W Fax:

City: Midland St TX Zip: 79703

PM/Attn: Claudia Ramos

Project ID/ Location: 1st Semi-Annual GW Monitoring, 073018-2013-01

PO#:

Invoice To: CRA's Niagara Falls Location

Quote #:

TAT Work Days = D Need results by:

Time:

Std (5-7D) Same Day 1D 2D 3D 4D 5D 7D 10D 14D Other

ANALYSES REQUESTED

Example Volatiles by 8260
VP VP GC GC GC GC
E.I. E.I. I I I I
BTEX TPH-GRO & DRO Dissolved Metals (As, Cr, Fe, Mn) TDS Hexavalent Chromium Chloride

Hold Sample (CALL) Run PAH on Highest TPH Only If

* Container Type Codes

VA Vial Amber ES Encore Sampler
VC Vial Clear TS TerraCore Sampler
VP Vial Pre-preserved AC Air Canister
GA Glass Amber TB Tedlar Bag
GC Glass Clear ZB Zip Lock Bag
PA Plastic Amber PC Plastic Clear
Other

Size(e): 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal

** Preservative Type Codes

A. None E. HCL I. Ice
B. HNO₃ F. MeOH J. MCAA
C. H₂SO₄ G. Na₂S₂O₈ K. ZnCl₂/NaOH
D. NaOH H. NaHSO₄ L. Aspc Acid/NaOH
O

^ Matrix Type Codes

GW Ground Water S
Soil/Sediment/Solid W Wipe
WW Waste Water A Air
DW Drinking Water O Oil
SW Surface Water T Tissue
OW Ocean/Sea Water U Urine
PL Product-Liquid B Blood
PS Product-Solid
SL Sludge

REMARKS

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code	Field Filtered	Depth	Total # of containers	# Cont	Lab Only:	BTEX	TPH-GRO & DRO	Dissolved Metals (As, Cr, Fe, Mn)	TDS	Hexavalent Chromium	Chloride	Hold Sample (CALL) Run PAH on Highest TPH Only If	REMARKS
1	MMW-1	6/16/04	11:35	GW	X	6"	2		X	X	X	X	X	X	X		
2				GW					X	X	X	X	X	X	X		
3				GW					X	X	X	X	X	X	X		
4				GW					X	X	X	X	X	X	X		
5				GW					X	X	X	X	X	X	X		
6				GW					X	X	X	X	X	X	X		
7				GW					X	X	X	X	X	X	X		
8				GW					X	X	X	X	X	X	X		
9				GW					X	X	X	X	X	X	X		
0				GW					X	X	X	X	X	X	X		
Reg. Program / Clean-up Std		STATE for Certs & Regs		QA/QC Level & Certification		EDDs		COC & Labels		Coolers Temp °C		Lab Use Only		YES NO N/A			
CTLs	TRRP DW NPDES LPST DryCh	FL TX GA NC SC NJ PA OK	1 2 3 4 CLP AFCEE QAPP	NEIAC DOB-ELAP Other:	ADAFT SEDD ERPIIMS	Match Incomplete Absent Unclear	Affiliation	Date	Time								
Other:	Relinquished by	Affiliation	Date	Time	Received by												
1																	
2																	
3																	
4																	

B&A Laboratories: Hobbs 575-392-7550 Dallas 214-902-0300 Houston 281-242-4200 Odessa 432-563-1800 San Antonio 210-509-3334 Phoenix 602-437-0330
FTS Service Centers: Atlanta 770-449-8800 Lakeland 863-646-8526 Tampa 803-543-8099 Philadelphia 610-955-5649 South Carolina 803-543-8099

Execution of this document by client creates a legal and binding agreement between client and Xenco for analytical and testing services provided by Xenco to client under Xenco's standard terms and conditions unless previously agreed in writing. Terms of payment are Net 30 days, and all past due amounts shall accrue interest at 1.5% per month until paid in full. All laboratory analytical data and reports generated by Xenco remain the exclusive property of Xenco until invoices for such data are paid in full. Revision Date: Nov 12, 2009



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Conestoga Rovers & Associates

Date/ Time Received: 10/30/2013 07:00:00 PM

Work Order #: 473153

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	3
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by:

Candace James

Candace James

Date: 10/31/2013

Checklist reviewed by:

Kelsey Brooks

Kelsey Brooks

Date: 10/31/2013

Analytical Report 473208

for

Conestoga Rovers & Associates

Project Manager: Claudia Ramos

2nd Semi-Annual GW Monitoring

073018-2013-01

07-NOV-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-13-15-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



07-NOV-13

Project Manager: **Claudia Ramos**
Conestoga Rovers & Associates
2135 S Loop 250 W
Midland, TX 79703

Reference: XENCO Report No(s): **473208**
2nd Semi-Annual GW Monitoring
Project Address: New Mexico

Claudia Ramos:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 473208. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 473208 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks

Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW065SA-103113	W	10-31-13 08:50		473208-001
MW083SA-103113	W	10-31-13 09:50		473208-002
MW085SA-103113	W	10-31-13 10:55		473208-003
Woodell WW-103113	W	10-31-13 12:20		473208-004
MW074SA-103113	W	10-31-13 13:20		473208-005
MW072SA-103113	W	10-31-13 14:35		473208-006
MW066SA-103113	W	10-31-13 15:35		473208-007
MW055SA-103113	W	10-31-13 16:35		473208-008
MW58-103113	W	10-31-13 09:00		473208-009
MW30-103113	W	10-31-13 09:50		473208-010
MW23-103113	W	10-31-13 11:05		473208-011
MW23A-103113	W	10-31-13 12:45		473208-012
MW059-103113	W	10-31-13 14:00		473208-013
MW31-103113	W	10-31-13 15:15		473208-014
MW060-103113	W	10-31-13 16:40		473208-015
Trip Blank	W	10-31-13 00:00		473208-016



CASE NARRATIVE



Client Name: *Conestoga Rovers & Associates*

Project Name: *2nd Semi-Annual GW Monitoring*

Project ID: 073018-2013-01
Work Order Number(s): 473208

Report Date: 07-NOV-13
Date Received: 10/31/2013

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-926569 Chromium, Hexavalent by SW 7196A
SW7196A

Batch 926569, Hexavalent Chromium recovered above QC limits in the laboratory control sample.
Samples affected are: 473208-010, -013, -011, -015, -012, -009, -014, -008.

Batch: LBA-926980 BTEX by EPA 8021B
SW8021BM

Batch 926980, Benzene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate.
Samples affected are: 473208-016.
The Laboratory Control Sample for Benzene is within laboratory Control Limits



Certificate of Analytical Results

473208



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW065SA-103113** Matrix: Water Sample Depth:
Lab Sample Id: 473208-001 Date Collected: 10.31.13 08.50 Date Received: 10.31.13 17.15
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926919 Date Prep: 11.05.13 10.00
Prep seq: 646510

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1020	20.0	0.560	mg/L	11.05.13 18:12		20

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927010 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	3670	5.00	5.00	mg/L	11.05.13 13:30		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 926988 Date Prep: 11.06.13 11.10
Subcontractor: SUB: E871002 Prep seq: 646523

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0167	0.0200	0.00756	mg/L	11.06.13 18:29	J	1
Chromium	7440-47-3	0.179	0.0100	0.00355	mg/L	11.06.13 18:29		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 18:29	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.06.13 18:29	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 926568 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.180	0.0100	0.00500	mg/L	11.01.13 08:50		1



Certificate of Analytical Results

473208



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW065SA-103113** Matrix: Water Sample Depth:
Lab Sample Id: 473208-001 Date Collected: 10.31.13 08.50 Date Received: 10.31.13 17.15
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926703 Date Prep: 11.01.13 17.00
Prep seq: 646370

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.01.13 19:34	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.01.13 19:34	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.01.13 19:34	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	127	70 - 135	%		
o-Terphenyl	107	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926678 Date Prep: 11.01.13 18.00
Prep seq: 646358

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.01.13 23:35	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.01.13 23:35	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.01.13 23:35	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.01.13 23:35	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.01.13 23:35	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.01.13 23:35	U	
Total BTEX		ND		0.000500	mg/L	11.01.13 23:35	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	86	80 - 120	%		
4-Bromofluorobenzene	98	80 - 120	%		

Certificate of Analytical Results

473208

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW083SA-103113	Matrix: Water	Sample Depth:
Lab Sample Id: 473208-002	Date Collected: 10.31.13 09:50	Date Received: 10.31.13 17:15
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 926919	Date Prep: 11.05.13 10:00	
	Prep seq: 646510	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	729	20.0	0.560	mg/L	11.05.13 18:35		20

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927010	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	2870	5.00	5.00	mg/L	11.05.13 13:30		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 926988	
	% Moist:
	Date Prep: 11.06.13 11:10
Subcontractor: SUB: E871002	Prep seq: 646523

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	11.06.13 18:57	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.06.13 18:57	U	1
Iron	7439-89-6	0.0594	0.200	0.0188	mg/L	11.06.13 18:57	J	1
Manganese	7439-96-5	0.246	0.0200	0.00291	mg/L	11.06.13 18:57		1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 926568	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.01.13 08:50	U	1



Certificate of Analytical Results

473208



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW083SA-103113**

Matrix: Water

Sample Depth:

Lab Sample Id: 473208-002

Date Collected: 10.31.13 09.50

Date Received: 10.31.13 17.15

Analytical Method: TPH By SW8015B Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926703

Date Prep: 11.01.13 17.00

Prep seq: 646370

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.01.13 20:52	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.01.13 20:52	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.01.13 20:52	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	122	70 - 135	%		
o-Terphenyl	102	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926678

Date Prep: 11.01.13 18.00

Prep seq: 646358

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.01.13 23:51	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.01.13 23:51	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.01.13 23:51	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.01.13 23:51	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.01.13 23:51	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.01.13 23:51	U	
Total BTEX		ND		0.000500	mg/L	11.01.13 23:51	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	89	80 - 120	%		
4-Bromofluorobenzene	99	80 - 120	%		



Certificate of Analytical Results

473208



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW085SA-103113** Matrix: Water Sample Depth:
Lab Sample Id: 473208-003 Date Collected: 10.31.13 10:55 Date Received: 10.31.13 17:15
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926919 Date Prep: 11.05.13 10:00
Prep seq: 646510

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	661	20.0	0.560	mg/L	11.05.13 18:57		20

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927010 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	2770	5.00	5.00	mg/L	11.05.13 13:30		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 926988 Date Prep: 11.06.13 11:10
Subcontractor: SUB: E871002 Prep seq: 646523

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.00961	0.0200	0.00756	mg/L	11.06.13 19:02	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.06.13 19:02	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 19:02	U	1
Manganese	7439-96-5	0.707	0.0200	0.00291	mg/L	11.06.13 19:02		1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 926568 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.01.13 08:50	U	1



Certificate of Analytical Results

473208



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW085SA-103113**

Matrix: Water

Sample Depth:

Lab Sample Id: 473208-003

Date Collected: 10.31.13 10.55

Date Received: 10.31.13 17.15

Analytical Method: TPH By SW8015B Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926703

Date Prep: 11.01.13 17.00

Prep seq: 646370

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.01.13 21:17	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.01.13 21:17	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.01.13 21:17	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	123	70 - 135	%		
o-Terphenyl	110	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926678

Date Prep: 11.01.13 18.00

Prep seq: 646358

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.02.13 00:07	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.02.13 00:07	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.02.13 00:07	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.02.13 00:07	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.02.13 00:07	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.02.13 00:07	U	
Total BTEX		ND		0.000500	mg/L	11.02.13 00:07	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	86	80 - 120	%		
4-Bromofluorobenzene	94	80 - 120	%		



Certificate of Analytical Results

473208



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **Woodell WW-103113**

Matrix: Water

Sample Depth:

Lab Sample Id: 473208-004

Date Collected: 10.31.13 12.20

Date Received: 10.31.13 17.15

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 926919

Date Prep: 11.05.13 10.00

Prep seq: 646510

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	775	20.0	0.560	mg/L	11.05.13 19:20		20

Analytical Method: TDS by SM2540C

Prep Method:

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 927010

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	2820	5.00	5.00	mg/L	11.05.13 13:30		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B

Prep Method: 3010A

Analyst: MKO

% Moist:

Tech: MKO

Seq Number: 926988

Date Prep: 11.06.13 11.10

Subcontractor: SUB: E871002

Prep seq: 646523

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.00793	0.0200	0.00756	mg/L	11.06.13 19:19	J	1
Chromium	7440-47-3	0.0866	0.0100	0.00355	mg/L	11.06.13 19:19		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 19:19	U	1
Manganese	7439-96-5	0.0623	0.0200	0.00291	mg/L	11.06.13 19:19		1

Analytical Method: Chromium, Hexavalent by SW 7196A

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 926568

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.0843	0.0100	0.00500	mg/L	11.01.13 08:50		1



Certificate of Analytical Results

473208



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **Woodell WW-103113**

Matrix: Water

Sample Depth:

Lab Sample Id: 473208-004

Date Collected: 10.31.13 12.20

Date Received: 10.31.13 17.15

Analytical Method: TPH By SW8015B Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926703

Date Prep: 11.01.13 17.00

Prep seq: 646370

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 07:02	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 07:02	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 07:02	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	127	70 - 135	%		
o-Terphenyl	117	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926678

Date Prep: 11.01.13 18.00

Prep seq: 646358

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.02.13 00:23	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.02.13 00:23	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.02.13 00:23	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.02.13 00:23	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.02.13 00:23	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.02.13 00:23	U	
Total BTEX		ND		0.000500	mg/L	11.02.13 00:23	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	87	80 - 120	%		
4-Bromofluorobenzene	90	80 - 120	%		

Certificate of Analytical Results

473208

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW074SA-103113	Matrix: Water	Sample Depth:
Lab Sample Id: 473208-005	Date Collected: 10.31.13 13.20	Date Received: 10.31.13 17.15
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 926919	Date Prep: 11.05.13 10.00	
	Prep seq: 646510	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	500	20.0	0.560	mg/L	11.06.13 03:17		20

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927010	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	2070	5.00	5.00	mg/L	11.05.13 13:30		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 926988	
	% Moist:
	Date Prep: 11.06.13 11.10
Subcontractor: SUB: E871002	Prep seq: 646523

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0128	0.0200	0.00756	mg/L	11.06.13 19:25	J	1
Chromium	7440-47-3	0.0111	0.0100	0.00355	mg/L	11.06.13 19:25		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 19:25	U	1
Manganese	7439-96-5	0.0530	0.0200	0.00291	mg/L	11.06.13 19:25		1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 926568	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.0113	0.0100	0.00500	mg/L	11.01.13 08:50		1



Certificate of Analytical Results

473208



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW074SA-103113**

Matrix: Water

Sample Depth:

Lab Sample Id: 473208-005

Date Collected: 10.31.13 13.20

Date Received: 10.31.13 17.15

Analytical Method: TPH By SW8015B Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926703

Date Prep: 11.01.13 17.00

Prep seq: 646370

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.01.13 22:07	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.01.13 22:07	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.01.13 22:07	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	129	70 - 135	%		
o-Terphenyl	113	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926678

Date Prep: 11.01.13 18.00

Prep seq: 646358

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.02.13 00:39	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.02.13 00:39	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.02.13 00:39	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.02.13 00:39	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.02.13 00:39	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.02.13 00:39	U	
Total BTEX		ND		0.000500	mg/L	11.02.13 00:39	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	87	80 - 120	%		
4-Bromofluorobenzene	88	80 - 120	%		

Certificate of Analytical Results

473208

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW072SA-103113	Matrix: Water	Sample Depth:
Lab Sample Id: 473208-006	Date Collected: 10.31.13 14.35	Date Received: 10.31.13 17.15
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 926919	Date Prep: 11.05.13 10.00	
	Prep seq: 646510	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	320	10.0	0.280	mg/L	11.05.13 20:28		10

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927010	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1450	5.00	5.00	mg/L	11.05.13 13:30		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 926988	
	% Moist:
	Date Prep: 11.06.13 11.10
Subcontractor: SUB: E871002	Prep seq: 646523

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0167	0.0200	0.00756	mg/L	11.06.13 19:31	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.06.13 19:31	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 19:31	U	1
Manganese	7439-96-5	0.0345	0.0200	0.00291	mg/L	11.06.13 19:31		1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 926568	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.01.13 08:50	U	1



Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW072SA-103113** Matrix: Water Sample Depth:
Lab Sample Id: 473208-006 Date Collected: 10.31.13 14.35 Date Received: 10.31.13 17.15
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926703 Date Prep: 11.01.13 17.00
Prep seq: 646370

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 07:24	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 07:24	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 07:24	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	100	70 - 135	%		
o-Terphenyl	92	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926678 Date Prep: 11.01.13 18.00
Prep seq: 646358

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.02.13 00:55	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.02.13 00:55	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.02.13 00:55	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.02.13 00:55	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.02.13 00:55	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.02.13 00:55	U	
Total BTEX		ND		0.000500	mg/L	11.02.13 00:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	85	80 - 120	%		
4-Bromofluorobenzene	92	80 - 120	%		

Certificate of Analytical Results

473208

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW066SA-103113	Matrix: Water	Sample Depth:
Lab Sample Id: 473208-007	Date Collected: 10.31.13 15.35	Date Received: 10.31.13 17.15
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 926919	Date Prep: 11.05.13 10.00	
	Prep seq: 646510	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1290	20.0	0.560	mg/L	11.05.13 20:51		20

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927010	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	3580	5.00	5.00	mg/L	11.05.13 13:30		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 926988	
	% Moist:
	Date Prep: 11.06.13 11.10
Subcontractor: SUB: E871002	Prep seq: 646523

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.00999	0.0200	0.00756	mg/L	11.06.13 19:37	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.06.13 19:37	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 19:37	U	1
Manganese	7439-96-5	1.13	0.0200	0.00291	mg/L	11.06.13 19:37		1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 926568	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.01.13 08:50	U	1



Certificate of Analytical Results

473208



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW066SA-103113** Matrix: Water Sample Depth:
Lab Sample Id: 473208-007 Date Collected: 10.31.13 15.35 Date Received: 10.31.13 17.15
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926703 Date Prep: 11.01.13 17.00
Prep seq: 646370

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 07:47	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 07:47	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 07:47	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	103	70 - 135	%		
o-Terphenyl	95	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926678 Date Prep: 11.01.13 18.00
Prep seq: 646358

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.02.13 01:11	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.02.13 01:11	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.02.13 01:11	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.02.13 01:11	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.02.13 01:11	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.02.13 01:11	U	
Total BTEX		ND		0.000500	mg/L	11.02.13 01:11	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	87	80 - 120	%		
4-Bromofluorobenzene	92	80 - 120	%		

Certificate of Analytical Results

473208

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW055SA-103113	Matrix: Water	Sample Depth:
Lab Sample Id: 473208-008	Date Collected: 10.31.13 16.35	Date Received: 10.31.13 17.15
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 926919	Date Prep: 11.05.13 10.00	
	Prep seq: 646510	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	565	20.0	0.560	mg/L	11.05.13 21:14		20

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927010	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1920	5.00	5.00	mg/L	11.05.13 13:30		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 926988	
	% Moist:
	Date Prep: 11.06.13 11.10
Subcontractor: SUB: E871002	Prep seq: 646523

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	11.06.13 19:43	U	1
Chromium	7440-47-3	0.149	0.0100	0.00355	mg/L	11.06.13 19:43		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 19:43	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.06.13 19:43	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 926569	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.160	0.0100	0.00500	mg/L	11.01.13 08:50	H	1



Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW055SA-103113** Matrix: Water Sample Depth:
Lab Sample Id: 473208-008 Date Collected: 10.31.13 16.35 Date Received: 10.31.13 17.15
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926703 Date Prep: 11.01.13 17.00
Prep seq: 646370

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 08:10	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 08:10	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 08:10	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	112	70 - 135	%		
o-Terphenyl	100	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926678 Date Prep: 11.01.13 18.00
Prep seq: 646358

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.02.13 01:27	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.02.13 01:27	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.02.13 01:27	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.02.13 01:27	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.02.13 01:27	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.02.13 01:27	U	
Total BTEX		ND		0.000500	mg/L	11.02.13 01:27	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	90	80 - 120	%		
4-Bromofluorobenzene	92	80 - 120	%		



Certificate of Analytical Results

473208



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW58-103113** Matrix: Water Sample Depth:
Lab Sample Id: 473208-009 Date Collected: 10.31.13 09.00 Date Received: 10.31.13 17.15
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926919 Date Prep: 11.05.13 10.00
Prep seq: 646510

Parameter	CAS Number	Result	ML	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1070	20.0	0.560	mg/L	11.05.13 21:36		20

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927010 Date Prep:
Prep seq:

Parameter	CAS Number	Result	ML	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	4370	5.00	5.00	mg/L	11.05.13 13:30		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 926988 Date Prep: 11.06.13 11.10
Subcontractor: SUB: E871002 Prep seq: 646523

Parameter	CAS Number	Result	ML	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0210	0.0200	0.00756	mg/L	11.06.13 19:48		1
Chromium	7440-47-3	2.70	0.0100	0.00355	mg/L	11.06.13 19:48		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 19:48	U	1
Manganese	7439-96-5	0.0151	0.0200	0.00291	mg/L	11.06.13 19:48	J	1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 926569 Date Prep:
Prep seq:

Parameter	CAS Number	Result	ML	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	2.78	0.200	0.100	mg/L	11.01.13 08:50	H	20



Certificate of Analytical Results

473208



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW58-103113** Matrix: Water Sample Depth:
Lab Sample Id: 473208-009 Date Collected: 10.31.13 09.00 Date Received: 10.31.13 17.15
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926703 Date Prep: 11.01.13 17.00
Prep seq: 646370

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.01.13 23:45	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.01.13 23:45	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.01.13 23:45	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	129	70 - 135	%		
o-Terphenyl	112	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926678 Date Prep: 11.01.13 18.00
Prep seq: 646358

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.02.13 01:43	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.02.13 01:43	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.02.13 01:43	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.02.13 01:43	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.02.13 01:43	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.02.13 01:43	U	
Total BTEX		ND		0.000500	mg/L	11.02.13 01:43	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	91	80 - 120	%		
4-Bromofluorobenzene	95	80 - 120	%		



Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW30-103113** Matrix: Water Sample Depth:
Lab Sample Id: 473208-010 Date Collected: 10.31.13 09:50 Date Received: 10.31.13 17:15
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926919 Date Prep: 11.05.13 10:00
Prep seq: 646510

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	315	10.0	0.280	mg/L	11.05.13 21:59		10

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927010 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1080	5.00	5.00	mg/L	11.05.13 13:30		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 926988 Date Prep: 11.06.13 11:10
Subcontractor: SUB: E871002 Prep seq: 646523

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0146	0.0200	0.00756	mg/L	11.06.13 19:54	J	1
Chromium	7440-47-3	0.00414	0.0100	0.00355	mg/L	11.06.13 19:54	J	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 19:54	U	1
Manganese	7439-96-5	0.0793	0.0200	0.00291	mg/L	11.06.13 19:54		1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 926569 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.01.13 08:50	UH	1

Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW30-103113	Matrix: Water	Sample Depth:
Lab Sample Id: 473208-010	Date Collected: 10.31.13 09.50	Date Received: 10.31.13 17.15
Analytical Method: TPH By SW8015B Mod		Prep Method: 1005
Analyst: ARM	% Moist:	Tech: ARM
Seq Number: 926703	Date Prep: 11.01.13 17.00	
	Prep seq: 646370	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.02.13 00:09	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.02.13 00:09	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.02.13 00:09	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	126	70 - 135	%		
o-Terphenyl	114	70 - 135	%		

Analytical Method: BTEX by EPA 8021B		Prep Method: 5030B
Analyst: ARM	% Moist:	Tech: ARM
Seq Number: 926678	Date Prep: 11.01.13 18.00	
	Prep seq: 646358	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.02.13 01:59	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.02.13 01:59	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.02.13 01:59	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.02.13 01:59	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.02.13 01:59	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.02.13 01:59	U	
Total BTEX		ND		0.000500	mg/L	11.02.13 01:59	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	88	80 - 120	%		
4-Bromofluorobenzene	91	80 - 120	%		



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW23-103113** Matrix: Water Sample Depth:
Lab Sample Id: 473208-011 Date Collected: 10.31.13 11.05 Date Received: 10.31.13 17.15
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926919 Date Prep: 11.05.13 10.00
Prep seq: 646510

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	762	20.0	0.560	mg/L	11.05.13 22:45		20

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927010 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	3680	5.00	5.00	mg/L	11.05.13 13:30		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 926988 Date Prep: 11.06.13 11.10
Subcontractor: SUB: E871002 Prep seq: 646523

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0198	0.0200	0.00756	mg/L	11.06.13 20:00	J	1
Chromium	7440-47-3	1.37	0.0100	0.00355	mg/L	11.06.13 20:00		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 20:00	U	1
Manganese	7439-96-5	0.0266	0.0200	0.00291	mg/L	11.06.13 20:00		1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 926569 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	1.42	0.200	0.100	mg/L	11.01.13 08:50	H	20



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW23-103113** Matrix: Water Sample Depth:
Lab Sample Id: 473208-011 Date Collected: 10.31.13 11.05 Date Received: 10.31.13 17.15
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926703 Date Prep: 11.01.13 17.00
Prep seq: 646370

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.02.13 01:21	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.02.13 01:21	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.02.13 01:21	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	130	70 - 135	%		
o-Terphenyl	110	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926678 Date Prep: 11.01.13 18.00
Prep seq: 646358

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.02.13 02:47	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.02.13 02:47	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.02.13 02:47	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.02.13 02:47	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.02.13 02:47	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.02.13 02:47	U	
Total BTEX		ND		0.000500	mg/L	11.02.13 02:47	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	87	80 - 120	%		
4-Bromofluorobenzene	91	80 - 120	%		



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW23A-103113** Matrix: Water Sample Depth:
Lab Sample Id: 473208-012 Date Collected: 10.31.13 12.45 Date Received: 10.31.13 17.15
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926919 Date Prep: 11.05.13 10.00
Prep seq: 646510

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	45.7	5.00	0.140	mg/L	11.05.13 23:07		5

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927010 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1980	5.00	5.00	mg/L	11.05.13 13:30		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 926988 Date Prep: 11.06.13 11.10
Subcontractor: SUB: E871002 Prep seq: 646523

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0169	0.0200	0.00756	mg/L	11.06.13 20:05	J	1
Chromium	7440-47-3	0.00591	0.0100	0.00355	mg/L	11.06.13 20:05	J	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 20:05	U	1
Manganese	7439-96-5	0.00877	0.0200	0.00291	mg/L	11.06.13 20:05	J	1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 926569 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.01.13 08:50	UH	1



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW23A-103113**

Matrix: Water

Sample Depth:

Lab Sample Id: 473208-012

Date Collected: 10.31.13 12.45

Date Received: 10.31.13 17.15

Analytical Method: TPH By SW8015B Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926703

Date Prep: 11.01.13 17.00

Prep seq: 646370

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.02.13 01:45	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.02.13 01:45	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.02.13 01:45	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	128	70 - 135	%		
o-Terphenyl	117	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926678

Date Prep: 11.01.13 18.00

Prep seq: 646358

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.02.13 03:03	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.02.13 03:03	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.02.13 03:03	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.02.13 03:03	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.02.13 03:03	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.02.13 03:03	U	
Total BTEX		ND		0.000500	mg/L	11.02.13 03:03	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	90	80 - 120	%		
4-Bromofluorobenzene	93	80 - 120	%		



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW059-103113** Matrix: Water Sample Depth:
Lab Sample Id: 473208-013 Date Collected: 10.31.13 14.00 Date Received: 10.31.13 17.15
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926919 Date Prep: 11.05.13 10.00
Prep seq: 646510

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	404	10.0	0.280	mg/L	11.05.13 23:30		10

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927010 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	543	5.00	5.00	mg/L	11.05.13 13:30		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 926988 Date Prep: 11.06.13 11.10
Subcontractor: SUB: E871002 Prep seq: 646523

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0178	0.0200	0.00756	mg/L	11.06.13 20:11	J	1
Chromium	7440-47-3	0.105	0.0100	0.00355	mg/L	11.06.13 20:11		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 20:11	U	1
Manganese	7439-96-5	0.0522	0.0200	0.00291	mg/L	11.06.13 20:11		1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 926569 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.106	0.0100	0.00500	mg/L	11.01.13 08:50	H	1

Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW059-103113	Matrix: Water	Sample Depth:
Lab Sample Id: 473208-013	Date Collected: 10.31.13 14.00	Date Received: 10.31.13 17.15
Analytical Method: TPH By SW8015B Mod		Prep Method: 1005
Analyst: ARM	% Moist:	Tech: ARM
Seq Number: 926703	Date Prep: 11.01.13 17.00	
	Prep seq: 646370	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 08:33	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 08:33	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 08:33	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	102	70 - 135	%		
o-Terphenyl	94	70 - 135	%		

Analytical Method: BTEX by EPA 8021B	Prep Method: 5030B
Analyst: ARM	% Moist:
Seq Number: 926678	Date Prep: 11.01.13 18.00
	Prep seq: 646358

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.02.13 03:19	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.02.13 03:19	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.02.13 03:19	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.02.13 03:19	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.02.13 03:19	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.02.13 03:19	U	
Total BTEX		ND		0.000500	mg/L	11.02.13 03:19	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	90	80 - 120	%		
4-Bromofluorobenzene	93	80 - 120	%		



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW31-103113** Matrix: Water Sample Depth:
Lab Sample Id: 473208-014 Date Collected: 10.31.13 15.15 Date Received: 10.31.13 17.15
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926919 Date Prep: 11.05.13 10.00
Prep seq: 646510

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	98.3	5.00	0.140	mg/L	11.05.13 23:53		5

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927010 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	761	5.00	5.00	mg/L	11.05.13 13:30		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 926988 Date Prep: 11.06.13 11.10
Subcontractor: SUB: E871002 Prep seq: 646523

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0124	0.0200	0.00756	mg/L	11.06.13 20:28	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.06.13 20:28	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 20:28	U	1
Manganese	7439-96-5	0.222	0.0200	0.00291	mg/L	11.06.13 20:28		1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 926569 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.01.13 08:50	UH	1

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW31-103113	Matrix: Water	Sample Depth:
Lab Sample Id: 473208-014	Date Collected: 10.31.13 15.15	Date Received: 10.31.13 17.15
Analytical Method: TPH By SW8015B Mod		Prep Method: 1005
Analyst: ARM	% Moist:	Tech: ARM
Seq Number: 926703	Date Prep: 11.01.13 17.00	
	Prep seq: 646370	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.02.13 02:32	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.02.13 02:32	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.02.13 02:32	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	122	70 - 135	%		
o-Terphenyl	103	70 - 135	%		

Analytical Method: BTEX by EPA 8021B	Prep Method: 5030B
Analyst: ARM	% Moist:
Seq Number: 926678	Date Prep: 11.01.13 18.00
	Prep seq: 646358

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.02.13 03:35	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.02.13 03:35	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.02.13 03:35	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.02.13 03:35	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.02.13 03:35	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.02.13 03:35	U	
Total BTEX		ND		0.000500	mg/L	11.02.13 03:35	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	92	80 - 120	%		
4-Bromofluorobenzene	95	80 - 120	%		



Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW060-103113** Matrix: Water Sample Depth:
Lab Sample Id: 473208-015 Date Collected: 10.31.13 16.40 Date Received: 10.31.13 17.15
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926919 Date Prep: 11.05.13 10.00
Prep seq: 646510

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	984	20.0	0.560	mg/L	11.06.13 01:01		20

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927010 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	4040	5.00	5.00	mg/L	11.05.13 13:30		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 926988 Date Prep: 11.06.13 11.10
Subcontractor: SUB: E871002 Prep seq: 646523

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0110	0.0200	0.00756	mg/L	11.06.13 20:34	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.06.13 20:34	U	1
Iron	7439-89-6	1.07	0.200	0.0188	mg/L	11.06.13 20:34		1
Manganese	7439-96-5	1.07	0.0200	0.00291	mg/L	11.06.13 20:34		1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 926569 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.01.13 08:50	UH	1



Certificate of Analytical Results

473208



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW060-103113** Matrix: Water Sample Depth:
Lab Sample Id: 473208-015 Date Collected: 10.31.13 16.40 Date Received: 10.31.13 17.15
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926703 Date Prep: 11.01.13 17.00
Prep seq: 646370

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.02.13 02:55	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.02.13 02:55	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.02.13 02:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	111	70 - 135	%		
o-Terphenyl	103	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926678 Date Prep: 11.01.13 18.00
Prep seq: 646358

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.02.13 03:51	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.02.13 03:51	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.02.13 03:51	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.02.13 03:51	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.02.13 03:51	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.02.13 03:51	U	
Total BTEX		ND		0.000500	mg/L	11.02.13 03:51	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	88	80 - 120	%		
4-Bromofluorobenzene	96	80 - 120	%		



Certificate of Analytical Results

473208



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **Trip Blank** Matrix: Water Sample Depth:
Lab Sample Id: 473208-016 Date Collected: 10.31.13 00.00 Date Received: 10.31.13 17.15
Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926980 Date Prep: 11.05.13 14.00
Prep seq: 646536

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.05.13 20:31	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.05.13 20:31	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.05.13 20:31	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.05.13 20:31	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.05.13 20:31	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.05.13 20:31	U	
Total BTEX		ND		0.000500	mg/L	11.05.13 20:31	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	84	80 - 120	%		
4-Bromofluorobenzene	90	80 - 120	%		

Sample Id: **646358-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646358-1-BLK Date Collected: Date Received:
Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926678 Date Prep: 11.01.13 18.00
Prep seq: 646358

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.01.13 23:19	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.01.13 23:19	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.01.13 23:19	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.01.13 23:19	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.01.13 23:19	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	87	80 - 120	%		
4-Bromofluorobenzene	89	80 - 120	%		



Certificate of Analytical Results

473208



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **646370-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646370-1-BLK Date Collected: Date Received:
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926703 Date Prep: 11.01.13 17.00
Prep seq: 646370

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.01.13 19:07	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.01.13 19:07	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.01.13 19:07	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	127	70 - 135	%		
o-Terphenyl	109	70 - 135	%		

Sample Id: **646510-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646510-1-BLK Date Collected: Date Received:
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926919 Date Prep: 11.05.13 10.00
Prep seq: 646510

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	ND	1.00	0.0280	mg/L	11.05.13 15:56	U	1

Sample Id: **646523-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646523-1-BLK Date Collected: Date Received:
Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 926988 Date Prep: 11.06.13 11.10
Subcontractor: SUB: E871002 Prep seq: 646523

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	11.06.13 18:12	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.06.13 18:12	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.06.13 18:12	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.06.13 18:12	U	1



Certificate of Analytical Results

473208



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **646536-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646536-1-BLK Date Collected: Date Received:
Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926980 Date Prep: 11.05.13 14.00
Prep seq: 646536

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.05.13 16:31	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.05.13 16:31	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.05.13 16:31	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.05.13 16:31	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.05.13 16:31	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	88	80 - 120	%		
4-Bromofluorobenzene	95	80 - 120	%		

Sample Id: **926568-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 926568-1-BLK Date Collected: Date Received:
Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 926568 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.01.13 08:50	U	1

Sample Id: **926569-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 926569-1-BLK Date Collected: Date Received:
Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 926569 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.01.13 08:50	U	1



Certificate of Analytical Results

473208



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **927010-1-BLK**

Matrix: Water

Sample Depth:

Lab Sample Id: 927010-1-BLK

Date Collected:

Date Received:

Analytical Method: TDS by SM2540C

Prep Method:

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 927010

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	ND	5.00	5.00	mg/L	11.05.13 13:30	U	1

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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Form 2 - Surrogate Recoveries

Project Name: 2nd Semi-Annual GW Monitoring

Work Orders : 473208,

Project ID: 073018-2013-01

Lab Batch #: 926678

Sample: 646358-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/01/13 21:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0273	0.0300	91	80-120	
4-Bromofluorobenzene	0.0290	0.0300	97	80-120	

Lab Batch #: 926678

Sample: 646358-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/01/13 22:15

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	80-120	
4-Bromofluorobenzene	0.0286	0.0300	95	80-120	

Lab Batch #: 926678

Sample: 473208-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/01/13 22:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0290	0.0300	97	80-120	
4-Bromofluorobenzene	0.0316	0.0300	105	80-120	

Lab Batch #: 926678

Sample: 473208-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/01/13 22:47

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0318	0.0300	106	80-120	

Lab Batch #: 926678

Sample: 646358-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/01/13 23:19

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0260	0.0300	87	80-120	
4-Bromofluorobenzene	0.0267	0.0300	89	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: 2nd Semi-Annual GW Monitoring

Work Orders : 473208,

Project ID: 073018-2013-01

Lab Batch #: 926980

Sample: 646536-1-BKS / BKS

Batch: 1 **Matrix:** Water

Units: mg/L Date Analyzed: 11/05/13 15:11		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0276	0.0300	92	80-120
4-Bromofluorobenzene		0.0303	0.0300	101	80-120

Lab Batch #: 926980

Sample: 646536-1-BSD / BSD

Batch: 1 **Matrix:** Water

Units: mg/L Date Analyzed: 11/05/13 15:27		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0288	0.0300	96	80-120
4-Bromofluorobenzene		0.0325	0.0300	108	80-120

Lab Batch #: 926980

Sample: 473402-001 S / MS

Batch: 1 **Matrix:** Water

Units: mg/L Date Analyzed: 11/05/13 15:43		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0277	0.0300	92	80-120
4-Bromofluorobenzene		0.0332	0.0300	111	80-120

Lab Batch #: 926980

Sample: 473402-001 SD / MSD

Batch: 1 **Matrix:** Water

Units: mg/L Date Analyzed: 11/05/13 15:59		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0293	0.0300	98	80-120
4-Bromofluorobenzene		0.0327	0.0300	109	80-120

Lab Batch #: 926980

Sample: 646536-1-BLK / BLK

Batch: 1 **Matrix:** Water

Units: mg/L Date Analyzed: 11/05/13 16:31		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0264	0.0300	88	80-120
4-Bromofluorobenzene		0.0285	0.0300	95	80-120

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: 2nd Semi-Annual GW Monitoring

Work Orders : 473208,

Project ID: 073018-2013-01

Lab Batch #: 926703

Sample: 646370-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/01/13 18:13

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	7.27	10.0	73	70-135	
o-Terphenyl	6.04	5.00	121	70-135	

Lab Batch #: 926703

Sample: 646370-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/01/13 18:40

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	9.32	10.0	93	70-135	
o-Terphenyl	6.30	5.00	126	70-135	

Lab Batch #: 926703

Sample: 646370-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/01/13 19:07

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	12.7	10.0	127	70-135	
o-Terphenyl	5.44	5.00	109	70-135	

Lab Batch #: 926703

Sample: 473208-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/01/13 20:00

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.7	10.0	107	70-135	
o-Terphenyl	5.97	5.00	119	70-135	

Lab Batch #: 926703

Sample: 473208-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/01/13 20:26

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	12.2	10.0	122	70-135	
o-Terphenyl	5.87	5.00	117	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Work Order #: 473208

Project ID: 073018-2013-01

Lab Batch #: 926568

Sample: 926568-1-BKS

Matrix: Water

Date Analyzed: 11/01/2013

Date Prepared: 11/01/2013

Analyst: WRU

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Hexavalent Chromium	<0.00500	0.0200	0.0224	112	80-120	

Lab Batch #: 926569

Sample: 926569-1-BKS

Matrix: Water

Date Analyzed: 11/01/2013

Date Prepared: 11/01/2013

Analyst: WRU

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Hexavalent Chromium	<0.00500	0.0200	0.0244	122	80-120	H

Lab Batch #: 927010

Sample: 927010-1-BKS

Matrix: Water

Date Analyzed: 11/05/2013

Date Prepared: 11/05/2013

Analyst: AMB

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

TDS by SM2540C Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Total dissolved solids	<5.00	1000	962	96	80-120	

Blank Spike Recovery [D] = 100*[C]/[B]

All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Project Name: 2nd Semi-Annual GW Monitoring

Work Order #: 473208

Project ID: 073018-2013-01

Analyst: ARM

Date Prepared: 11/01/2013

Date Analyzed: 11/01/2013

Lab Batch ID: 926678

Sample: 646358-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000500	0.100	0.0900	90	0.100	0.0854	85	5	70-125	25	
Toluene	<0.00100	0.100	0.0914	91	0.100	0.0865	87	6	70-125	25	
Ethylbenzene	<0.000700	0.100	0.0956	96	0.100	0.0900	90	6	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.193	97	0.200	0.183	92	5	70-131	25	
o-Xylene	<0.000700	0.100	0.0999	100	0.100	0.0946	95	5	71-133	25	

Analyst: ARM

Date Prepared: 11/05/2013

Date Analyzed: 11/05/2013

Lab Batch ID: 926980

Sample: 646536-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000500	0.100	0.0930	93	0.100	0.104	104	11	70-125	25	
Toluene	<0.00100	0.100	0.0951	95	0.100	0.106	106	11	70-125	25	
Ethylbenzene	<0.000700	0.100	0.102	102	0.100	0.114	114	11	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.208	104	0.200	0.232	116	11	70-131	25	
o-Xylene	<0.000700	0.100	0.105	105	0.100	0.117	117	11	71-133	25	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: 2nd Semi-Annual GW Monitoring

Work Order #: 473208

Project ID: 073018-2013-01

Analyst: MKO

Date Prepared: 11/06/2013

Date Analyzed: 11/06/2013

Lab Batch ID: 926988

Sample: 646523-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Dissolved Metals per ICP by SW846 6010B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Arsenic	<0.00756	1.00	1.01	101	1.00	1.02	102	1	80-120	20	
Chromium	<0.00355	1.00	1.04	104	1.00	1.04	104	0	80-120	20	
Iron	<0.0188	5.00	5.15	103	5.00	5.19	104	1	80-120	20	
Manganese	<0.00291	1.00	0.987	99	1.00	1.02	102	3	80-120	20	

Analyst: AMB

Date Prepared: 11/05/2013

Date Analyzed: 11/05/2013

Lab Batch ID: 926919

Sample: 646510-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.0280	25.0	23.4	94	25.0	23.6	94	1	80-120	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: 2nd Semi-Annual GW Monitoring

Work Order #: 473208

Project ID: 073018-2013-01

Analyst: ARM

Date Prepared: 11/01/2013

Date Analyzed: 11/01/2013

Lab Batch ID: 926703

Sample: 646370-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<0.988	100	119	119	100	115	115	3	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	113	113	100	128	128	12	70-135	25	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

Project Name: 2nd Semi-Annual GW Monitoring



Work Order #: 473208

Lab Batch #: 926919

Date Analyzed: 11/05/2013

QC- Sample ID: 473153-011 S

Reporting Units: mg/L

Date Prepared: 11/05/2013

Batch #: 1

Project ID: 073018-2013-01

Analyst: AMB

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	167	250	438	108	80-120	

Lab Batch #: 926919

Date Analyzed: 11/05/2013

QC- Sample ID: 473208-010 S

Reporting Units: mg/L

Date Prepared: 11/05/2013

Batch #: 1

Analyst: AMB

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	315	250	599	114	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: 2nd Semi-Annual GW Monitoring

Work Order # : 473208

Project ID: 073018-2013-01

Lab Batch ID: 926678

QC- Sample ID: 473208-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/01/2013

Date Prepared: 11/01/2013

Analyst: ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000500	0.100	0.0956	96	0.100	0.0942	94	1	70-125	25	
Toluene	<0.00100	0.100	0.0962	96	0.100	0.0949	95	1	70-125	25	
Ethylbenzene	<0.000700	0.100	0.101	101	0.100	0.100	100	1	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.205	103	0.200	0.203	102	1	70-131	25	
o-Xylene	<0.000700	0.100	0.105	105	0.100	0.104	104	1	71-133	25	

Lab Batch ID: 926980

QC- Sample ID: 473402-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/05/2013

Date Prepared: 11/05/2013

Analyst: ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.0663	0.100	0.111	45	0.100	0.108	42	3	70-125	25	X
Toluene	0.0123	0.100	0.110	98	0.100	0.107	95	3	70-125	25	
Ethylbenzene	0.00751	0.100	0.116	108	0.100	0.113	105	3	71-129	25	
m,p-Xylenes	0.0269	0.200	0.235	104	0.200	0.231	102	2	70-131	25	
o-Xylene	0.00716	0.100	0.118	111	0.100	0.115	108	3	71-133	25	

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries



Project Name: 2nd Semi-Annual GW Monitoring

Work Order # : 473208

Project ID: 073018-2013-01

Lab Batch ID: 926568

QC- Sample ID: 473199-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/01/2013

Date Prepared: 11/01/2013

Analyst: WRU

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Hexavalent Chromium	0.0151	0.200	0.213	99	0.200	0.213	99	0	80-120	20	

Lab Batch ID: 926569

QC- Sample ID: 473208-010 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/01/2013

Date Prepared: 11/01/2013

Analyst: WRU

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Hexavalent Chromium	<0.00500	0.200	0.201	101	0.200	0.203	102	1	80-120	20	

Lab Batch ID: 926988

QC- Sample ID: 473208-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/06/2013

Date Prepared: 11/06/2013

Analyst: MKO

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Dissolved Metals per ICP by SW846 6010B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Arsenic	0.0167	1.00	1.08	106	1.00	0.967	95	11	75-125	20	
Chromium	0.179	1.00	1.19	101	1.00	1.06	88	12	75-125	20	
Iron	<0.0188	5.00	4.62	92	5.00	4.09	82	12	75-125	20	
Manganese	<0.00291	1.00	1.03	103	1.00	0.895	90	14	75-125	20	

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries



Project Name: 2nd Semi-Annual GW Monitoring

Work Order # : 473208

Project ID: 073018-2013-01

Lab Batch ID: 926703

QC- Sample ID: 473208-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/01/2013

Date Prepared: 11/01/2013

Analyst: ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<0.988	100	125	125	100	115	115	8	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	122	122	100	118	118	3	70-135	25	

Matrix Spike Percent Recovery $[D] = 100 * (C - A) / B$
Relative Percent Difference $RPD = 200 * |(C - F) / (C + F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 * (F - A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Project Name: 2nd Semi-Annual GW Monitoring

Work Order #: 473208

Lab Batch #: 927010

Project ID: 073018-2013-01

Date Analyzed: 11/05/2013 13:30

Date Prepared: 11/05/2013

Analyst: AMB

QC- Sample ID: 473167-002 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	1630	1660	2	10	

Lab Batch #: 927010

Date Analyzed: 11/05/2013 13:30

Date Prepared: 11/05/2013

Analyst: AMB

QC- Sample ID: 473208-006 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	1450	1450	0	10	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$
 All Results are based on MDL and validated for QC purposes.
 BRL - Below Reporting Limit



ANALYSIS REQUEST & CHAIN OF CUSTODY RECORD

☐ 4143 Greenbriar Drive, Stafford, TX 77477 281-240-4200
☐ 5332 Blackberry Drive, San Antonio, TX 78238 210-509-3334
☐ 9701 Harry Hines Blvd., Dallas, TX 75220 214-902-0300

☐ 12600 West I-20 East, Odessa, TX 79765 432-563-1800
☐ 842 Canwell, Corpus Christi, TX 78408 361-884-0371

Serial #: 251244

Page 1 of 2

Company City: Midland Phone: 432-686-0886

Proj Name-Location: ☐ Previously done at XENCO Project ID: B73018

Proj State: TX, AL, FL, GA, LA, MS, NC, NJ, PA, SC, TN, UT Other: MIKE WISNIEWSKI

e-Mail Results to: PM and Fax No: 432-686-0186

Invoice to: ☐ Accounting ☐ Inc. Invoice with Final Report ☐ Invoice must have a P.O. Bill to:

Quote/Pricing: P.O. No: ☐ Call for P.O.

Reg Program: UST DRY-CLEAN Land-Fill Waste-Disp NPDES DW TRRP

GAPP Per-Contract CIP AFCEE NAVY DOE DOD USAGE OTHER:

Special DLs (GW DW GAPP MDLs RLS See Lab PM Included Call PM)

Sampler Name: Justin K. Khan Signature: [Signature]

Sample ID	Sampling Date	Time	Depth ft' In" m	Matrix	Composite	Grab	# Containers	Container Size	Container Type	Preservatives	VOCs: Full-List	VOC's PP TCL	PAHs	TX-1005 DRO	SVOCs: Full-List	OC Pesticides	Metals: RCRA-	SPLP - TCLP	EDB / DBCP											TATASAP 5h	Addn: PAH above	Hold Samples (	Sample Clean	Addn:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
MW065SA-103113	10-31-13	8:50		W	X	6				HCl Alert	X										X	X	X	X	X	X																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																

Preservatives: Various (V), HCl pH<2 (H), H2SO4 pH<2 (S), HNO3 pH<2 (N), Asbc Acid&NaOH (A), ZnAc&NaOH (Z), (Cool<4C) (C), None (NA), See Label (L), Other (O)
Cont. Size: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (40), 1L (1), 500ml (5), Tedlar Bag (B), Various (V), Other _____ Cont. Type: Glass Amb (A), Glass Clear (C), Plastic (P), Various (V)

Matrix: Air (A), Product (P), Solid(S), Water (W), Liquid (L)

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Notice: Signature of this document and relinquishment of these samples constitutes a valid purchase order from client company to Xenco Laboratories and its affiliates, subcontractors and assigns under Xenco's standard terms and conditions of service unless previously negotiated under a fully executed client contract.



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subcontractors and assigns under Xencó's standard terms and conditions of service unless previously negotiated under a fully executed client contract.



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Conestoga Rovers & Associates

Date/ Time Received: 10/31/2013 05:15:00 PM

Work Order #: 473208

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist

Comments

#1 *Temperature of cooler(s)?	3
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO ₃ , HCL, H ₂ SO ₄ ?	Yes
#22 >10 for all samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by:


Kelsey Brooks

Date: 11/01/2013

Checklist reviewed by:


Kelsey Brooks

Date: 11/01/2013

Analytical Report 473290

for

Conestoga Rovers & Associates

Project Manager: Claudia Ramos

2nd Semi-Annual GW Monitoring

073018-2013-01

08-NOV-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-13-15-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



08-NOV-13

Project Manager: **Claudia Ramos**

Conestoga Rovers & Associates

2135 S Loop 250 W

Midland, TX 79703

Reference: XENCO Report No(s): **473290**

2nd Semi-Annual GW Monitoring

Project Address: New Mexico

Claudia Ramos:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 473290. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 473290 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks

Project Manager

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Sample Cross Reference 473290



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW94-110113	W	11-01-13 09:40		473290-001
MW61-110113	W	11-01-13 11:15		473290-002
MW021A-110113	W	11-01-13 08:55		473290-003
MW079SA	W	11-01-13 10:05		473290-004
MW067SA	W	11-01-13 11:05		473290-005



CASE NARRATIVE



Client Name: *Conestoga Rovers & Associates*

Project Name: *2nd Semi-Annual GW Monitoring*

Project ID: 073018-2013-01
Work Order Number(s): 473290

Report Date: 08-NOV-13
Date Received: 11/01/2013

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-927060 Dissolved Metals per ICP by SW846 6010B
SW6010B

Batch 927060, Manganese detected in the blank below the MQL but above the SQL; possible laboratory contamination.

Samples affected are: 473290-001.



Certificate of Analytical Results

473290



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW94-110113** Matrix: Water Sample Depth:
Lab Sample Id: 473290-001 Date Collected: 11.01.13 09.40 Date Received: 11.01.13 15.40
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926919 Date Prep: 11.05.13 10.00
Prep seq: 646510

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	226	10.0	0.280	mg/L	11.06.13 01:23		10

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927100 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	2030	5.00	5.00	mg/L	11.07.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 927060 Date Prep: 11.07.13 08.30
Subcontractor: SUB: E871002 Prep seq: 646568

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.00855	0.0200	0.00756	mg/L	11.07.13 15:37	J	1
Chromium	7440-47-3	0.138	0.0100	0.00355	mg/L	11.07.13 15:37		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.07.13 15:37	U	1
Manganese	7439-96-5	0.0211	0.0200	0.00291	mg/L	11.07.13 15:37		1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 927148 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.127	0.0100	0.00500	mg/L	11.01.13 16:25		1



Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW94-110113** Matrix: Water Sample Depth:
Lab Sample Id: 473290-001 Date Collected: 11.01.13 09.40 Date Received: 11.01.13 15.40
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926779 Date Prep: 11.04.13 16.00
Prep seq: 646438

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.05.13 04:24	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.05.13 04:24	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.05.13 04:24	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	123	70 - 135	%		
o-Terphenyl	106	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926774 Date Prep: 11.04.13 18.00
Prep seq: 646372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.00140	0.00100	0.000500	mg/L	11.04.13 22:02		1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.04.13 22:02	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.04.13 22:02	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.04.13 22:02	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.04.13 22:02	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.04.13 22:02	U	
Total BTEX		0.00140		0.000500	mg/L	11.04.13 22:02		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	92	80 - 120	%		
4-Bromofluorobenzene	103	80 - 120	%		

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW61-110113	Matrix: Water	Sample Depth:
Lab Sample Id: 473290-002	Date Collected: 11.01.13 11.15	Date Received: 11.01.13 15.40
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 926919	Date Prep: 11.05.13 10.00	
	Prep seq: 646510	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	267	10.0	0.280	mg/L	11.06.13 01:46		10

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927100	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1710	5.00	5.00	mg/L	11.07.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927060	
	% Moist:
	Date Prep: 11.07.13 08.30
Subcontractor: SUB: E871002	Prep seq: 646568

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.00902	0.0200	0.00756	mg/L	11.07.13 16:22	J	1
Chromium	7440-47-3	0.423	0.0100	0.00355	mg/L	11.07.13 16:22		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.07.13 16:22	U	1
Manganese	7439-96-5	0.234	0.0200	0.00291	mg/L	11.07.13 16:22		1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927148	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.367	0.0100	0.00500	mg/L	11.01.13 16:25		1



Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW61-110113** Matrix: Water Sample Depth:
Lab Sample Id: 473290-002 Date Collected: 11.01.13 11.15 Date Received: 11.01.13 15.40
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926779 Date Prep: 11.04.13 16.00
Prep seq: 646438

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.05.13 05:37	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.05.13 05:37	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.05.13 05:37	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	125	70 - 135	%		
o-Terphenyl	110	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926774 Date Prep: 11.04.13 18.00
Prep seq: 646372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.04.13 22:18	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.04.13 22:18	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.04.13 22:18	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.04.13 22:18	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.04.13 22:18	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.04.13 22:18	U	
Total BTEX		ND		0.000500	mg/L	11.04.13 22:18	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	93	80 - 120	%		
4-Bromofluorobenzene	103	80 - 120	%		

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW021A-110113	Matrix: Water	Sample Depth:
Lab Sample Id: 473290-003	Date Collected: 11.01.13 08.55	Date Received: 11.01.13 15.40
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 926919	Date Prep: 11.05.13 10.00	
	Prep seq: 646510	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	2760	50.0	1.40	mg/L	11.06.13 02:09		50

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927100	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	6560	5.00	5.00	mg/L	11.07.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927060	
	% Moist:
	Date Prep: 11.07.13 08.30
Subcontractor: SUB: E871002	Prep seq: 646568

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0107	0.0200	0.00756	mg/L	11.07.13 16:28	J	1
Chromium	7440-47-3	0.00442	0.0100	0.00355	mg/L	11.07.13 16:28	J	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.07.13 16:28	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.07.13 16:28	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927148	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.01.13 16:25	U	1



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW021A-110113** Matrix: Water Sample Depth:
Lab Sample Id: 473290-003 Date Collected: 11.01.13 08.55 Date Received: 11.01.13 15.40
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926779 Date Prep: 11.04.13 16.00
Prep seq: 646438

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.05.13 06:02	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.05.13 06:02	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.05.13 06:02	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	115	70 - 135	%		
o-Terphenyl	101	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926774 Date Prep: 11.04.13 18.00
Prep seq: 646372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.04.13 22:34	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.04.13 22:34	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.04.13 22:34	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.04.13 22:34	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.04.13 22:34	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.04.13 22:34	U	
Total BTEX		ND		0.000500	mg/L	11.04.13 22:34	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	91	80 - 120	%		
4-Bromofluorobenzene	95	80 - 120	%		

Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW079SA	Matrix: Water	Sample Depth:
Lab Sample Id: 473290-004	Date Collected: 11.01.13 10.05	Date Received: 11.01.13 15.40
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 926919	Date Prep: 11.05.13 10.00	
	Prep seq: 646510	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	338	10.0	0.280	mg/L	11.06.13 02:31		10

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927100	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1360	5.00	5.00	mg/L	11.07.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927060	
	% Moist:
	Date Prep: 11.07.13 08.30
Subcontractor: SUB: E871002	Prep seq: 646568

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.00919	0.0200	0.00756	mg/L	11.07.13 16:34	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.07.13 16:34	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.07.13 16:34	U	1
Manganese	7439-96-5	0.0225	0.0200	0.00291	mg/L	11.07.13 16:34		1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927148	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.01.13 16:25	U	1



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW079SA**

Matrix: Water

Sample Depth:

Lab Sample Id: 473290-004

Date Collected: 11.01.13 10.05

Date Received: 11.01.13 15.40

Analytical Method: TPH By SW8015B Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926779

Date Prep: 11.04.13 16.00

Prep seq: 646438

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.05.13 06:26	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.05.13 06:26	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.05.13 06:26	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	119	70 - 135	%		
o-Terphenyl	102	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926774

Date Prep: 11.04.13 18.00

Prep seq: 646372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.04.13 22:50	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.04.13 22:50	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.04.13 22:50	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.04.13 22:50	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.04.13 22:50	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.04.13 22:50	U	
Total BTEX		ND		0.000500	mg/L	11.04.13 22:50	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	94	80 - 120	%		
4-Bromofluorobenzene	99	80 - 120	%		



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW067SA** Matrix: Water Sample Depth:
Lab Sample Id: 473290-005 Date Collected: 11.01.13 11.05 Date Received: 11.01.13 15.40
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926919 Date Prep: 11.05.13 10.00
Prep seq: 646510

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	157	10.0	0.280	mg/L	11.06.13 02:54		10

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927100 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	981	5.00	5.00	mg/L	11.07.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 927060 Date Prep: 11.07.13 08.30
Subcontractor: SUB: E871002 Prep seq: 646568

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0152	0.0200	0.00756	mg/L	11.07.13 16:39	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.07.13 16:39	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.07.13 16:39	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.07.13 16:39	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 927148 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.01.13 16:25	U	1



Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW067SA**

Matrix: Water

Sample Depth:

Lab Sample Id: 473290-005

Date Collected: 11.01.13 11:05

Date Received: 11.01.13 15:40

Analytical Method: TPH By SW8015B Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926779

Date Prep: 11.04.13 16:00

Prep seq: 646438

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.05.13 06:51	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.05.13 06:51	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.05.13 06:51	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	118	70 - 135	%		
o-Terphenyl	102	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926774

Date Prep: 11.04.13 18:00

Prep seq: 646372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.04.13 23:06	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.04.13 23:06	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.04.13 23:06	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.04.13 23:06	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.04.13 23:06	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.04.13 23:06	U	
Total BTEX		ND		0.000500	mg/L	11.04.13 23:06	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	84	80 - 120	%		
4-Bromofluorobenzene	93	80 - 120	%		



Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **646372-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646372-1-BLK Date Collected: Date Received:
Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926774 Date Prep: 11.04.13 18.00
Prep seq: 646372

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.04.13 21:46	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.04.13 21:46	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.04.13 21:46	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.04.13 21:46	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.04.13 21:46	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	90	80 - 120	%		
4-Bromofluorobenzene	99	80 - 120	%		

Sample Id: **646438-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646438-1-BLK Date Collected: Date Received:
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926779 Date Prep: 11.04.13 16.00
Prep seq: 646438

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.05.13 03:59	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.05.13 03:59	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.05.13 03:59	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	129	70 - 135	%		
o-Terphenyl	110	70 - 135	%		



Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **646510-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646510-1-BLK Date Collected: Date Received:
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 926919 Date Prep: 11.05.13 10.00
Prep seq: 646510

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	ND	1.00	0.0280	mg/L	11.05.13 15:56	U	1

Sample Id: **646568-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646568-1-BLK Date Collected: Date Received:
Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 927060 Date Prep: 11.07.13 08.30
Subcontractor: SUB: E871002 Prep seq: 646568

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	11.07.13 15:21	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.07.13 15:21	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.07.13 15:21	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.07.13 15:21	U	1

Sample Id: **927100-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 927100-1-BLK Date Collected: Date Received:
Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927100 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	ND	5.00	5.00	mg/L	11.07.13 11:00	U	1



Certificate of Analytical Results

473290



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **927148-1-BLK**

Matrix: Water

Sample Depth:

Lab Sample Id: 927148-1-BLK

Date Collected:

Date Received:

Analytical Method: Chromium, Hexavalent by SW 7196A

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 927148

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.01.13 16:25	U	1

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **SQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: 2nd Semi-Annual GW Monitoring

Work Orders : 473290,

Project ID: 073018-2013-01

Lab Batch #: 926774

Sample: 646372-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/04/13 20:26

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0241	0.0300	80	80-120	
4-Bromofluorobenzene	0.0308	0.0300	103	80-120	

Lab Batch #: 926774

Sample: 646372-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/04/13 20:42

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0250	0.0300	83	80-120	
4-Bromofluorobenzene	0.0316	0.0300	105	80-120	

Lab Batch #: 926774

Sample: 473290-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/04/13 20:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0289	0.0300	96	80-120	
4-Bromofluorobenzene	0.0306	0.0300	102	80-120	

Lab Batch #: 926774

Sample: 473290-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/04/13 21:14

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0291	0.0300	97	80-120	
4-Bromofluorobenzene	0.0311	0.0300	104	80-120	

Lab Batch #: 926774

Sample: 646372-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/04/13 21:46

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0271	0.0300	90	80-120	
4-Bromofluorobenzene	0.0298	0.0300	99	80-120	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: 2nd Semi-Annual GW Monitoring

Work Orders : 473290,

Project ID: 073018-2013-01

Lab Batch #: 926779

Sample: 646438-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/05/13 03:10

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	12.8	10.0	128	70-135	
o-Terphenyl	5.04	5.00	101	70-135	

Lab Batch #: 926779

Sample: 646438-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/05/13 03:34

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	12.9	10.0	129	70-135	
o-Terphenyl	5.45	5.00	109	70-135	

Lab Batch #: 926779

Sample: 646438-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/05/13 03:59

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	12.9	10.0	129	70-135	
o-Terphenyl	5.50	5.00	110	70-135	

Lab Batch #: 926779

Sample: 473290-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/05/13 04:48

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	12.9	10.0	129	70-135	
o-Terphenyl	5.22	5.00	104	70-135	

Lab Batch #: 926779

Sample: 473290-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/05/13 05:13

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	12.2	10.0	122	70-135	
o-Terphenyl	5.35	5.00	107	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



Blank Spike Recovery

Project Name: 2nd Semi-Annual GW Monitoring



Work Order #: 473290

Project ID: 073018-2013-01

Lab Batch #: 927148

Sample: 927148-1-BKS

Matrix: Water

Date Analyzed: 11/01/2013

Date Prepared: 11/01/2013

Analyst: WRU

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Hexavalent Chromium	<0.00500	0.0200	0.0216	108	80-120	

Lab Batch #: 927100

Sample: 927100-1-BKS

Matrix: Water

Date Analyzed: 11/07/2013

Date Prepared: 11/07/2013

Analyst: AMB

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

TDS by SM2540C Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Total dissolved solids	<5.00	1000	993	99	80-120	

Blank Spike Recovery [D] = $100 \times [C] / [B]$

All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Project Name: 2nd Semi-Annual GW Monitoring

Work Order #: 473290

Project ID: 073018-2013-01

Analyst: ARM

Date Prepared: 11/04/2013

Date Analyzed: 11/04/2013

Lab Batch ID: 926774

Sample: 646372-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000500	0.100	0.0923	92	0.100	0.0993	99	7	70-125	25	
Toluene	<0.00100	0.100	0.0943	94	0.100	0.101	101	7	70-125	25	
Ethylbenzene	<0.000700	0.100	0.0990	99	0.100	0.106	106	7	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.202	101	0.200	0.216	108	7	70-131	25	
o-Xylene	<0.000700	0.100	0.103	103	0.100	0.110	110	7	71-133	25	

Analyst: MKO

Date Prepared: 11/07/2013

Date Analyzed: 11/07/2013

Lab Batch ID: 927060

Sample: 646568-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Dissolved Metals per ICP by SW846 6010B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Arsenic	<0.00756	1.00	1.00	100	1.00	0.999	100	0	80-120	20	
Chromium	<0.00355	1.00	1.01	101	1.00	1.01	101	0	80-120	20	
Iron	<0.0188	5.00	5.05	101	5.00	5.06	101	0	80-120	20	
Manganese	<0.00291	1.00	0.978	98	1.00	1.00	100	2	80-120	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Project Name: 2nd Semi-Annual GW Monitoring

Work Order #: 473290

Project ID: 073018-2013-01

Analyst: AMB

Date Prepared: 11/05/2013

Date Analyzed: 11/05/2013

Lab Batch ID: 926919

Sample: 646510-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.0280	25.0	23.4	94	25.0	23.6	94	1	80-120	20	

Analyst: ARM

Date Prepared: 11/04/2013

Date Analyzed: 11/05/2013

Lab Batch ID: 926779

Sample: 646438-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C10 Gasoline Range Hydrocarbons	<0.988	100	114	114	100	119	119	4	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	116	116	100	118	118	2	70-135	25	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

Project Name: 2nd Semi-Annual GW Monitoring



Work Order #: 473290

Lab Batch #: 926919

Date Analyzed: 11/05/2013

QC- Sample ID: 473153-011 S

Reporting Units: mg/L

Date Prepared: 11/05/2013

Batch #: 1

Project ID: 073018-2013-01

Analyst: AMB

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	167	250	438	108	80-120	

Lab Batch #: 926919

Date Analyzed: 11/05/2013

QC- Sample ID: 473208-010 S

Reporting Units: mg/L

Date Prepared: 11/05/2013

Batch #: 1

Analyst: AMB

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	315	250	599	114	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: 2nd Semi-Annual GW Monitoring

Work Order # : 473290

Project ID: 073018-2013-01

Lab Batch ID: 926774

QC- Sample ID: 473290-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/04/2013

Date Prepared: 11/04/2013

Analyst: ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.00140	0.100	0.0974	96	0.100	0.0976	96	0	70-125	25	
Toluene	<0.00100	0.100	0.0987	99	0.100	0.0984	98	0	70-125	25	
Ethylbenzene	<0.000700	0.100	0.105	105	0.100	0.104	104	1	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.214	107	0.200	0.212	106	1	70-131	25	
o-Xylene	<0.000700	0.100	0.108	108	0.100	0.107	107	1	71-133	25	

Lab Batch ID: 927148

QC- Sample ID: 473290-005 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/01/2013

Date Prepared: 11/01/2013

Analyst: WRU

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Hexavalent Chromium	<0.00500	0.200	0.201	101	0.200	0.202	101	0	80-120	20	

Lab Batch ID: 927060

QC- Sample ID: 473290-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/07/2013

Date Prepared: 11/07/2013

Analyst: MKO

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Dissolved Metals per ICP by SW846 6010B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Arsenic	0.00855	1.00	1.05	104	1.00	1.03	102	2	75-125	20	
Chromium	0.138	1.00	1.10	96	1.00	1.08	94	2	75-125	20	
Iron	<0.0188	5.00	4.63	93	5.00	4.52	90	2	75-125	20	
Manganese	0.0211	1.00	0.948	93	1.00	0.968	95	2	75-125	20	

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries



Project Name: 2nd Semi-Annual GW Monitoring

Work Order # : 473290

Project ID: 073018-2013-01

Lab Batch ID: 926779

QC- Sample ID: 473290-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/05/2013

Date Prepared: 11/04/2013

Analyst: ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<0.988	100	120	120	100	119	119	1	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	120	120	100	120	120	0	70-135	25	

Matrix Spike Percent Recovery $[D] = 100 * (C - A) / B$
Relative Percent Difference $RPD = 200 * |(C - F) / (C + F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 * (F - A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Project Name: 2nd Semi-Annual GW Monitoring

Work Order #: 473290

Lab Batch #: 927100

Project ID: 073018-2013-01

Date Analyzed: 11/07/2013 11:00

Date Prepared: 11/07/2013

Analyst: AMB

QC- Sample ID: 473290-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	2030	2090	3	10	

Lab Batch #: 927100

Date Analyzed: 11/07/2013 11:00

Date Prepared: 11/07/2013

Analyst: AMB

QC- Sample ID: 473393-006 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	2650	2870	8	10	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$
 All Results are based on MDL and validated for QC purposes.
 BRL - Below Reporting Limit



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Conestoga Rovers & Associates

Date/ Time Received: 11/01/2013 03:40:11 PM

Work Order #: 473290

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	5.5
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: Kelsey Brooks
Kelsey Brooks

Date: 11/01/2013

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks

Date: 11/01/2013

Analytical Report 473402

for

Conestoga Rovers & Associates

Project Manager: Claudia Ramos

2nd Semi-Annual GW Monitoring

073018-2013-01

13-NOV-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-13-15-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



13-NOV-13

Project Manager: **Claudia Ramos**

Conestoga Rovers & Associates

2135 S Loop 250 W

Midland, TX 79703

Reference: XENCO Report No(s): **473402**

2nd Semi-Annual GW Monitoring

Project Address: New Mexico

Claudia Ramos:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 473402. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 473402 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks

Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

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Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America



Sample Cross Reference 473402



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW10-110413	W	11-04-13 10:40		473402-001
MW040A-110413	W	11-04-13 12:55		473402-002
MW13-110413	W	11-04-13 14:25		473402-003
MW13A-110413	W	11-04-13 15:50		473402-004
DUP2-110413	W	11-04-13 00:00		473402-005
DUP3-110413	W	11-04-13 00:00		473402-006
MW056SA-110413	W	11-04-13 09:05		473402-007
MW078SA-110413	W	11-04-13 10:10		473402-008
MW053SA-110413	W	11-04-13 12:35		473402-009
MW054SA-110413	W	11-04-13 13:35		473402-010
MW048SA-110413	W	11-04-13 14:45		473402-012
MW020A-110413	W	11-04-13 15:45		473402-013
Trip Blank	W	11-04-13 00:00		473402-014
IW28-110413	W	11-04-13 09:20		Not Analyzed



CASE NARRATIVE



Client Name: *Conestoga Rovers & Associates*

Project Name: *2nd Semi-Annual GW Monitoring*

Project ID: 073018-2013-01
Work Order Number(s): 473402

Report Date: 13-NOV-13
Date Received: 11/04/2013

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-927165 Dissolved Metals per ICP by SW846 6010B
SW6010B

Batch 927165, Iron detected in the blank below the MQL but above the SQL; possible laboratory contamination.

Samples affected are: 473402-012, -013.

Certificate of Analytical Results

473402

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW10-110413	Matrix: Water	Sample Depth:
Lab Sample Id: 473402-001	Date Collected: 11.04.13 10.40	Date Received: 11.04.13 16.45
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 927007	Date Prep: 11.06.13 10.00	
	Prep seq: 646569	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	2430	50.0	1.40	mg/L	11.06.13 18:40		50

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927100	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	6240	5.00	5.00	mg/L	11.07.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927060	
	% Moist:
	Date Prep: 11.07.13 10.00
Subcontractor: SUB: E871002	Prep seq: 646568

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	11.07.13 17:02	U	1
Chromium	7440-47-3	0.0258	0.0100	0.00355	mg/L	11.07.13 17:02		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.07.13 17:02	U	1
Manganese	7439-96-5	0.0554	0.0200	0.00291	mg/L	11.07.13 17:02		1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927202	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.0193	0.0100	0.00500	mg/L	11.04.13 19:20		1



Certificate of Analytical Results

473402



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW10-110413** Matrix: Water Sample Depth:
Lab Sample Id: 473402-001 Date Collected: 11.04.13 10.40 Date Received: 11.04.13 16.45
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926990 Date Prep: 11.05.13 16.00
Prep seq: 646538

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.05.13 19:27	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.05.13 19:27	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.05.13 19:27	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	112	70 - 135	%		
o-Terphenyl	103	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926980 Date Prep: 11.05.13 14.00
Prep seq: 646536

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.00615	0.00100	0.000500	mg/L	11.08.13 15:16		1
Toluene	108-88-3	0.00682	0.00200	0.00100	mg/L	11.08.13 15:16		1
Ethylbenzene	100-41-4	0.00293	0.00100	0.000700	mg/L	11.08.13 15:16		1
m,p-Xylenes	179601-23-1	0.00267	0.00200	0.00140	mg/L	11.08.13 15:16		1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.08.13 15:16	U	1
Total Xylenes	1330-20-7	0.00267		0.000700	mg/L	11.08.13 15:16		
Total BTEX		0.0186		0.000500	mg/L	11.08.13 15:16		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	83	80 - 120	%		
4-Bromofluorobenzene	94	80 - 120	%		

Certificate of Analytical Results

473402

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW040A-110413	Matrix: Water	Sample Depth:
Lab Sample Id: 473402-002	Date Collected: 11.04.13 12.55	Date Received: 11.04.13 16.45
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 927007	Date Prep: 11.06.13 10.00	
	Prep seq: 646569	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	48.2	5.00	0.140	mg/L	11.06.13 19:02		5

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927100	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	488	5.00	5.00	mg/L	11.07.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927060	
	% Moist:
	Date Prep: 11.07.13 10.00
Subcontractor: SUB: E871002	Prep seq: 646568

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0183	0.0200	0.00756	mg/L	11.07.13 17:08	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.07.13 17:08	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.07.13 17:08	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.07.13 17:08	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927202	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.04.13 19:20	U	1



Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW040A-110413** Matrix: Water Sample Depth:
Lab Sample Id: 473402-002 Date Collected: 11.04.13 12.55 Date Received: 11.04.13 16.45
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926992 Date Prep: 11.06.13 15.00
Prep seq: 646543

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 06:39	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 06:39	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 06:39	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	114	70 - 135	%		
o-Terphenyl	105	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926995 Date Prep: 11.06.13 15.00
Prep seq: 646541

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.06.13 22:46	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.06.13 22:46	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.06.13 22:46	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.06.13 22:46	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.06.13 22:46	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.06.13 22:46	U	
Total BTEX		ND		0.000500	mg/L	11.06.13 22:46	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	81	80 - 120	%		
4-Bromofluorobenzene	98	80 - 120	%		



Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW13-110413** Matrix: Water Sample Depth:
Lab Sample Id: 473402-003 Date Collected: 11.04.13 14.25 Date Received: 11.04.13 16.45
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927007 Date Prep: 11.06.13 10.00
Prep seq: 646569

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	650	20.0	0.560	mg/L	11.06.13 19:25		20

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927100 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	3230	5.00	5.00	mg/L	11.07.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 927060 Date Prep: 11.07.13 10.00
Subcontractor: SUB: E871002 Prep seq: 646568

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	11.07.13 17:13	U	1
Chromium	7440-47-3	1.76	0.0100	0.00355	mg/L	11.07.13 17:13		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.07.13 17:13	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.07.13 17:13	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 927202 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	1.78	0.200	0.100	mg/L	11.04.13 19:20		20



Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW13-110413** Matrix: Water Sample Depth:
Lab Sample Id: 473402-003 Date Collected: 11.04.13 14.25 Date Received: 11.04.13 16.45
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926990 Date Prep: 11.05.13 16.00
Prep seq: 646538

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.05.13 20:47	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.05.13 20:47	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.05.13 20:47	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	110	70 - 135	%		
o-Terphenyl	104	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926980 Date Prep: 11.05.13 14.00
Prep seq: 646536

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.00405	0.00100	0.000500	mg/L	11.08.13 15:32		1
Toluene	108-88-3	0.00459	0.00200	0.00100	mg/L	11.08.13 15:32		1
Ethylbenzene	100-41-4	0.00184	0.00100	0.000700	mg/L	11.08.13 15:32		1
m,p-Xylenes	179601-23-1	0.00182	0.00200	0.00140	mg/L	11.08.13 15:32	J	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.08.13 15:32	U	1
Total Xylenes	1330-20-7	0.00182		0.000700	mg/L	11.08.13 15:32		
Total BTEX		0.0123		0.000500	mg/L	11.08.13 15:32		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	86	80 - 120	%		
4-Bromofluorobenzene	91	80 - 120	%		

Certificate of Analytical Results

473402

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW13A-110413	Matrix: Water	Sample Depth:
Lab Sample Id: 473402-004	Date Collected: 11.04.13 15.50	Date Received: 11.04.13 16.45
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 927007	Date Prep: 11.06.13 10.00	
	Prep seq: 646569	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	59.6	5.00	0.140	mg/L	11.06.13 19:48		5

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927100	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	512	5.00	5.00	mg/L	11.07.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927060	
	% Moist:
	Date Prep: 11.07.13 10.00
Subcontractor: SUB: E871002	Prep seq: 646568

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0199	0.0200	0.00756	mg/L	11.07.13 17:30	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.07.13 17:30	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.07.13 17:30	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.12.13 23:12	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927202	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.04.13 19:20	U	1



Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW13A-110413** Matrix: Water Sample Depth:
Lab Sample Id: 473402-004 Date Collected: 11.04.13 15.50 Date Received: 11.04.13 16.45
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926990 Date Prep: 11.05.13 16.00
Prep seq: 646538

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.05.13 21:13	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.05.13 21:13	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.05.13 21:13	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	103	70 - 135	%		
o-Terphenyl	98	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926980 Date Prep: 11.05.13 14.00
Prep seq: 646536

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.00275	0.00100	0.000500	mg/L	11.05.13 17:19		1
Toluene	108-88-3	0.00214	0.00200	0.00100	mg/L	11.05.13 17:19		1
Ethylbenzene	100-41-4	0.00109	0.00100	0.000700	mg/L	11.05.13 17:19		1
m,p-Xylenes	179601-23-1	0.00764	0.00200	0.00140	mg/L	11.05.13 17:19		1
o-Xylene	95-47-6	0.00146	0.00100	0.000700	mg/L	11.05.13 17:19		1
Total Xylenes	1330-20-7	0.00910		0.000700	mg/L	11.05.13 17:19		
Total BTEX		0.0151		0.000500	mg/L	11.05.13 17:19		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	82	80 - 120	%		
4-Bromofluorobenzene	99	80 - 120	%		

Certificate of Analytical Results

473402

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: DUP2-110413	Matrix: Water	Sample Depth:
Lab Sample Id: 473402-005	Date Collected: 11.04.13 00.00	Date Received: 11.04.13 16.45
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 927007	Date Prep: 11.06.13 10.00	
	Prep seq: 646569	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1150	50.0	1.40	mg/L	11.06.13 20:10		50

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927100	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	3620	5.00	5.00	mg/L	11.07.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927060	
	% Moist:
	Date Prep: 11.07.13 10.00
Subcontractor: SUB: E871002	Prep seq: 646568

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0155	0.0200	0.00756	mg/L	11.07.13 17:36	J	1
Chromium	7440-47-3	0.432	0.0100	0.00355	mg/L	11.07.13 17:36		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.07.13 17:36	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.07.13 17:36	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927202	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.268	0.200	0.100	mg/L	11.04.13 19:20		20



Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **DUP2-110413** Matrix: Water Sample Depth:
Lab Sample Id: 473402-005 Date Collected: 11.04.13 00.00 Date Received: 11.04.13 16.45
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926990 Date Prep: 11.05.13 16.00
Prep seq: 646538

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.05.13 21:39	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.05.13 21:39	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.05.13 21:39	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	105	70 - 135	%		
o-Terphenyl	100	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926980 Date Prep: 11.05.13 14.00
Prep seq: 646536

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.00190	0.00100	0.000500	mg/L	11.05.13 17:35		1
Toluene	108-88-3	0.00166	0.00200	0.00100	mg/L	11.05.13 17:35	J	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.05.13 17:35	U	1
m,p-Xylenes	179601-23-1	0.00463	0.00200	0.00140	mg/L	11.05.13 17:35		1
o-Xylene	95-47-6	0.000950	0.00100	0.000700	mg/L	11.05.13 17:35	J	1
Total Xylenes	1330-20-7	0.00558		0.000700	mg/L	11.05.13 17:35		
Total BTEX		0.00914		0.000500	mg/L	11.05.13 17:35		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	83	80 - 120	%		
4-Bromofluorobenzene	104	80 - 120	%		

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: DUP3-110413	Matrix: Water	Sample Depth:
Lab Sample Id: 473402-006	Date Collected: 11.04.13 00.00	Date Received: 11.04.13 16.45
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 927007	Date Prep: 11.06.13 10.00	
	Prep seq: 646569	

Parameter	CAS Number	Result	ML	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	63.2	5.00	0.140	mg/L	11.06.13 20:56		5

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927100	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	ML	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	511	5.00	5.00	mg/L	11.07.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927060	
	% Moist:
	Date Prep: 11.07.13 10.00
Subcontractor: SUB: E871002	Prep seq: 646568

Parameter	CAS Number	Result	ML	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0201	0.0200	0.00756	mg/L	11.07.13 17:42		1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.07.13 17:42	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.07.13 17:42	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.12.13 23:18	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927202	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	ML	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.04.13 19:20	U	1



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **DUP3-110413**

Matrix: Water

Sample Depth:

Lab Sample Id: 473402-006

Date Collected: 11.04.13 00.00

Date Received: 11.04.13 16.45

Analytical Method: TPH By SW8015B Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926990

Date Prep: 11.05.13 16.00

Prep seq: 646538

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.05.13 22:04	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.05.13 22:04	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.05.13 22:04	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	103	70 - 135	%		
o-Terphenyl	100	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926980

Date Prep: 11.05.13 14.00

Prep seq: 646536

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.00147	0.00100	0.000500	mg/L	11.05.13 17:51		1
Toluene	108-88-3	0.00177	0.00200	0.00100	mg/L	11.05.13 17:51	J	1
Ethylbenzene	100-41-4	0.00101	0.00100	0.000700	mg/L	11.05.13 17:51		1
m,p-Xylenes	179601-23-1	0.00695	0.00200	0.00140	mg/L	11.05.13 17:51		1
o-Xylene	95-47-6	0.00149	0.00100	0.000700	mg/L	11.05.13 17:51		1
Total Xylenes	1330-20-7	0.00844		0.000700	mg/L	11.05.13 17:51		
Total BTEX		0.0127		0.000500	mg/L	11.05.13 17:51		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	82	80 - 120	%		
4-Bromofluorobenzene	107	80 - 120	%		

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2nd Semi-Annual GW Monitoring

Sample Id: MW056SA-110413	Matrix: Water	Sample Depth:
Lab Sample Id: 473402-007	Date Collected: 11.04.13 09.05	Date Received: 11.04.13 16.45
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 927007	Date Prep: 11.06.13 10.00	
	Prep seq: 646569	

Parameter	CAS Number	Result	ML	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1140	50.0	1.40	mg/L	11.06.13 21:18		50

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927100	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	ML	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	3660	5.00	5.00	mg/L	11.07.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927060	
	% Moist:
	Date Prep: 11.07.13 10.00
Subcontractor: SUB: E871002	Prep seq: 646568

Parameter	CAS Number	Result	ML	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0154	0.0200	0.00756	mg/L	11.07.13 17:47	J	1
Chromium	7440-47-3	0.412	0.0100	0.00355	mg/L	11.07.13 17:47		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.07.13 17:47	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.07.13 17:47	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927202	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	ML	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.290	0.200	0.100	mg/L	11.04.13 19:20		20



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW056SA-110413** Matrix: Water Sample Depth:
Lab Sample Id: 473402-007 Date Collected: 11.04.13 09.05 Date Received: 11.04.13 16.45
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926990 Date Prep: 11.05.13 16.00
Prep seq: 646538

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.05.13 22:30	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.05.13 22:30	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.05.13 22:30	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	98	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926980 Date Prep: 11.05.13 14.00
Prep seq: 646536

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.000750	0.00100	0.000500	mg/L	11.05.13 18:07	J	1
Toluene	108-88-3	0.00110	0.00200	0.00100	mg/L	11.05.13 18:07	J	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.05.13 18:07	U	1
m,p-Xylenes	179601-23-1	0.00547	0.00200	0.00140	mg/L	11.05.13 18:07		1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.05.13 18:07	U	1
Total Xylenes	1330-20-7	0.00547		0.000700	mg/L	11.05.13 18:07		
Total BTEX		0.00732		0.000500	mg/L	11.05.13 18:07		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	81	80 - 120	%		
4-Bromofluorobenzene	106	80 - 120	%		

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW078SA-110413	Matrix: Water	Sample Depth:
Lab Sample Id: 473402-008	Date Collected: 11.04.13 10.10	Date Received: 11.04.13 16.45
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 927007	Date Prep: 11.06.13 10.00	
	Prep seq: 646569	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	132	10.0	0.280	mg/L	11.06.13 21:41		10

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927100	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	793	5.00	5.00	mg/L	11.07.13 11:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927060	
	% Moist:
	Date Prep: 11.07.13 10.00
Subcontractor: SUB: E871002	Prep seq: 646568

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0104	0.0200	0.00756	mg/L	11.07.13 17:53	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.07.13 17:53	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.07.13 17:53	U	1
Manganese	7439-96-5	0.0180	0.0200	0.00291	mg/L	11.07.13 17:53	J	1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927202	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.04.13 19:20	U	1

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW078SA-110413	Matrix: Water	Sample Depth:
Lab Sample Id: 473402-008	Date Collected: 11.04.13 10.10	Date Received: 11.04.13 16.45
Analytical Method: TPH By SW8015B Mod		Prep Method: 1005
Analyst: ARM	% Moist:	Tech: ARM
Seq Number: 926990	Date Prep: 11.05.13 16.00	
	Prep seq: 646538	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.05.13 22:55	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.05.13 22:55	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.05.13 22:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	106	70 - 135	%		
o-Terphenyl	100	70 - 135	%		

Analytical Method: BTEX by EPA 8021B	Prep Method: 5030B
Analyst: ARM	% Moist:
Seq Number: 926980	Date Prep: 11.05.13 14.00
	Prep seq: 646536

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.000540	0.00100	0.000500	mg/L	11.05.13 18:23	J	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.05.13 18:23	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.05.13 18:23	U	1
m,p-Xylenes	179601-23-1	0.00373	0.00200	0.00140	mg/L	11.05.13 18:23		1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.05.13 18:23	U	1
Total Xylenes	1330-20-7	0.00373		0.000700	mg/L	11.05.13 18:23		
Total BTEX		0.00427		0.000500	mg/L	11.05.13 18:23		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	83	80 - 120	%		
4-Bromofluorobenzene	102	80 - 120	%		

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW053SA-110413	Matrix: Water	Sample Depth:
Lab Sample Id: 473402-009	Date Collected: 11.04.13 12.35	Date Received: 11.04.13 16.45
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 927007	Date Prep: 11.06.13 10.00	
	Prep seq: 646569	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	314	10.0	0.280	mg/L	11.06.13 22:04		10

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927101	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1320	5.00	5.00	mg/L	11.08.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927060	
	% Moist:
	Date Prep: 11.07.13 10.00
Subcontractor: SUB: E871002	Prep seq: 646568

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0127	0.0200	0.00756	mg/L	11.07.13 17:59	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.07.13 17:59	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.07.13 17:59	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.07.13 17:59	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927202	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.04.13 19:20	U	1



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2nd Semi-Annual GW Monitoring

Sample Id: **MW053SA-110413** Matrix: Water Sample Depth:
Lab Sample Id: 473402-009 Date Collected: 11.04.13 12.35 Date Received: 11.04.13 16.45
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926990 Date Prep: 11.05.13 16.00
Prep seq: 646538

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.05.13 23:21	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.05.13 23:21	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.05.13 23:21	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	99	70 - 135	%		
o-Terphenyl	94	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926980 Date Prep: 11.05.13 14.00
Prep seq: 646536

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.00113	0.00100	0.000500	mg/L	11.05.13 18:39		1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.05.13 18:39	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.05.13 18:39	U	1
m,p-Xylenes	179601-23-1	0.00766	0.00200	0.00140	mg/L	11.05.13 18:39		1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.05.13 18:39	U	1
Total Xylenes	1330-20-7	0.00766		0.000700	mg/L	11.05.13 18:39		
Total BTEX		0.00879		0.000500	mg/L	11.05.13 18:39		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	85	80 - 120	%		
4-Bromofluorobenzene	106	80 - 120	%		

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW054SA-110413	Matrix: Water	Sample Depth:
Lab Sample Id: 473402-010	Date Collected: 11.04.13 13.35	Date Received: 11.04.13 16.45
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 927007	Date Prep: 11.06.13 10.00	
	Prep seq: 646569	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	726	20.0	0.560	mg/L	11.06.13 23:12		20

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927101	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	2540	5.00	5.00	mg/L	11.08.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927060	
	% Moist:
	Date Prep: 11.07.13 10.00
Subcontractor: SUB: E871002	Prep seq: 646568

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0107	0.0200	0.00756	mg/L	11.07.13 18:05	J	1
Chromium	7440-47-3	0.143	0.0100	0.00355	mg/L	11.07.13 18:05		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.07.13 18:05	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.07.13 18:05	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927202	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.142	0.0100	0.00500	mg/L	11.04.13 19:20		1



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW054SA-110413** Matrix: Water Sample Depth:
Lab Sample Id: 473402-010 Date Collected: 11.04.13 13.35 Date Received: 11.04.13 16.45
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926990 Date Prep: 11.05.13 16.00
Prep seq: 646538

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.05.13 23:48	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.05.13 23:48	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.05.13 23:48	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	103	70 - 135	%		
o-Terphenyl	98	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926980 Date Prep: 11.05.13 14.00
Prep seq: 646536

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.05.13 18:55	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.05.13 18:55	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.05.13 18:55	U	1
m,p-Xylenes	179601-23-1	0.00384	0.00200	0.00140	mg/L	11.05.13 18:55		1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.05.13 18:55	U	1
Total Xylenes	1330-20-7	0.00384		0.000700	mg/L	11.05.13 18:55		
Total BTEX		0.00384		0.000500	mg/L	11.05.13 18:55		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	84	80 - 120	%		
4-Bromofluorobenzene	103	80 - 120	%		

Certificate of Analytical Results

473402

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW048SA-110413	Matrix: Water	Sample Depth:
Lab Sample Id: 473402-012	Date Collected: 11.04.13 14.45	Date Received: 11.04.13 16.45
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 927007	Date Prep: 11.06.13 10.00	
	Prep seq: 646569	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	545	20.0	0.560	mg/L	11.06.13 23:35		20

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927101	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	2390	5.00	5.00	mg/L	11.08.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927165	
	% Moist:
	Date Prep: 11.08.13 09.30
Subcontractor: SUB: E871002	Prep seq: 646642

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0117	0.0200	0.00756	mg/L	11.08.13 14:11	J	1
Chromium	7440-47-3	0.475	0.0100	0.00355	mg/L	11.08.13 14:11		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.08.13 14:11	U	1
Manganese	7439-96-5	0.0322	0.0200	0.00291	mg/L	11.08.13 14:11		1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927210	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.470	0.0100	0.00500	mg/L	11.04.13 19:20		1



Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW048SA-110413** Matrix: Water Sample Depth:
Lab Sample Id: 473402-012 Date Collected: 11.04.13 14.45 Date Received: 11.04.13 16.45
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926990 Date Prep: 11.05.13 16.00
Prep seq: 646538

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.06.13 00:13	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.06.13 00:13	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.06.13 00:13	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	97	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926980 Date Prep: 11.05.13 14.00
Prep seq: 646536

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.05.13 19:11	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.05.13 19:11	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.05.13 19:11	U	1
m,p-Xylenes	179601-23-1	0.00678	0.00200	0.00140	mg/L	11.05.13 19:11		1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.05.13 19:11	U	1
Total Xylenes	1330-20-7	0.00678		0.000700	mg/L	11.05.13 19:11		
Total BTEX		0.00678		0.000500	mg/L	11.05.13 19:11		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	84	80 - 120	%		
4-Bromofluorobenzene	110	80 - 120	%		

Certificate of Analytical Results

473402

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW020A-110413	Matrix: Water	Sample Depth:
Lab Sample Id: 473402-013	Date Collected: 11.04.13 15.45	Date Received: 11.04.13 16.45
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 927007	Date Prep: 11.06.13 10.00	
	Prep seq: 646569	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	960	20.0	0.560	mg/L	11.06.13 23:57		20

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927101	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	3090	5.00	5.00	mg/L	11.08.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927165	
	% Moist:
	Date Prep: 11.08.13 09.30
Subcontractor: SUB: E871002	Prep seq: 646642

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	11.08.13 14:28	U	1
Chromium	7440-47-3	0.00735	0.0100	0.00355	mg/L	11.08.13 14:28	J	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.08.13 14:28	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.08.13 14:28	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927210	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.04.13 19:20	U	1



Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW020A-110413** Matrix: Water Sample Depth:
Lab Sample Id: 473402-013 Date Collected: 11.04.13 15.45 Date Received: 11.04.13 16.45
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926990 Date Prep: 11.05.13 16.00
Prep seq: 646538

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.06.13 00:38	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.06.13 00:38	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.06.13 00:38	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	90	70 - 135	%		
o-Terphenyl	87	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926980 Date Prep: 11.05.13 14.00
Prep seq: 646536

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.05.13 19:59	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.05.13 19:59	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.05.13 19:59	U	1
m,p-Xylenes	179601-23-1	0.00211	0.00200	0.00140	mg/L	11.05.13 19:59		1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.05.13 19:59	U	1
Total Xylenes	1330-20-7	0.00211		0.000700	mg/L	11.05.13 19:59		
Total BTEX		0.00211		0.000500	mg/L	11.05.13 19:59		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	84	80 - 120	%		
4-Bromofluorobenzene	99	80 - 120	%		



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473402



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **Trip Blank** Matrix: Water Sample Depth:
Lab Sample Id: 473402-014 Date Collected: 11.04.13 00.00 Date Received: 11.04.13 16.45
Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926980 Date Prep: 11.05.13 14.00
Prep seq: 646536

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.05.13 20:15	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.05.13 20:15	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.05.13 20:15	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.05.13 20:15	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.05.13 20:15	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.05.13 20:15	U	
Total BTEX		ND		0.000500	mg/L	11.05.13 20:15	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	86	80 - 120	%		
4-Bromofluorobenzene	90	80 - 120	%		

Sample Id: **646536-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646536-1-BLK Date Collected: Date Received:
Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926980 Date Prep: 11.05.13 14.00
Prep seq: 646536

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.05.13 16:31	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.05.13 16:31	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.05.13 16:31	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.05.13 16:31	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.05.13 16:31	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	88	80 - 120	%		
4-Bromofluorobenzene	95	80 - 120	%		



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **646538-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646538-1-BLK Date Collected: Date Received:
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926990 Date Prep: 11.05.13 16.00
Prep seq: 646538

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.05.13 19:00	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.05.13 19:00	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.05.13 19:00	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	107	70 - 135	%		
o-Terphenyl	99	70 - 135	%		

Sample Id: **646541-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646541-1-BLK Date Collected: Date Received:
Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926995 Date Prep: 11.06.13 15.00
Prep seq: 646541

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.06.13 18:31	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.06.13 18:31	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.06.13 18:31	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.06.13 18:31	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.06.13 18:31	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	90	80 - 120	%		
4-Bromofluorobenzene	97	80 - 120	%		



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **646543-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646543-1-BLK Date Collected: Date Received:
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926992 Date Prep: 11.06.13 15.00
Prep seq: 646543

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 00:18	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 00:18	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 00:18	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	124	70 - 135	%		
o-Terphenyl	114	70 - 135	%		

Sample Id: **646568-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646568-1-BLK Date Collected: Date Received:
Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 927060 Date Prep: 11.07.13 08.30
Subcontractor: SUB: E871002 Prep seq: 646568

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	11.07.13 15:21	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.07.13 15:21	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.07.13 15:21	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.07.13 15:21	U	1

Sample Id: **646569-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646569-1-BLK Date Collected: Date Received:
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927007 Date Prep: 11.06.13 10.00
Prep seq: 646569

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	ND	1.00	0.0280	mg/L	11.06.13 12:37	U	1



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **646642-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646642-1-BLK Date Collected: Date Received:
Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 927165 Date Prep: 11.08.13 09.30
Subcontractor: SUB: E871002 Prep seq: 646642

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	11.08.13 13:54	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.08.13 13:54	U	1
Iron	7439-89-6	0.0528	0.200	0.0188	mg/L	11.08.13 13:54	J	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.08.13 13:54	U	1

Sample Id: **927100-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 927100-1-BLK Date Collected: Date Received:
Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927100 Date Prep: Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	ND	5.00	5.00	mg/L	11.07.13 11:00	U	1

Sample Id: **927101-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 927101-1-BLK Date Collected: Date Received:
Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927101 Date Prep: Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	6.50	5.00	5.00	mg/L	11.08.13 10:00		1



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473402



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **927202-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 927202-1-BLK Date Collected: Date Received:
Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 927202 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.04.13 19:20	U	1

Sample Id: **927210-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 927210-1-BLK Date Collected: Date Received:
Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 927210 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.04.13 19:20	U	1

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **SQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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(770) 449-8800	(770) 449-5477
(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: 2nd Semi-Annual GW Monitoring

Work Orders : 473402,

Project ID: 073018-2013-01

Lab Batch #: 926980

Sample: 646536-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 11/05/13 15:11	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0276	0.0300	92	80-120
4-Bromofluorobenzene		0.0303	0.0300	101	80-120

Lab Batch #: 926980

Sample: 646536-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 11/05/13 15:27	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0288	0.0300	96	80-120
4-Bromofluorobenzene		0.0325	0.0300	108	80-120

Lab Batch #: 926980

Sample: 473402-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 11/05/13 15:43	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0277	0.0300	92	80-120
4-Bromofluorobenzene		0.0332	0.0300	111	80-120

Lab Batch #: 926980

Sample: 473402-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 11/05/13 15:59	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0293	0.0300	98	80-120
4-Bromofluorobenzene		0.0327	0.0300	109	80-120

Lab Batch #: 926980

Sample: 646536-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 11/05/13 16:31	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0264	0.0300	88	80-120
4-Bromofluorobenzene		0.0285	0.0300	95	80-120

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: 2nd Semi-Annual GW Monitoring

Work Orders : 473402,

Project ID: 073018-2013-01

Lab Batch #: 926995

Sample: 646541-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 11/06/13 17:11	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0290	0.0300	97	80-120
4-Bromofluorobenzene		0.0326	0.0300	109	80-120

Lab Batch #: 926995

Sample: 646541-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 11/06/13 17:27	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0282	0.0300	94	80-120
4-Bromofluorobenzene		0.0315	0.0300	105	80-120

Lab Batch #: 926995

Sample: 473484-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 11/06/13 17:43	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0245	0.0300	82	80-120
4-Bromofluorobenzene		0.0300	0.0300	100	80-120

Lab Batch #: 926995

Sample: 473484-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 11/06/13 17:59	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0272	0.0300	91	80-120
4-Bromofluorobenzene		0.0302	0.0300	101	80-120

Lab Batch #: 926995

Sample: 646541-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L	Date Analyzed: 11/06/13 18:31	SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0269	0.0300	90	80-120
4-Bromofluorobenzene		0.0291	0.0300	97	80-120

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: 2nd Semi-Annual GW Monitoring

Work Orders : 473402,

Project ID: 073018-2013-01

Lab Batch #: 926990

Sample: 646538-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/05/13 18:06

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.3	10.0	103	70-135	
o-Terphenyl	5.52	5.00	110	70-135	

Lab Batch #: 926990

Sample: 646538-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/05/13 18:33

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.7	10.0	107	70-135	
o-Terphenyl	5.98	5.00	120	70-135	

Lab Batch #: 926990

Sample: 646538-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/05/13 19:00

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.7	10.0	107	70-135	
o-Terphenyl	4.95	5.00	99	70-135	

Lab Batch #: 926990

Sample: 473402-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/05/13 19:54

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.3	10.0	103	70-135	
o-Terphenyl	5.52	5.00	110	70-135	

Lab Batch #: 926990

Sample: 473402-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/05/13 20:21

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.9	10.0	109	70-135	
o-Terphenyl	5.95	5.00	119	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: 2nd Semi-Annual GW Monitoring

Work Orders : 473402,

Project ID: 073018-2013-01

Lab Batch #: 926992

Sample: 646543-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/06/13 23:32

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.2	10.0	112	70-135	
o-Terphenyl	6.04	5.00	121	70-135	

Lab Batch #: 926992

Sample: 646543-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/06/13 23:55

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.7	10.0	117	70-135	
o-Terphenyl	5.77	5.00	115	70-135	

Lab Batch #: 926992

Sample: 646543-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/07/13 00:18

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	12.4	10.0	124	70-135	
o-Terphenyl	5.72	5.00	114	70-135	

Lab Batch #: 926992

Sample: 473484-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/07/13 01:02

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.3	10.0	113	70-135	
o-Terphenyl	5.31	5.00	106	70-135	

Lab Batch #: 926992

Sample: 473484-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/07/13 01:25

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	12.5	10.0	125	70-135	
o-Terphenyl	6.21	5.00	124	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Work Order #: 473402

Project ID: 073018-2013-01

Lab Batch #: 927202

Sample: 927202-1-BKS

Matrix: Water

Date Analyzed: 11/04/2013

Date Prepared: 11/04/2013

Analyst: WRU

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Hexavalent Chromium	<0.00500	0.0200	0.0222	111	80-120	

Lab Batch #: 927210

Sample: 927210-1-BKS

Matrix: Water

Date Analyzed: 11/04/2013

Date Prepared: 11/04/2013

Analyst: WRU

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Hexavalent Chromium	<0.00500	0.0200	0.0223	112	80-120	

Lab Batch #: 927100

Sample: 927100-1-BKS

Matrix: Water

Date Analyzed: 11/07/2013

Date Prepared: 11/07/2013

Analyst: AMB

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

TDS by SM2540C Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Total dissolved solids	<5.00	1000	993	99	80-120	

Lab Batch #: 927101

Sample: 927101-1-BKS

Matrix: Water

Date Analyzed: 11/08/2013

Date Prepared: 11/08/2013

Analyst: AMB

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

TDS by SM2540C Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Total dissolved solids	6.50	1000	1020	102	80-120	

Blank Spike Recovery [D] = 100*[C]/[B]

All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Project Name: 2nd Semi-Annual GW Monitoring

Work Order #: 473402

Project ID: 073018-2013-01

Analyst: ARM

Date Prepared: 11/05/2013

Date Analyzed: 11/05/2013

Lab Batch ID: 926980

Sample: 646536-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000500	0.100	0.0930	93	0.100	0.104	104	11	70-125	25	
Toluene	<0.00100	0.100	0.0951	95	0.100	0.106	106	11	70-125	25	
Ethylbenzene	<0.000700	0.100	0.102	102	0.100	0.114	114	11	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.208	104	0.200	0.232	116	11	70-131	25	
o-Xylene	<0.000700	0.100	0.105	105	0.100	0.117	117	11	71-133	25	

Analyst: ARM

Date Prepared: 11/06/2013

Date Analyzed: 11/06/2013

Lab Batch ID: 926995

Sample: 646541-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000500	0.100	0.0998	100	0.100	0.0971	97	3	70-125	25	
Toluene	<0.00100	0.100	0.101	101	0.100	0.0993	99	2	70-125	25	
Ethylbenzene	<0.000700	0.100	0.106	106	0.100	0.105	105	1	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.217	109	0.200	0.213	107	2	70-131	25	
o-Xylene	<0.000700	0.100	0.110	110	0.100	0.108	108	2	71-133	25	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Project Name: 2nd Semi-Annual GW Monitoring

Work Order #: 473402

Project ID: 073018-2013-01

Analyst: MKO

Date Prepared: 11/07/2013

Date Analyzed: 11/07/2013

Lab Batch ID: 927060

Sample: 646568-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Dissolved Metals per ICP by SW846 6010B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Arsenic	<0.00756	1.00	1.00	100	1.00	0.999	100	0	80-120	20	
Chromium	<0.00355	1.00	1.01	101	1.00	1.01	101	0	80-120	20	
Iron	<0.0188	5.00	5.05	101	5.00	5.06	101	0	80-120	20	
Manganese	<0.00291	1.00	0.978	98	1.00	1.00	100	2	80-120	20	

Analyst: MKO

Date Prepared: 11/08/2013

Date Analyzed: 11/08/2013

Lab Batch ID: 927165

Sample: 646642-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Dissolved Metals per ICP by SW846 6010B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Arsenic	<0.00756	1.00	0.967	97	1.00	0.961	96	1	80-120	20	
Chromium	<0.00355	1.00	0.996	100	1.00	0.989	99	1	80-120	20	
Iron	0.0528	5.00	5.07	101	5.00	5.01	100	1	80-120	20	
Manganese	<0.00291	1.00	0.979	98	1.00	0.988	99	1	80-120	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Project Name: 2nd Semi-Annual GW Monitoring

Work Order #: 473402

Project ID: 073018-2013-01

Analyst: AMB

Date Prepared: 11/06/2013

Date Analyzed: 11/06/2013

Lab Batch ID: 927007

Sample: 646569-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.0280	25.0	23.5	94	25.0	23.4	94	0	80-120	20	

Analyst: ARM

Date Prepared: 11/05/2013

Date Analyzed: 11/05/2013

Lab Batch ID: 926990

Sample: 646538-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C10 Gasoline Range Hydrocarbons	<0.988	100	97.1	97	100	106	106	9	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	101	101	100	111	111	9	70-135	25	

Analyst: ARM

Date Prepared: 11/06/2013

Date Analyzed: 11/06/2013

Lab Batch ID: 926992

Sample: 646543-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C10 Gasoline Range Hydrocarbons	<0.988	100	126	126	100	122	122	3	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	124	124	100	122	122	2	70-135	25	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

Project Name: 2nd Semi-Annual GW Monitoring



Work Order #: 473402

Lab Batch #: 927007

Date Analyzed: 11/06/2013

QC- Sample ID: 473393-001 S

Reporting Units: mg/L

Date Prepared: 11/06/2013

Batch #: 1

Project ID: 073018-2013-01

Analyst: AMB

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	615	500	1190	115	80-120	

Lab Batch #: 927007

Date Analyzed: 11/06/2013

QC- Sample ID: 473402-005 S

Reporting Units: mg/L

Date Prepared: 11/06/2013

Batch #: 1

Analyst: AMB

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	1150	1250	2450	104	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: 2nd Semi-Annual GW Monitoring

Work Order # : 473402

Project ID: 073018-2013-01

Lab Batch ID: 926980

QC- Sample ID: 473402-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/05/2013

Date Prepared: 11/05/2013

Analyst: ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.00615	0.100	0.111	105	0.100	0.108	102	3	70-125	25	
Toluene	0.00682	0.100	0.110	103	0.100	0.107	100	3	70-125	25	
Ethylbenzene	0.00293	0.100	0.116	113	0.100	0.113	110	3	71-129	25	
m,p-Xylenes	0.00267	0.200	0.235	116	0.200	0.231	114	2	70-131	25	
o-Xylene	<0.000700	0.100	0.118	118	0.100	0.115	115	3	71-133	25	

Lab Batch ID: 926995

QC- Sample ID: 473484-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/06/2013

Date Prepared: 11/06/2013

Analyst: ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.00306	0.100	0.0969	94	0.100	0.0927	90	4	70-125	25	
Toluene	<0.00100	0.100	0.100	100	0.100	0.0940	94	6	70-125	25	
Ethylbenzene	<0.000700	0.100	0.106	106	0.100	0.100	100	6	71-129	25	
m,p-Xylenes	0.00302	0.200	0.217	107	0.200	0.204	100	6	70-131	25	
o-Xylene	<0.000700	0.100	0.109	109	0.100	0.104	104	5	71-133	25	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery [G] = $100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries



Project Name: 2nd Semi-Annual GW Monitoring

Work Order # : 473402

Project ID: 073018-2013-01

Lab Batch ID: 927202

QC- Sample ID: 473402-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/04/2013

Date Prepared: 11/04/2013

Analyst: WRU

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Hexavalent Chromium	0.0193	0.200	0.221	101	0.200	0.222	101	0	80-120	20	

Lab Batch ID: 927210

QC- Sample ID: 473427-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/04/2013

Date Prepared: 11/04/2013

Analyst: WRU

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Hexavalent Chromium	0.0302	0.200	0.238	104	0.200	0.232	101	3	80-120	20	

Lab Batch ID: 927060

QC- Sample ID: 473290-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/07/2013

Date Prepared: 11/07/2013

Analyst: MKO

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Dissolved Metals per ICP by SW846 6010B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Arsenic	0.00855	1.00	1.05	104	1.00	1.03	102	2	75-125	20	
Chromium	0.138	1.00	1.10	96	1.00	1.08	94	2	75-125	20	
Iron	<0.0188	5.00	4.63	93	5.00	4.52	90	2	75-125	20	
Manganese	0.0211	1.00	0.948	93	1.00	0.968	95	2	75-125	20	

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries



Project Name: 2nd Semi-Annual GW Monitoring

Work Order # : 473402

Project ID: 073018-2013-01

Lab Batch ID: 927165

QC- Sample ID: 473402-012 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/08/2013

Date Prepared: 11/08/2013

Analyst: MKO

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Dissolved Metals per ICP by SW846 6010B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Arsenic	0.0117	1.00	1.00	99	1.00	1.01	100	1	75-125	20	
Chromium	0.475	1.00	1.41	94	1.00	1.40	93	1	75-125	20	
Iron	<0.0188	5.00	4.62	92	5.00	4.59	92	1	75-125	20	
Manganese	0.0322	1.00	0.937	90	1.00	0.935	90	0	75-125	20	

Lab Batch ID: 926990

QC- Sample ID: 473402-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/05/2013

Date Prepared: 11/05/2013

Analyst: ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<0.988	100	99.9	100	100	105	105	5	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	98.0	98	100	105	105	7	70-135	25	

Lab Batch ID: 926992

QC- Sample ID: 473484-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/07/2013

Date Prepared: 11/06/2013

Analyst: ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<0.988	100	118	118	100	121	121	3	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	117	117	100	127	127	8	70-135	25	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Project Name: 2nd Semi-Annual GW Monitoring

Work Order #: 473402

Lab Batch #: 927100

Project ID: 073018-2013-01

Date Analyzed: 11/07/2013 11:00

Date Prepared: 11/07/2013

Analyst: AMB

QC- Sample ID: 473290-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	2030	2090	3	10	

Lab Batch #: 927100

Date Analyzed: 11/07/2013 11:00

Date Prepared: 11/07/2013

Analyst: AMB

QC- Sample ID: 473393-006 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	2650	2870	8	10	

Lab Batch #: 927101

Date Analyzed: 11/08/2013 10:00

Date Prepared: 11/08/2013

Analyst: AMB

QC- Sample ID: 473402-009 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	1320	1320	0	10	

Lab Batch #: 927101

Date Analyzed: 11/08/2013 10:00

Date Prepared: 11/08/2013

Analyst: AMB

QC- Sample ID: 473484-006 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	3960	4300	8	10	

Spike Relative Difference $RPD = 200 * |(B-A)/(B+A)|$
 All Results are based on MDL and validated for QC purposes.
 BRL - Below Reporting Limit



CHAIN OF CUSTODY RECORD

Page 2 of 2

LAB W.O. #:

473402

Field billable Hrs.:

TAT

Work Days = D

Need results by:

Time:

Sid (5-7D) Same Day 1D 2D 3D 4D 5D 7D 10D 14D Other

Size(s): 2oz, 4oz, 8oz, 16oz, 32oz, 1Gal

Company: DRA
Address: 2315 Loop 250W
City: Midland
St TX
Zip: 79703
Phone: 432.686.0086
Fax:

Project ID/ Location: 1st Semi-Annual GW Monitoring, 073018-2013-01
PM/Attn: Claudia Ramos
PO#:
Invoice To: CRAs Niagra Falls Location
Quote #:

* Container Type Codes			
VA Vial Amber	ES	Entire Sampler	
VC Vial Clear	TS	TerraCore Sampler	
VP Vial Pre-preserved	AC	Air Canister	
GA Glass Amber	TB	Tedlar Bag	
GC Glass Clear	ZB	Zip Lock Bag	
PA Plastic Amber	PC	Plastic Clear	
Other:			

** Preservative Type Codes

A. None	E. HCL	I. Ice
B. HNO ₃	F. MeOH	J. MCAA
C. H ₂ SO ₄	G. Na ₂ S ₂ O ₈	K. ZnAc2/NaOH
D. NaOH	H. NaHSO ₄	L. Aspc Acid/NaOH
O		

^ Matrix Type Codes

GW Ground Water	S	W Wipe
SS Sediment/Solid	A Air	O Oil
WW Waste Water	T Tissue	U Urine
DW Drinking Water	B Blood	
SW Surface Water		
OW Ocean/Sea Water		
PL Product-Liquid		
PS Product-Solid		
Sl Sludge		

REMARKS

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code	Field Filtered	Depth	Total # of containers	# Cont	Example Volatiles by 8260									
									VP	VP	GC	GC	GC	GC	GC	GC	GC	GC
11	11-28-110413	6/16/04	11:35	GW	X	6"	2		BTEX	TPH-GRO & DRO	Dissolved Metals (As, Cr, Fe, Mn)	TDS	Hexavalent Chromium	Chloride	TAC-Ammoinum	Total Cr, Mg, Mn	Total Microbial	Sulfide
12	11-28-110413		1445	GW			6		X	X	X	X	X	X	X	X	X	X
13	11-28-110413		1545	GW			6		X	X	X	X	X	X	X	X	X	X
14				GW			6		X	X	X	X	X	X	X	X	X	X
15				GW			6		X	X	X	X	X	X	X	X	X	X
16	Trip Blank			GW			2		X									
17				GW														
18				GW														
19				GW														
20				GW														
Reg. Program / Clean-up Std																		
CLTs TRRP DW NPDES LPST Dych				STATE for Certs & Regs				QA/QC Level & Certification				EDDs				COC & Labels		
Other:				FL TX GA NC SC NJ PA OK				1 2 3 4 CLP AFCEE OAPP				ADAPT SEDD ERPIMS				Match Incomplete		
Relinquished by				LA AL NM Other:				NELAC DOD-ELAP Other:				XLS Other:				Absent Unclear		
1																		
2																		
3																		
4																		

B&A Laboratories: Hobbs 575-392-7550 Dallas 214-902-0300 Houston 281-242-4200 Odessa 432-563-1800 San Antonio 210-509-3334 Phoenix 602-437-0330
FTS Service Centers: Atlanta 770-449-8800 Lakeland 863-646-8526 Tampa 803-543-8099 Philadelphia 610-955-5649 South Carolina 803-543-8099

C.O.C. Serial #

Execution of this document by client creates a legal and binding agreement between client and Xenco for analytical and testing services provided by Xenco to client under Xenco's standard terms and conditions unless previously agreed in writing. Terms of payment are Net 30 days, and all past due amounts shall accrue interest at 1.5% per month until paid in full. All laboratory analytical data and reports generated by Xenco remain the exclusive property of Xenco until invoices for such data are paid in full.

Revision Date: Nov 12, 2009



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Conestoga Rovers & Associates

Date/ Time Received: 11/04/2013 04:45:00 PM

Work Order #: 473402

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	0
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO ₃ , HCL, H ₂ SO ₄ ?	Yes
#22 >10 for all samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: Kelsey Brooks
Kelsey Brooks

Date: 11/05/2013

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks

Date: 11/05/2013

Analytical Report 473427

for

Conestoga Rovers & Associates

Project Manager: Claudia Ramos

N. Eunice- Soy Lactate

073018

13-NOV-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-13-15-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



13-NOV-13

Project Manager: **Claudia Ramos**

Conestoga Rovers & Associates

2135 S Loop 250 W

Midland, TX 79703

Reference: XENCO Report No(s): **473427**

N. Eunice- Soy Lactate

Project Address: New Mexico

Claudia Ramos:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 473427. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 473427 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks

Project Manager

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Sample Cross Reference 473427



Conestoga Rovers & Associates, Midland, TX

N. Eunice- Soy Lactate

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
IW28-110413	W	11-04-13 09:20		473427-001



CASE NARRATIVE



Client Name: Conestoga Rovers & Associates

Project Name: N. Eunice- Soy Lactate

Project ID: 073018

Work Order Number(s): 473427

Report Date: 13-NOV-13

Date Received: 11/04/2013

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-926964 TOC by SM 5310C
SM5310C

Batch 926964, Total Organic Carbon recovered below QC limits in the Matrix Spike.

Samples affected are: 473427-001.

The Laboratory Control Sample for Total Organic Carbon is within laboratory Control Limits

Batch: LBA-927013 Sulfide by SM4500-S-F-00

Nor enough sample for duplicate

Batch: LBA-927060 Total Metals by EPA 6010B
SW6010B

Batch 927060, Sodium recovered below QC limits in the Matrix Spike Duplicate.

Samples affected are: 473427-001.

The Laboratory Control Sample for Sodium is within laboratory Control Limits

Certificate of Analysis Summary 473427

Conestoga Rovers & Associates, Midland, TX



Project Id: 073018

Contact: Claudia Ramos

Project Location: New Mexico

Project Name: N. Eunice- Soy Lactate

Date Received in Lab: Mon Nov-04-13 04:45 pm

Report Date: 13-NOV-13

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id: 473427-001 Field Id: IW28-110413 Depth: Matrix: WATER Sampled: Nov-04-13 09:20					
Chromium, Hexavalent by SW 7196A	Extracted: Analyzed: Nov-04-13 19:20 Units/RL: mg/L RL					
Hexavalent Chromium	0.0302 0.0100					
Dissolved Metals per ICP by SW846 6010B SUB: E871002	Extracted: Nov-07-13 10:00 Analyzed: Nov-07-13 16:45 Units/RL: mg/L RL					
Chromium	0.0394 0.0100					
Iron	ND 0.200					
Sodium	296 0.500					
Inorganic Anions by EPA 300/300.1	Extracted: Nov-06-13 10:00 Analyzed: Nov-07-13 00:20 Units/RL: mg/L RL					
Bromide	ND 8.00					
Sulfate	500 40.0					
Nitrogen Ammonia by EPA 350.1 SUB: E871002	Extracted: Nov-06-13 12:56 Analyzed: Nov-06-13 13:57 Units/RL: mg/L RL					
Nitrogen, Ammonia (as N)	ND 0.100					
Sulfide by SM4500-S-F-00 SUB: E871002	Extracted: Analyzed: Nov-07-13 13:06 Units/RL: mg/L RL					
Sulfide, total	ND 5.00					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi



Kelsey Brooks
Project Manager



Certificate of Analysis Summary 473427

Conestoga Rovers & Associates, Midland, TX

Project Name: N. Eunice- Soy Lactate



Project Id: 073018

Contact: Claudia Ramos

Project Location: New Mexico

Date Received in Lab: Mon Nov-04-13 04:45 pm

Report Date: 13-NOV-13

Project Manager: Kelsey Brooks

Analysis Requested	Lab Id: 473427-001 Field Id: IW28-110413 Depth: Matrix: WATER Sampled: Nov-04-13 09:20					
TOC by SM 5310C SUB: E871002	Extracted: Nov-06-13 11:00 Analyzed: Nov-06-13 14:23 Units/RL: mg/L RL					
Total Organic Carbon	4.24 1.00					
Total Metals by EPA 6010B SUB: E871002	Extracted: Nov-07-13 08:30 Analyzed: Nov-07-13 16:56 Units/RL: mg/L RL					
Chromium	0.0394 0.0100					
Iron	ND 0.200					
Sodium	292 0.500					

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Kelsey Brooks
Project Manager

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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 12600 West I-20 East, Odessa, TX 79765
 6017 Financial Drive, Norcross, GA 30071
 3725 E. Atlanta Ave, Phoenix, AZ 85040

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(214) 902 0300	(214) 351-9139
(210) 509-3334	(210) 509-3335
(813) 620-2000	(813) 620-2033
(432) 563-1800	(432) 563-1713
(770) 449-8800	(770) 449-5477
(602) 437-0330	

Work Order #: 473427

Project ID:

073018

Lab Batch #: 927210

Sample: 927210-1-BKS

Matrix: Water

Date Analyzed: 11/04/2013

Date Prepared: 11/04/2013

Analyst: WRU

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Hexavalent Chromium	<0.0100	0.0200	0.0223	112	80-120	

Lab Batch #: 926927

Sample: 646512-1-BKS

Matrix: Water

Date Analyzed: 11/06/2013

Date Prepared: 11/06/2013

Analyst: DEP

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Nitrogen Ammonia by EPA 350.1	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Nitrogen, Ammonia (as N)	<0.100	2.50	2.67	107	90-110	

Lab Batch #: 926964

Sample: 646551-1-BKS

Matrix: Water

Date Analyzed: 11/06/2013

Date Prepared: 11/06/2013

Analyst: RKO

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

TOC by SM 5310C	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Analytes						
Total Organic Carbon	<1.00	10.0	11.0	110	90-110	

Blank Spike Recovery [D] = 100*[C]/[B]

All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Project Name: N. Eunice- Soy Lactate

Work Order #: 473427, 473427

Project ID: 073018

Analyst: AMB

Date Prepared: 11/06/2013

Date Analyzed: 11/06/2013

Lab Batch ID: 927007

Sample: 646569-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Bromide	<0.400	5.00	4.03	81	5.00	4.05	81	0	80-120	20	
Sulfate	<2.00	25.0	24.2	97	25.0	24.2	97	0	80-120	20	

Analyst: DHE

Date Prepared: 11/07/2013

Date Analyzed: 11/07/2013

Lab Batch ID: 927013

Sample: 927013-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Sulfide by SM4500-S-F-00	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Sulfide, total	<5.00	50.0	43.0	86	50.0	43.8	88	2	80-120	20	

Analyst: MKO

Date Prepared: 11/07/2013

Date Analyzed: 11/07/2013

Lab Batch ID: 927060

Sample: 646568-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Total Metals by EPA 6010B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chromium	<0.0100	1.00	1.01	101	1.00	1.01	101	0	80-120	20	
Iron	<0.200	5.00	5.05	101	5.00	5.06	101	0	80-120	20	
Sodium	<0.500	25.0	24.7	99	25.0	24.7	99	0	80-120	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Work Order #: 473427

Lab Batch #: 927007

Date Analyzed: 11/06/2013

QC- Sample ID: 473393-001 S

Reporting Units: mg/L

Date Prepared: 11/06/2013

Batch #: 1

Project ID: 073018

Analyst: AMB

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Bromide	<8.00	100	88.0	88	80-120	
Sulfate	781	500	1350	114	80-120	

Lab Batch #: 927007

Date Analyzed: 11/06/2013

QC- Sample ID: 473402-005 S

Reporting Units: mg/L

Date Prepared: 11/06/2013

Batch #: 1

Analyst: AMB

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Bromide	<20.0	250	221	88	80-120	
Sulfate	881	1250	2100	98	80-120	

Lab Batch #: 926964

Date Analyzed: 11/06/2013

QC- Sample ID: 473352-040 S

Reporting Units: mg/L

Date Prepared: 11/06/2013

Batch #: 1

Analyst: RKO

Matrix: Surface Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
TOC by SM 5310C	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Total Organic Carbon	19.3	10.0	26.1	68	90-110	X

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
 Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$
 All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: N. Eunice- Soy Lactate

Work Order # : 473427

Project ID: 073018

Lab Batch ID: 927210

QC- Sample ID: 473427-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/04/2013

Date Prepared: 11/04/2013

Analyst: WRU

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Hexavalent Chromium	0.0302	0.200	0.238	104	0.200	0.232	101	3	80-120	20	

Lab Batch ID: 926927

QC- Sample ID: 473131-004 S

Batch #: 1 Matrix: Aqueous

Date Analyzed: 11/06/2013

Date Prepared: 11/06/2013

Analyst: DEP

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Nitrogen Ammonia by EPA 350.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Nitrogen, Ammonia (as N)	<0.100	2.50	2.39	96	2.50	2.45	98	2	90-110	20	

Lab Batch ID: 926927

QC- Sample ID: 473158-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/06/2013

Date Prepared: 11/06/2013

Analyst: DEP

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Nitrogen Ammonia by EPA 350.1 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Nitrogen, Ammonia (as N)	3.04	2.50	5.69	106	2.50	5.76	109	1	90-110	20	

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Project Name: N. Eunice- Soy Lactate

Work Order # : 473427

Project ID: 073018

Lab Batch ID: 926964

QC- Sample ID: 473427-001 S

Batch #: 1 **Matrix:** Water

Date Analyzed: 11/06/2013

Date Prepared: 11/06/2013

Analyst: RKO

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TOC by SM 5310C Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Total Organic Carbon	4.24	10.0	15.7	115	10.0	15.7	115	0	90-110	20	X

Lab Batch ID: 927060

QC- Sample ID: 473290-001 S

Batch #: 1 **Matrix:** Water

Date Analyzed: 11/07/2013

Date Prepared: 11/07/2013

Analyst: MKO

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Total Metals by EPA 6010B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chromium	0.138	1.00	1.10	96	1.00	1.08	94	2	80-120	20	
Iron	<0.200	5.00	4.63	93	5.00	4.52	90	2	80-120	20	
Sodium	194	25.0	216	88	25.0	211	68	2	75-125	20	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Conestoga Rovers & Associates

Date/ Time Received: 11/04/2013 04:45:00 PM

Work Order #: 473427

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	0
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#21 <2 for all samples preserved with HNO ₃ ,HCL, H ₂ SO ₄ ?	Yes
#22 >10 for all samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by:

Candace James

Candace James

Date: 11/05/2013

Checklist reviewed by:

Kelsey Brooks

Kelsey Brooks

Date: 11/05/2013

(Hygeia SOP-09)



Hygeia Laboratories Inc.

3626 Westchase Drive

Houston, TX 77042

(713) 343-4483 (713) 977-1963 Fax

www.hygeialabsinc.com

Client No.: 30311 Kelsey Brooks Xenco Laboratories (Odessa) 12600 West I-20 East Odessa, TX 79765	Project No.: 1018365 Project Name: Collected: 11/04/2013 9:20 AM Received: 11/06/2013 Analyzed: 11/11/2013 4:30 PM
---	--

Hygeia Sample ID	105495
Client Sample ID	473427-001
Location	IW28-110413
Sample Type	Water
Sample Amount	0.1 mL
Medium / Method	SM 9215
Dilution Factor(s)	1:1

Bacteria Isolated:

[illegible]

Quantitative Bacterial Report

Heterotrophic Plate Count

(Hygeia SOP-09)



Hygeia Laboratories Inc.

3626 Westchase Drive

Houston, TX 77042

(713) 343-4483 (713) 977-1963 Fax

www.hygeialabsinc.com

Client No.: 30311

Kelsey Brooks

Xenco Laboratories (Odessa)

12600 West I-20 East

Odessa, TX 79765

Project No.: 1018365

Project Name:

Collected: 11/04/2013 9:20 AM

Received: 11/06/2013

Analyzed: 11/11/2013 4:30 PM

Analyst

Vanessa Garcia

Lab Director

Crystal Enloe

Thank you for using Hygeia Laboratories Inc. We strive to provide superior quality and service.

This report may not be reproduced except in full, and only with the written approval of this laboratory. Please contact Hygeia regarding any questions about these results, this report, or the analytical methods employed.

Data in this report are reliable within two significant figures. Sample results are not corrected based on results of blanks. The minimum reporting limit (MRL) is calculated as the lowest dilution tested/volume. Estimates of uncertainty are available upon request. CFU = colony forming units. CFU/unit is calculated as raw count*dilution/sample amount. Total CFU/unit is the sum of individual CFUs/unit and is considered <MRL if no colonies are present.

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Interpretation of the data and information within this document is left to the company, consultant, and/or persons who conducted the fieldwork.

Bacteria have been associated with a variety of health effects and sensitivity varies from person to person. Contact the CDC (www.cdc.gov) for information regarding potential health risks related to exposure in air or on surfaces and the USEPA (www.epa.gov) for existing established standards including regulated water quality standards.

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Revision 0 11/12/2013 ce

Analytical Report 473484

for

Conestoga Rovers & Associates

Project Manager: Claudia Ramos

2nd Semi-Annual GW Monitoring

073018-2013-01

19-NOV-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-13-15-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



19-NOV-13

Project Manager: **Claudia Ramos**

Conestoga Rovers & Associates

2135 S Loop 250 W

Midland, TX 79703

Reference: XENCO Report No(s): **473484**

2nd Semi-Annual GW Monitoring

Project Address: New Mexico

Claudia Ramos:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 473484. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 473484 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks

Project Manager

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW16A-110513	W	11-05-13 09:45		473484-001
MW15A-110513	W	11-05-13 11:20		473484-002
MW15-110513	W	11-05-13 14:15		473484-003
MW26-110513	W	11-05-13 14:45		473484-004
MW27-110513	W	11-05-13 13:25		473484-005
MW18-110513	W	11-05-13 11:20		473484-006
LordWW-110513	W	11-05-13 09:10		473484-007
MW19A-110513	W	11-05-13 10:20		473484-008
MW19-110513	W	11-05-13 15:35		473484-009
MW14A-110513	W	11-05-13 16:15		473484-010
DUP4-110513	W	11-05-13 00:00		473484-011
DUP5-110513	W	11-05-13 00:00		473484-012
Trip Blank	W	11-05-13 16:15		473484-013



CASE NARRATIVE



Client Name: *Conestoga Rovers & Associates*

Project Name: *2nd Semi-Annual GW Monitoring*

Project ID: 073018-2013-01
Work Order Number(s): 473484

Report Date: 19-NOV-13
Date Received: 11/05/2013

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results

473484

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW16A-110513	Matrix: Water	Sample Depth:
Lab Sample Id: 473484-001	Date Collected: 11.05.13 09.45	Date Received: 11.05.13 19.15
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 927203	Date Prep: 11.07.13 14.29	
	Prep seq: 646629	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	541	20.0	0.560	mg/L	11.07.13 14:29		20

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927101	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1790	5.00	5.00	mg/L	11.08.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927452	
	% Moist:
	Date Prep: 11.11.13 07.00
Subcontractor: SUB: E871002	Prep seq: 646716

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.00924	0.0200	0.00756	mg/L	11.12.13 20:33	J	1
Chromium	7440-47-3	0.00397	0.0100	0.00355	mg/L	11.12.13 20:33	J	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.12.13 20:33	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.12.13 20:33	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927270	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.05.13 19:25	U	1



Certificate of Analytical Results

473484



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW16A-110513** Matrix: Water Sample Depth:
Lab Sample Id: 473484-001 Date Collected: 11.05.13 09.45 Date Received: 11.05.13 19.15
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926992 Date Prep: 11.06.13 15.00
Prep seq: 646543

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 00:40	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 00:40	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 00:40	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	110	70 - 135	%		
o-Terphenyl	101	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926995 Date Prep: 11.06.13 15.00
Prep seq: 646541

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	0.00306	0.00100	0.000500	mg/L	11.06.13 18:47		1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.06.13 18:47	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.06.13 18:47	U	1
m,p-Xylenes	179601-23-1	0.00302	0.00200	0.00140	mg/L	11.06.13 18:47		1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.06.13 18:47	U	1
Total Xylenes	1330-20-7	0.00302		0.000700	mg/L	11.06.13 18:47		
Total BTEX		0.00608		0.000500	mg/L	11.06.13 18:47		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	81	80 - 120	%		
4-Bromofluorobenzene	97	80 - 120	%		

Certificate of Analytical Results

473484

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW15A-110513	Matrix: Water	Sample Depth:
Lab Sample Id: 473484-002	Date Collected: 11.05.13 11.20	Date Received: 11.05.13 19.15
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 927203	Date Prep: 11.07.13 15.14	
	Prep seq: 646629	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	205	10.0	0.280	mg/L	11.07.13 15:14		10

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927101	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1230	5.00	5.00	mg/L	11.08.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927452	
	% Moist:
	Date Prep: 11.11.13 07.00
Subcontractor: SUB: E871002	Prep seq: 646716

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	11.12.13 21:01	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.12.13 21:01	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.12.13 21:01	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.12.13 21:01	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927270	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.05.13 19:25	U	1



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW15A-110513** Matrix: Water Sample Depth:
Lab Sample Id: 473484-002 Date Collected: 11.05.13 11.20 Date Received: 11.05.13 19.15
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926992 Date Prep: 11.06.13 15.00
Prep seq: 646543

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 01:47	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 01:47	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 01:47	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	108	70 - 135	%		
o-Terphenyl	98	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926995 Date Prep: 11.06.13 15.00
Prep seq: 646541

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.06.13 19:03	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.06.13 19:03	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.06.13 19:03	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.06.13 19:03	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.06.13 19:03	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.06.13 19:03	U	
Total BTEX		ND		0.000500	mg/L	11.06.13 19:03	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	81	80 - 120	%		
4-Bromofluorobenzene	100	80 - 120	%		



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW15-110513** Matrix: Water Sample Depth:
Lab Sample Id: 473484-003 Date Collected: 11.05.13 14.15 Date Received: 11.05.13 19.15
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927203 Date Prep: 11.07.13 15.37
Prep seq: 646629

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	543	20.0	0.560	mg/L	11.07.13 15:37		20

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927101 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	2250	5.00	5.00	mg/L	11.08.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 927452 Date Prep: 11.11.13 07.00
Subcontractor: SUB: E871002 Prep seq: 646716

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0120	0.0200	0.00756	mg/L	11.12.13 21:07	J	1
Chromium	7440-47-3	0.00624	0.0100	0.00355	mg/L	11.12.13 21:07	J	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.12.13 21:07	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.12.13 21:07	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 927270 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.05.13 19:25	U	1



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW15-110513** Matrix: Water Sample Depth:
Lab Sample Id: 473484-003 Date Collected: 11.05.13 14.15 Date Received: 11.05.13 19.15
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926992 Date Prep: 11.06.13 15.00
Prep seq: 646543

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 02:10	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 02:10	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 02:10	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	125	70 - 135	%		
o-Terphenyl	115	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926995 Date Prep: 11.06.13 15.00
Prep seq: 646541

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.06.13 19:19	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.06.13 19:19	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.06.13 19:19	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.06.13 19:19	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.06.13 19:19	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.06.13 19:19	U	
Total BTEX		ND		0.000500	mg/L	11.06.13 19:19	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	83	80 - 120	%		
4-Bromofluorobenzene	101	80 - 120	%		



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW26-110513**

Matrix: Water

Sample Depth:

Lab Sample Id: 473484-004

Date Collected: 11.05.13 14.45

Date Received: 11.05.13 19.15

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 927203

Date Prep: 11.07.13 15.59

Prep seq: 646629

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	544	20.0	0.560	mg/L	11.07.13 15:59		20

Analytical Method: TDS by SM2540C

Prep Method:

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 927101

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	3020	5.00	5.00	mg/L	11.08.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B

Prep Method: 3010A

Analyst: MKO

% Moist:

Tech: MKO

Seq Number: 927452

Date Prep: 11.11.13 07.00

Subcontractor: SUB: E871002

Prep seq: 646716

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.00883	0.0200	0.00756	mg/L	11.12.13 21:24	J	1
Chromium	7440-47-3	0.00598	0.0100	0.00355	mg/L	11.12.13 21:24	J	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.12.13 21:24	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.12.13 21:24	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 927270

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.05.13 19:25	U	1



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW26-110513** Matrix: Water Sample Depth:
Lab Sample Id: 473484-004 Date Collected: 11.05.13 14.45 Date Received: 11.05.13 19.15
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926992 Date Prep: 11.06.13 15.00
Prep seq: 646543

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 02:32	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 02:32	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 02:32	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	114	70 - 135	%		
o-Terphenyl	105	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926995 Date Prep: 11.06.13 15.00
Prep seq: 646541

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.06.13 19:35	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.06.13 19:35	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.06.13 19:35	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.06.13 19:35	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.06.13 19:35	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.06.13 19:35	U	
Total BTEX		ND		0.000500	mg/L	11.06.13 19:35	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	84	80 - 120	%		
4-Bromofluorobenzene	95	80 - 120	%		

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW27-110513	Matrix: Water	Sample Depth:
Lab Sample Id: 473484-005	Date Collected: 11.05.13 13.25	Date Received: 11.05.13 19.15
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 927203	Date Prep: 11.07.13 16.22	
	Prep seq: 646629	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	250	20.0	0.560	mg/L	11.07.13 16:22		20

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927101	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1470	5.00	5.00	mg/L	11.08.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927452	
	% Moist:
	Date Prep: 11.11.13 07.00
Subcontractor: SUB: E871002	Prep seq: 646716

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	11.12.13 21:29	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.12.13 21:29	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.12.13 21:29	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.12.13 21:29	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927270	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.05.13 19:25	U	1



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2nd Semi-Annual GW Monitoring

Sample Id: **MW27-110513** Matrix: Water Sample Depth:
Lab Sample Id: 473484-005 Date Collected: 11.05.13 13.25 Date Received: 11.05.13 19.15
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926992 Date Prep: 11.06.13 15.00
Prep seq: 646543

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 02:55	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 02:55	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 02:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	124	70 - 135	%		
o-Terphenyl	114	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926995 Date Prep: 11.06.13 15.00
Prep seq: 646541

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.06.13 19:51	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.06.13 19:51	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.06.13 19:51	U	1
m,p-Xylenes	179601-23-1	0.00268	0.00200	0.00140	mg/L	11.06.13 19:51		1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.06.13 19:51	U	1
Total Xylenes	1330-20-7	0.00268		0.000700	mg/L	11.06.13 19:51		
Total BTEX		0.00268		0.000500	mg/L	11.06.13 19:51		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	81	80 - 120	%		
4-Bromofluorobenzene	99	80 - 120	%		

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW18-110513** Matrix: Water Sample Depth:
 Lab Sample Id: 473484-006 Date Collected: 11.05.13 11.20 Date Received: 11.05.13 19.15
 Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
 Analyst: AMB % Moist: Tech: AMB
 Seq Number: 927203 Date Prep: 11.07.13 16.45
 Prep seq: 646629

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1620	50.0	1.40	mg/L	11.07.13 16:45		50

Analytical Method: TDS by SM2540C Prep Method:
 Analyst: AMB % Moist: Tech: AMB
 Seq Number: 927101 Date Prep:
 Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	3960	5.00	5.00	mg/L	11.08.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
 Analyst: MKO % Moist: Tech: MKO
 Seq Number: 927452 Date Prep: 11.11.13 07.00
 Subcontractor: SUB: E871002 Prep seq: 646716

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	11.12.13 21:35	U	1
Chromium	7440-47-3	0.00495	0.0100	0.00355	mg/L	11.12.13 21:35	J	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.12.13 21:35	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.12.13 21:35	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
 Analyst: WRU % Moist: Tech: WRU
 Seq Number: 927270 Date Prep:
 Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.05.13 19:25	U	1



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW18-110513** Matrix: Water Sample Depth:
Lab Sample Id: 473484-006 Date Collected: 11.05.13 11.20 Date Received: 11.05.13 19.15
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926992 Date Prep: 11.06.13 15.00
Prep seq: 646543

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 03:17	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 03:17	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 03:17	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	117	70 - 135	%		
o-Terphenyl	108	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926995 Date Prep: 11.06.13 15.00
Prep seq: 646541

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.06.13 20:07	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.06.13 20:07	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.06.13 20:07	U	1
m,p-Xylenes	179601-23-1	0.00327	0.00200	0.00140	mg/L	11.06.13 20:07		1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.06.13 20:07	U	1
Total Xylenes	1330-20-7	0.00327		0.000700	mg/L	11.06.13 20:07		
Total BTEX		0.00327		0.000500	mg/L	11.06.13 20:07		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	82	80 - 120	%		
4-Bromofluorobenzene	102	80 - 120	%		

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: LordWW-110513	Matrix: Water	Sample Depth:
Lab Sample Id: 473484-007	Date Collected: 11.05.13 09.10	Date Received: 11.05.13 19.15
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 927203	Date Prep: 11.07.13 17.53	
	Prep seq: 646629	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1320	50.0	1.40	mg/L	11.07.13 17:53		50

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927101	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	2600	5.00	5.00	mg/L	11.08.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927452	
	% Moist:
	Date Prep: 11.11.13 07.00
Subcontractor: SUB: E871002	Prep seq: 646716

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	11.12.13 21:41	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.12.13 21:41	U	1
Iron	7439-89-6	0.507	0.200	0.0188	mg/L	11.12.13 21:41		1
Manganese	7439-96-5	0.261	0.0200	0.00291	mg/L	11.12.13 21:41		1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927270	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.05.13 19:25	U	1

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2nd Semi-Annual GW Monitoring

Sample Id: LordWW-110513	Matrix: Water	Sample Depth:
Lab Sample Id: 473484-007	Date Collected: 11.05.13 09.10	Date Received: 11.05.13 19.15
Analytical Method: TPH By SW8015B Mod		Prep Method: 1005
Analyst: ARM	% Moist:	Tech: ARM
Seq Number: 926992	Date Prep: 11.06.13 15.00	
	Prep seq: 646543	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 03:40	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 03:40	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 03:40	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	114	70 - 135	%		
o-Terphenyl	107	70 - 135	%		

Analytical Method: BTEX by EPA 8021B	Prep Method: 5030B
Analyst: ARM	% Moist:
Seq Number: 926995	Date Prep: 11.06.13 15.00
	Prep seq: 646541

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.06.13 20:23	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.06.13 20:23	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.06.13 20:23	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.06.13 20:23	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.06.13 20:23	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.06.13 20:23	U	
Total BTEX		ND		0.000500	mg/L	11.06.13 20:23	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	80	80 - 120	%		
4-Bromofluorobenzene	92	80 - 120	%		

Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW19A-110513	Matrix: Water	Sample Depth:
Lab Sample Id: 473484-008	Date Collected: 11.05.13 10.20	Date Received: 11.05.13 19.15
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 927203	Date Prep: 11.07.13 18.15	
	Prep seq: 646629	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	295	10.0	0.280	mg/L	11.07.13 18:15		10

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927101	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1240	5.00	5.00	mg/L	11.08.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927452	
	% Moist:
	Date Prep: 11.11.13 07.00
Subcontractor: SUB: E871002	Prep seq: 646716

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0156	0.0200	0.00756	mg/L	11.12.13 21:47	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.12.13 21:47	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.12.13 21:47	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.12.13 21:47	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927270	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.05.13 19:25	U	1

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW19A-110513	Matrix: Water	Sample Depth:
Lab Sample Id: 473484-008	Date Collected: 11.05.13 10.20	Date Received: 11.05.13 19.15
Analytical Method: TPH By SW8015B Mod		Prep Method: 1005
Analyst: ARM	% Moist:	Tech: ARM
Seq Number: 926992	Date Prep: 11.06.13 15.00	
	Prep seq: 646543	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 04:02	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 04:02	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 04:02	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	111	70 - 135	%		
o-Terphenyl	103	70 - 135	%		

Analytical Method: BTEX by EPA 8021B	Prep Method: 5030B
Analyst: ARM	% Moist:
Seq Number: 926995	Date Prep: 11.06.13 15.00
	Prep seq: 646541

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.06.13 20:39	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.06.13 20:39	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.06.13 20:39	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.06.13 20:39	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.06.13 20:39	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.06.13 20:39	U	
Total BTEX		ND		0.000500	mg/L	11.06.13 20:39	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	81	80 - 120	%		
4-Bromofluorobenzene	97	80 - 120	%		



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW19-110513** Matrix: Water Sample Depth:
Lab Sample Id: 473484-009 Date Collected: 11.05.13 15.35 Date Received: 11.05.13 19.15
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927203 Date Prep: 11.07.13 18.38
Prep seq: 646629

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1180	50.0	1.40	mg/L	11.07.13 18:38		50

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927101 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	3600	5.00	5.00	mg/L	11.08.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 927452 Date Prep: 11.11.13 07.00
Subcontractor: SUB: E871002 Prep seq: 646716

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0209	0.0200	0.00756	mg/L	11.12.13 21:52		1
Chromium	7440-47-3	0.0705	0.0100	0.00355	mg/L	11.12.13 21:52		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.12.13 21:52	U	1
Manganese	7439-96-5	0.172	0.0200	0.00291	mg/L	11.12.13 21:52		1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 927270 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.0480	0.0100	0.00500	mg/L	11.05.13 19:25		1



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW19-110513**

Matrix: Water

Sample Depth:

Lab Sample Id: 473484-009

Date Collected: 11.05.13 15.35

Date Received: 11.05.13 19.15

Analytical Method: TPH By SW8015B Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926992

Date Prep: 11.06.13 15.00

Prep seq: 646543

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 04:25	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 04:25	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 04:25	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	109	70 - 135	%		
o-Terphenyl	102	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926995

Date Prep: 11.06.13 15.00

Prep seq: 646541

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.06.13 20:55	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.06.13 20:55	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.06.13 20:55	U	1
m,p-Xylenes	179601-23-1	0.00237	0.00200	0.00140	mg/L	11.06.13 20:55		1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.06.13 20:55	U	1
Total Xylenes	1330-20-7	0.00237		0.000700	mg/L	11.06.13 20:55		
Total BTEX		0.00237		0.000500	mg/L	11.06.13 20:55		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	80	80 - 120	%		
4-Bromofluorobenzene	98	80 - 120	%		



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW14A-110513** Matrix: Water Sample Depth:
Lab Sample Id: 473484-010 Date Collected: 11.05.13 16.15 Date Received: 11.05.13 19.15
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927203 Date Prep: 11.07.13 19.01
Prep seq: 646629

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	30.6	5.00	0.140	mg/L	11.07.13 19:01		5

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927101 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	313	5.00	5.00	mg/L	11.08.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 927452 Date Prep: 11.11.13 07.00
Subcontractor: SUB: E871002 Prep seq: 646716

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	11.12.13 21:58	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.12.13 21:58	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.12.13 21:58	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.12.13 21:58	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 927270 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.05.13 19:25	U	1



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW14A-110513**

Matrix: Water

Sample Depth:

Lab Sample Id: 473484-010

Date Collected: 11.05.13 16.15

Date Received: 11.05.13 19.15

Analytical Method: TPH By SW8015B Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926992

Date Prep: 11.06.13 15.00

Prep seq: 646543

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 04:47	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 04:47	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 04:47	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	108	70 - 135	%		
o-Terphenyl	97	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 926995

Date Prep: 11.06.13 15.00

Prep seq: 646541

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.06.13 21:11	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.06.13 21:11	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.06.13 21:11	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.06.13 21:11	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.06.13 21:11	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.06.13 21:11	U	
Total BTEX		ND		0.000500	mg/L	11.06.13 21:11	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	86	80 - 120	%		
4-Bromofluorobenzene	98	80 - 120	%		



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **DUP4-110513** Matrix: Water Sample Depth:
Lab Sample Id: 473484-011 Date Collected: 11.05.13 00.00 Date Received: 11.05.13 19.15
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927203 Date Prep: 11.07.13 19.24
Prep seq: 646629

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1700	50.0	1.40	mg/L	11.07.13 19:24		50

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927101 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	4020	5.00	5.00	mg/L	11.08.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 927452 Date Prep: 11.11.13 07.00
Subcontractor: SUB: E871002 Prep seq: 646716

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0113	0.0200	0.00756	mg/L	11.12.13 22:04	J	1
Chromium	7440-47-3	0.00470	0.0100	0.00355	mg/L	11.12.13 22:04	J	1
Iron	7439-89-6	0.0203	0.200	0.0188	mg/L	11.12.13 22:04	J	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.12.13 22:04	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 927215 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.05.13 19:25	U	1



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **DUP4-110513** Matrix: Water Sample Depth:
Lab Sample Id: 473484-011 Date Collected: 11.05.13 00.00 Date Received: 11.05.13 19.15
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926992 Date Prep: 11.06.13 15.00
Prep seq: 646543

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 05:54	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 05:54	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 05:54	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	106	70 - 135	%		
o-Terphenyl	96	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926995 Date Prep: 11.06.13 15.00
Prep seq: 646541

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.06.13 21:59	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.06.13 21:59	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.06.13 21:59	U	1
m,p-Xylenes	179601-23-1	0.00218	0.00200	0.00140	mg/L	11.06.13 21:59		1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.06.13 21:59	U	1
Total Xylenes	1330-20-7	0.00218		0.000700	mg/L	11.06.13 21:59		
Total BTEX		0.00218		0.000500	mg/L	11.06.13 21:59		

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	84	80 - 120	%		
4-Bromofluorobenzene	101	80 - 120	%		



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **DUP5-110513** Matrix: Water Sample Depth:
Lab Sample Id: 473484-012 Date Collected: 11.05.13 00.00 Date Received: 11.05.13 19.15
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927203 Date Prep: 11.07.13 20.09
Prep seq: 646629

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	528	20.0	0.560	mg/L	11.07.13 20:09		20

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927101 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	2850	5.00	5.00	mg/L	11.08.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 927452 Date Prep: 11.11.13 07.00
Subcontractor: SUB: E871002 Prep seq: 646716

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	11.12.13 22:10	U	1
Chromium	7440-47-3	0.00502	0.0100	0.00355	mg/L	11.12.13 22:10	J	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.12.13 22:10	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.12.13 22:10	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 927215 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.05.13 19:25	U	1



Certificate of Analytical Results

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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **DUP5-110513** Matrix: Water Sample Depth:
Lab Sample Id: 473484-012 Date Collected: 11.05.13 00.00 Date Received: 11.05.13 19.15
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926992 Date Prep: 11.06.13 15.00
Prep seq: 646543

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 06:17	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 06:17	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 06:17	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	93	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926995 Date Prep: 11.06.13 15.00
Prep seq: 646541

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.06.13 22:14	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.06.13 22:14	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.06.13 22:14	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.06.13 22:14	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.06.13 22:14	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.06.13 22:14	U	
Total BTEX		ND		0.000500	mg/L	11.06.13 22:14	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	87	80 - 120	%		
4-Bromofluorobenzene	96	80 - 120	%		



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Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **Trip Blank** Matrix: Water Sample Depth:
Lab Sample Id: 473484-013 Date Collected: 11.05.13 16.15 Date Received: 11.05.13 19.15
Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926995 Date Prep: 11.06.13 15.00
Prep seq: 646541

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.06.13 22:30	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.06.13 22:30	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.06.13 22:30	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.06.13 22:30	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.06.13 22:30	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.06.13 22:30	U	
Total BTEX		ND		0.000500	mg/L	11.06.13 22:30	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	88	80 - 120	%		
4-Bromofluorobenzene	94	80 - 120	%		

Sample Id: **646541-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646541-1-BLK Date Collected: Date Received:
Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926995 Date Prep: 11.06.13 15.00
Prep seq: 646541

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.06.13 18:31	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.06.13 18:31	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.06.13 18:31	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.06.13 18:31	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.06.13 18:31	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	90	80 - 120	%		
4-Bromofluorobenzene	97	80 - 120	%		



Certificate of Analytical Results

473484



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **646543-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646543-1-BLK Date Collected: Date Received:
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 926992 Date Prep: 11.06.13 15.00
Prep seq: 646543

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 00:18	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 00:18	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 00:18	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	124	70 - 135	%		
o-Terphenyl	114	70 - 135	%		

Sample Id: **646629-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646629-1-BLK Date Collected: Date Received:
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927203 Date Prep: 11.07.13 12.35
Prep seq: 646629

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	ND	1.00	0.0280	mg/L	11.07.13 12:35	U	1

Sample Id: **646716-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646716-1-BLK Date Collected: Date Received:
Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 927452 Date Prep: 11.11.13 07.00
Subcontractor: SUB: E871002 Prep seq: 646716

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	11.12.13 20:16	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.12.13 20:16	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.12.13 20:16	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.12.13 20:16	U	1



Certificate of Analytical Results

473484



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **927101-1-BLK**

Matrix: Water

Sample Depth:

Lab Sample Id: 927101-1-BLK

Date Collected:

Date Received:

Analytical Method: TDS by SM2540C

Prep Method:

Analyst: AMB

% Moist:

Tech: AMB

Seq Number: 927101

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	6.50	5.00	5.00	mg/L	11.08.13 10:00		1

Sample Id: **927215-1-BLK**

Matrix: Water

Sample Depth:

Lab Sample Id: 927215-1-BLK

Date Collected:

Date Received:

Analytical Method: Chromium, Hexavalent by SW 7196A

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 927215

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.05.13 19:25	U	1

Sample Id: **927270-1-BLK**

Matrix: Water

Sample Depth:

Lab Sample Id: 927270-1-BLK

Date Collected:

Date Received:

Analytical Method: Chromium, Hexavalent by SW 7196A

Prep Method:

Analyst: WRU

% Moist:

Tech: WRU

Seq Number: 927270

Date Prep:

Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.05.13 19:25	U	1

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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(770) 449-8800	(770) 449-5477
(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: 2nd Semi-Annual GW Monitoring

Work Orders : 473484,

Project ID: 073018-2013-01

Lab Batch #: 926995

Sample: 646541-1-BKS / BKS

Batch: 1 **Matrix:** Water

Units: mg/L Date Analyzed: 11/06/13 17:11		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0290	0.0300	97	80-120
4-Bromofluorobenzene		0.0326	0.0300	109	80-120

Lab Batch #: 926995

Sample: 646541-1-BSD / BSD

Batch: 1 **Matrix:** Water

Units: mg/L Date Analyzed: 11/06/13 17:27		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0282	0.0300	94	80-120
4-Bromofluorobenzene		0.0315	0.0300	105	80-120

Lab Batch #: 926995

Sample: 473484-001 S / MS

Batch: 1 **Matrix:** Water

Units: mg/L Date Analyzed: 11/06/13 17:43		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0245	0.0300	82	80-120
4-Bromofluorobenzene		0.0300	0.0300	100	80-120

Lab Batch #: 926995

Sample: 473484-001 SD / MSD

Batch: 1 **Matrix:** Water

Units: mg/L Date Analyzed: 11/06/13 17:59		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0272	0.0300	91	80-120
4-Bromofluorobenzene		0.0302	0.0300	101	80-120

Lab Batch #: 926995

Sample: 646541-1-BLK / BLK

Batch: 1 **Matrix:** Water

Units: mg/L Date Analyzed: 11/06/13 18:31		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0269	0.0300	90	80-120
4-Bromofluorobenzene		0.0291	0.0300	97	80-120

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: 2nd Semi-Annual GW Monitoring

Work Orders : 473484,

Project ID: 073018-2013-01

Lab Batch #: 926992

Sample: 646543-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/06/13 23:32

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.2	10.0	112	70-135	
o-Terphenyl	6.04	5.00	121	70-135	

Lab Batch #: 926992

Sample: 646543-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/06/13 23:55

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.7	10.0	117	70-135	
o-Terphenyl	5.77	5.00	115	70-135	

Lab Batch #: 926992

Sample: 646543-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/07/13 00:18

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	12.4	10.0	124	70-135	
o-Terphenyl	5.72	5.00	114	70-135	

Lab Batch #: 926992

Sample: 473484-001 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/07/13 01:02

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.3	10.0	113	70-135	
o-Terphenyl	5.31	5.00	106	70-135	

Lab Batch #: 926992

Sample: 473484-001 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/07/13 01:25

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	12.5	10.0	125	70-135	
o-Terphenyl	6.21	5.00	124	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Work Order #: 473484

Project ID: 073018-2013-01

Lab Batch #: 927215

Sample: 927215-1-BKS

Matrix: Water

Date Analyzed: 11/05/2013

Date Prepared: 11/05/2013

Analyst: WRU

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Hexavalent Chromium	<0.00500	0.0200	0.0239	120	80-120	

Lab Batch #: 927270

Sample: 927270-1-BKS

Matrix: Water

Date Analyzed: 11/05/2013

Date Prepared: 11/05/2013

Analyst: WRU

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Hexavalent Chromium	<0.00500	0.0200	0.0227	114	80-120	

Lab Batch #: 927101

Sample: 927101-1-BKS

Matrix: Water

Date Analyzed: 11/08/2013

Date Prepared: 11/08/2013

Analyst: AMB

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

TDS by SM2540C Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Total dissolved solids	6.50	1000	1020	102	80-120	

Blank Spike Recovery [D] = 100*[C]/[B]

All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Project Name: 2nd Semi-Annual GW Monitoring

Work Order #: 473484

Project ID: 073018-2013-01

Analyst: ARM

Date Prepared: 11/06/2013

Date Analyzed: 11/06/2013

Lab Batch ID: 926995

Sample: 646541-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000500	0.100	0.0998	100	0.100	0.0971	97	3	70-125	25	
Toluene	<0.00100	0.100	0.101	101	0.100	0.0993	99	2	70-125	25	
Ethylbenzene	<0.000700	0.100	0.106	106	0.100	0.105	105	1	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.217	109	0.200	0.213	107	2	70-131	25	
o-Xylene	<0.000700	0.100	0.110	110	0.100	0.108	108	2	71-133	25	

Analyst: MKO

Date Prepared: 11/11/2013

Date Analyzed: 11/12/2013

Lab Batch ID: 927452

Sample: 646716-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Dissolved Metals per ICP by SW846 6010B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Arsenic	<0.00756	1.00	1.03	103	1.00	1.03	103	0	80-120	20	
Chromium	<0.00355	1.00	1.05	105	1.00	1.04	104	1	80-120	20	
Iron	<0.0188	5.00	5.18	104	5.00	5.18	104	0	80-120	20	
Manganese	<0.00291	1.00	0.978	98	1.00	0.994	99	2	80-120	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes

Project Name: 2nd Semi-Annual GW Monitoring

Work Order #: 473484

Project ID: 073018-2013-01

Analyst: AMB

Date Prepared: 11/07/2013

Date Analyzed: 11/07/2013

Lab Batch ID: 927203

Sample: 646629-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.0280	25.0	22.8	91	25.0	23.5	94	3	80-120	20	

Analyst: ARM

Date Prepared: 11/06/2013

Date Analyzed: 11/06/2013

Lab Batch ID: 926992

Sample: 646543-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C10 Gasoline Range Hydrocarbons	<0.988	100	126	126	100	122	122	3	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	124	124	100	122	122	2	70-135	25	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

Project Name: 2nd Semi-Annual GW Monitoring



Work Order #: 473484

Lab Batch #: 927203

Date Analyzed: 11/07/2013

QC- Sample ID: 473484-001 S

Reporting Units: mg/L

Date Prepared: 11/07/2013

Batch #: 1

Project ID: 073018-2013-01

Analyst: AMB

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	541	500	1090	110	80-120	

Lab Batch #: 927203

Date Analyzed: 11/07/2013

QC- Sample ID: 473484-011 S

Reporting Units: mg/L

Date Prepared: 11/07/2013

Batch #: 1

Analyst: AMB

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	1700	1250	3020	106	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

Project Name: 2nd Semi-Annual GW Monitoring

Work Order # : 473484

Project ID: 073018-2013-01

Lab Batch ID: 926995

QC- Sample ID: 473484-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/06/2013

Date Prepared: 11/06/2013

Analyst: ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	0.00306	0.100	0.0969	94	0.100	0.0927	90	4	70-125	25	
Toluene	<0.00100	0.100	0.100	100	0.100	0.0940	94	6	70-125	25	
Ethylbenzene	<0.000700	0.100	0.106	106	0.100	0.100	100	6	71-129	25	
m,p-Xylenes	0.00302	0.200	0.217	107	0.200	0.204	100	6	70-131	25	
o-Xylene	<0.000700	0.100	0.109	109	0.100	0.104	104	5	71-133	25	

Lab Batch ID: 927215

QC- Sample ID: 473484-011 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/05/2013

Date Prepared: 11/05/2013

Analyst: WRU

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Hexavalent Chromium	<0.00500	0.200	0.194	97	0.200	0.191	96	2	80-120	20	

Lab Batch ID: 927270

QC- Sample ID: 473484-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/05/2013

Date Prepared: 11/05/2013

Analyst: WRU

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Hexavalent Chromium	<0.00500	0.200	0.208	104	0.200	0.210	105	1	80-120	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries



Project Name: 2nd Semi-Annual GW Monitoring

Work Order # : 473484

Project ID: 073018-2013-01

Lab Batch ID: 927452

QC- Sample ID: 473484-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/12/2013

Date Prepared: 11/11/2013

Analyst: MKO

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Dissolved Metals per ICP by SW846 6010B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Arsenic	0.00924	1.00	1.07	106	1.00	1.07	106	0	75-125	20	
Chromium	0.00397	1.00	1.04	104	1.00	1.05	105	1	75-125	20	
Iron	<0.0188	5.00	4.85	97	5.00	4.85	97	0	75-125	20	
Manganese	<0.00291	1.00	0.944	94	1.00	0.988	99	5	75-125	20	

Lab Batch ID: 926992

QC- Sample ID: 473484-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/07/2013

Date Prepared: 11/06/2013

Analyst: ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<0.988	100	118	118	100	121	121	3	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	117	117	100	127	127	8	70-135	25	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery [G] = $100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Project Name: 2nd Semi-Annual GW Monitoring

Work Order #: 473484

Lab Batch #: 927101

Project ID: 073018-2013-01

Date Analyzed: 11/08/2013 10:00

Date Prepared: 11/08/2013

Analyst: AMB

QC- Sample ID: 473402-009 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	1320	1320	0	10	

Lab Batch #: 927101

Date Analyzed: 11/08/2013 10:00

Date Prepared: 11/08/2013

Analyst: AMB

QC- Sample ID: 473484-006 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	3960	4300	8	10	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$
 All Results are based on MDL and validated for QC purposes.
 BRL - Below Reporting Limit

Time:

* Preservative Type Codes

Matrix Type Codes	
SW	Ground Water
SS	Sediment/Solid
W	Waste Water
W	Wine

	YES	NO	N/A
Lab Use Only			
Conformances found?		X	
Examples intact upon arrival?	X		

VOCs rec'd w/o headspace?	X	—	—
proper containers used?	X	—	—
HH verified-acceptable, excl VOCs?	X	—	—
received on time to meet HTS?	X	—	—

C.O.C. Serial #

Revision Date: Nov 12, 2009



CHAIN OF CUSTODY RECORD

Page 2 of 2

LAB W.O. #: 473484
Field billable Hrs: _____

TAT Work Days = D Need results by: _____ Time: _____

Std (5-7D) Same Day 1D 2D 3D 4D 5D 7D 10D 14D Other _____

Company:	CRA	Phone:	432.686.0086
Address:	2315 Loop 250W	Fax:	
City:	Midland	St TX	Zip: 79703
PM/Attn:	Claudia Ramos		
Project ID/ Location:	1st Semi-Annual GW Monitoring; 07/30/18-2013-01	PO#:	
Invoice To:	CRA's Niagra Falls Location	Quote #:	

Circle One Event: Daily Weekly Monthly
Quarterly Semi-Annual Annual N/A

Sample #	Sample ID	Collect Date	Collect Time	Matrix Code	Field Filtered	Depth	Total # of containers
11	Dup4-11/5/13	11-5-13	-	GW	X	6"	2
12	Dup5-11/5/13	11-5-13	-	GW	X	6"	6
13				GW			6
14				GW			6
15				GW			6
6	Trip Blank	11.1.2013	9:15	GW			2
7							
8							
9							
0							

ANALYSES REQUESTED									
Example Volatiles by 8260	BTEX	TPH-GRO & DRO	Dissolved Metals (As, Cr, Fe, Mn)	TDS	Hexavalent Chromium	Chloride			
Cont Type	VP	VP	GC	GC	GC	GC			
Pres Type	E, I	E, I	I	I	I	I			
F.I.									

PRESERVATIVE TYPE CODES									
A. None	E. HCL	I. Ice	J. MCAA	K. ZnAc2NaOH	L. Aspic AcidNaOH				
B. HNO3	F. MeOH								
C. H2SO4	G. Na2S2O3								
D. NaOH	H. NaHSO4								

Lab Only:

Matrix Type Codes

REMARKS

Reg. Program / Clean-up Std									
CTLS	TRRP	DW	NPDES	LPST	DryCin	FL	TX	GA	NC
Other:						LA	AL	NM	Other:
1									
2									
3									
4									

QA/QC Level & Certification									
1	2	3	4	CLP	AFCEE	QAPP	NEIAC	DOB-ELAP	Other:
Date									
Time									
11-5-13									
16:44									

EDDs									
ADAPT	SEDD	ERPMS	Match	Incomplete	Affiliation	Date	Time		
XLS Other:			Absent	Unclear					
Received by									
11-5-13									
16:44									

Lab Use Only									
Non-Conformances found?									
Samples initialed upon arrival?									
Received on Wet Ice?									
Labelled with proper preservatives?									
Received within holding time?									
Custody seals intact?									
VOCs rec'd w/o headspace?									
Proper containers used?									
pH verified-acceptable, excl VOCs?									
Received on time to meet HTS?									

B&A Laboratories: Hobbs 575-392-7550 Dallas 214-902-0300 Houston 281-242-4200 Odessa 432-553-1800 San Antonio 210-509-3334 Phoenix 602-437-0330
FTS Service Centers: Atlanta 770-449-8800 Lakeland 863-646-8526 Tampa 803-543-8099 Philadelphia 610-955-5649 South Carolina 803-543-8099
C.O.C. Serial # _____
Execution of this document by client creates a legal and binding agreement between client and Xenoco for analytical and testing services provided by Xenoco to client under Xenoco's standard terms and conditions unless previously agreed in writing. Terms of payment are Net 30 days, and all past due amounts shall accrue interest at 1.5% per month until paid in full. All laboratory analytical data and reports generated by Xenoco remain the exclusive property of Xenoco until invoices for such data are paid in full.
Revision Date: Nov 12, 2009



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Conestoga Rovers & Associates

Date/ Time Received: 11/05/2013 07:15:00 PM

Work Order #: 473484

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	0
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO ₃ , HCL, H ₂ SO ₄ ?	Yes
#22 >10 for all samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by:

Candace James

Candace James

Date: 11/06/2013

Checklist reviewed by:

Kelsey Brooks

Kelsey Brooks

Date: 11/06/2013

Analytical Report 473542

for

Conestoga Rovers & Associates

Project Manager: Claudia Ramos

2nd Semi-Annual GW Monitoring

073018-2013-01

19-NOV-13

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-13-15-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):

Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)

Xenco-Lakeland: Florida (E84098)

Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)

Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)

Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)



19-NOV-13

Project Manager: **Claudia Ramos**

Conestoga Rovers & Associates

2135 S Loop 250 W

Midland, TX 79703

Reference: XENCO Report No(s): **473542**

2nd Semi-Annual GW Monitoring

Project Address: New Mexico

Claudia Ramos:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 473542. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 473542 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks

Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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Sample Cross Reference 473542



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MW95-110613	W	11-06-13 09:10		473542-001
DUP6-110613	W	11-06-13 00:00		473542-002
MW68-110613	W	11-06-13 10:15		473542-003
MW032-110613	W	11-06-13 11:10		473542-004
MW038-110613	W	11-06-13 13:00		473542-005
Trip Blank	W	11-06-13 00:00		473542-006



CASE NARRATIVE



Client Name: *Conestoga Rovers & Associates*

Project Name: *2nd Semi-Annual GW Monitoring*

Project ID: 073018-2013-01
Work Order Number(s): 473542

Report Date: 19-NOV-13
Date Received: 11/06/2013

This laboratory is NELAC accredited under the Texas Laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted. The data have been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory.

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analytical Results

473542



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW95-110613** Matrix: Water Sample Depth:
Lab Sample Id: 473542-001 Date Collected: 11.06.13 09.10 Date Received: 11.06.13 17.00
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927203 Date Prep: 11.07.13 23.33
Prep seq: 646629

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	1150	50.0	1.40	mg/L	11.07.13 23:33		50

Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927359 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	3940	5.00	5.00	mg/L	11.11.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 927452 Date Prep: 11.11.13 07.00
Subcontractor: SUB: E871002 Prep seq: 646716

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0187	0.0200	0.00756	mg/L	11.12.13 22:16	J	1
Chromium	7440-47-3	4.28	0.0100	0.00355	mg/L	11.12.13 22:16		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.12.13 22:16	U	1
Manganese	7439-96-5	0.0902	0.0200	0.00291	mg/L	11.12.13 22:16		1

Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 927229 Date Prep:
Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	4.31	0.200	0.100	mg/L	11.06.13 17:50		20



Certificate of Analytical Results

473542



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW95-110613** Matrix: Water Sample Depth:
Lab Sample Id: 473542-001 Date Collected: 11.06.13 09.10 Date Received: 11.06.13 17.00
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 927070 Date Prep: 11.07.13 13.00
Prep seq: 646598

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 16:01	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 16:01	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 16:01	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	96	70 - 135	%		
o-Terphenyl	89	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 927071 Date Prep: 11.07.13 13.00
Prep seq: 646597

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.07.13 17:27	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.07.13 17:27	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.07.13 17:27	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.07.13 17:27	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.07.13 17:27	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.07.13 17:27	U	
Total BTEX		ND		0.000500	mg/L	11.07.13 17:27	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	87	80 - 120	%		
4-Bromofluorobenzene	95	80 - 120	%		

Certificate of Analytical Results

473542

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: DUP6-110613	Matrix: Water	Sample Depth:
Lab Sample Id: 473542-002	Date Collected: 11.06.13 00.00	Date Received: 11.06.13 17.00
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 927203	Date Prep: 11.07.13 23.56	
	Prep seq: 646629	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	287	20.0	0.560	mg/L	11.07.13 23:56		20

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927359	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1650	5.00	5.00	mg/L	11.11.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927452	
	% Moist:
	Date Prep: 11.11.13 07.00
Subcontractor: SUB: E871002	Prep seq: 646716

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	11.12.13 22:33	U	1
Chromium	7440-47-3	0.0176	0.0100	0.00355	mg/L	11.12.13 22:33		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.12.13 22:33	U	1
Manganese	7439-96-5	0.131	0.0200	0.00291	mg/L	11.12.13 22:33		1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927229	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.0272	0.0100	0.00500	mg/L	11.06.13 17:50		1



Certificate of Analytical Results

473542



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **DUP6-110613** Matrix: Water Sample Depth:
Lab Sample Id: 473542-002 Date Collected: 11.06.13 00.00 Date Received: 11.06.13 17.00
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 927070 Date Prep: 11.07.13 13.00
Prep seq: 646598

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 16:26	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 16:26	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 16:26	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	92	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 927071 Date Prep: 11.07.13 13.00
Prep seq: 646597

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.07.13 16:07	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.07.13 16:07	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.07.13 16:07	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.07.13 16:07	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.07.13 16:07	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.07.13 16:07	U	
Total BTEX		ND		0.000500	mg/L	11.07.13 16:07	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	80	80 - 120	%		
4-Bromofluorobenzene	97	80 - 120	%		

Certificate of Analytical Results

473542

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW68-110613	Matrix: Water	Sample Depth:
Lab Sample Id: 473542-003	Date Collected: 11.06.13 10.15	Date Received: 11.06.13 17.00
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 927230	Date Prep: 11.08.13 02.12	
	Prep seq: 646630	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	111	10.0	0.280	mg/L	11.08.13 02:12		10

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927359	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	899	5.00	5.00	mg/L	11.11.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927452	
	% Moist:
	Date Prep: 11.11.13 07.00
Subcontractor: SUB: E871002	Prep seq: 646716

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.0166	0.0200	0.00756	mg/L	11.12.13 22:38	J	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.12.13 22:38	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.12.13 22:38	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.12.13 22:38	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927229	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.06.13 17:50	U	1



Certificate of Analytical Results

473542



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW68-110613**

Matrix: Water

Sample Depth:

Lab Sample Id: 473542-003

Date Collected: 11.06.13 10.15

Date Received: 11.06.13 17.00

Analytical Method: TPH By SW8015B Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 927070

Date Prep: 11.07.13 13.00

Prep seq: 646598

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 17:41	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 17:41	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 17:41	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	101	70 - 135	%		
o-Terphenyl	92	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 927071

Date Prep: 11.07.13 13.00

Prep seq: 646597

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.07.13 16:23	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.07.13 16:23	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.07.13 16:23	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.07.13 16:23	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.07.13 16:23	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.07.13 16:23	U	
Total BTEX		ND		0.000500	mg/L	11.07.13 16:23	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	86	80 - 120	%		
4-Bromofluorobenzene	93	80 - 120	%		

Certificate of Analytical Results

473542

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW032-110613	Matrix: Water	Sample Depth:
Lab Sample Id: 473542-004	Date Collected: 11.06.13 11.10	Date Received: 11.06.13 17.00
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 927230	Date Prep: 11.08.13 02.57	
	Prep seq: 646630	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	212	10.0	0.280	mg/L	11.08.13 02:57		10

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927359	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1110	5.00	5.00	mg/L	11.11.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927452	
	% Moist:
	Date Prep: 11.11.13 07.00
Subcontractor: SUB: E871002	Prep seq: 646716

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	11.12.13 22:44	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.12.13 22:44	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.12.13 22:44	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.12.13 22:44	U	1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927229	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.06.13 17:50	U	1



Certificate of Analytical Results

473542



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW032-110613** Matrix: Water Sample Depth:
Lab Sample Id: 473542-004 Date Collected: 11.06.13 11.10 Date Received: 11.06.13 17.00
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 927070 Date Prep: 11.07.13 13.00
Prep seq: 646598

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 18:06	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 18:06	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 18:06	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	104	70 - 135	%		
o-Terphenyl	94	70 - 135	%		

Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 927071 Date Prep: 11.07.13 13.00
Prep seq: 646597

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.07.13 16:39	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.07.13 16:39	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.07.13 16:39	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.07.13 16:39	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.07.13 16:39	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.07.13 16:39	U	
Total BTEX		ND		0.000500	mg/L	11.07.13 16:39	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	87	80 - 120	%		
4-Bromofluorobenzene	98	80 - 120	%		

Certificate of Analytical Results

473542

Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: MW038-110613	Matrix: Water	Sample Depth:
Lab Sample Id: 473542-005	Date Collected: 11.06.13 13.00	Date Received: 11.06.13 17.00
Analytical Method: Inorganic Anions by EPA 300/300.1		Prep Method: E300P
Analyst: AMB	% Moist:	Tech: AMB
Seq Number: 927230	Date Prep: 11.08.13 03.20	
	Prep seq: 646630	

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	296	20.0	0.560	mg/L	11.08.13 03:20		20

Analytical Method: TDS by SM2540C	Prep Method:
Analyst: AMB	Tech: AMB
Seq Number: 927359	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	1650	5.00	5.00	mg/L	11.11.13 10:00		1

Analytical Method: Dissolved Metals per ICP by SW846 6010B	Prep Method: 3010A
Analyst: MKO	Tech: MKO
Seq Number: 927452	
	% Moist:
	Date Prep: 11.11.13 07.00
Subcontractor: SUB: E871002	Prep seq: 646716

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	0.00895	0.0200	0.00756	mg/L	11.12.13 22:50	J	1
Chromium	7440-47-3	0.0205	0.0100	0.00355	mg/L	11.12.13 22:50		1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.12.13 22:50	U	1
Manganese	7439-96-5	0.114	0.0200	0.00291	mg/L	11.12.13 22:50		1

Analytical Method: Chromium, Hexavalent by SW 7196A	Prep Method:
Analyst: WRU	Tech: WRU
Seq Number: 927229	
	% Moist:
	Date Prep:
	Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	0.0243	0.0100	0.00500	mg/L	11.06.13 17:50		1



Certificate of Analytical Results

473542



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **MW038-110613**

Matrix: Water

Sample Depth:

Lab Sample Id: 473542-005

Date Collected: 11.06.13 13.00

Date Received: 11.06.13 17.00

Analytical Method: TPH By SW8015B Mod

Prep Method: 1005

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 927070

Date Prep: 11.07.13 13.00

Prep seq: 646598

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 18:30	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 18:30	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 18:30	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	91	70 - 135	%		
o-Terphenyl	82	70 - 135	%		

Analytical Method: BTEX by EPA 8021B

Prep Method: 5030B

Analyst: ARM

% Moist:

Tech: ARM

Seq Number: 927071

Date Prep: 11.07.13 13.00

Prep seq: 646597

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.07.13 16:55	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.07.13 16:55	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.07.13 16:55	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.07.13 16:55	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.07.13 16:55	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.07.13 16:55	U	
Total BTEX		ND		0.000500	mg/L	11.07.13 16:55	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	87	80 - 120	%		
4-Bromofluorobenzene	94	80 - 120	%		



Certificate of Analytical Results

473542



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **Trip Blank** Matrix: Water Sample Depth:
Lab Sample Id: 473542-006 Date Collected: 11.06.13 00.00 Date Received: 11.06.13 17.00
Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 927071 Date Prep: 11.07.13 13.00
Prep seq: 646597

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.07.13 17:11	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.07.13 17:11	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.07.13 17:11	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.07.13 17:11	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.07.13 17:11	U	1
Total Xylenes	1330-20-7	ND		0.000700	mg/L	11.07.13 17:11	U	
Total BTEX		ND		0.000500	mg/L	11.07.13 17:11	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	89	80 - 120	%		
4-Bromofluorobenzene	93	80 - 120	%		

Sample Id: **646597-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646597-1-BLK Date Collected: Date Received:
Analytical Method: BTEX by EPA 8021B Prep Method: 5030B
Analyst: ARM % Moist: Tech: ARM
Seq Number: 927071 Date Prep: 11.07.13 13.00
Prep seq: 646597

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Benzene	71-43-2	ND	0.00100	0.000500	mg/L	11.07.13 15:51	U	1
Toluene	108-88-3	ND	0.00200	0.00100	mg/L	11.07.13 15:51	U	1
Ethylbenzene	100-41-4	ND	0.00100	0.000700	mg/L	11.07.13 15:51	U	1
m,p-Xylenes	179601-23-1	ND	0.00200	0.00140	mg/L	11.07.13 15:51	U	1
o-Xylene	95-47-6	ND	0.00100	0.000700	mg/L	11.07.13 15:51	U	1

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1,4-Difluorobenzene	92	80 - 120	%		
4-Bromofluorobenzene	96	80 - 120	%		



Certificate of Analytical Results

473542



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **646598-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646598-1-BLK Date Collected: Date Received:
Analytical Method: TPH By SW8015B Mod Prep Method: 1005
Analyst: ARM % Moist: Tech: ARM
Seq Number: 927070 Date Prep: 11.07.13 13.00
Prep seq: 646598

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
C6-C10 Gasoline Range Hydrocarbons	C6C10GRO	ND	1.50	0.988	mg/L	11.07.13 15:35	U	1
C12-C28 Diesel Range Hydrocarbons	C10C28DRO	ND	1.50	0.988	mg/L	11.07.13 15:35	U	1
Total TPH	PHC635	ND		0.988	mg/L	11.07.13 15:35	U	

Surrogate	% Recovery	Limits	Units	Analysis Date	Flag
1-Chlorooctane	106	70 - 135	%		
o-Terphenyl	97	70 - 135	%		

Sample Id: **646629-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646629-1-BLK Date Collected: Date Received:
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927203 Date Prep: 11.07.13 12.35
Prep seq: 646629

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	ND	1.00	0.0280	mg/L	11.07.13 12:35	U	1

Sample Id: **646630-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646630-1-BLK Date Collected: Date Received:
Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927230 Date Prep: 11.08.13 01.04
Prep seq: 646630

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Chloride	16887-00-6	ND	1.00	0.0280	mg/L	11.08.13 01:04	U	1



Certificate of Analytical Results

473542



Conestoga Rovers & Associates, Midland, TX

2nd Semi-Annual GW Monitoring

Sample Id: **646716-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 646716-1-BLK Date Collected: Date Received:
Analytical Method: Dissolved Metals per ICP by SW846 6010B Prep Method: 3010A
Analyst: MKO % Moist: Tech: MKO
Seq Number: 927452 Date Prep: 11.11.13 07.00
Subcontractor: SUB: E871002 Prep seq: 646716

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Arsenic	7440-38-2	ND	0.0200	0.00756	mg/L	11.12.13 20:16	U	1
Chromium	7440-47-3	ND	0.0100	0.00355	mg/L	11.12.13 20:16	U	1
Iron	7439-89-6	ND	0.200	0.0188	mg/L	11.12.13 20:16	U	1
Manganese	7439-96-5	ND	0.0200	0.00291	mg/L	11.12.13 20:16	U	1

Sample Id: **927229-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 927229-1-BLK Date Collected: Date Received:
Analytical Method: Chromium, Hexavalent by SW 7196A Prep Method:
Analyst: WRU % Moist: Tech: WRU
Seq Number: 927229 Date Prep: Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Hexavalent Chromium	18540-29-9	ND	0.0100	0.00500	mg/L	11.06.13 15:45	U	1

Sample Id: **927359-1-BLK** Matrix: Water Sample Depth:
Lab Sample Id: 927359-1-BLK Date Collected: Date Received:
Analytical Method: TDS by SM2540C Prep Method:
Analyst: AMB % Moist: Tech: AMB
Seq Number: 927359 Date Prep: Prep seq:

Parameter	CAS Number	Result	MQL	SDL	Units	Analysis Date	Flag	Dil Factor
Total dissolved solids	TDS	ND	5.00	5.00	mg/L	11.11.13 10:00	U	1

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **SQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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(602) 437-0330	

Form 2 - Surrogate Recoveries

Project Name: 2nd Semi-Annual GW Monitoring

Work Orders : 473542,

Project ID: 073018-2013-01

Lab Batch #: 927071

Sample: 646597-1-BKS / BKS

Batch: 1 **Matrix:** Water

Units: mg/L Date Analyzed: 11/07/13 14:31		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0277	0.0300	92	80-120
4-Bromofluorobenzene		0.0291	0.0300	97	80-120

Lab Batch #: 927071

Sample: 646597-1-BSD / BSD

Batch: 1 **Matrix:** Water

Units: mg/L Date Analyzed: 11/07/13 14:47		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0274	0.0300	91	80-120
4-Bromofluorobenzene		0.0293	0.0300	98	80-120

Lab Batch #: 927071

Sample: 473542-002 S / MS

Batch: 1 **Matrix:** Water

Units: mg/L Date Analyzed: 11/07/13 15:03		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0285	0.0300	95	80-120
4-Bromofluorobenzene		0.0323	0.0300	108	80-120

Lab Batch #: 927071

Sample: 473542-002 SD / MSD

Batch: 1 **Matrix:** Water

Units: mg/L Date Analyzed: 11/07/13 15:19		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0283	0.0300	94	80-120
4-Bromofluorobenzene		0.0306	0.0300	102	80-120

Lab Batch #: 927071

Sample: 646597-1-BLK / BLK

Batch: 1 **Matrix:** Water

Units: mg/L Date Analyzed: 11/07/13 15:51		SURROGATE RECOVERY STUDY			
BTEX by EPA 8021B		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R
Analytes					
1,4-Difluorobenzene		0.0276	0.0300	92	80-120
4-Bromofluorobenzene		0.0287	0.0300	96	80-120

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: 2nd Semi-Annual GW Monitoring

Work Orders : 473542,

Project ID: 073018-2013-01

Lab Batch #: 927070

Sample: 646598-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/07/13 14:43

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	11.4	10.0	114	70-135	
o-Terphenyl	6.03	5.00	121	70-135	

Lab Batch #: 927070

Sample: 646598-1-BSD / BSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/07/13 15:09

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.1	10.0	101	70-135	
o-Terphenyl	5.96	5.00	119	70-135	

Lab Batch #: 927070

Sample: 646598-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/07/13 15:35

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	10.6	10.0	106	70-135	
o-Terphenyl	4.87	5.00	97	70-135	

Lab Batch #: 927070

Sample: 473542-002 S / MS

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/07/13 16:51

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	9.40	10.0	94	70-135	
o-Terphenyl	5.07	5.00	101	70-135	

Lab Batch #: 927070

Sample: 473542-002 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

Date Analyzed: 11/07/13 17:16

SURROGATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	9.86	10.0	99	70-135	
o-Terphenyl	5.26	5.00	105	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = $100 * A / B$

All results are based on MDL and validated for QC purposes.



Blank Spike Recovery

Project Name: 2nd Semi-Annual GW Monitoring



Work Order #: 473542

Project ID: 073018-2013-01

Lab Batch #: 927229

Sample: 927229-1-BKS

Matrix: Water

Date Analyzed: 11/06/2013

Date Prepared: 11/06/2013

Analyst: WRU

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Hexavalent Chromium	<0.00500	0.0200	0.0238	119	80-120	

Lab Batch #: 927359

Sample: 927359-1-BKS

Matrix: Water

Date Analyzed: 11/11/2013

Date Prepared: 11/11/2013

Analyst: AMB

Reporting Units: mg/L

Batch #: 1

BLANK /BLANK SPIKE RECOVERY STUDY

TDS by SM2540C Analytes	Blank Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Total dissolved solids	<5.00	1000	984	98	80-120	

Blank Spike Recovery [D] = $100 \times [C] / [B]$

All results are based on MDL and validated for QC purposes.

BRL - Below Reporting Limit

Project Name: 2nd Semi-Annual GW Monitoring

Work Order #: 473542

Project ID: 073018-2013-01

Analyst: ARM

Date Prepared: 11/07/2013

Date Analyzed: 11/07/2013

Lab Batch ID: 927071

Sample: 646597-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Benzene	<0.000500	0.100	0.0946	95	0.100	0.0961	96	2	70-125	25	
Toluene	<0.00100	0.100	0.0964	96	0.100	0.0984	98	2	70-125	25	
Ethylbenzene	<0.000700	0.100	0.103	103	0.100	0.105	105	2	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.209	105	0.200	0.213	107	2	70-131	25	
o-Xylene	<0.000700	0.100	0.105	105	0.100	0.108	108	3	71-133	25	

Analyst: MKO

Date Prepared: 11/11/2013

Date Analyzed: 11/12/2013

Lab Batch ID: 927452

Sample: 646716-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Dissolved Metals per ICP by SW846 6010B	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Arsenic	<0.00756	1.00	1.03	103	1.00	1.03	103	0	80-120	20	
Chromium	<0.00355	1.00	1.05	105	1.00	1.04	104	1	80-120	20	
Iron	<0.0188	5.00	5.18	104	5.00	5.18	104	0	80-120	20	
Manganese	<0.00291	1.00	0.978	98	1.00	0.994	99	2	80-120	20	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



BS / BSD Recoveries



Project Name: 2nd Semi-Annual GW Monitoring

Work Order #: 473542

Project ID: 073018-2013-01

Analyst: AMB

Date Prepared: 11/07/2013

Date Analyzed: 11/07/2013

Lab Batch ID: 927203

Sample: 646629-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.0280	25.0	22.8	91	25.0	23.5	94	3	80-120	20	

Analyst: AMB

Date Prepared: 11/08/2013

Date Analyzed: 11/08/2013

Lab Batch ID: 927230

Sample: 646630-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<0.0280	25.0	23.6	94	25.0	23.2	93	2	80-120	20	

Analyst: ARM

Date Prepared: 11/07/2013

Date Analyzed: 11/07/2013

Lab Batch ID: 927070

Sample: 646598-1-BKS

Batch #: 1

Matrix: Water

Units: mg/L

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
C6-C10 Gasoline Range Hydrocarbons	<0.988	100	107	107	100	103	103	4	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	114	114	100	108	108	5	70-135	25	

Relative Percent Difference RPD = $200 * |(C-F)/(C+F)|$

Blank Spike Recovery [D] = $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] = $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

Project Name: 2nd Semi-Annual GW Monitoring



Work Order #: 473542

Lab Batch #: 927203

Date Analyzed: 11/07/2013

QC- Sample ID: 473484-001 S

Reporting Units: mg/L

Date Prepared: 11/07/2013

Batch #: 1

Project ID: 073018-2013-01

Analyst: AMB

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	541	500	1090	110	80-120	

Lab Batch #: 927203

Date Analyzed: 11/07/2013

QC- Sample ID: 473484-011 S

Reporting Units: mg/L

Date Prepared: 11/07/2013

Batch #: 1

Analyst: AMB

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	1700	1250	3020	106	80-120	

Lab Batch #: 927230

Date Analyzed: 11/08/2013

QC- Sample ID: 473542-003 S

Reporting Units: mg/L

Date Prepared: 11/08/2013

Batch #: 1

Analyst: AMB

Matrix: Water

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	111	250	352	96	80-120	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
Relative Percent Difference [E] = $200 \times (C-A)/(C+B)$
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: 2nd Semi-Annual GW Monitoring

Work Order # : 473542

Project ID: 073018-2013-01

Lab Batch ID: 927071

QC- Sample ID: 473542-002 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/07/2013

Date Prepared: 11/07/2013

Analyst: ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000500	0.100	0.101	101	0.100	0.100	100	1	70-125	25	
Toluene	<0.00100	0.100	0.103	103	0.100	0.102	102	1	70-125	25	
Ethylbenzene	<0.000700	0.100	0.111	111	0.100	0.110	110	1	71-129	25	
m,p-Xylenes	<0.00140	0.200	0.224	112	0.200	0.222	111	1	70-131	25	
o-Xylene	<0.000700	0.100	0.113	113	0.100	0.111	111	2	71-133	25	

Lab Batch ID: 927229

QC- Sample ID: 473535-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/06/2013

Date Prepared: 11/06/2013

Analyst: WRU

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chromium, Hexavalent by SW 7196A Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Hexavalent Chromium	0.00760	0.200	0.212	102	0.200	0.216	104	2	80-120	20	

Lab Batch ID: 927452

QC- Sample ID: 473484-001 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/12/2013

Date Prepared: 11/11/2013

Analyst: MKO

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Dissolved Metals per ICP by SW846 6010B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Arsenic	0.00924	1.00	1.07	106	1.00	1.07	106	0	75-125	20	
Chromium	0.00397	1.00	1.04	104	1.00	1.05	105	1	75-125	20	
Iron	<0.0188	5.00	4.85	97	5.00	4.85	97	0	75-125	20	
Manganese	<0.00291	1.00	0.944	94	1.00	0.988	99	5	75-125	20	

Matrix Spike Percent Recovery $[D] = 100 \times (C-A)/B$
Relative Percent Difference $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



Form 3 - MS / MSD Recoveries



Project Name: 2nd Semi-Annual GW Monitoring

Work Order # : 473542

Project ID: 073018-2013-01

Lab Batch ID: 927070

QC- Sample ID: 473542-002 S

Batch #: 1 Matrix: Water

Date Analyzed: 11/07/2013

Date Prepared: 11/07/2013

Analyst: ARM

Reporting Units: mg/L

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015B Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C10 Gasoline Range Hydrocarbons	<0.988	100	98.1	98	100	101	101	3	70-135	25	
C12-C28 Diesel Range Hydrocarbons	<0.988	100	101	101	100	104	104	3	70-135	25	

Matrix Spike Percent Recovery [D] = $100 \times (C-A)/B$
Relative Percent Difference RPD = $200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery [G] = $100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Project Name: 2nd Semi-Annual GW Monitoring

Work Order #: 473542

Lab Batch #: 927359

Project ID: 073018-2013-01

Date Analyzed: 11/11/2013 10:00

Date Prepared: 11/11/2013

Analyst: AMB

QC- Sample ID: 473542-001 D

Batch #: 1

Matrix: Water

Reporting Units: mg/L

SAMPLE / SAMPLE DUPLICATE RECOVERY

TDS by SM2540C	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Total dissolved solids	3940	4250	8	10	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$
 All Results are based on MDL and validated for QC purposes.
 BRL - Below Reporting Limit



CHAIN OF CUSTODY RECORD

Page 1 of 1

LAB W.O #: 473542

Field billable Hrs :

Need results by:

TAT Work Days = D

Time:

Phone: 432.686.0086

Fax:

City: Midland

St: TX

Zip: 79703

PM/Attn: Claudia Ramos

PO#:

Quote #:

Invoice To: CRA's Niagra Falls Location

Circle One Event: Daily Weekly Monthly

Quarterly Semi-Annual Annual N/A

Sample ID

Collect Date

Collect Time

Matrix Code

Field

Depth

Total # of containers

Sample #

1 MW95-110613

2 Dypb-110613

3 MW68-110613

4 MW032-110613

5 MW038-110613

6 Trip Blank

7

8

9

10

Reg. Program / Clean-up Std

CTLS TRRP DW NPDES LPST DryCh

Other:

Relinquished by

Affiliation

Date

Time

QA/QC Level & Certification

1 2 3 4 CLP AFCEE QAPP

NELAC DoD-ELAP Other:

STATE for Certs & Regs

FL TX GA NC SC NJ PA OK

LA AL NM Other:

Reg. Program / Clean-up Std

CTLS TRRP DW NPDES LPST DryCh

Other:

Relinquished by

Affiliation

Company: CRA

Address: 2315 Loop 250W

City: Midland

St: TX

Zip: 79703

PM/Attn: Claudia Ramos

PO#:

Quote #:

Invoice To: CRA's Niagra Falls Location

Circle One Event: Daily Weekly Monthly

Quarterly Semi-Annual Annual N/A

Sample ID

Collect Date

Collect Time

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Field

Depth

Total # of containers

Sample #

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CTLS TRRP DW NPDES LPST DryCh

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Affiliation

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QA/QC Level & Certification

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NELAC DoD-ELAP Other:

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LA AL NM Other:

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CTLS TRRP DW NPDES LPST DryCh

Other:

Relinquished by

Affiliation

Company: CRA

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City: Midland

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Zip: 79703

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Circle One Event: Daily Weekly Monthly

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Sample ID

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Other:

Relinquished by

Affiliation

Date

Time

QA/QC Level & Certification

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NELAC DoD-ELAP Other:

STATE for Certs & Regs

FL TX GA NC SC NJ PA OK

LA AL NM Other:

Reg. Program / Clean-up Std

CTLS TRRP DW NPDES LPST DryCh

Other:

Relinquished by

Affiliation

Company: CRA

Address: 2315 Loop 250W

City: Midland

St: TX

Zip: 79703

PM/Attn: Claudia Ramos

PO#:

Quote #:

Invoice To: CRA's Niagra Falls Location

Circle One Event: Daily Weekly Monthly

Quarterly Semi-Annual Annual N/A

Sample ID

Collect Date

Collect Time

Matrix Code

Field

Depth

Total # of containers

Sample #

1 MW95-110613

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Reg. Program / Clean-up Std

CTLS TRRP DW NPDES LPST DryCh

Other:

Relinquished by

Affiliation

Date

Time

QA/QC Level & Certification

1 2 3 4 CLP AFCEE QAPP

NELAC DoD-ELAP Other:

STATE for Certs & Regs

FL TX GA NC SC NJ PA OK

LA AL NM Other:

Reg. Program / Clean-up Std

CTLS TRRP DW NPDES LPST DryCh

Other:

Relinquished by

Affiliation

Company: CRA

Address: 2315 Loop 250W

City: Midland

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Circle One Event: Daily Weekly Monthly

Quarterly Semi-Annual Annual N/A

Sample ID

Collect Date

Collect Time

Matrix Code

Field

Depth

Total # of containers

Sample #

1 MW95-110613

2 Dypb-110613

3 MW68-110613

4 MW032-110613

5 MW038-110613

6 Trip Blank

7

8

9

10

Reg. Program / Clean-up Std

CTLS TRRP DW NPDES LPST DryCh

Other:

Relinquished by

Affiliation

Date

Time

QA/QC Level & Certification

1 2 3 4 CLP AFCEE QAPP

NELAC DoD-ELAP Other:

STATE for Certs & Regs

FL TX GA NC SC NJ PA OK

LA AL NM Other:

Reg. Program / Clean-up Std

CTLS TRRP DW NPDES LPST DryCh

Other:

Relinquished by

Affiliation

Company: CRA

Address: 2315 Loop 250W

City: Midland

St: TX

Zip: 79703

PM/Attn: Claudia Ramos

PO#:

Quote #:

Invoice To: CRA's Niagra Falls Location

Circle One Event: Daily Weekly Monthly

Quarterly Semi-Annual Annual N/A

Sample ID

Collect Date

Collect Time

Matrix Code

Field

Depth

Total # of containers

Sample #

1 MW95-110613

2 Dypb-110613

3 MW68-110613

4 MW032-110613

5 MW038-110613

6 Trip Blank

7

8

9

10

Reg. Program / Clean-up Std

CTLS TRRP DW NPDES LPST DryCh

Other:

Relinquished by

Affiliation

Date

Time

QA/QC Level & Certification

1 2 3 4 CLP AFCEE QAPP

NELAC DoD-ELAP Other:

STATE for Certs & Regs

FL TX GA NC SC NJ PA OK

LA AL NM Other:

Reg. Program / Clean-up Std

CTLS TRRP DW NPDES LPST DryCh

Other:

Relinquished by

Affiliation

Company: CRA

Address: 2315 Loop 250W

City: Midland

St: TX

Zip: 79703

PM/Attn: Claudia Ramos

PO#:

Quote #:

Invoice To: CRA's Niagra Falls Location

Circle One Event: Daily Weekly Monthly

Quarterly Semi-Annual Annual N/A

Sample ID

Collect Date

Collect Time

Matrix Code

Field

Depth

Total # of containers

Sample #

1 MW95-110613

2 Dypb-110613

3 MW68-110613

4 MW032-110613

5 MW038-110613

6 Trip Blank

7

</



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Conestoga Rovers & Associates

Date/ Time Received: 11/06/2013 05:00:00 PM

Work Order #: 473542

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	4
#2 *Shipping container in good condition?	N/A
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:
----------	-----------------

Checklist completed by: Kelsey Brooks
Kelsey Brooks

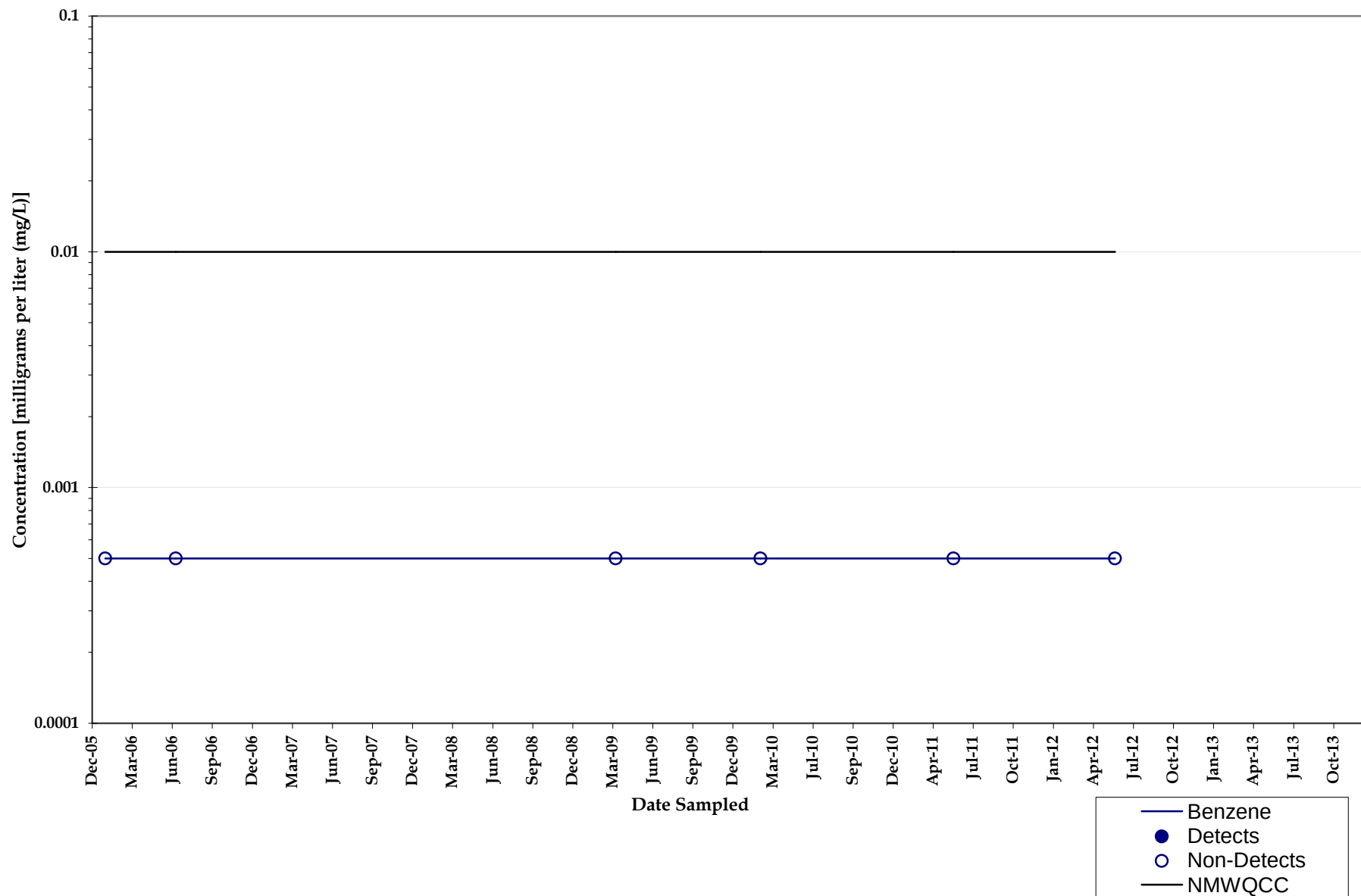
Date: 11/07/2013

Checklist reviewed by: Kelsey Brooks
Kelsey Brooks

Date: 11/07/2013

APPENDIX D

CONCENTRATION THROUGH TIME GRAPHS - BENZENE, CHROMIUM AND HEXAVALENT CHROMIUM

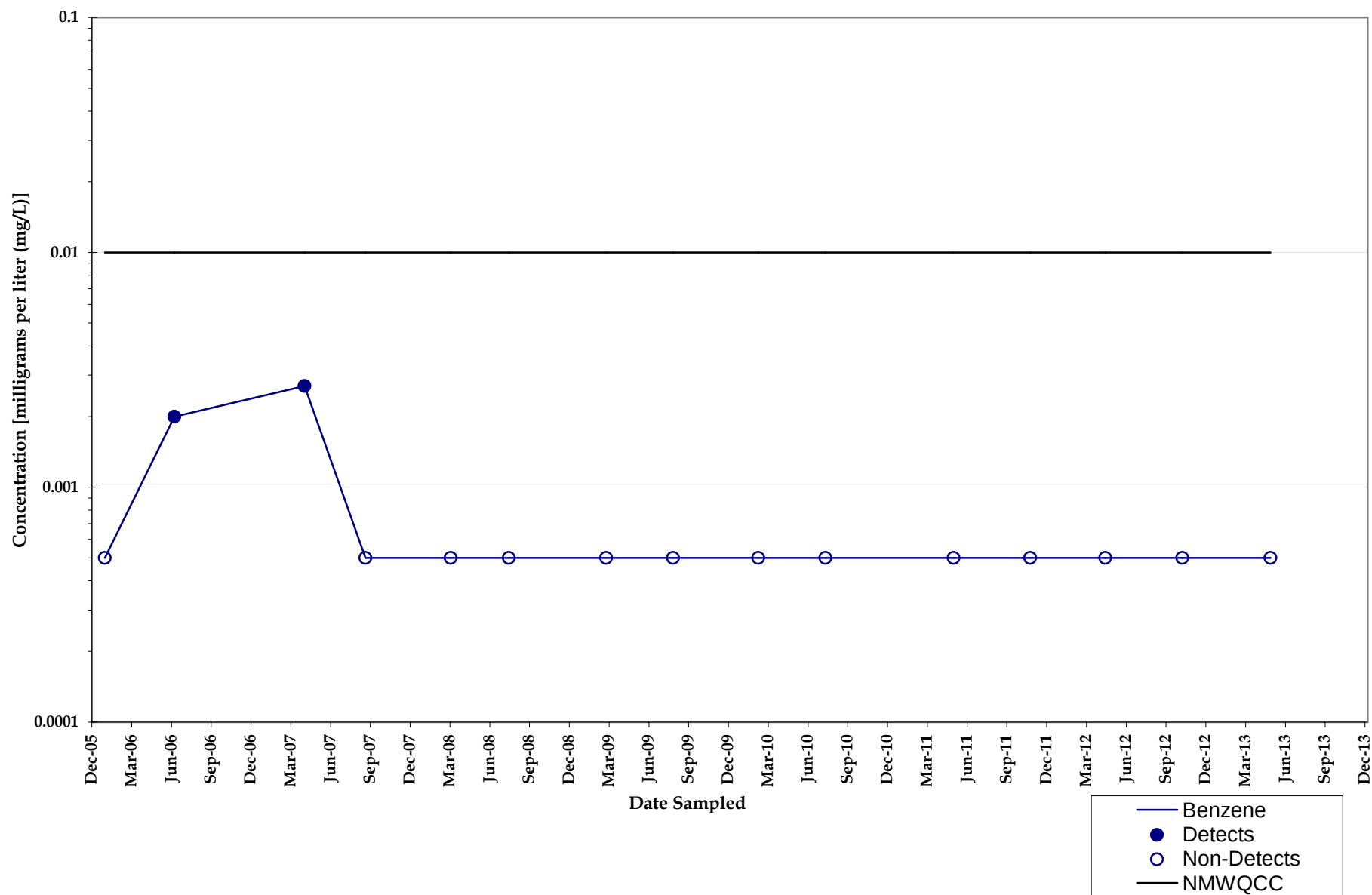


Benzene Concentrations Monitoring Well EPWW1

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

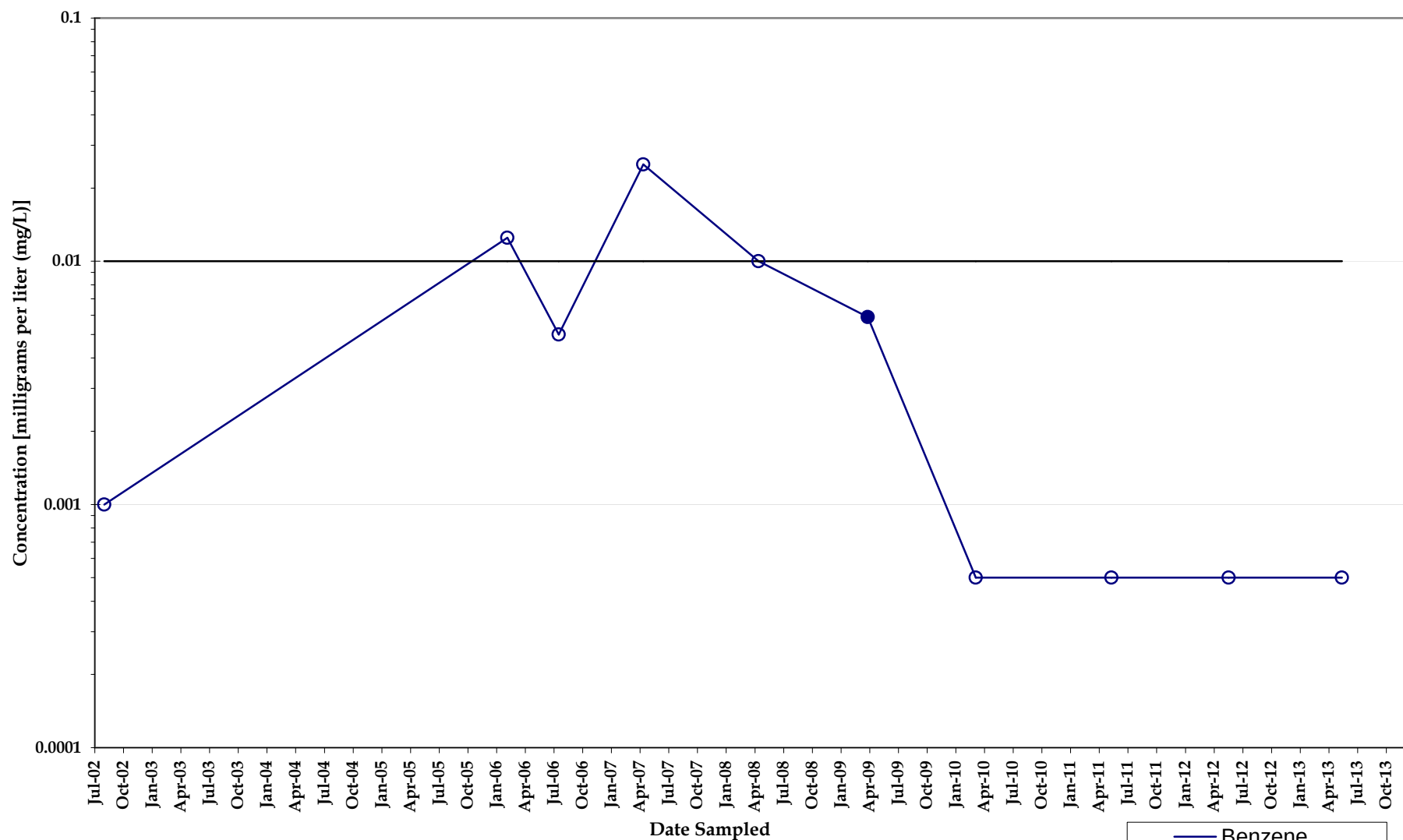


Benzene Concentrations Monitoring Well GOPWW2

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

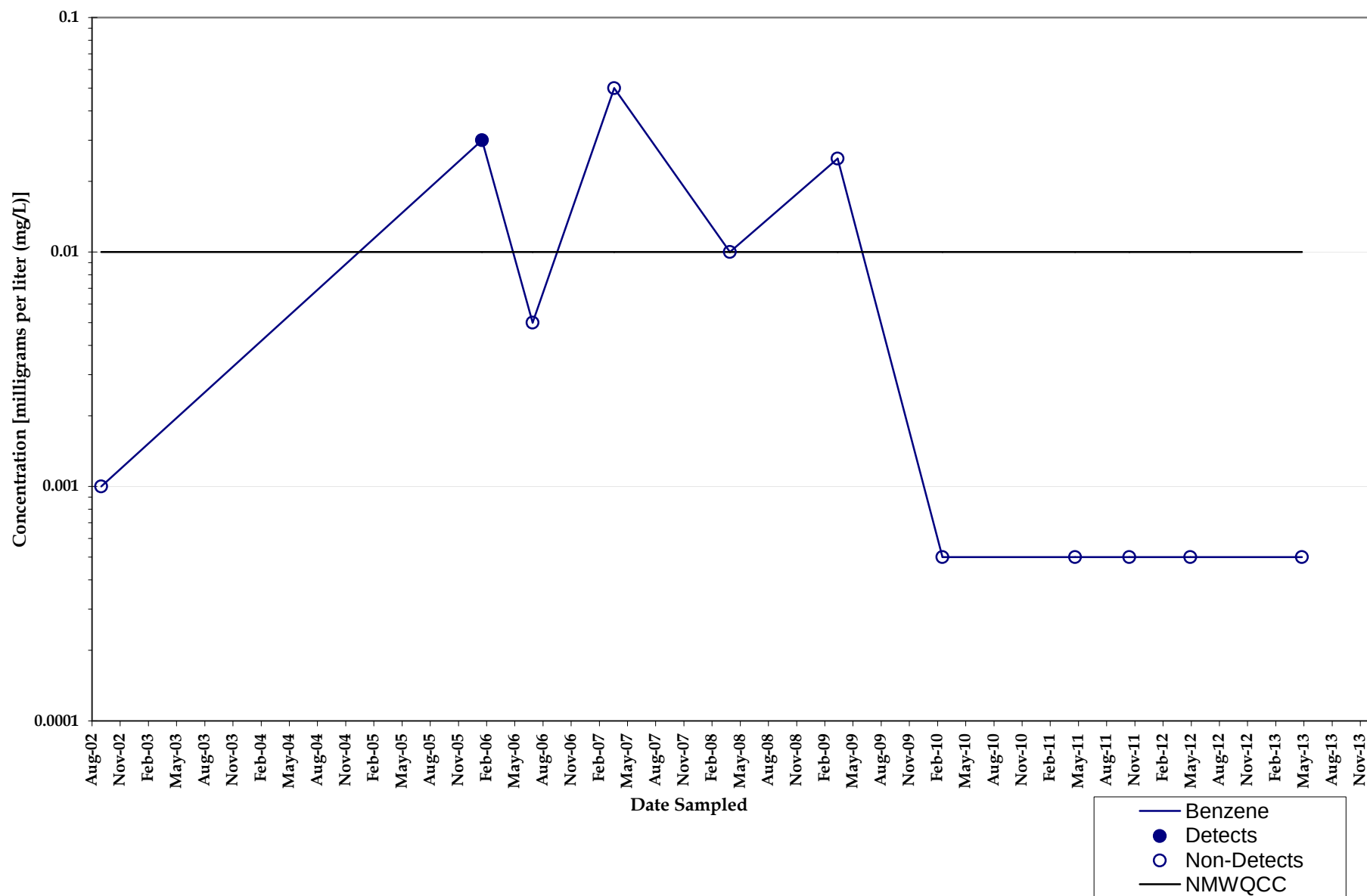


Benzene Concentrations Monitoring Well IW001

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

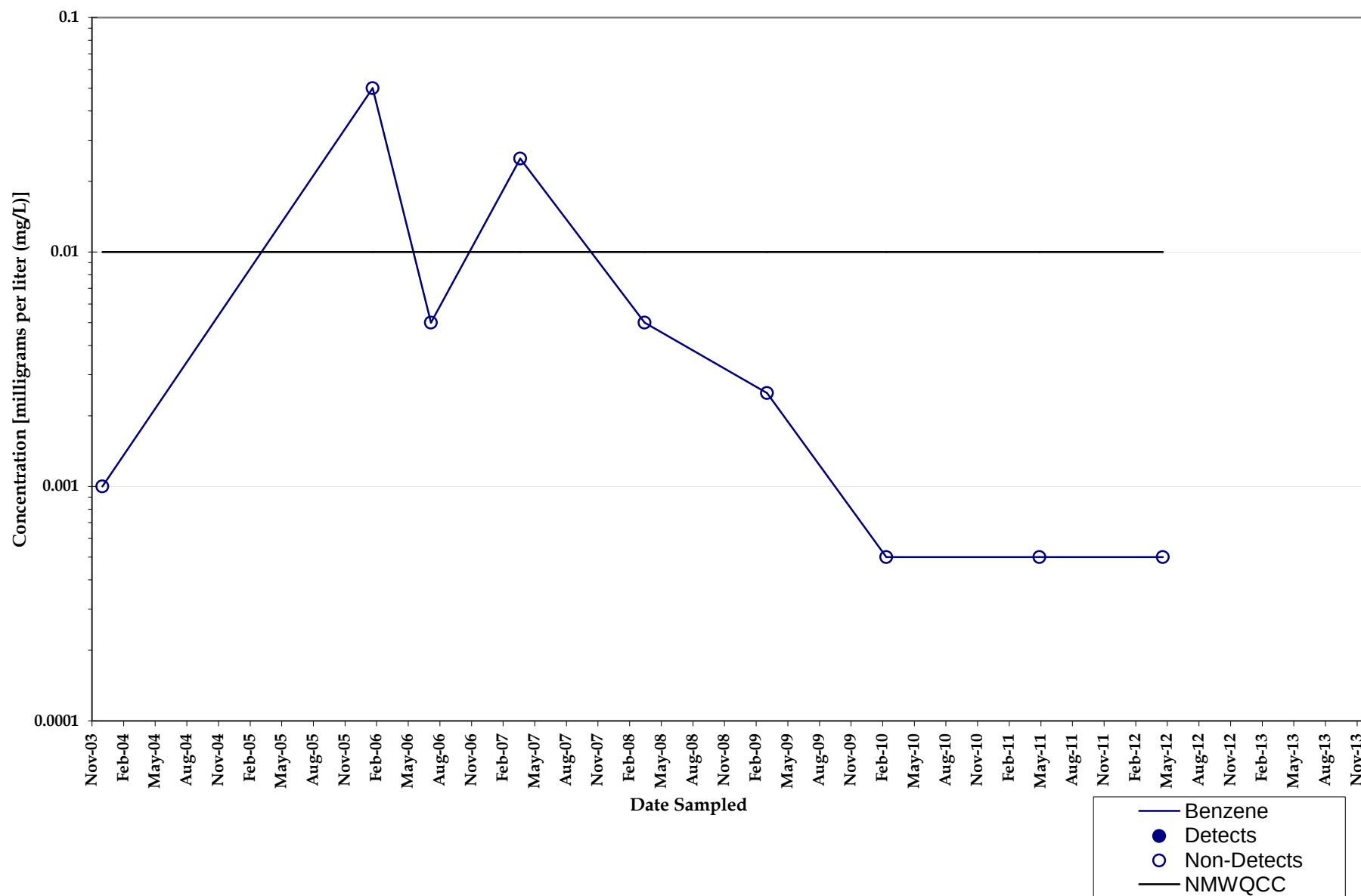


Benzene Concentrations Monitoring Well IW002

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

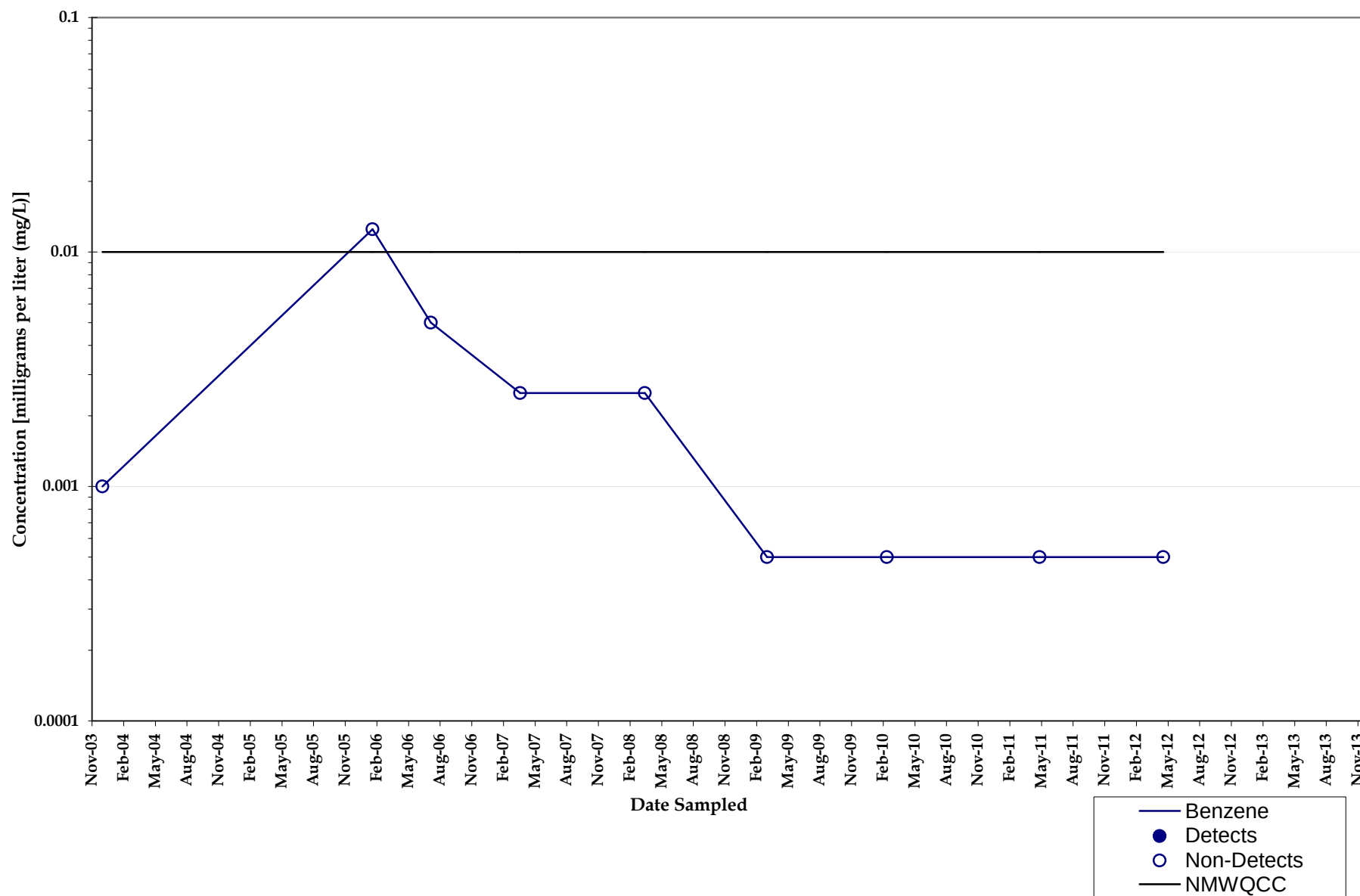


Benzene Concentrations Monitoring Well IW003

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

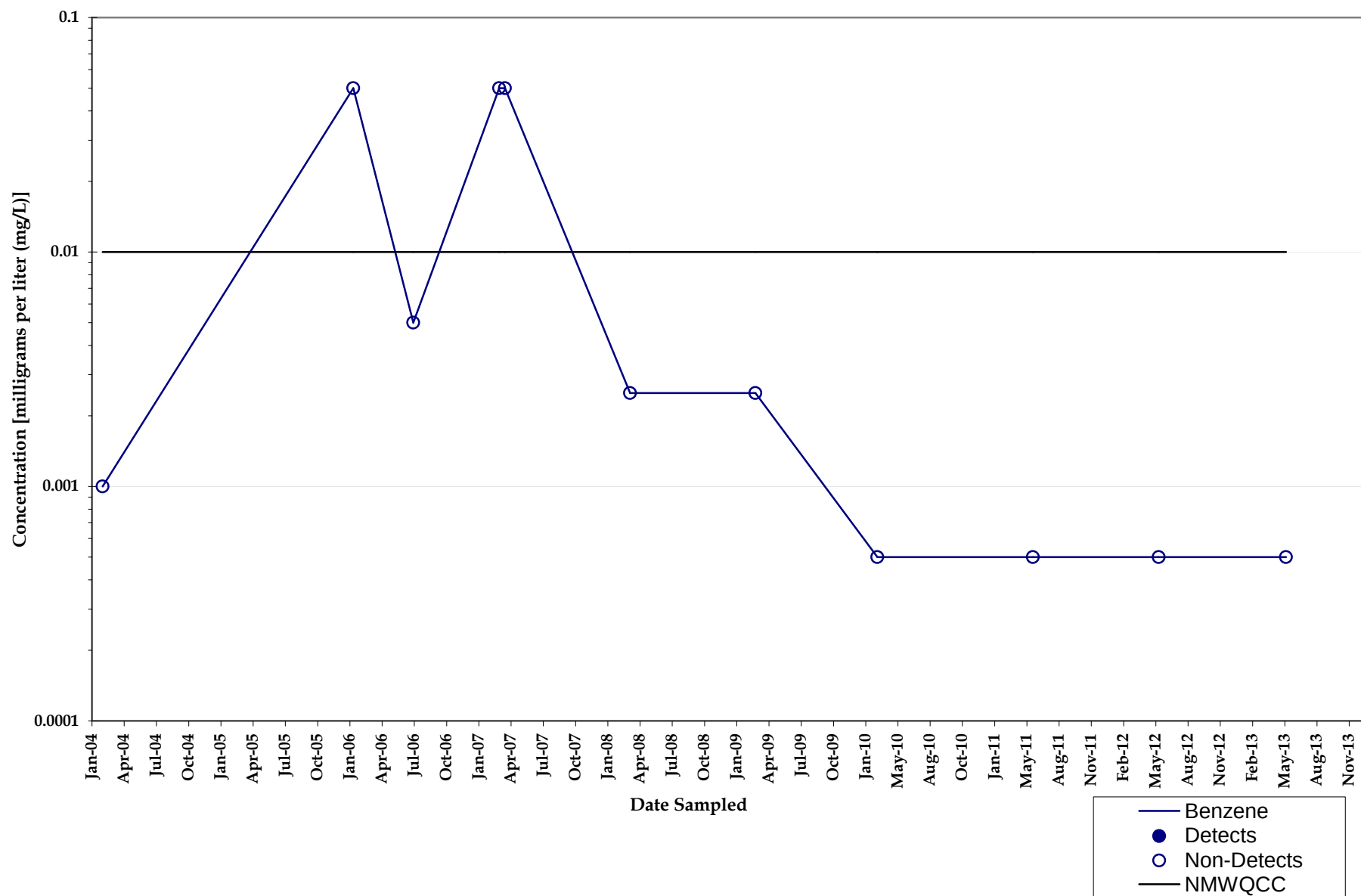


Benzene Concentrations Monitoring Well IW004

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

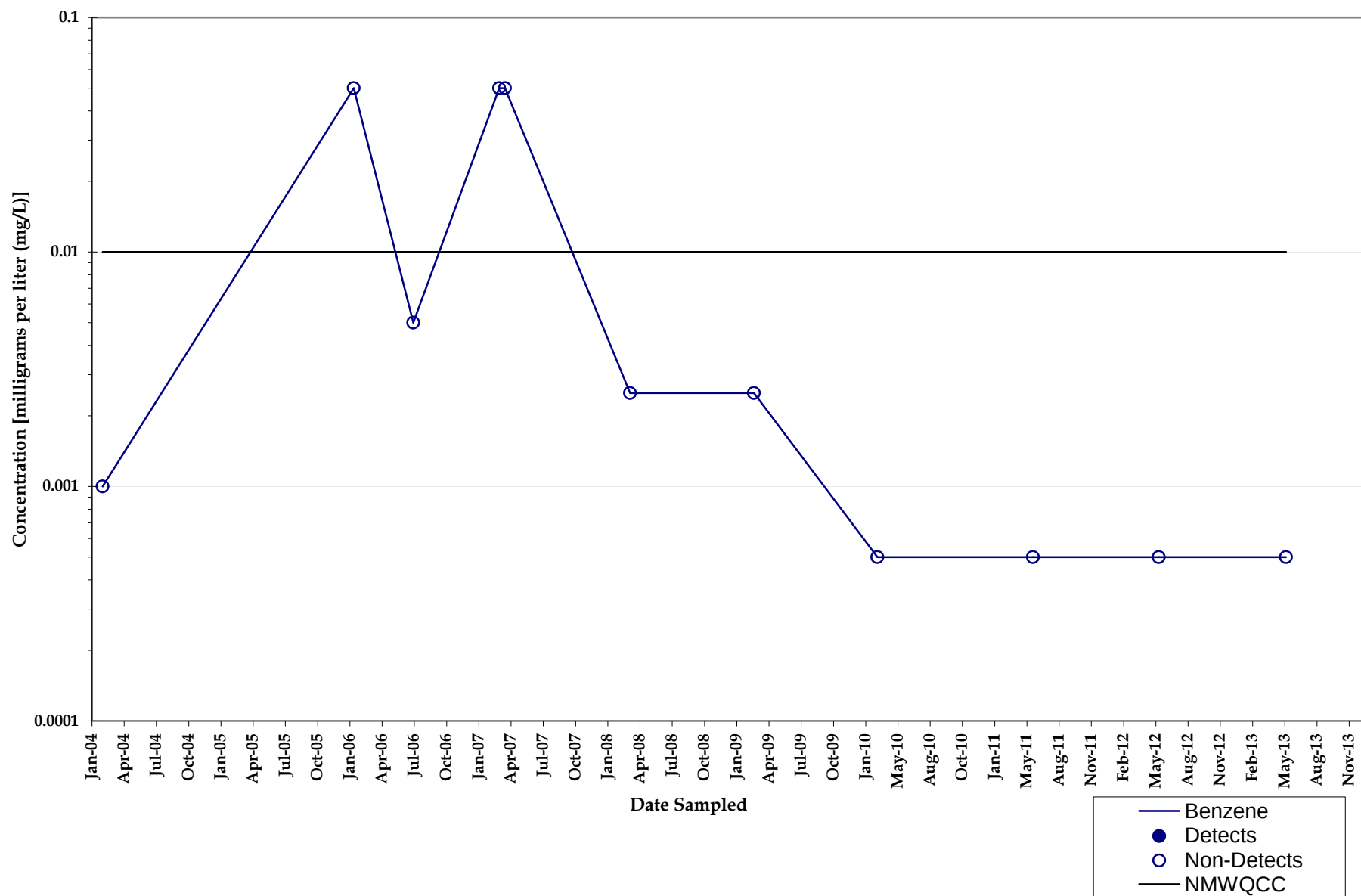


Benzene Concentrations Monitoring Well IW005

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

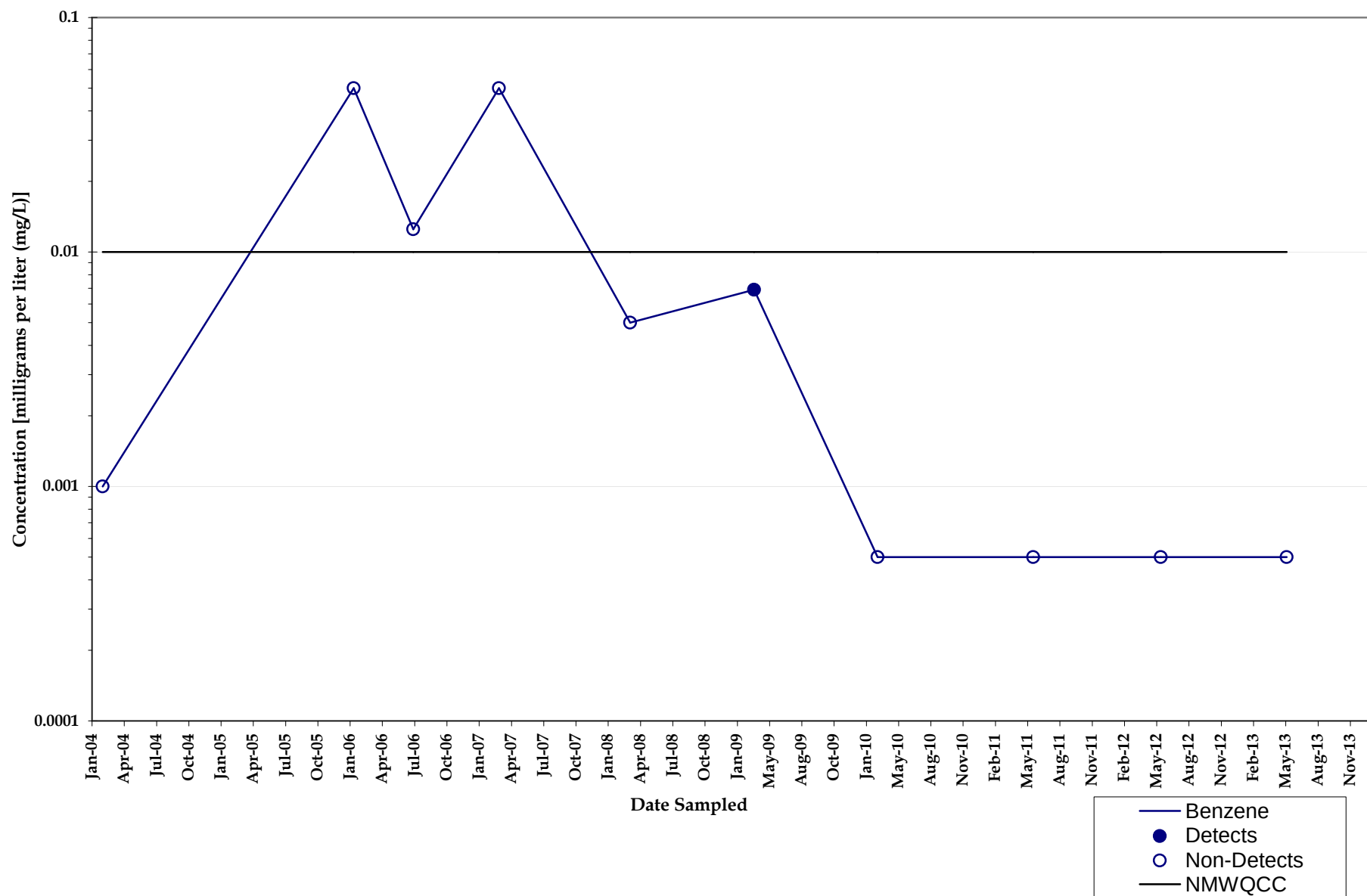


Benzene Concentrations Monitoring Well IW006

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

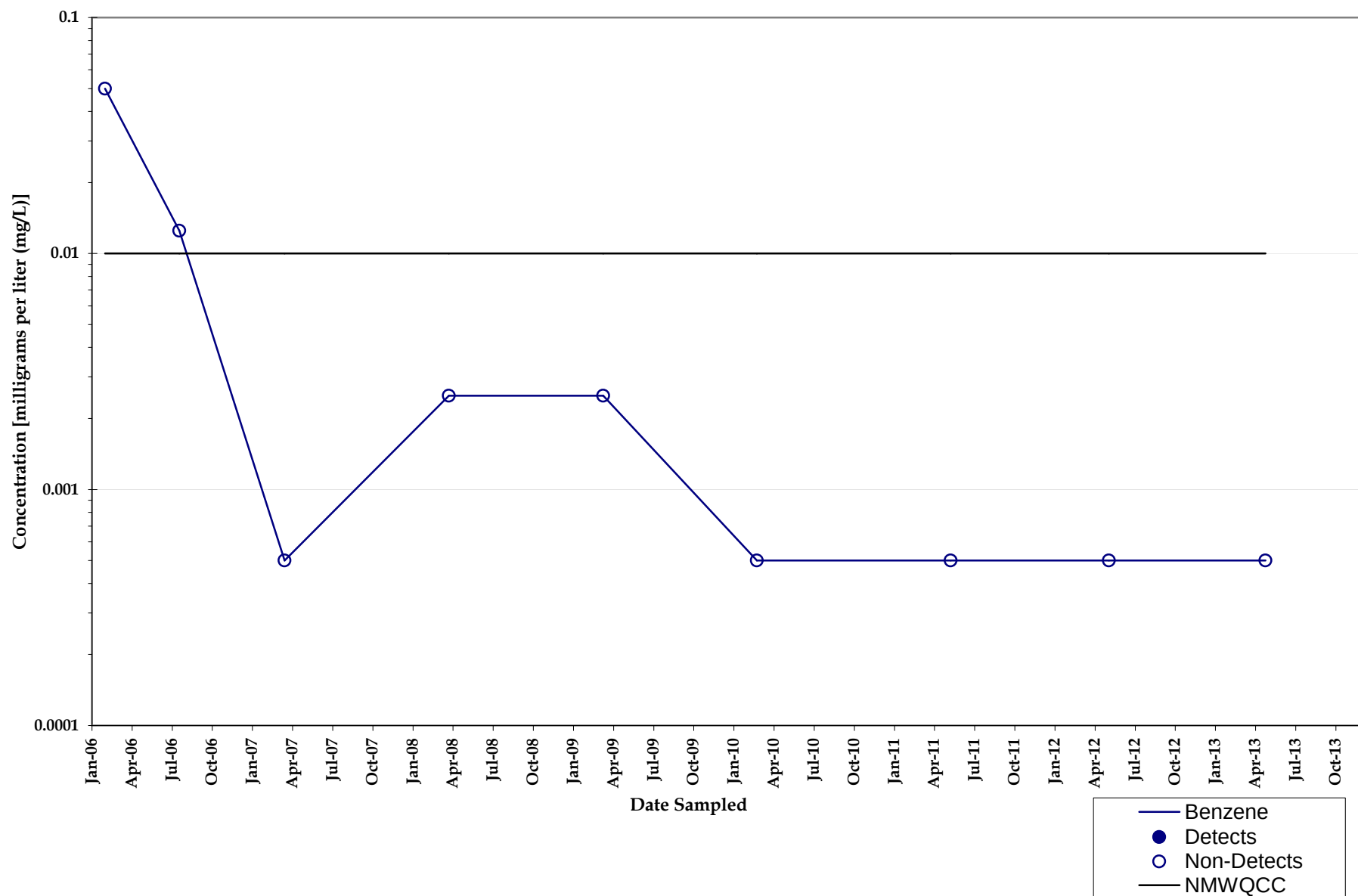


Benzene Concentrations Monitoring Well IW007

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

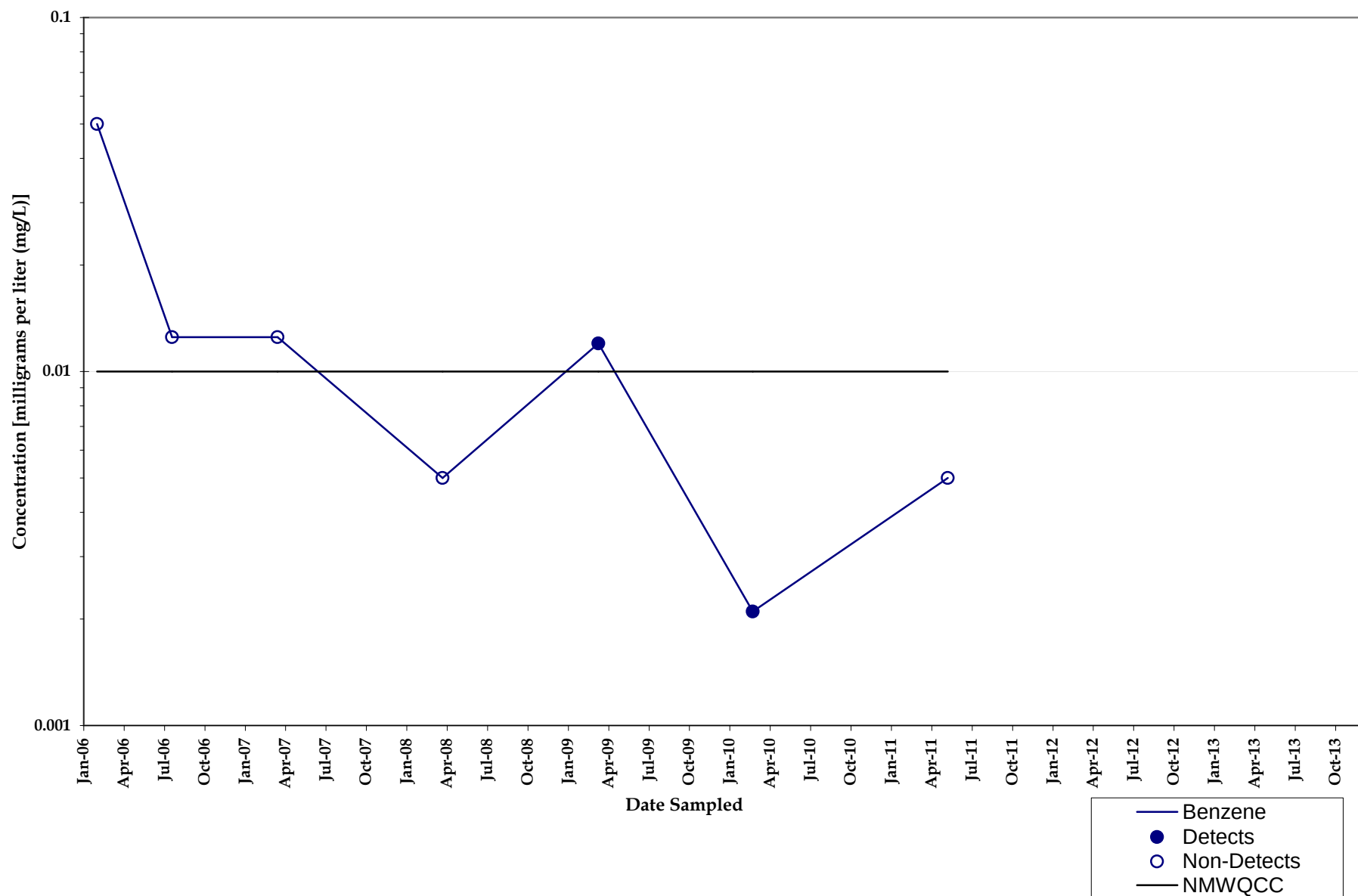


Benzene Concentrations Monitoring Well IW008

*North Eunice Gas Plant
Lea County, New Mexico*



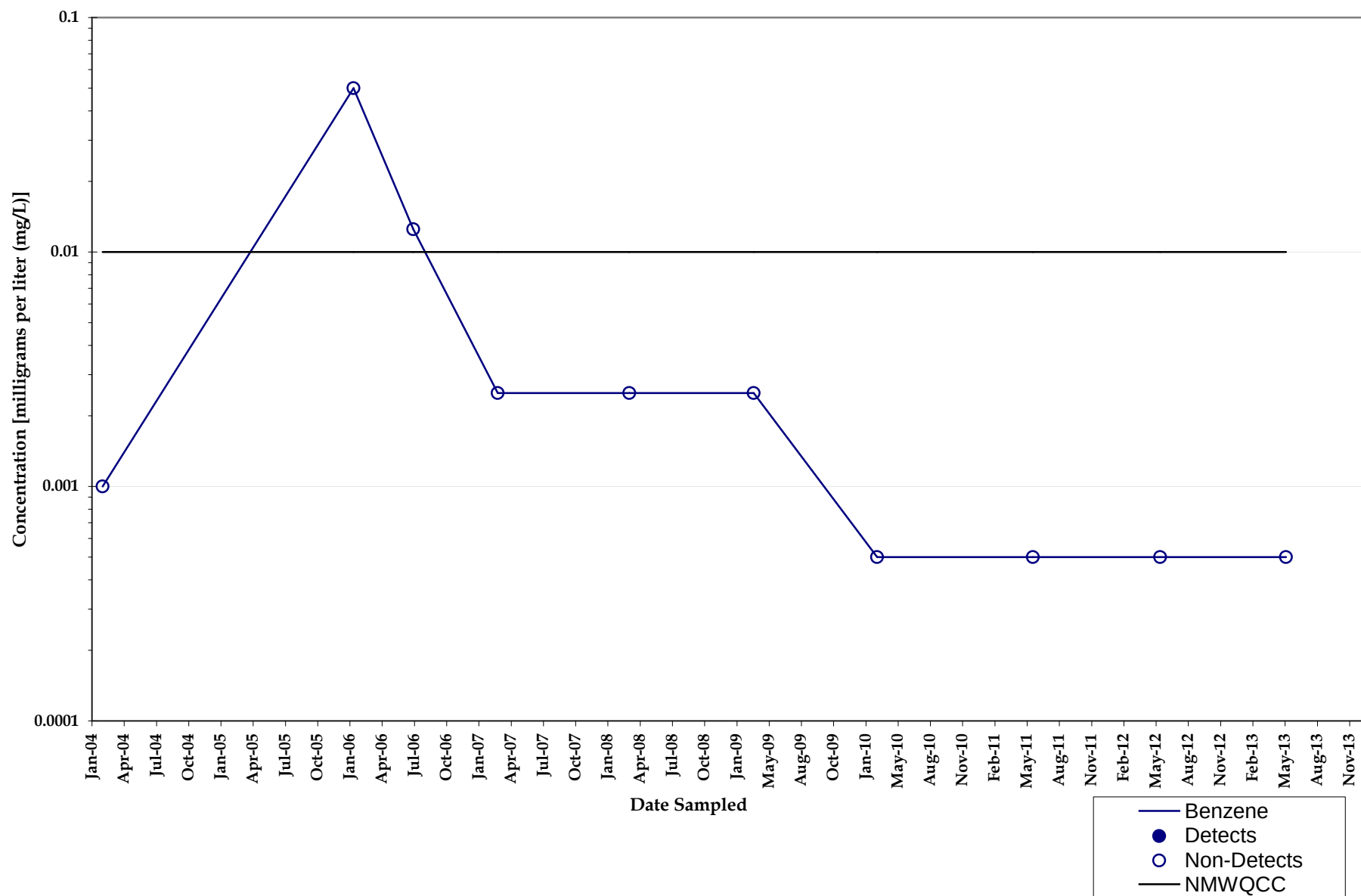
Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

Benzene Concentrations Monitoring Well IW009

*North Eunice Gas Plant
Lea County, New Mexico*

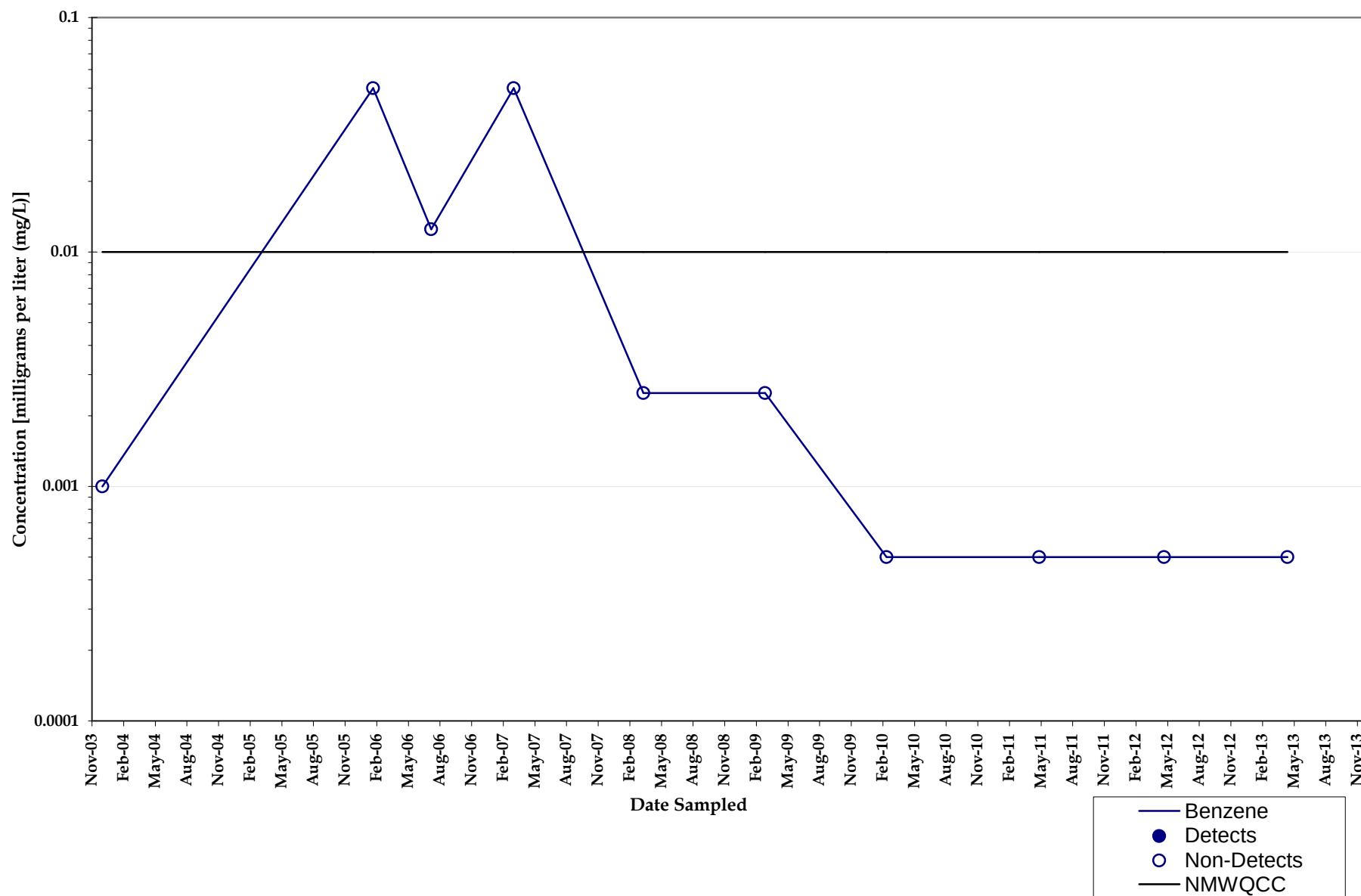


Benzene Concentrations Monitoring Well IW010

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

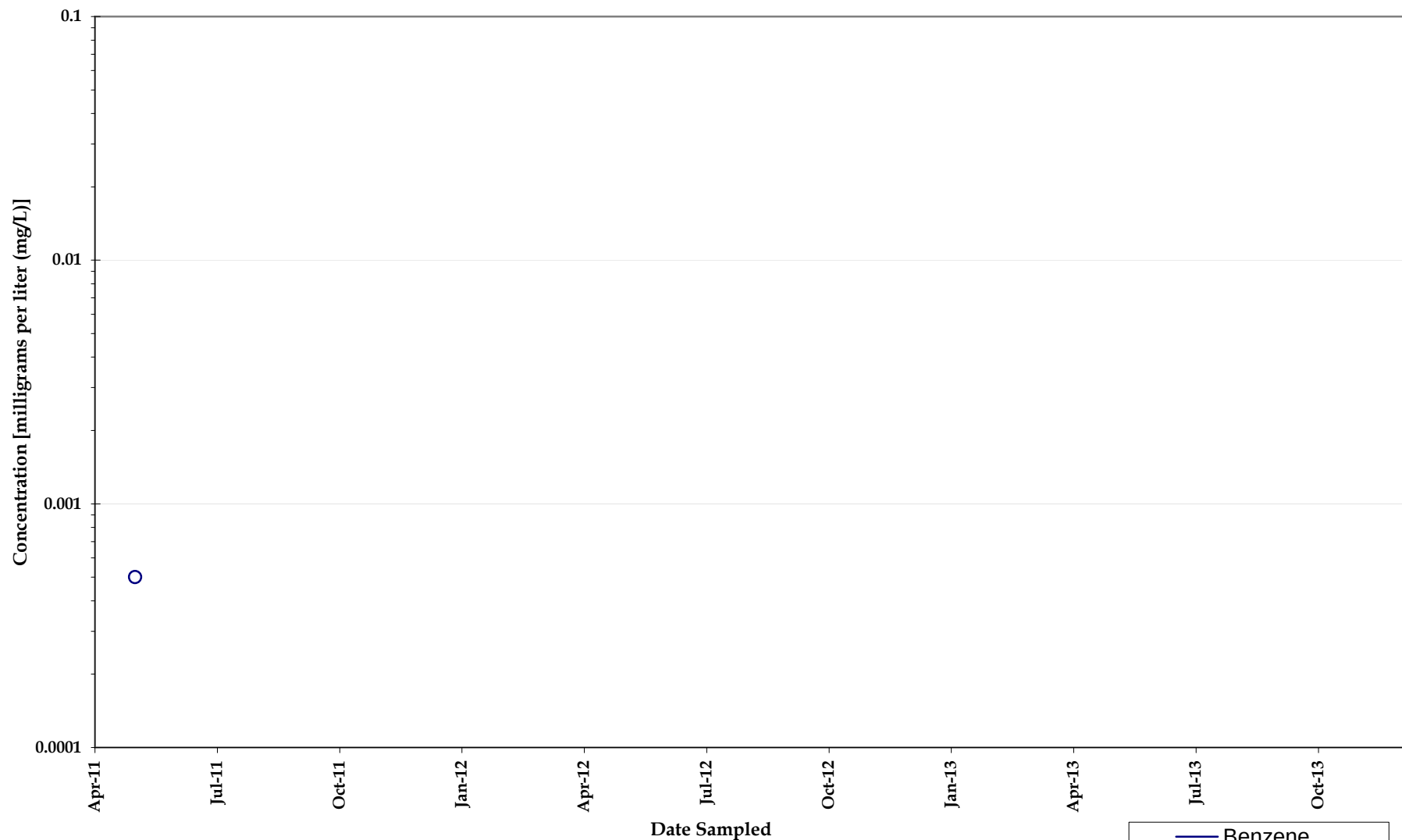


Benzene Concentrations Monitoring Well IW011

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

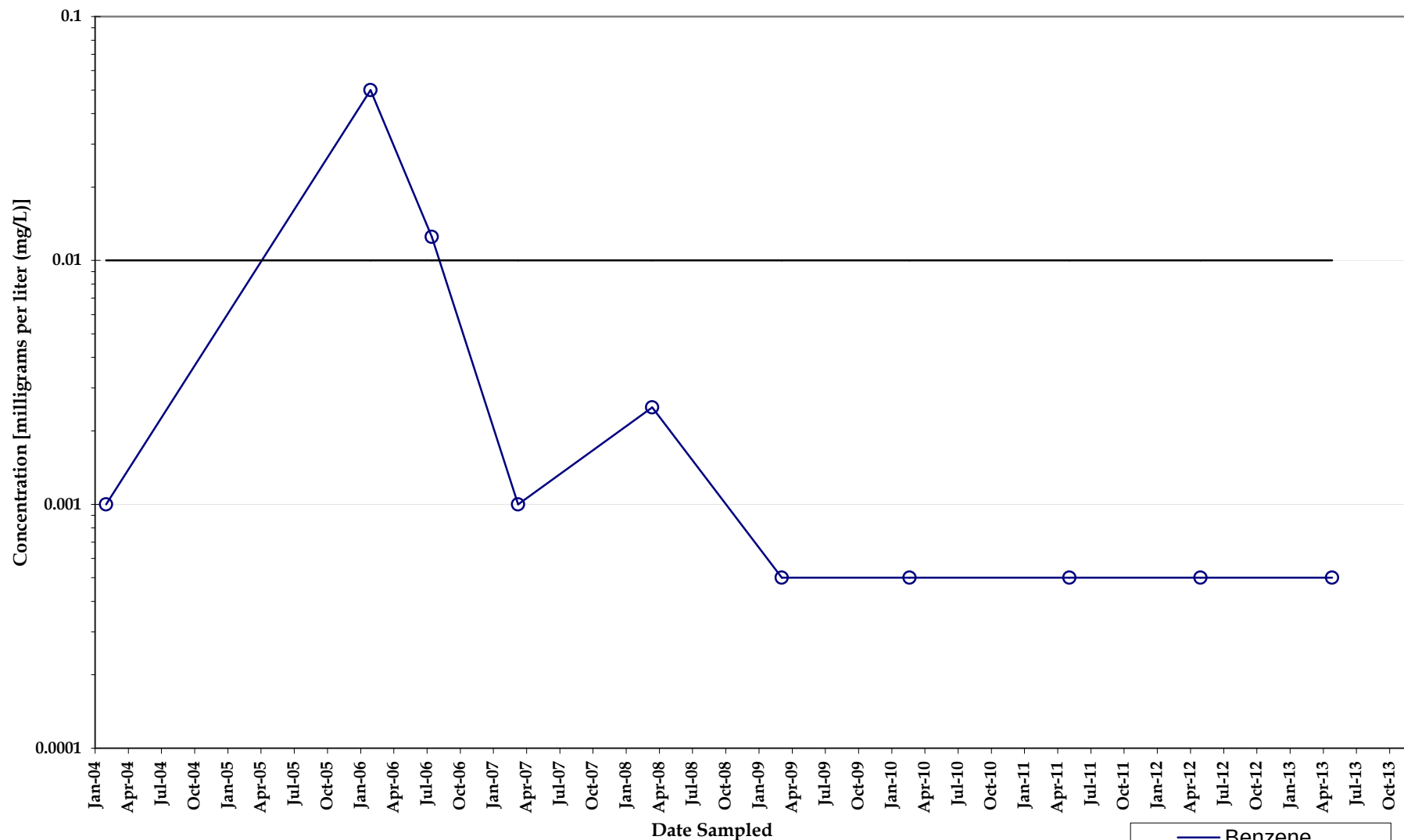


Benzene Concentrations Monitoring Well IW012

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

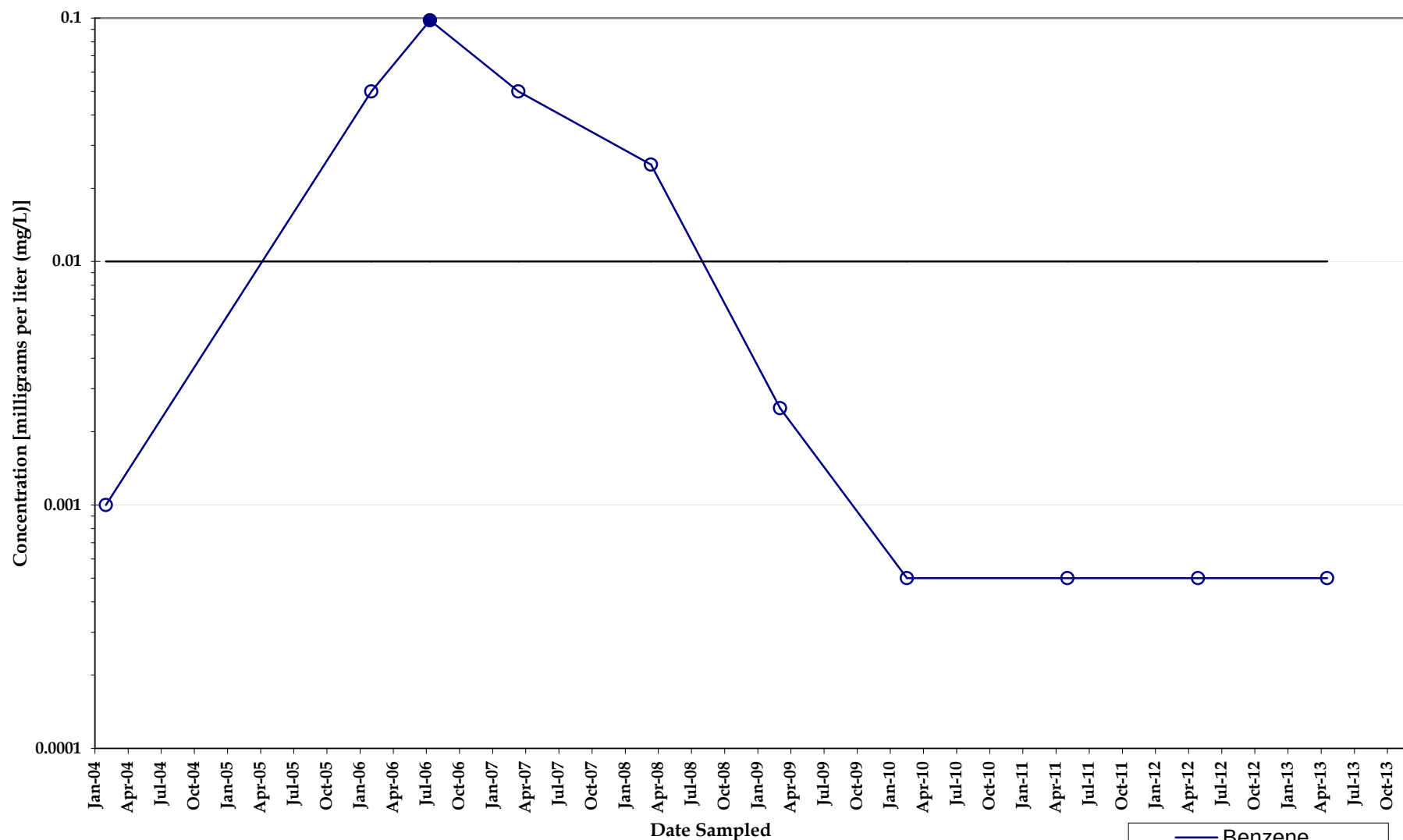


Benzene Concentrations Monitoring Well IW013

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

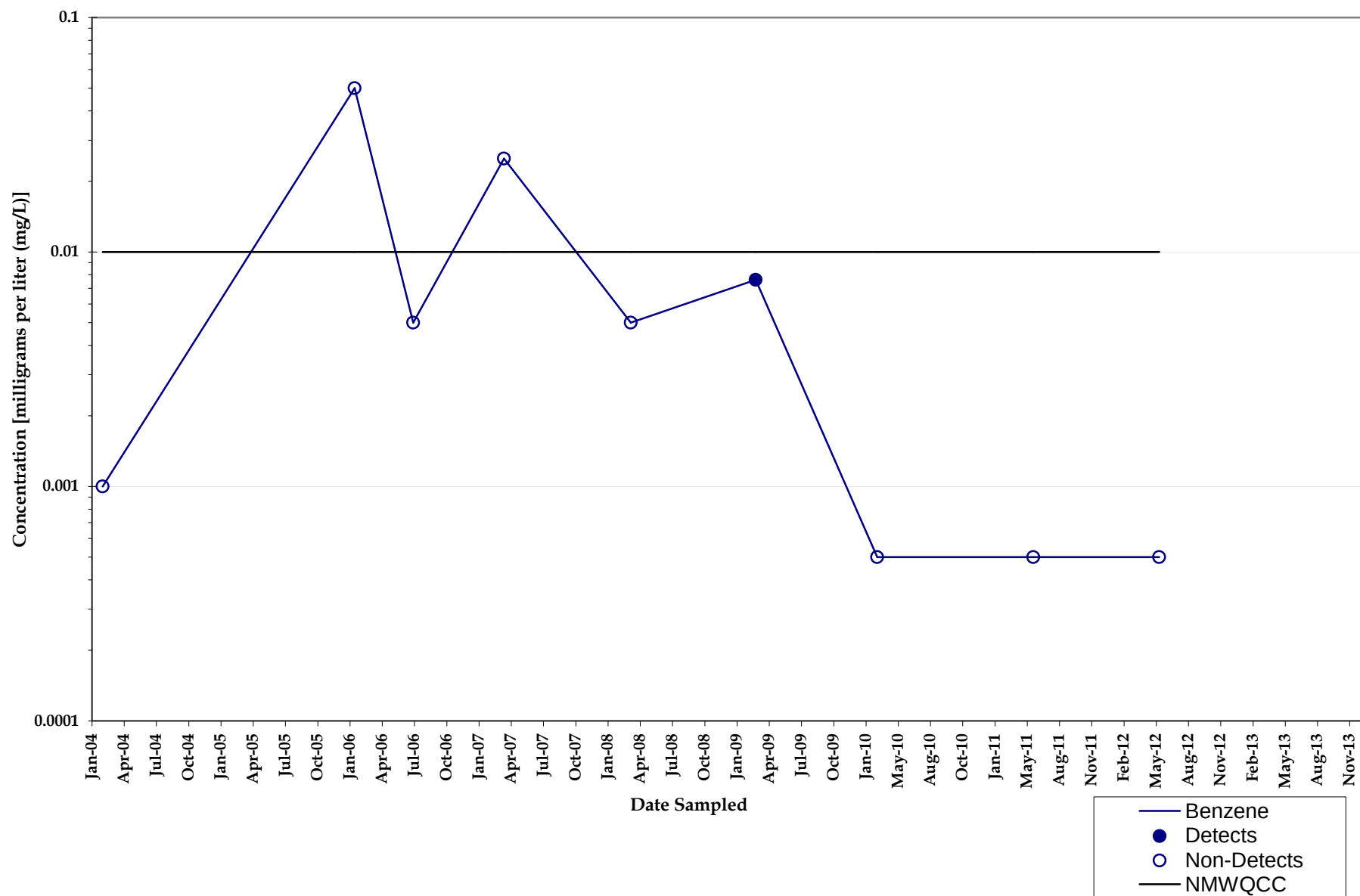


Benzene Concentrations Monitoring Well IW014

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

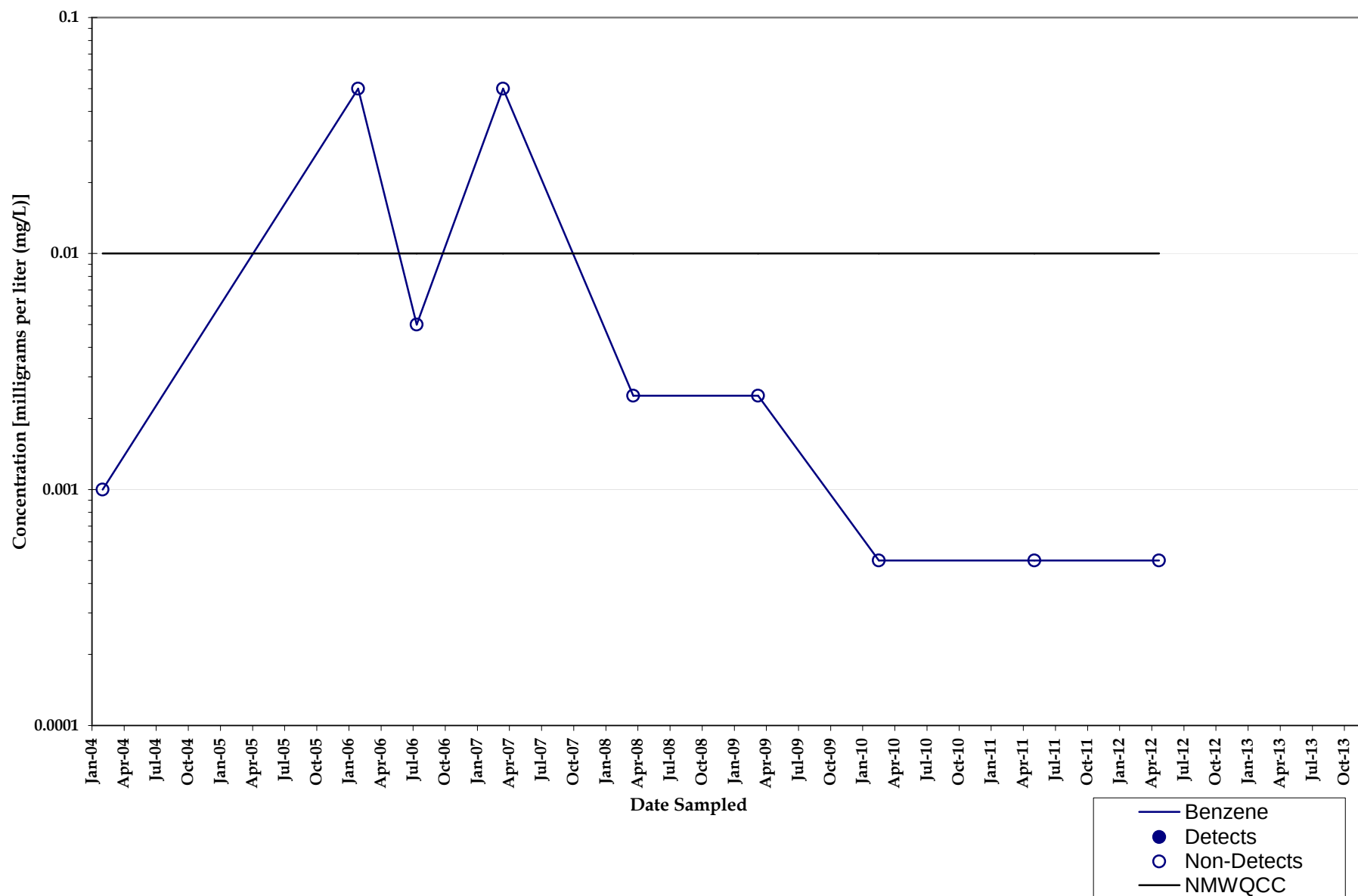


Benzene Concentrations Monitoring Well IW015

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

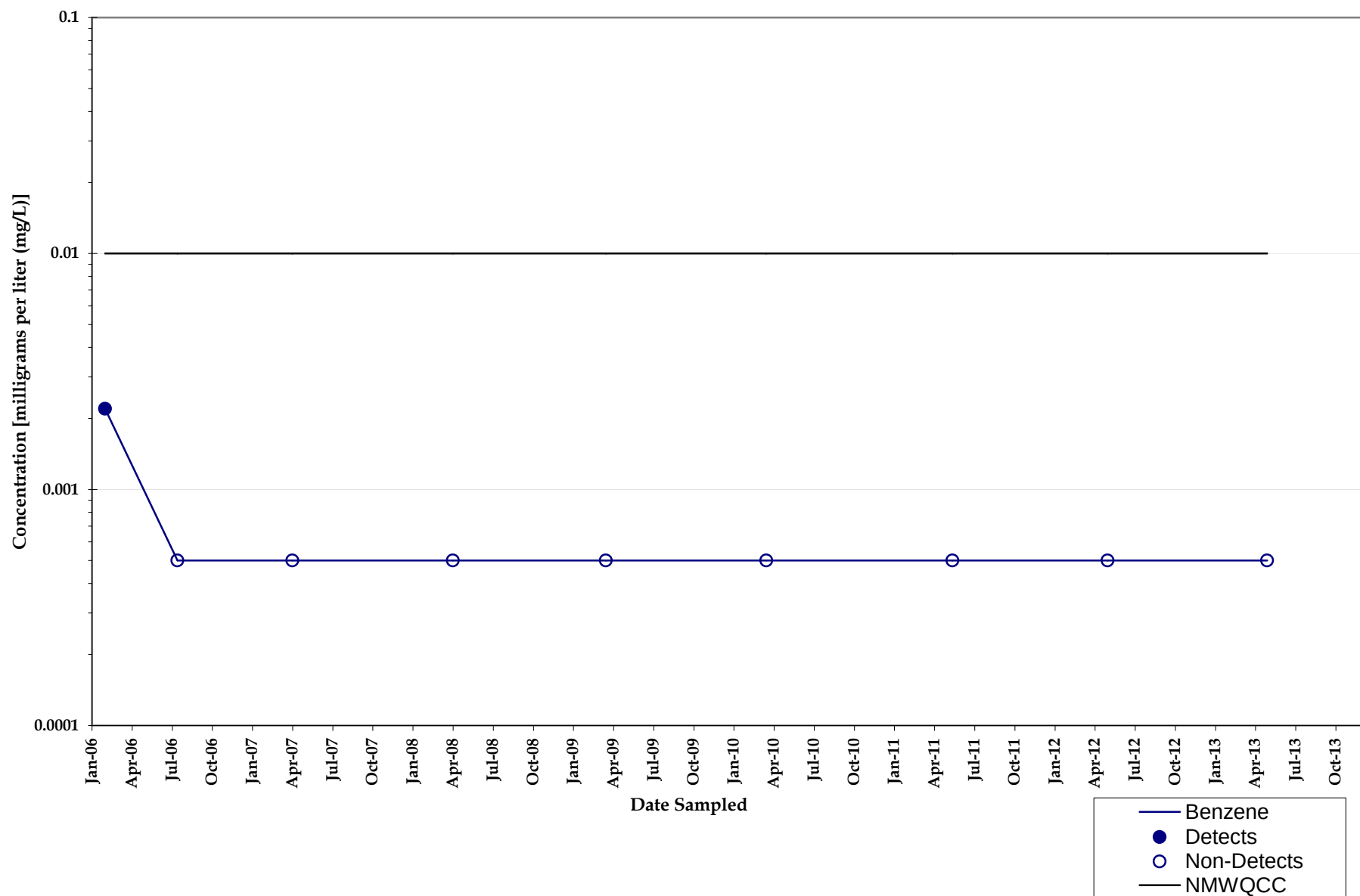


Benzene Concentrations Monitoring Well IW016

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

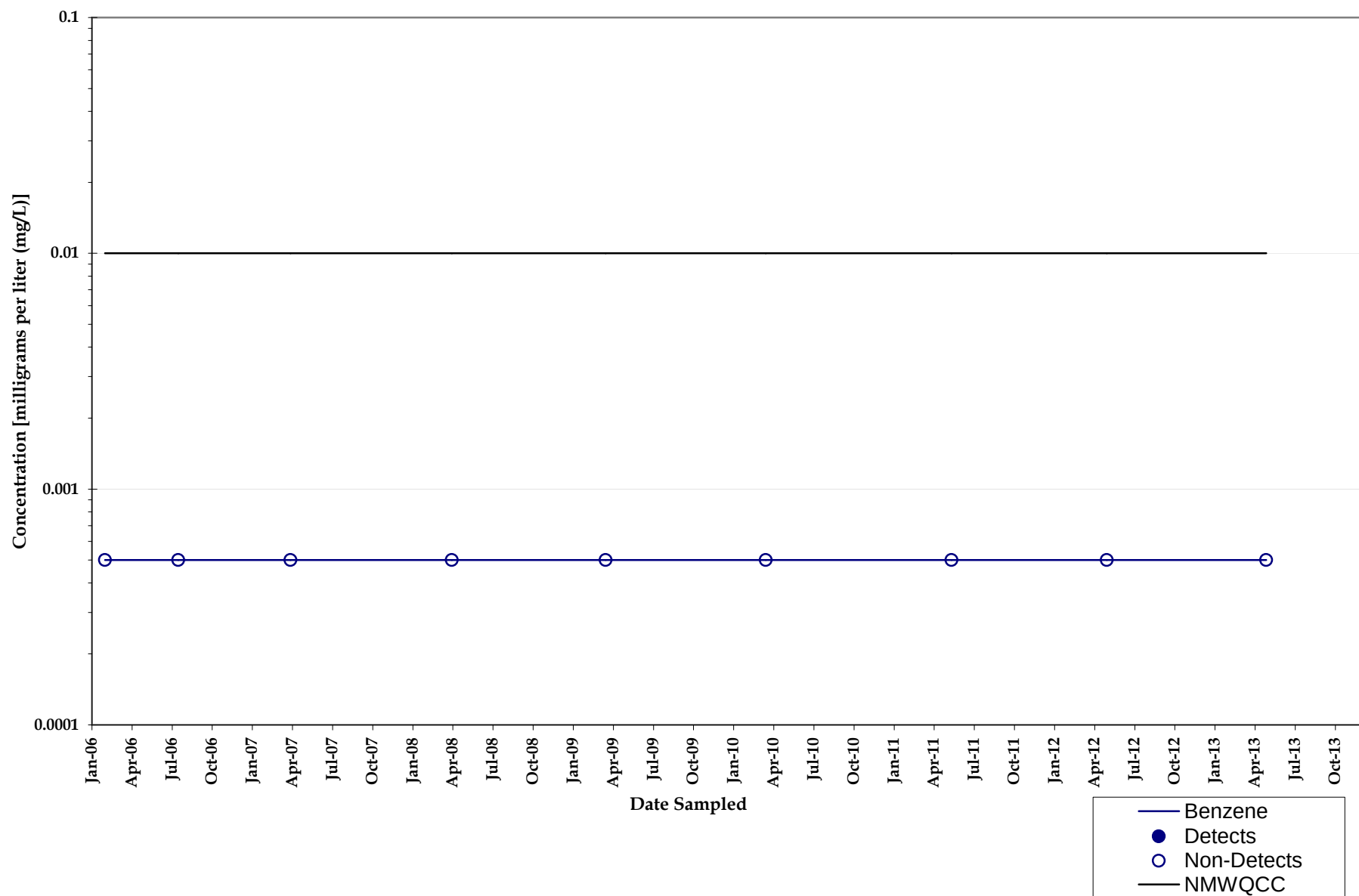


Benzene Concentrations Monitoring Well IW018

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

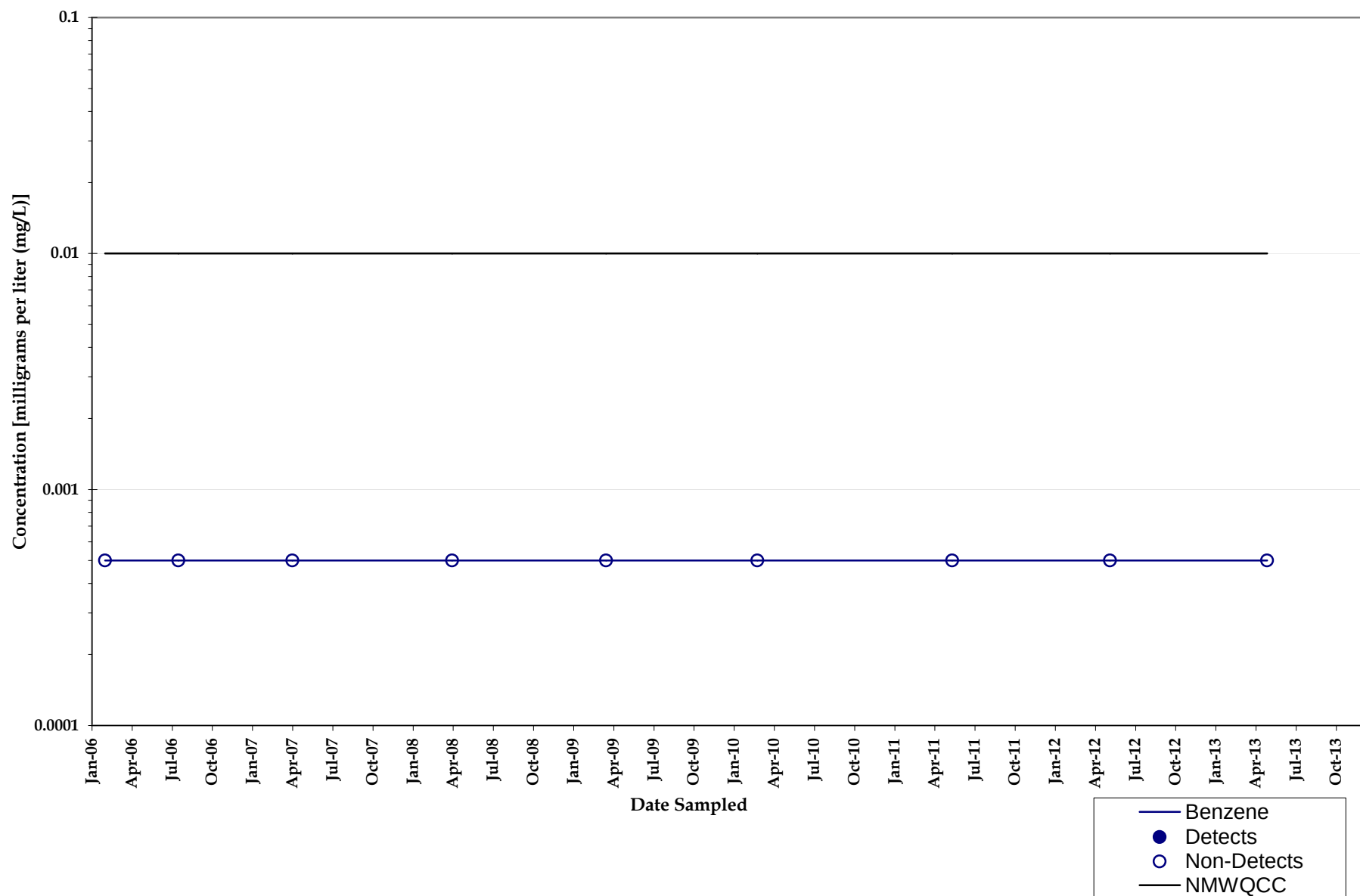


Benzene Concentrations Monitoring Well IW019

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

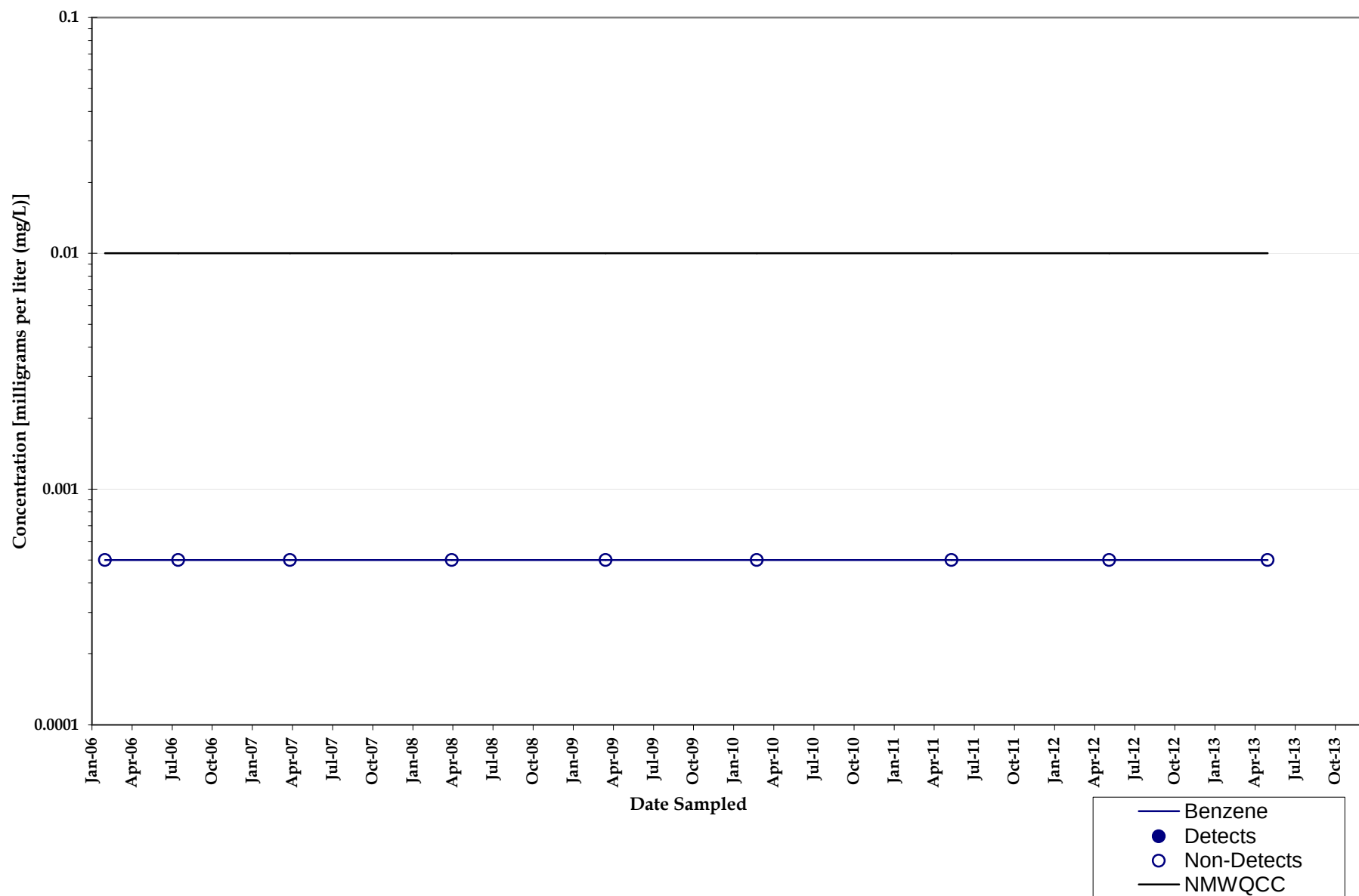


Benzene Concentrations Monitoring Well IW020

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

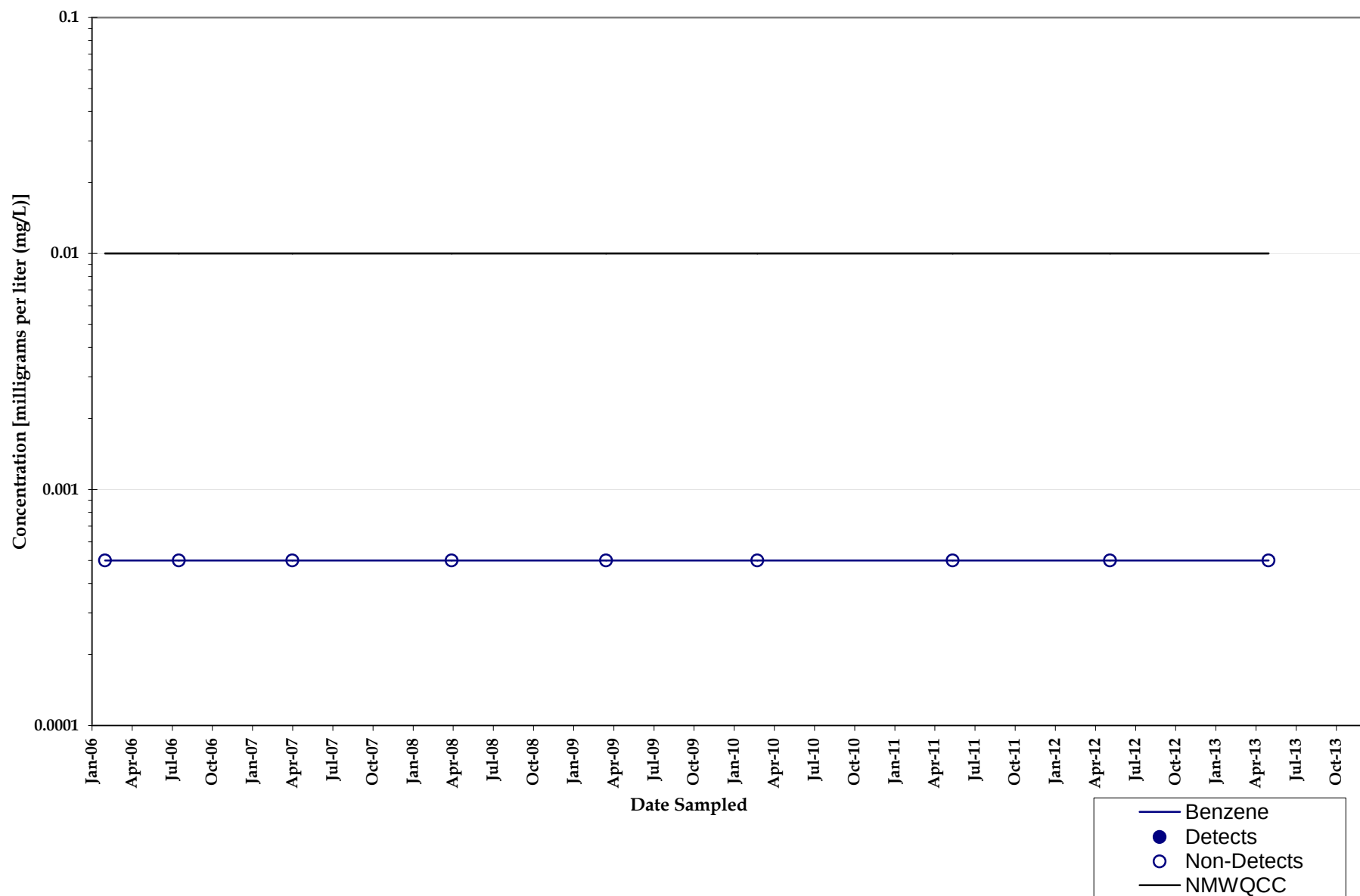


Benzene Concentrations Monitoring Well IW021

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by solid symbol and detection values greater than the RL denoted by shaded symbol.

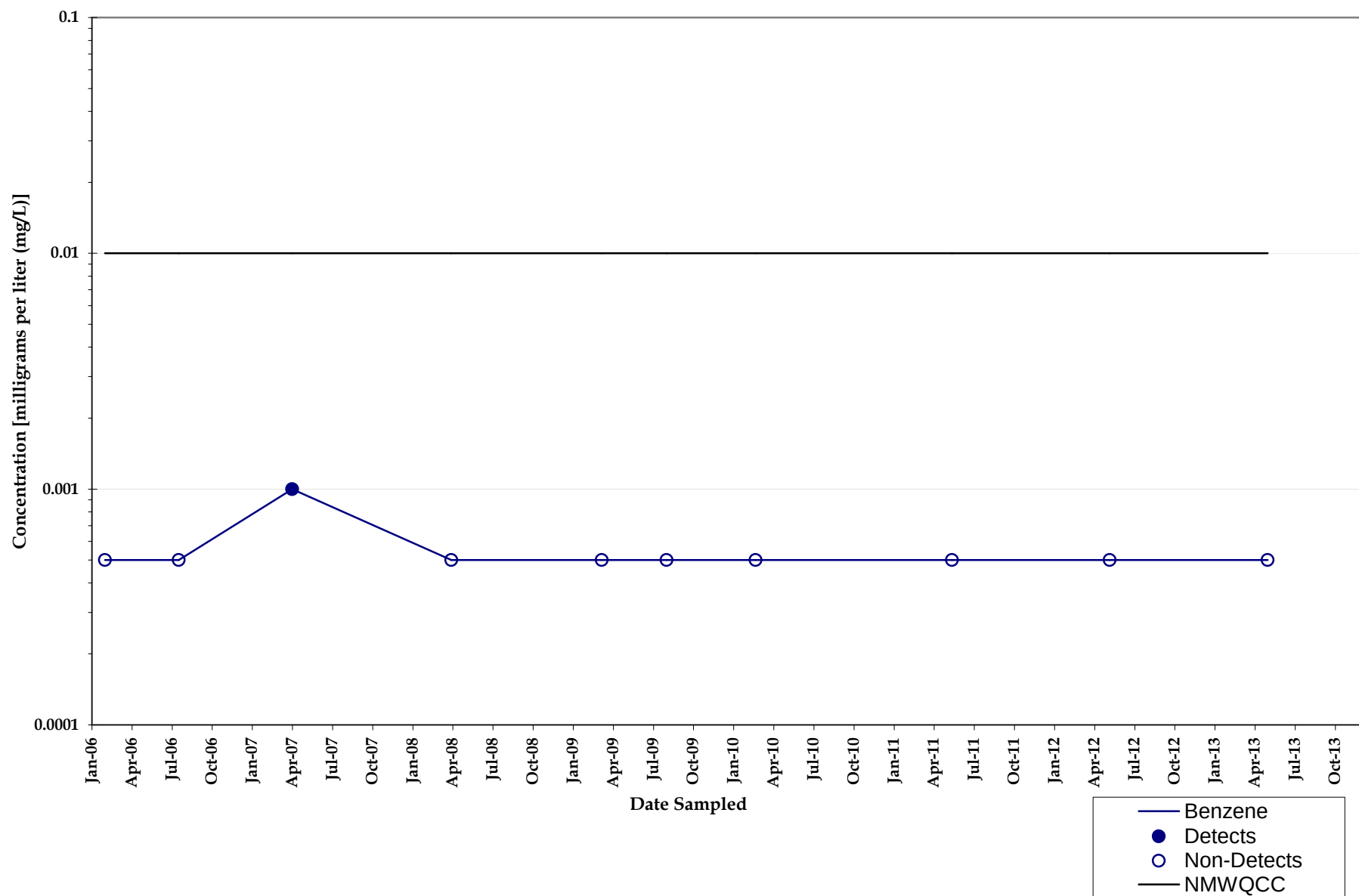


Benzene Concentrations Monitoring Well IW022

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

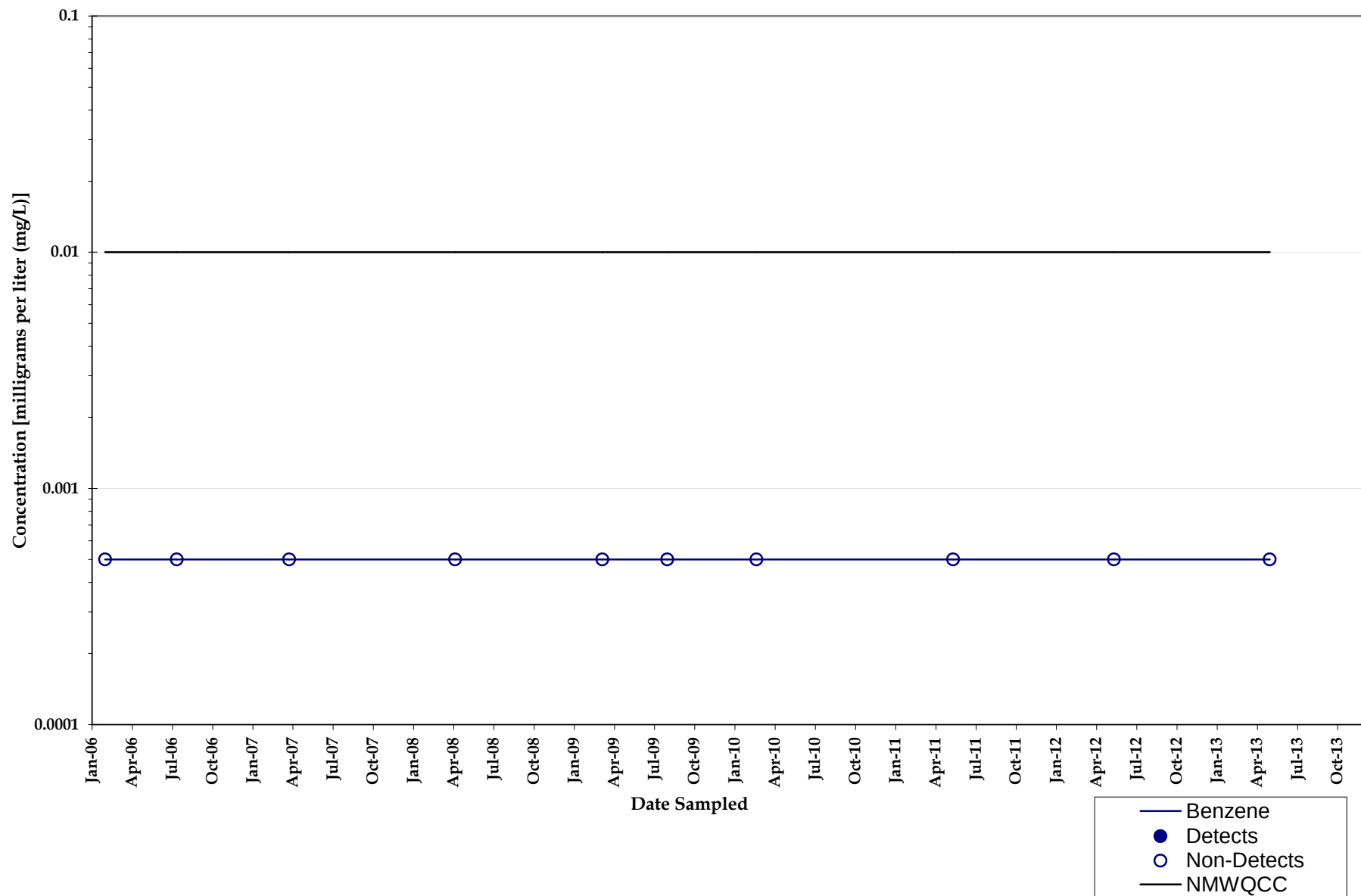


Benzene Concentrations Monitoring Well IW023

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

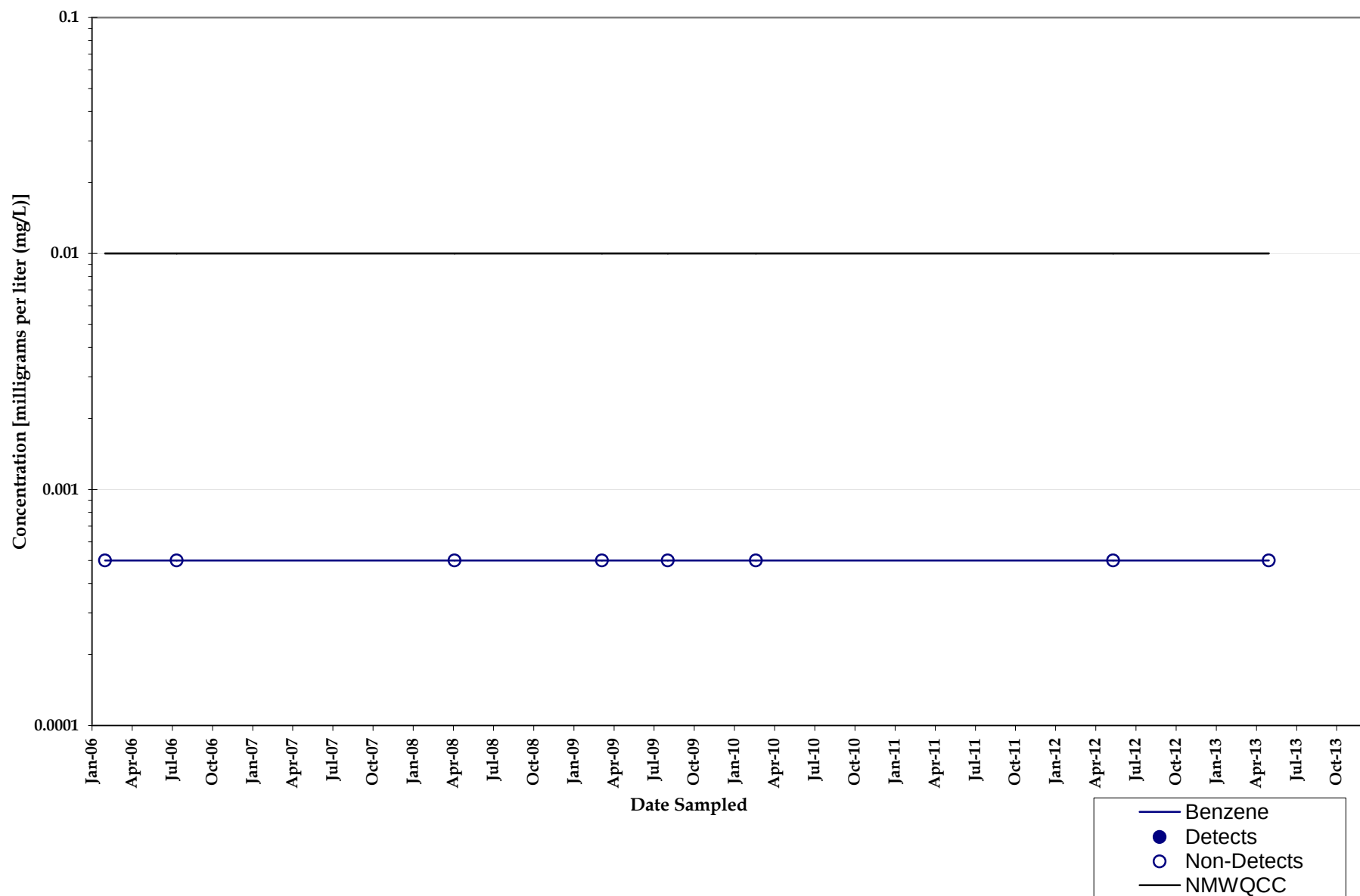


Benzene Concentrations Monitoring Well IW024

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

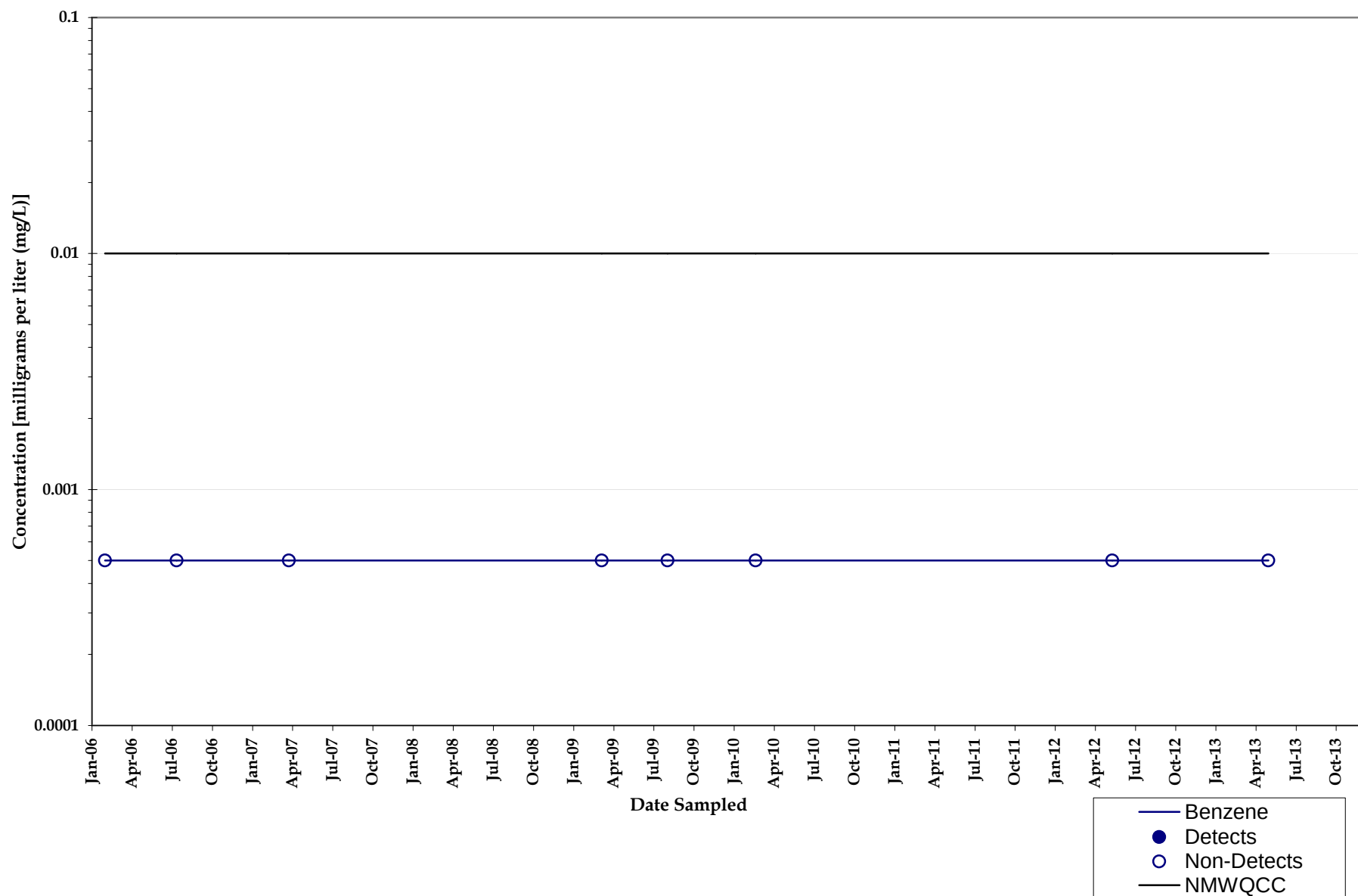


Benzene Concentrations Monitoring Well IW025

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

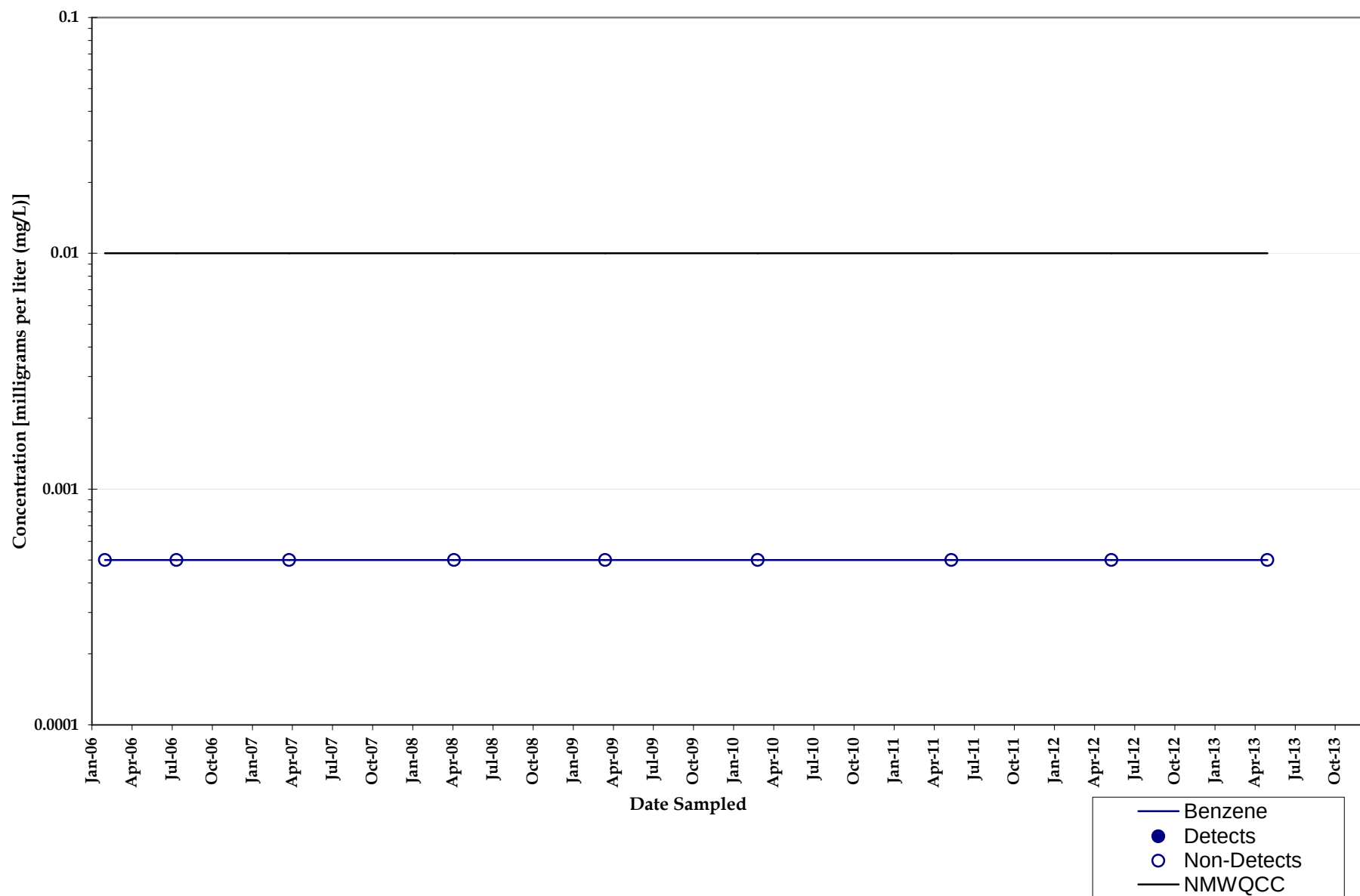


Benzene Concentrations Monitoring Well IW026

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

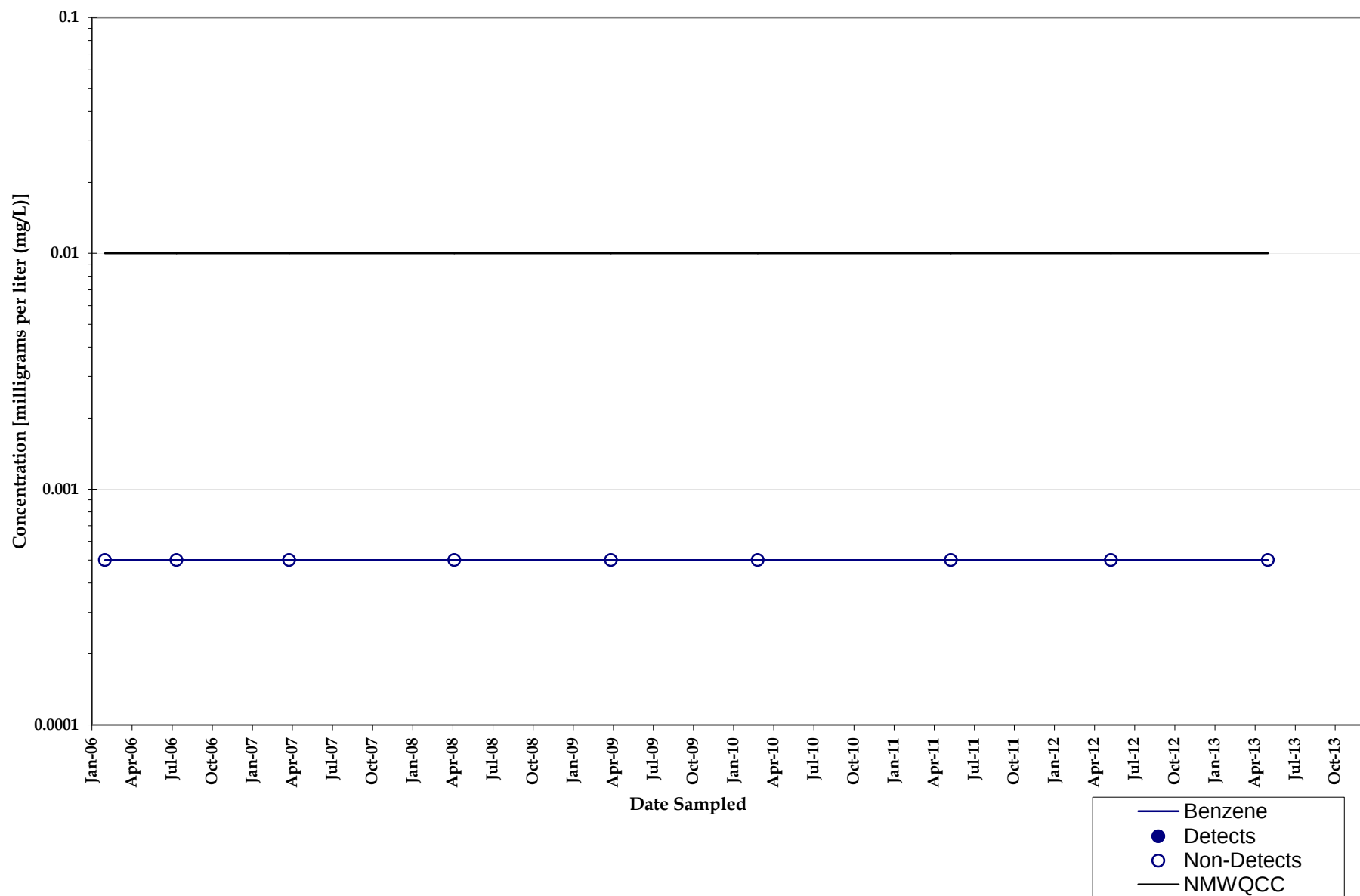


Benzene Concentrations Monitoring Well IW027

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

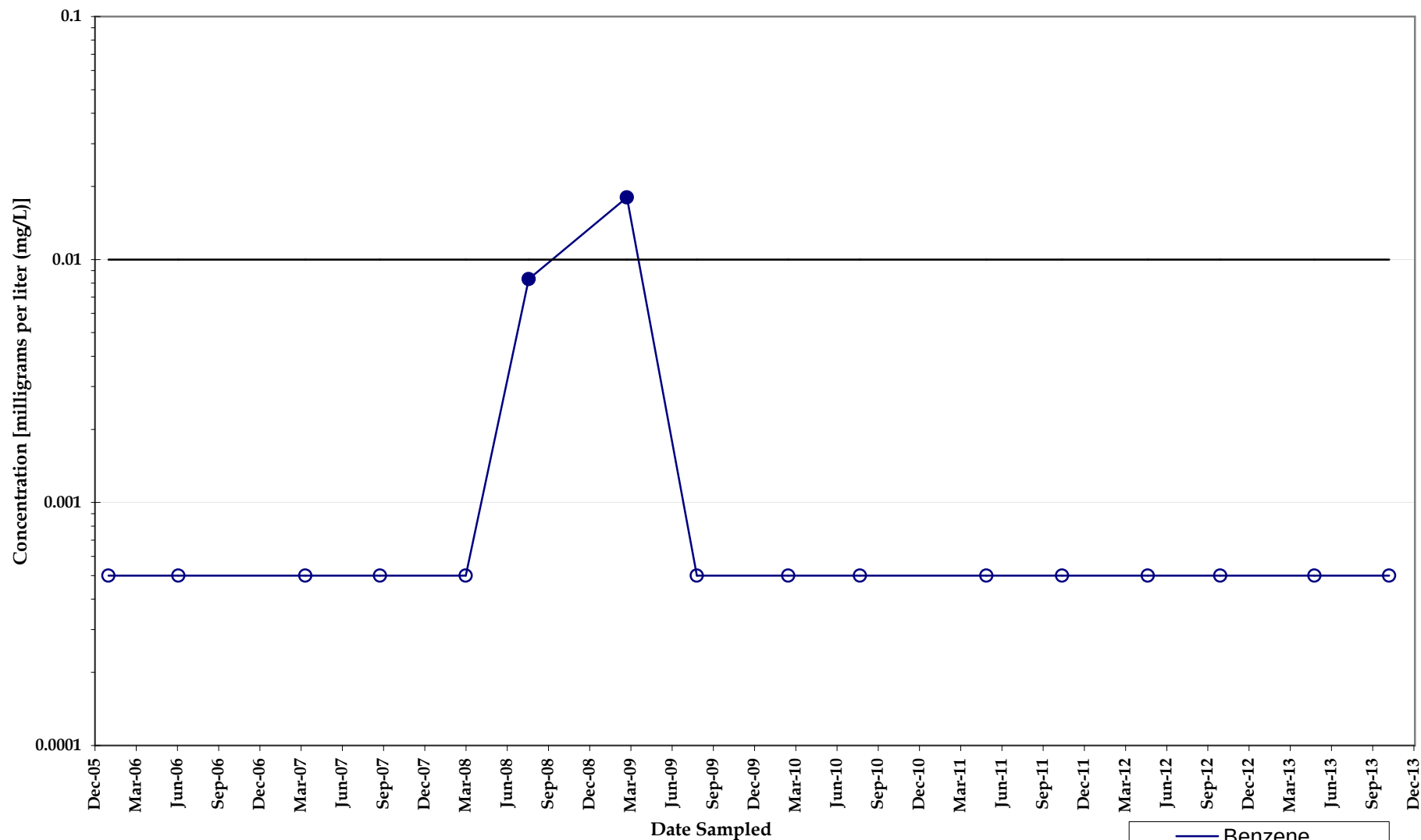


Benzene Concentrations Monitoring Well IW028

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

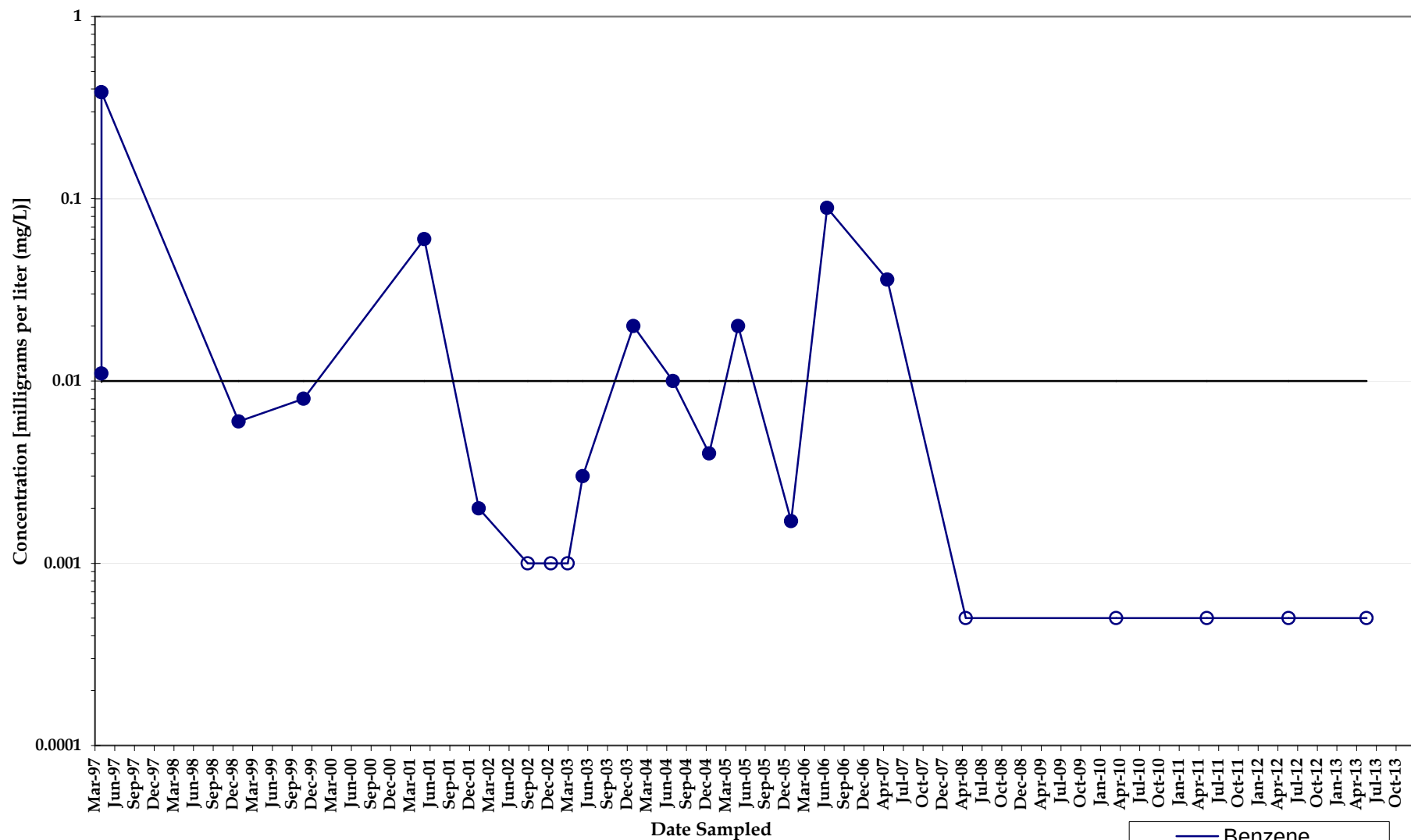


Benzene Concentrations Monitoring Well LORDWW

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

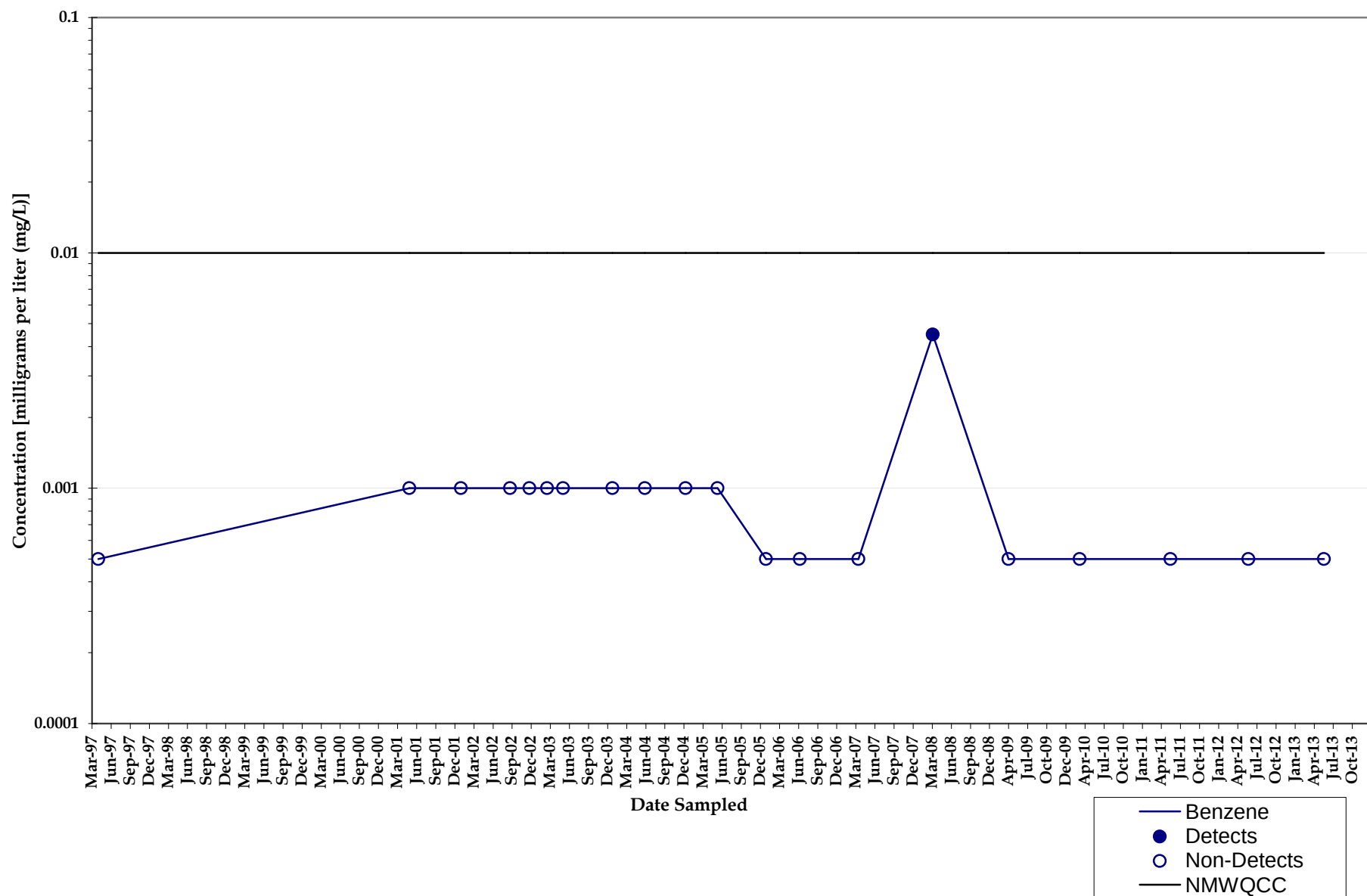


Benzene Concentrations Monitoring Well MW001

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

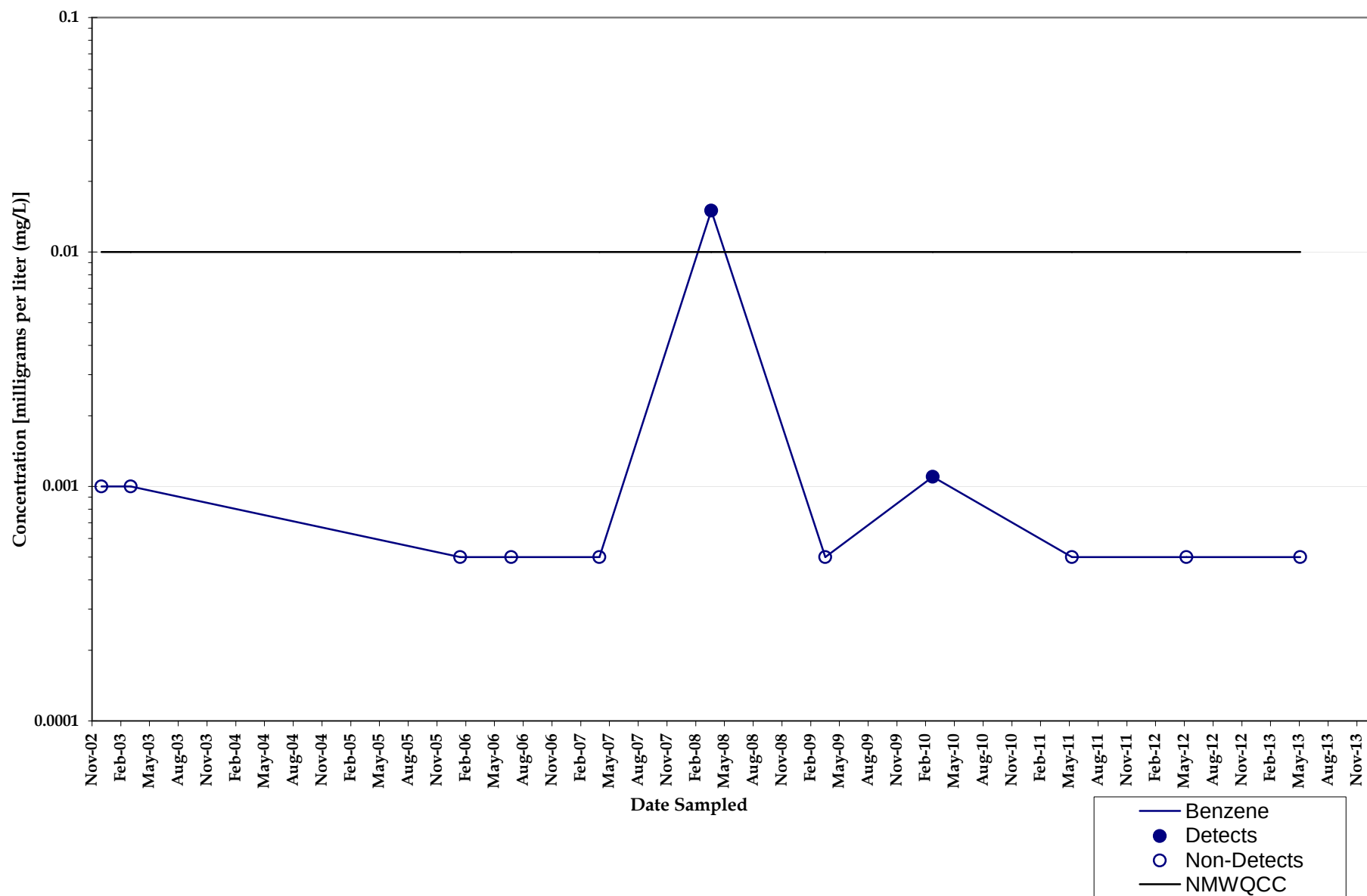


Benzene Concentrations Monitoring Well MW002

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

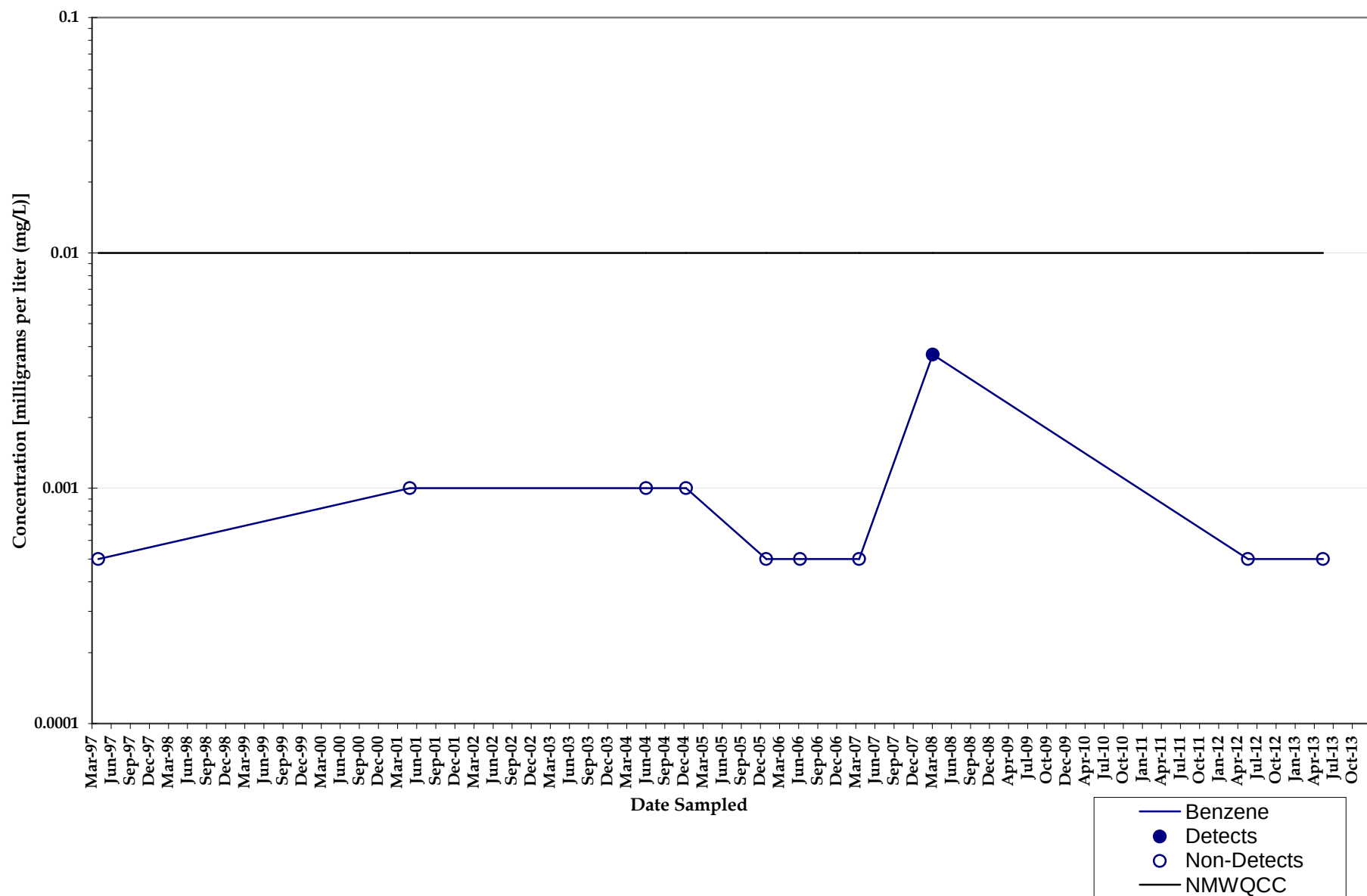


Benzene Concentrations Monitoring Well MW002A

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

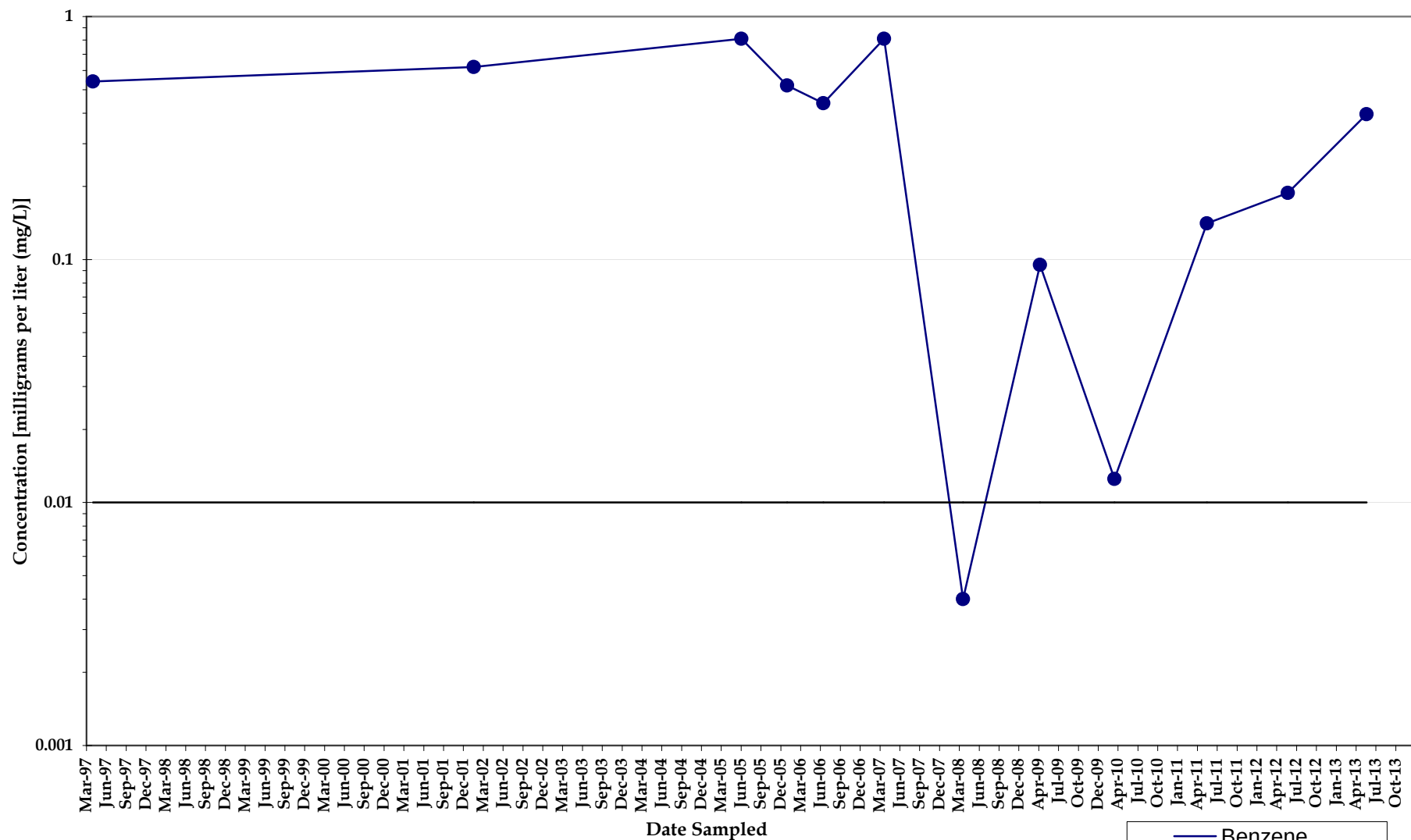


Benzene Concentrations Monitoring Well MW003

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

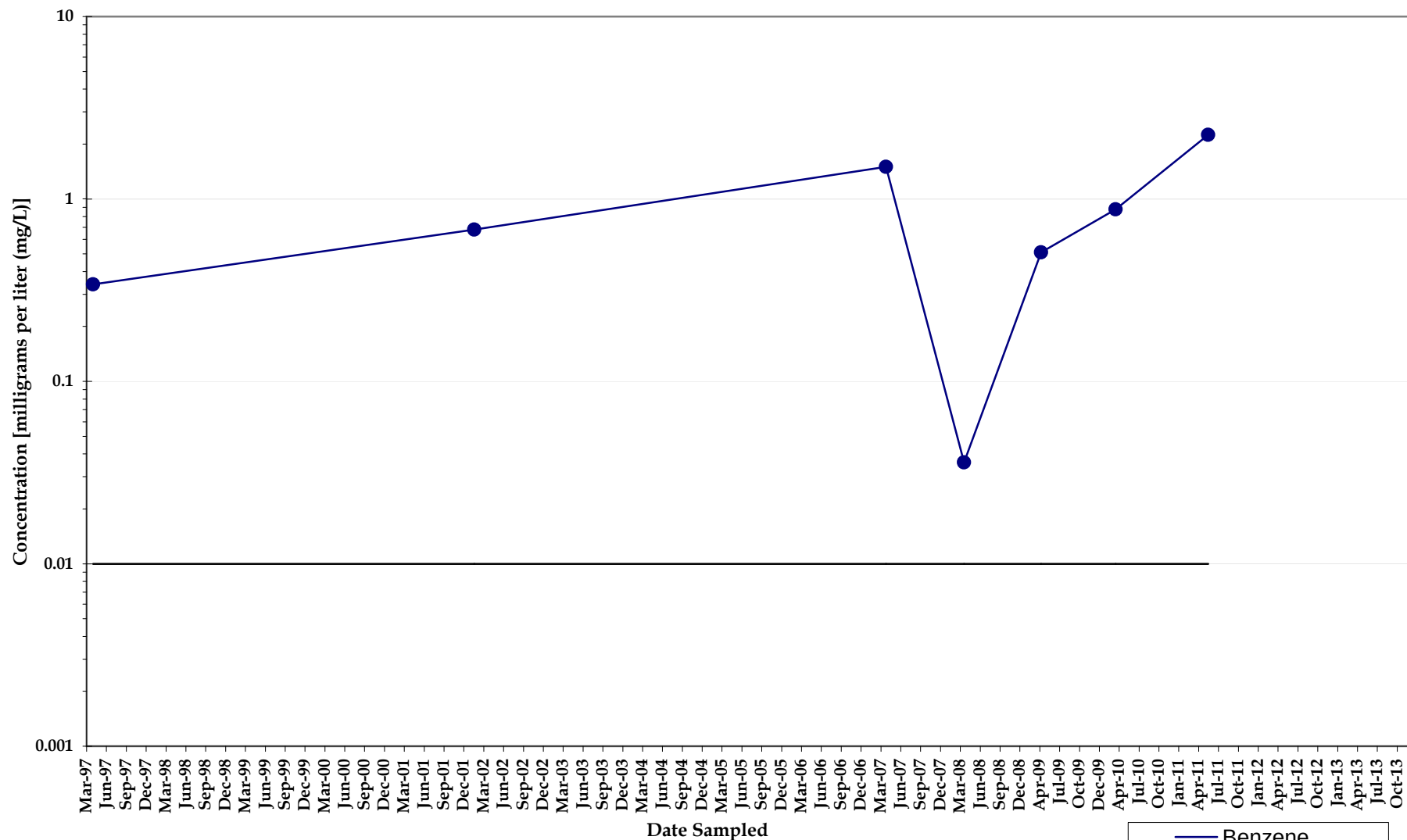


Benzene Concentrations Monitoring Well MW005

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

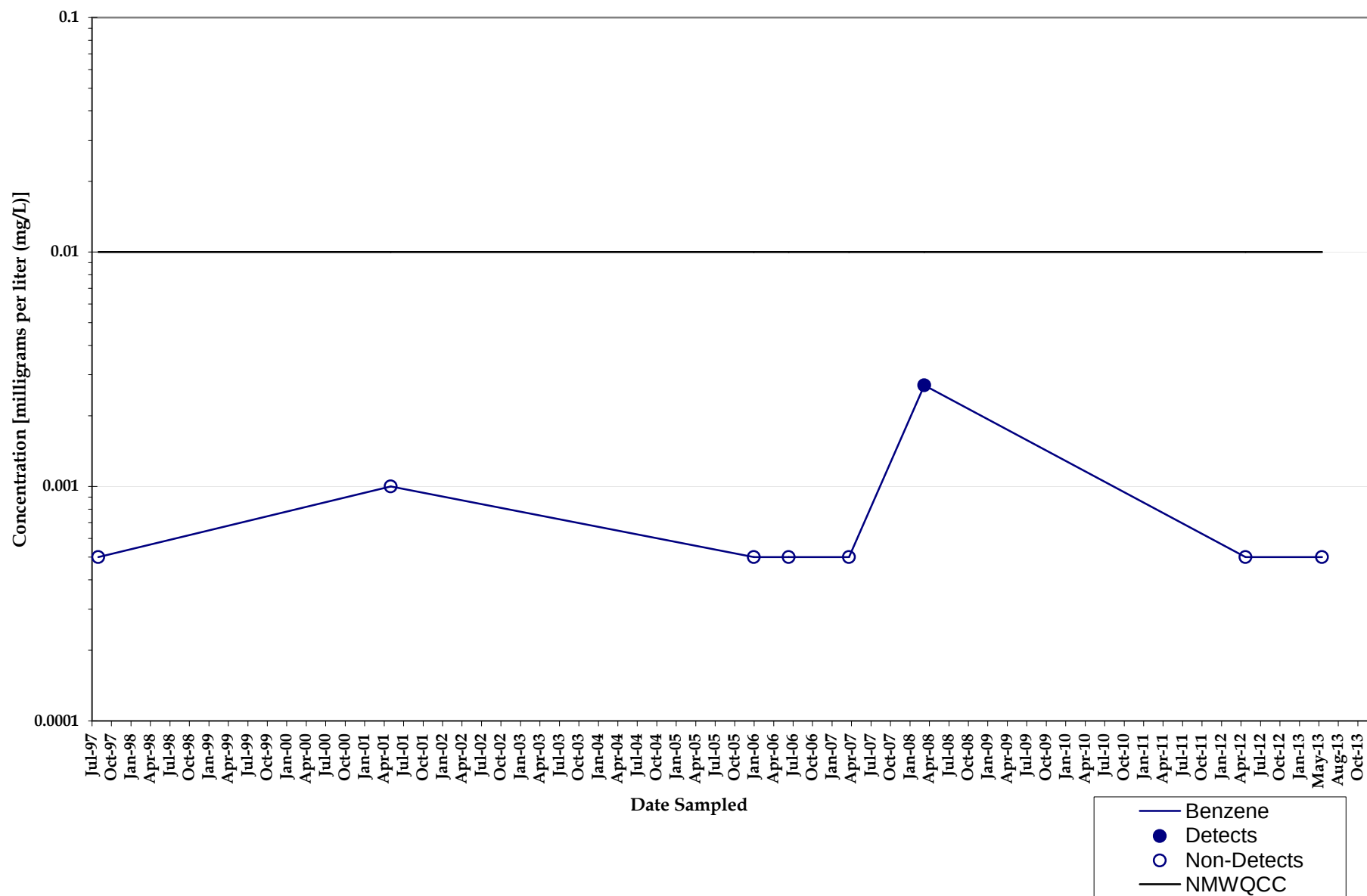


Benzene Concentrations Monitoring Well MW006

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

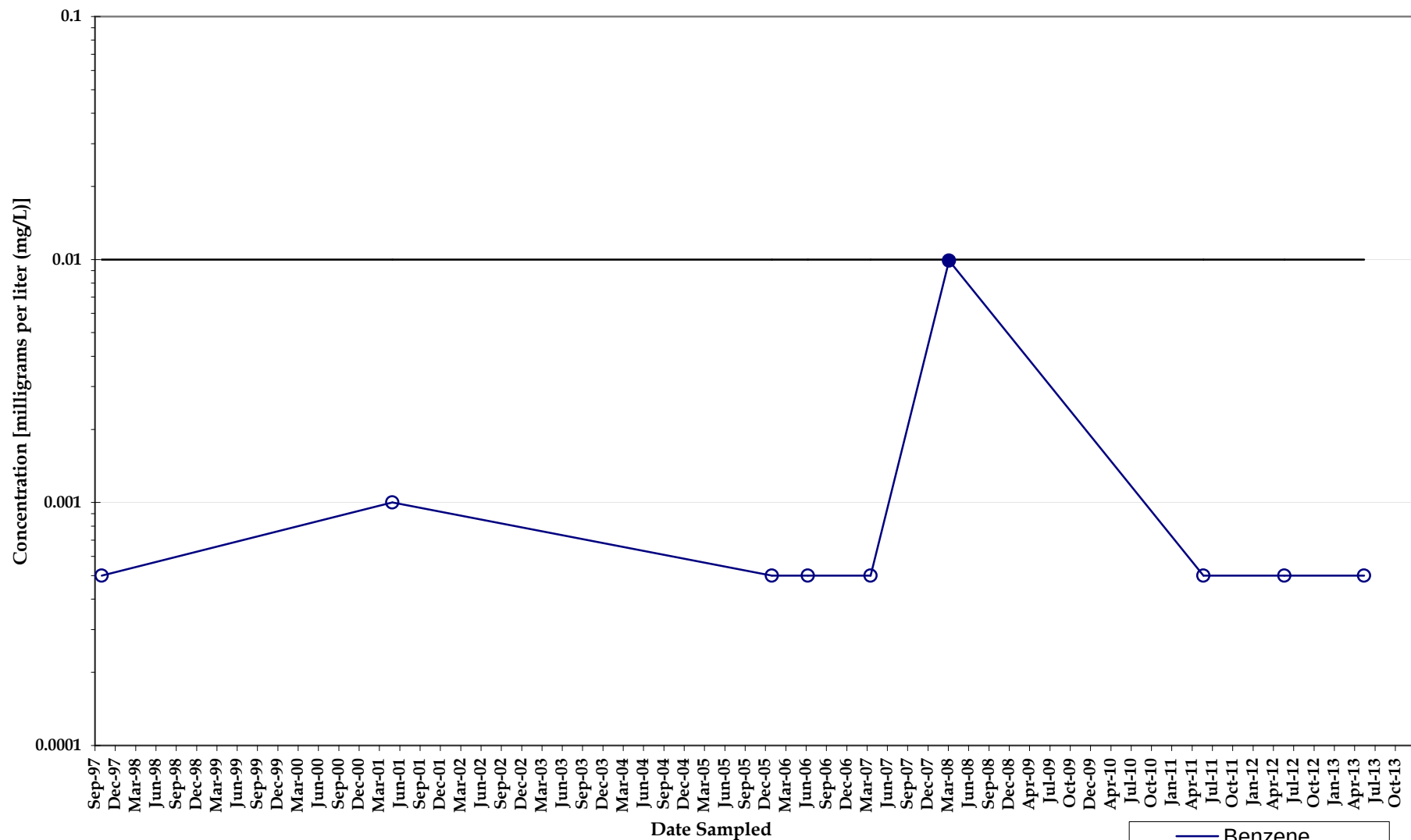


Benzene Concentrations Monitoring Well MW007

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

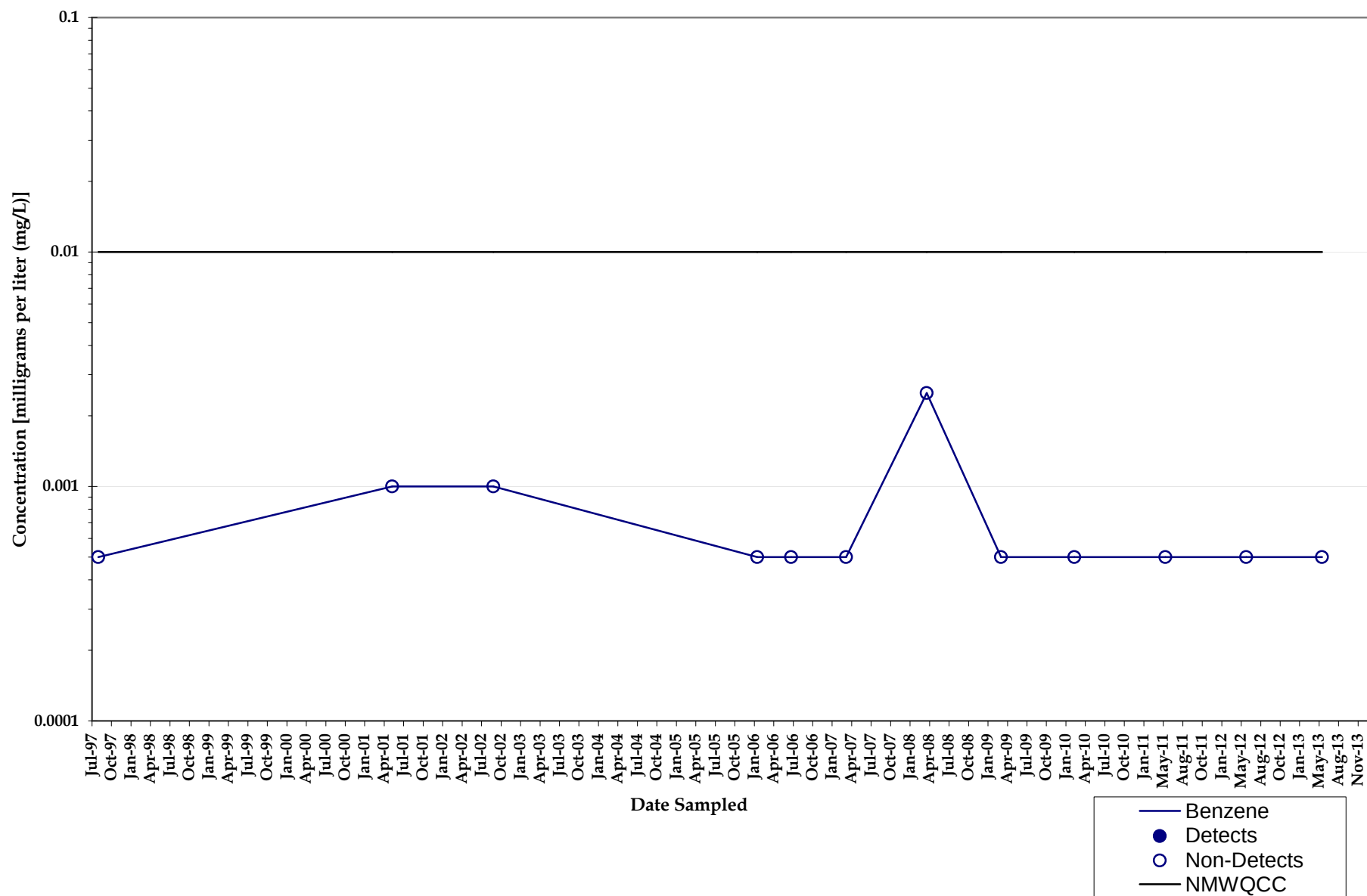


Benzene Concentrations Monitoring Well MW007A

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

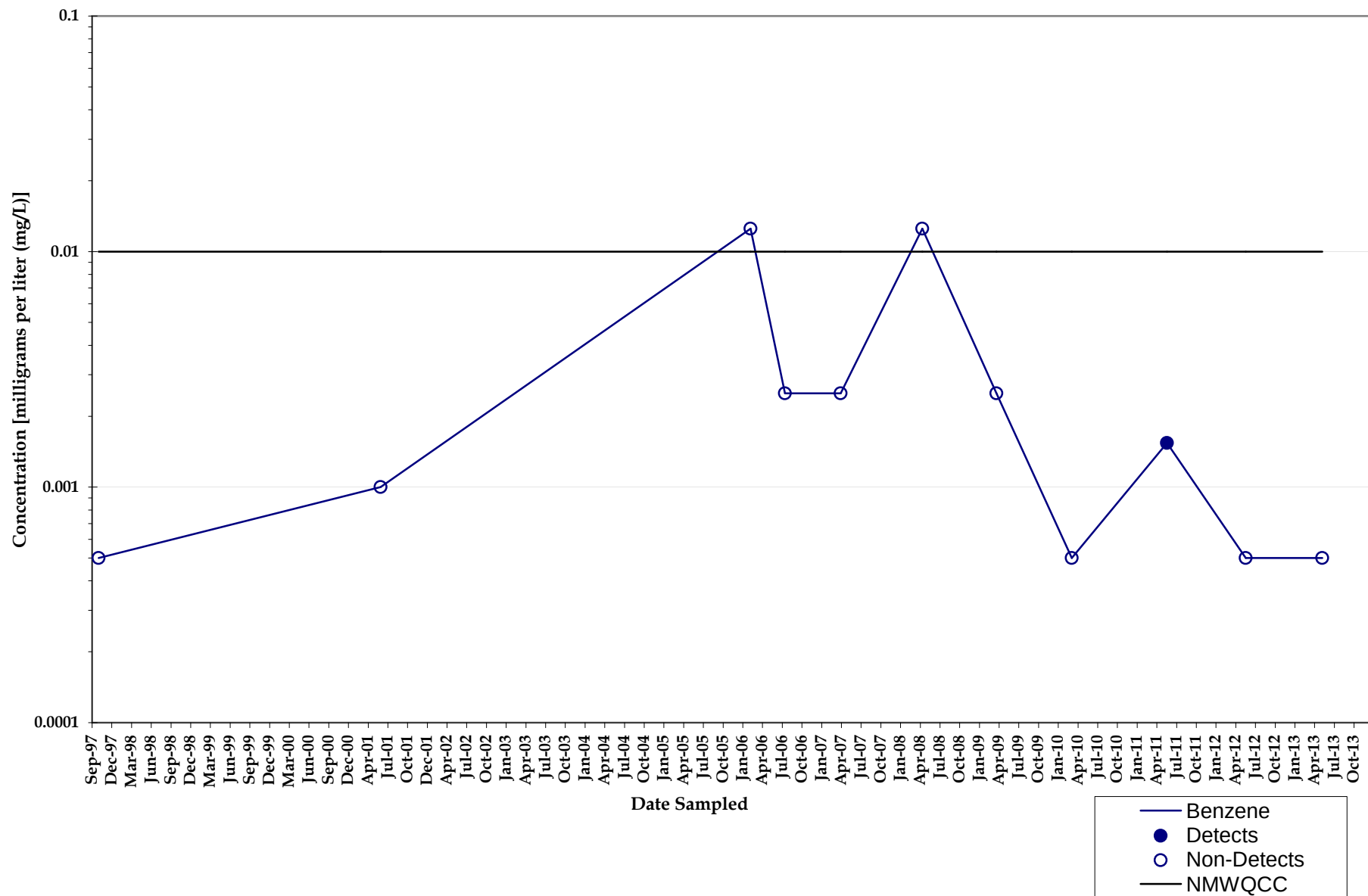


Benzene Concentrations Monitoring Well MW008

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

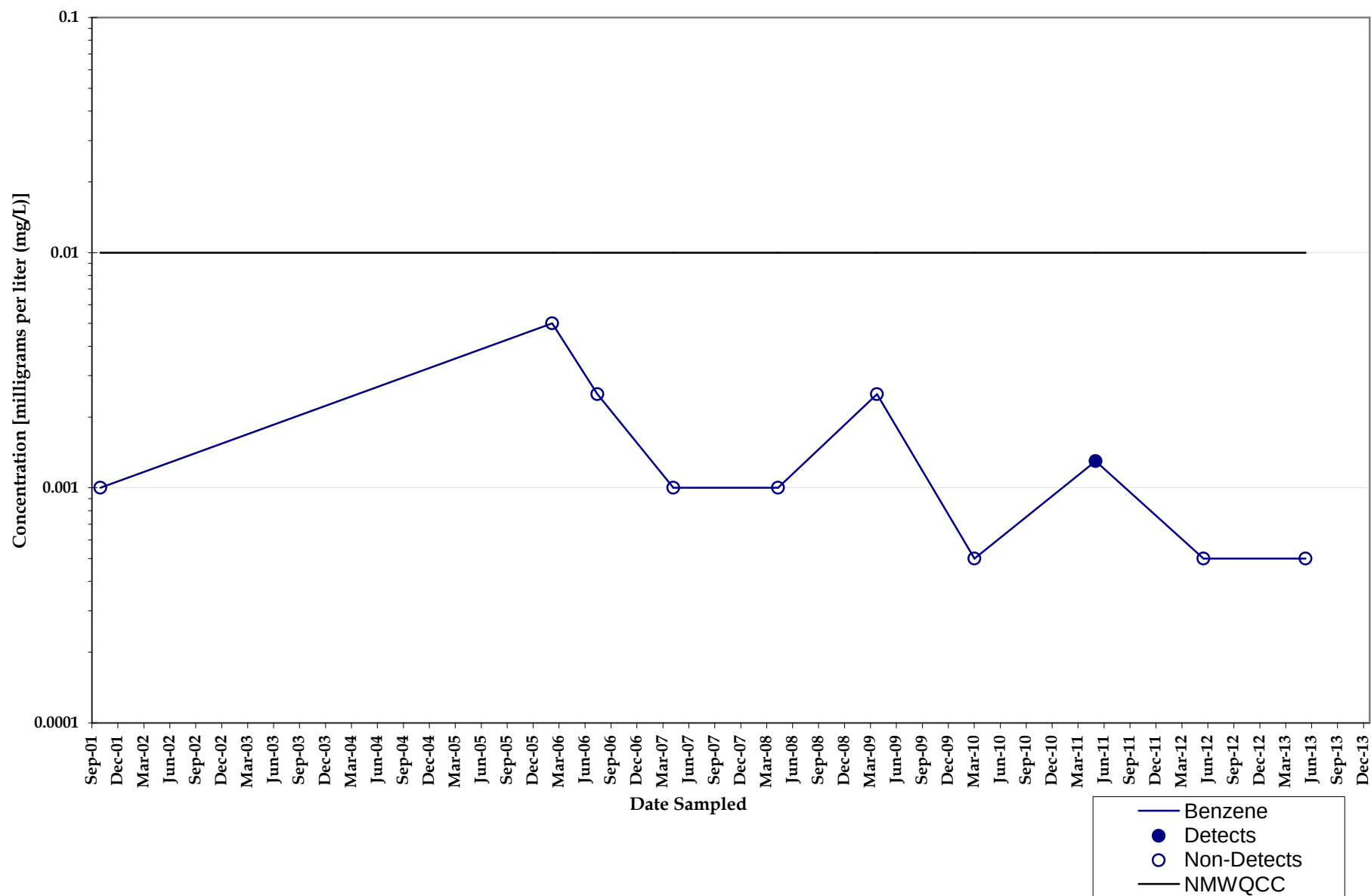


Benzene Concentrations Monitoring Well MW008A

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

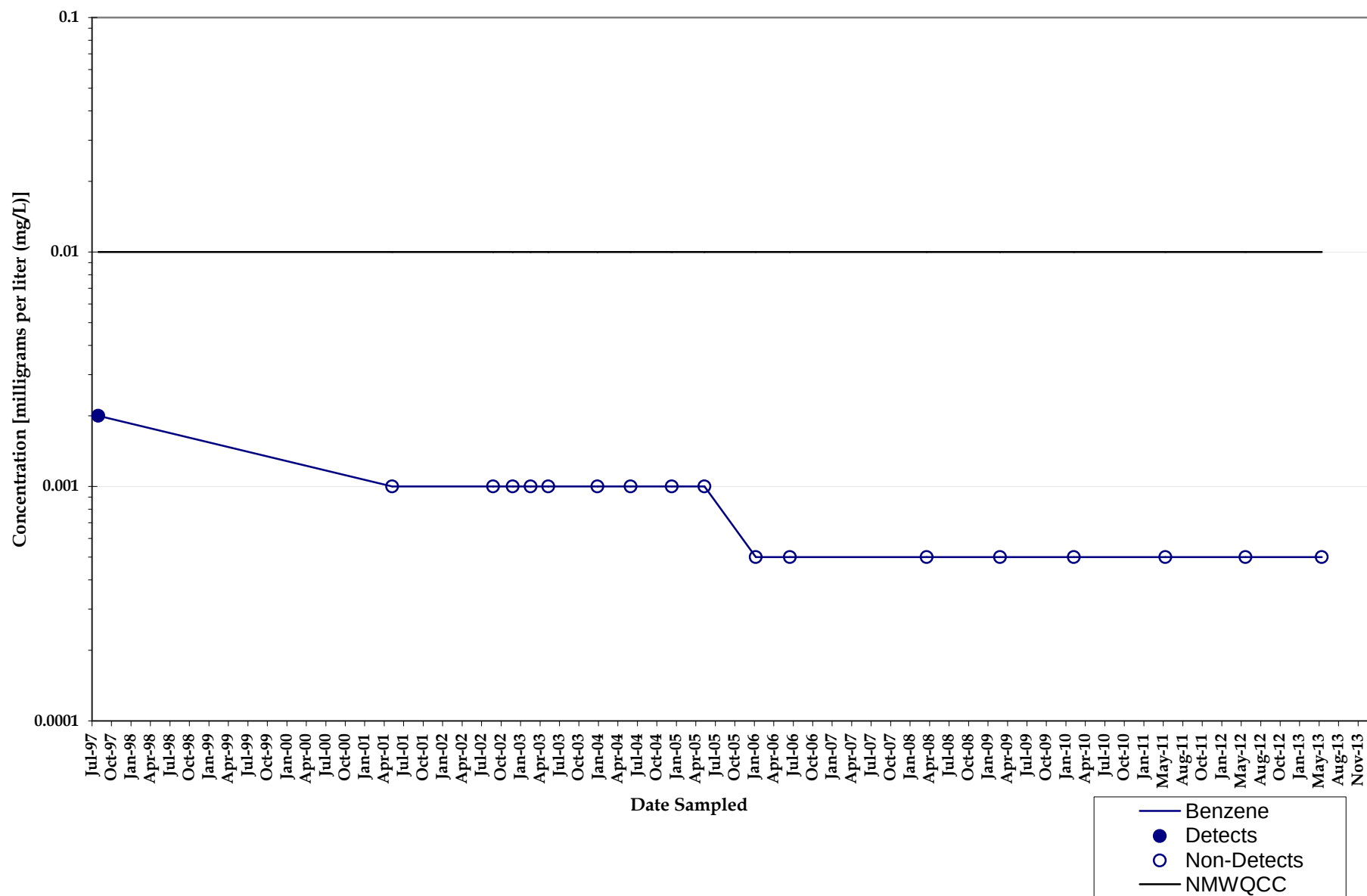


Benzene Concentrations Monitoring Well MW008M

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

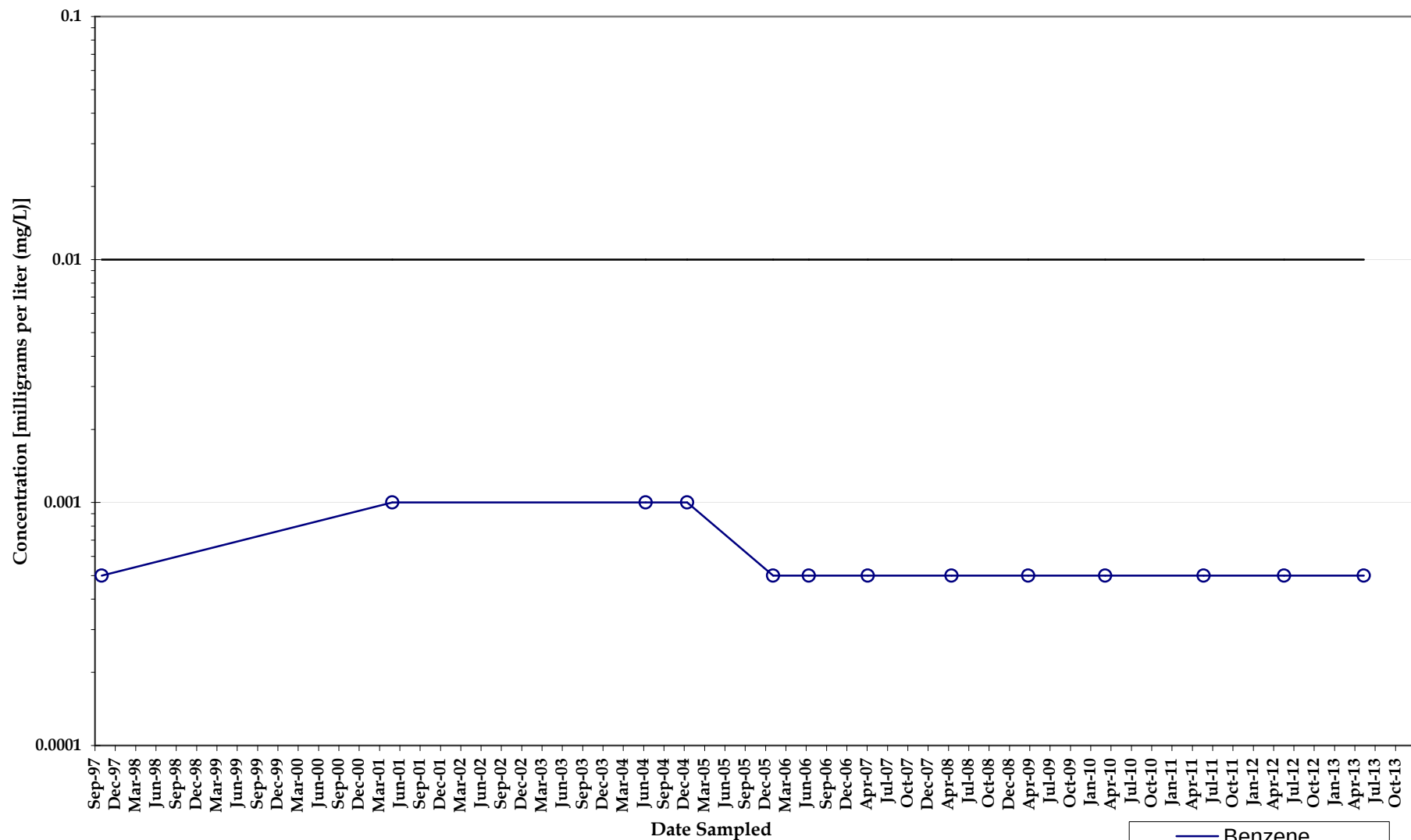


Benzene Concentrations Monitoring Well MW009

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

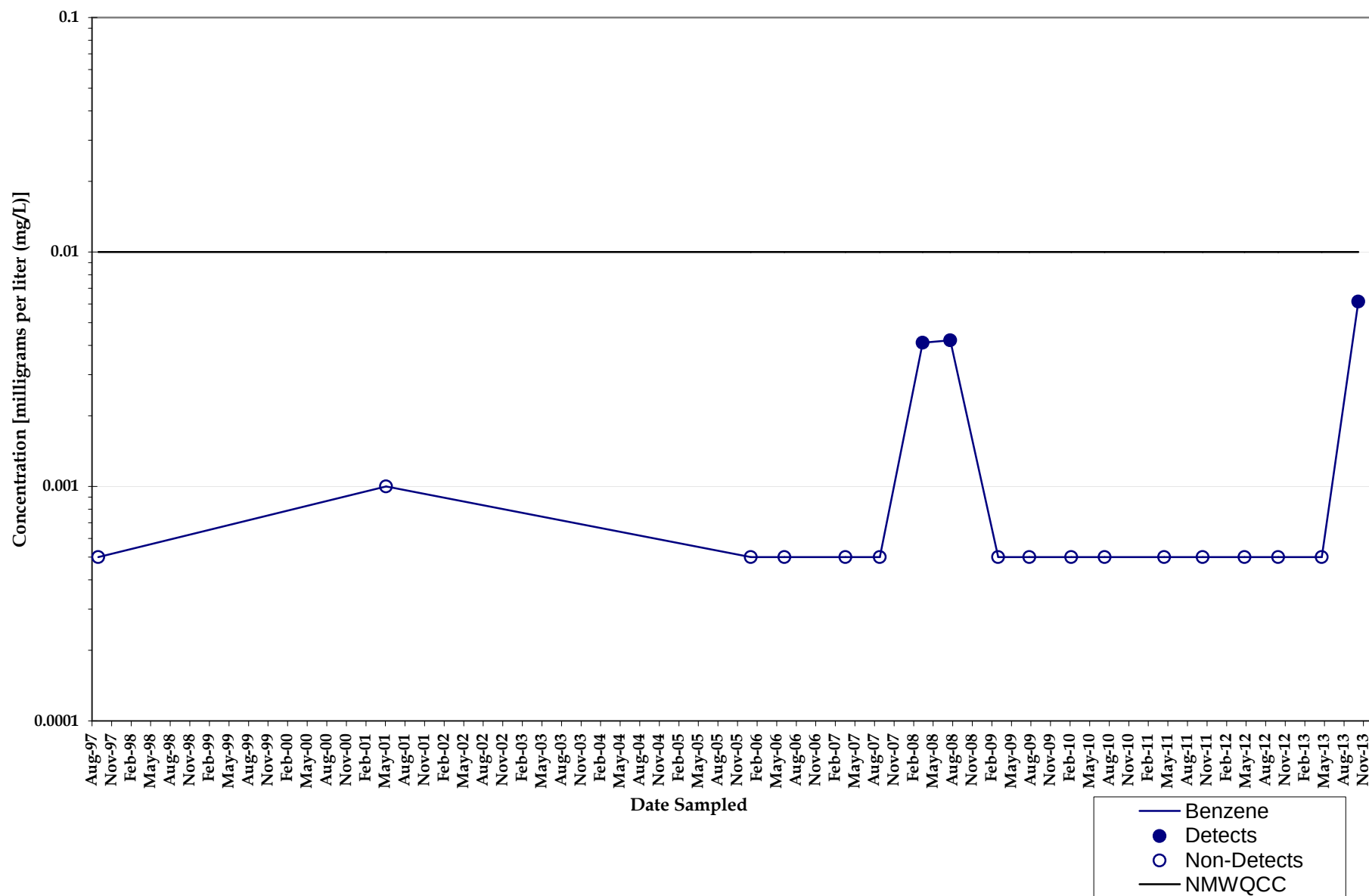


Benzene Concentrations Monitoring Well MW009A

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

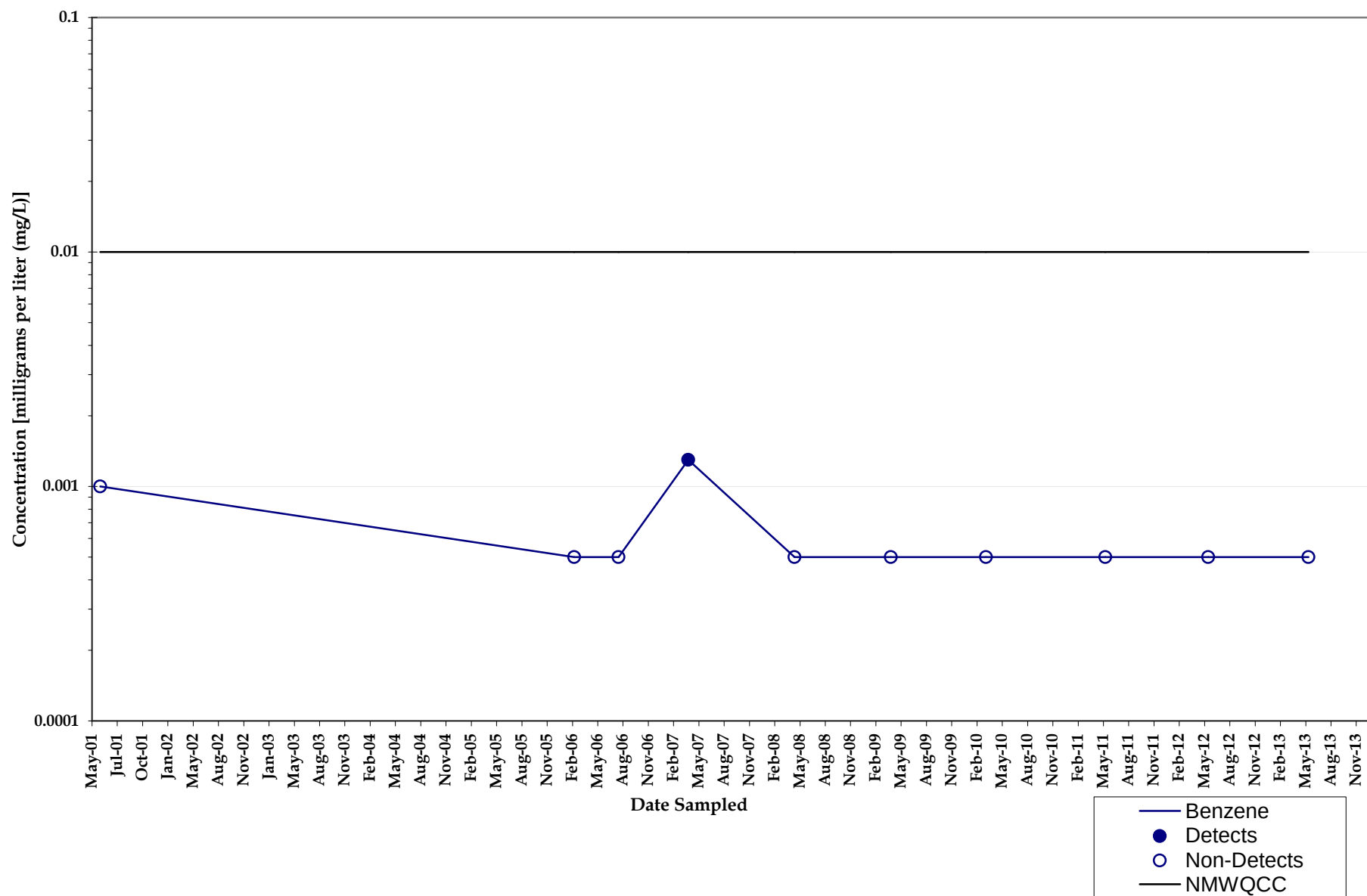


Benzene Concentrations Monitoring Well MW010

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

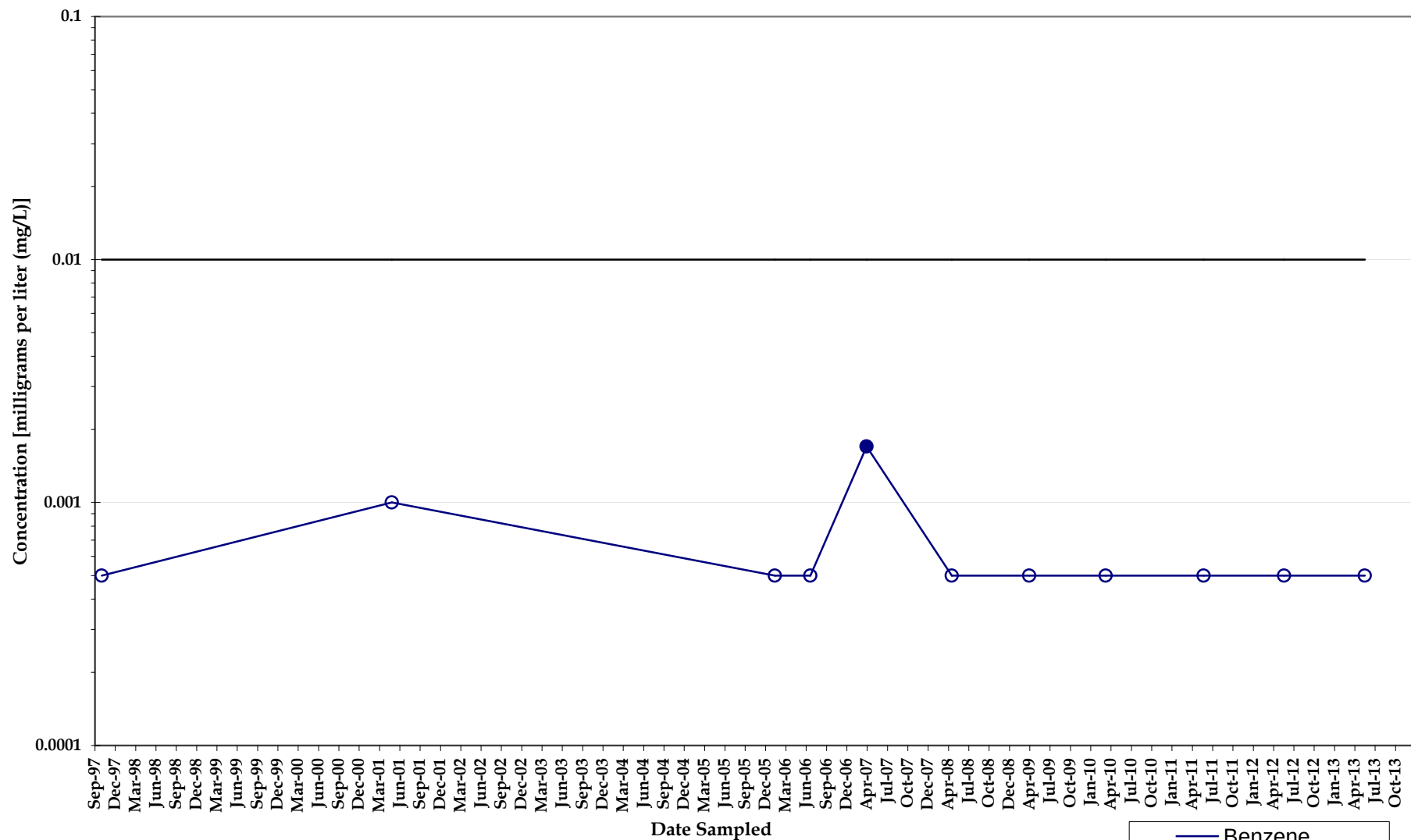


Benzene Concentrations Monitoring Well MW011

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

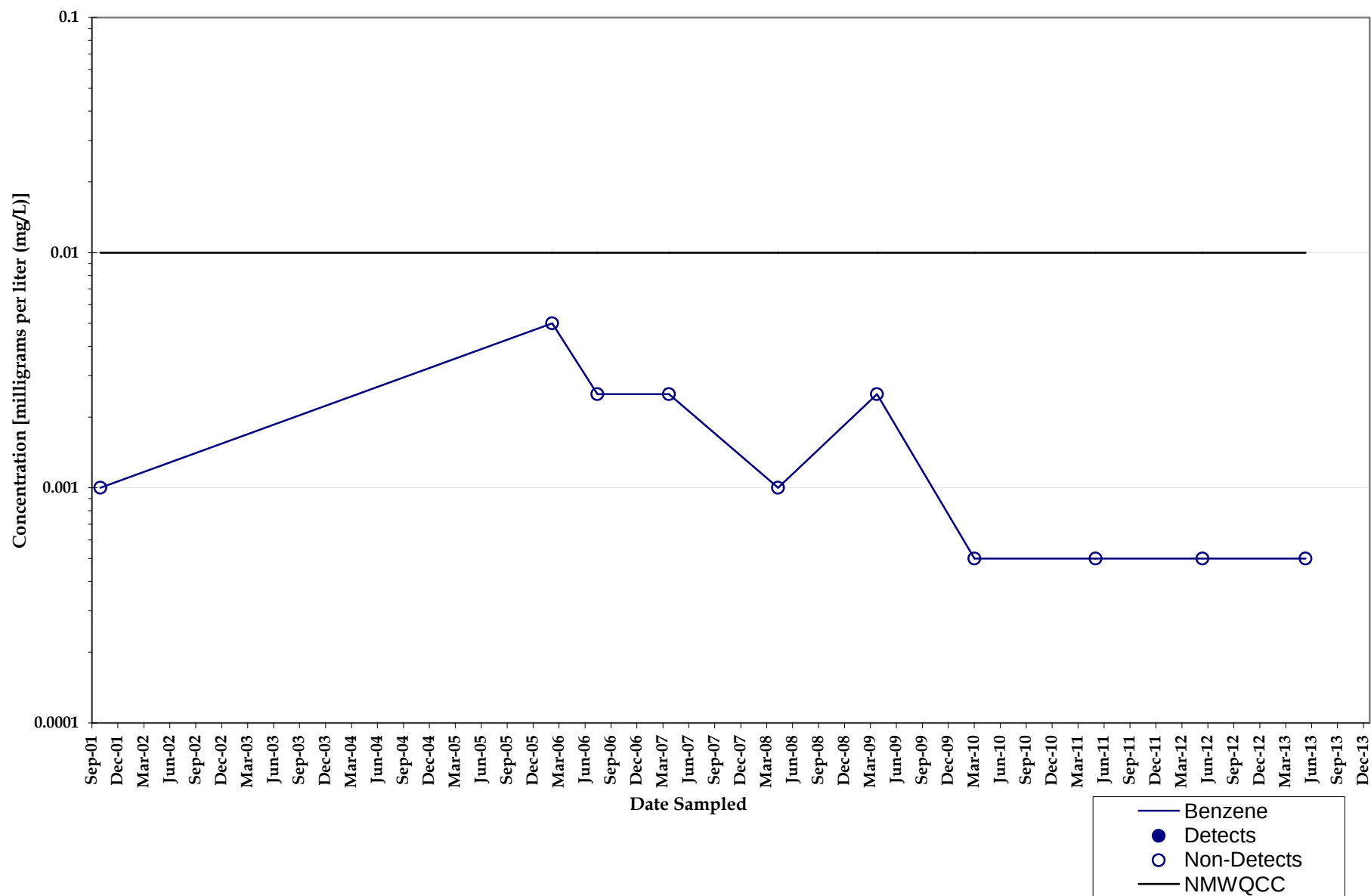


Benzene Concentrations Monitoring Well MW011A

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

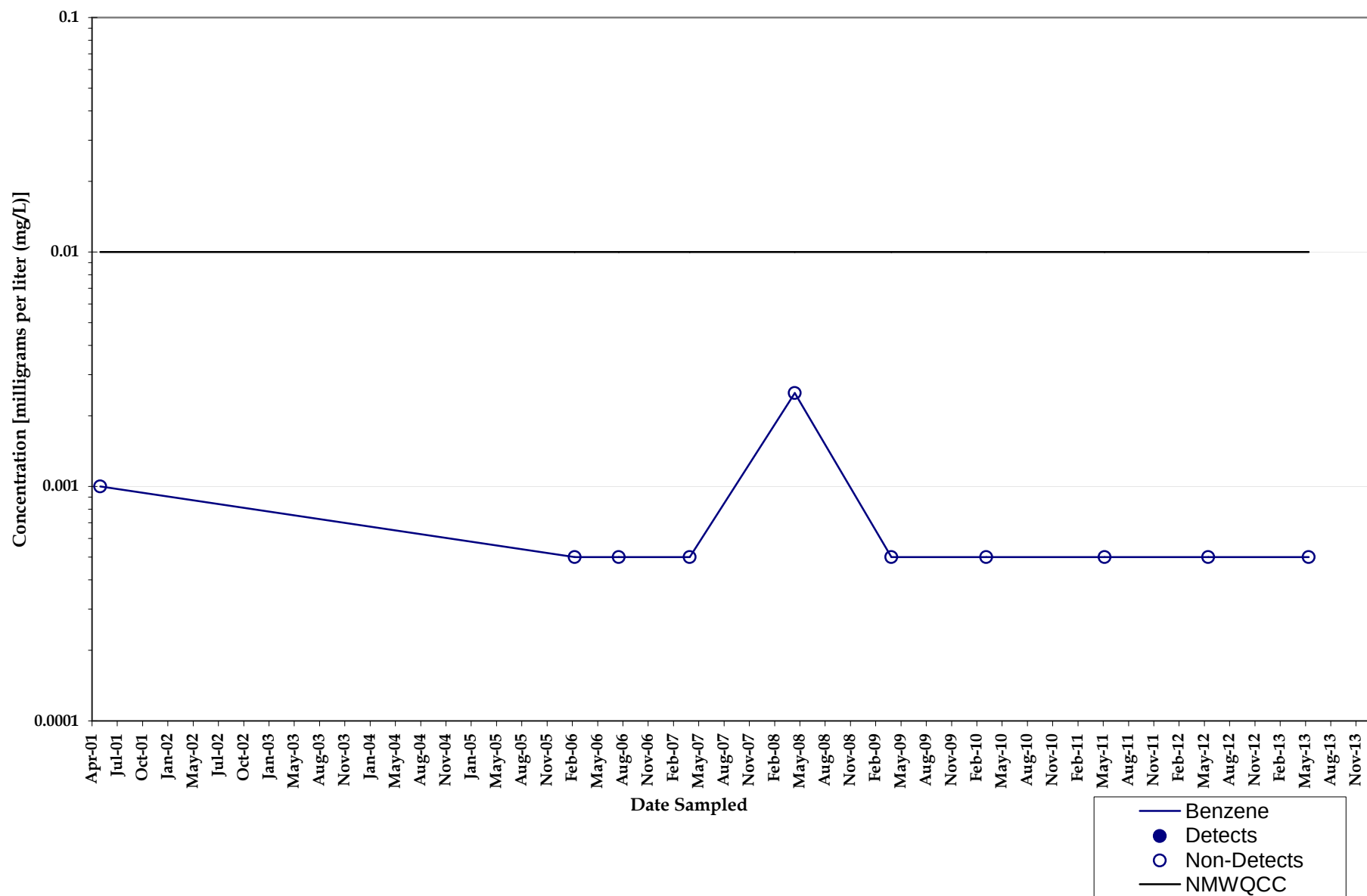


Benzene Concentrations Monitoring Well MW011M

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

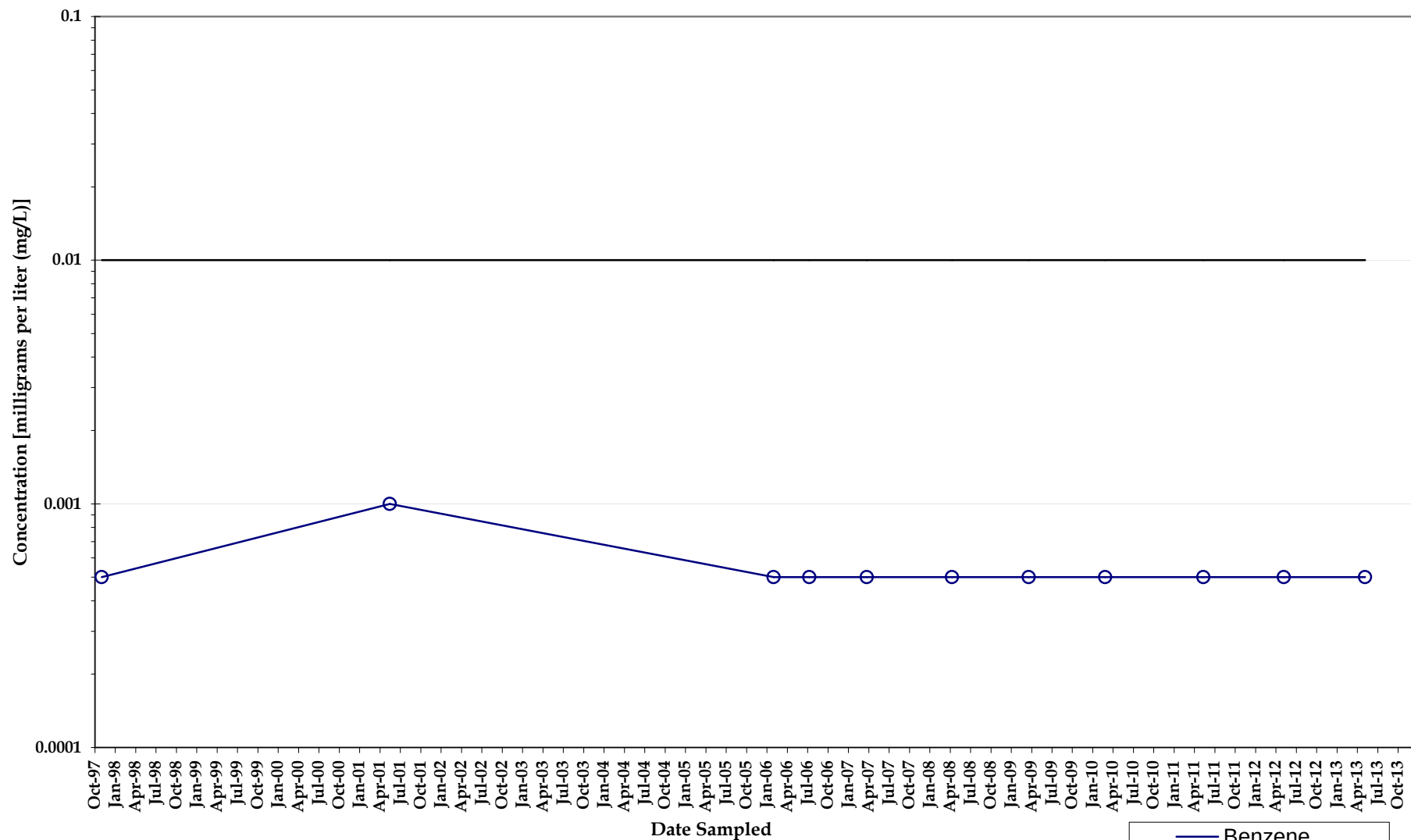


Benzene Concentrations Monitoring Well MW012

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

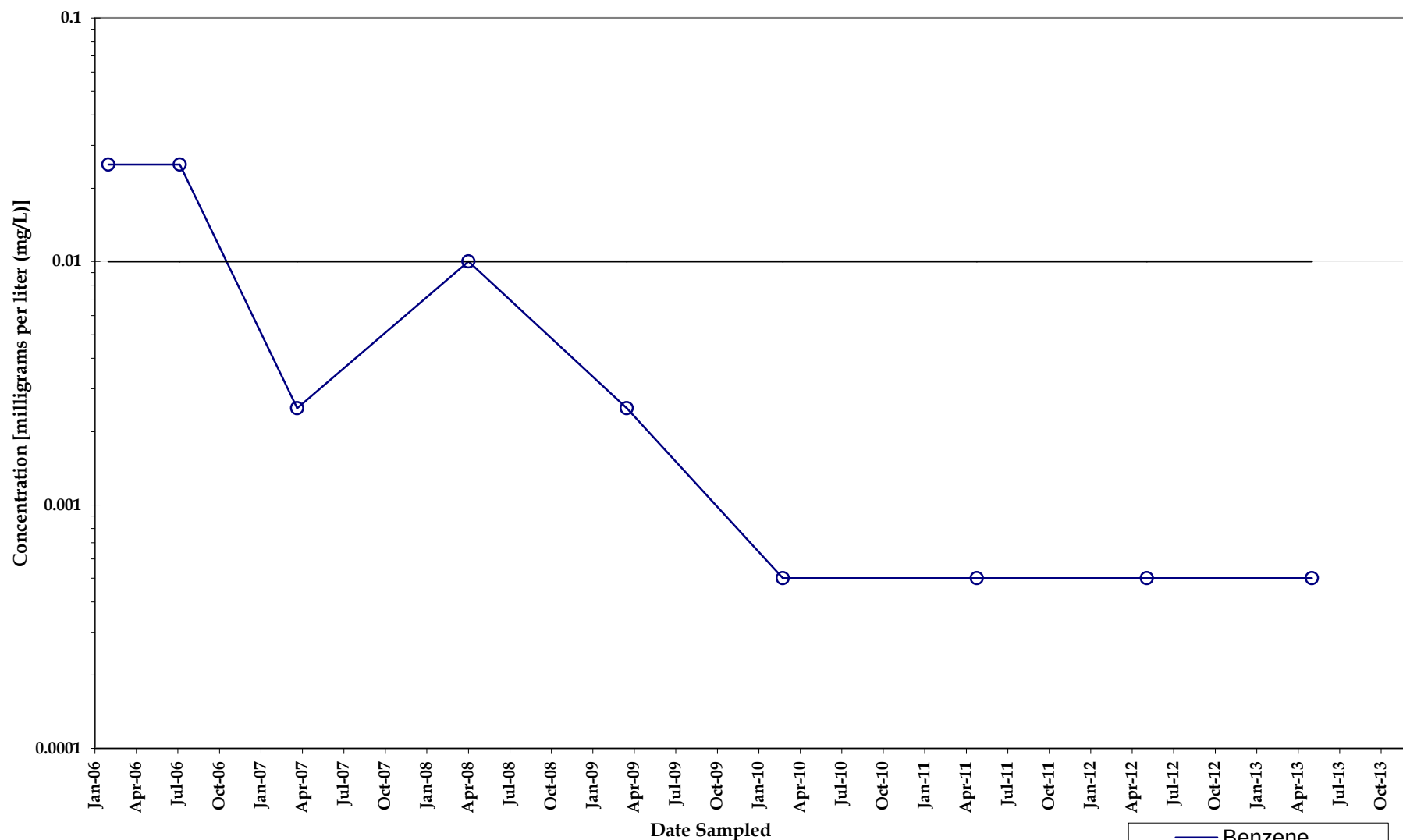


Benzene Concentrations Monitoring Well MW012A

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

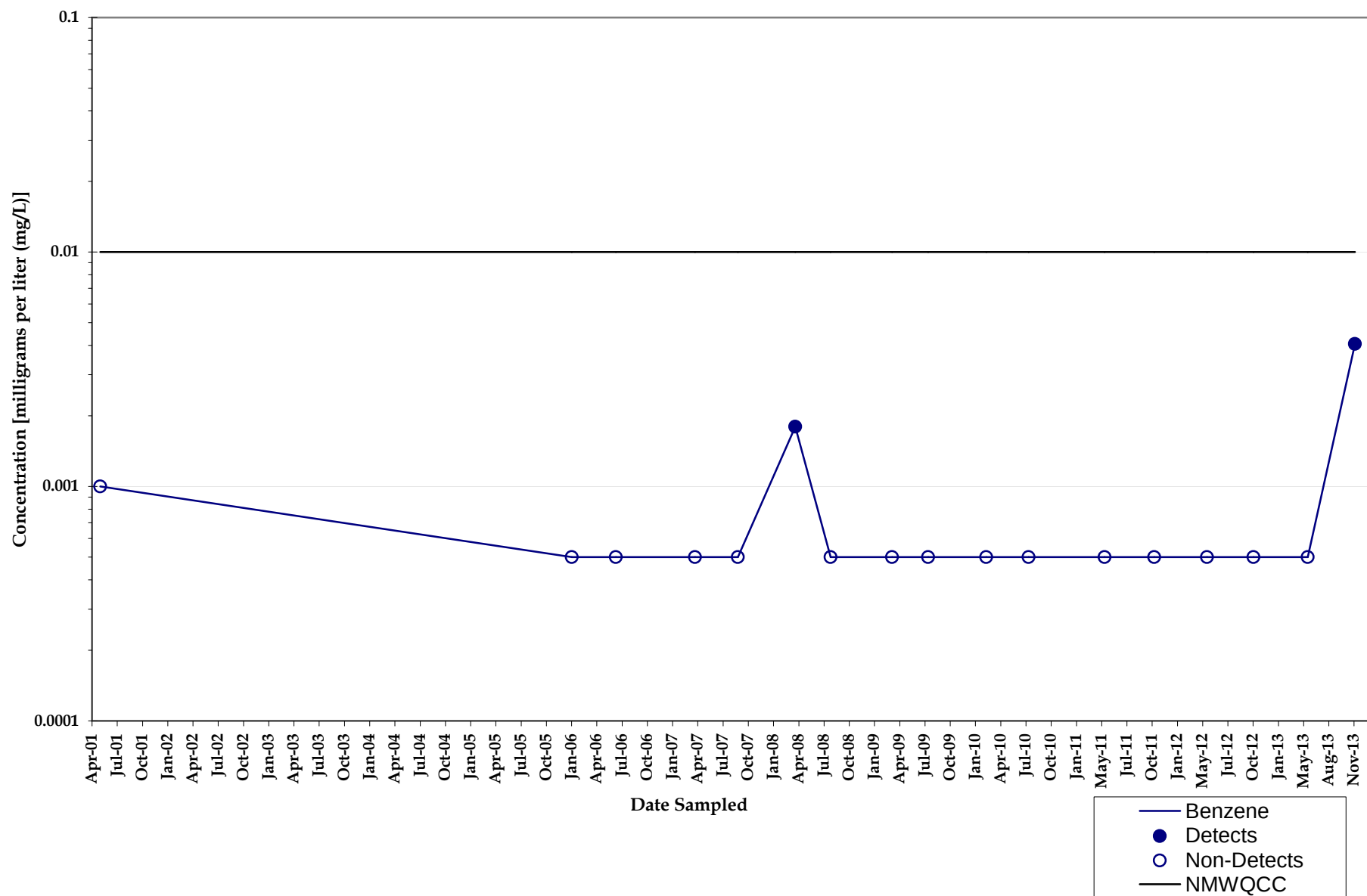


Benzene Concentrations Monitoring Well MW012M

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

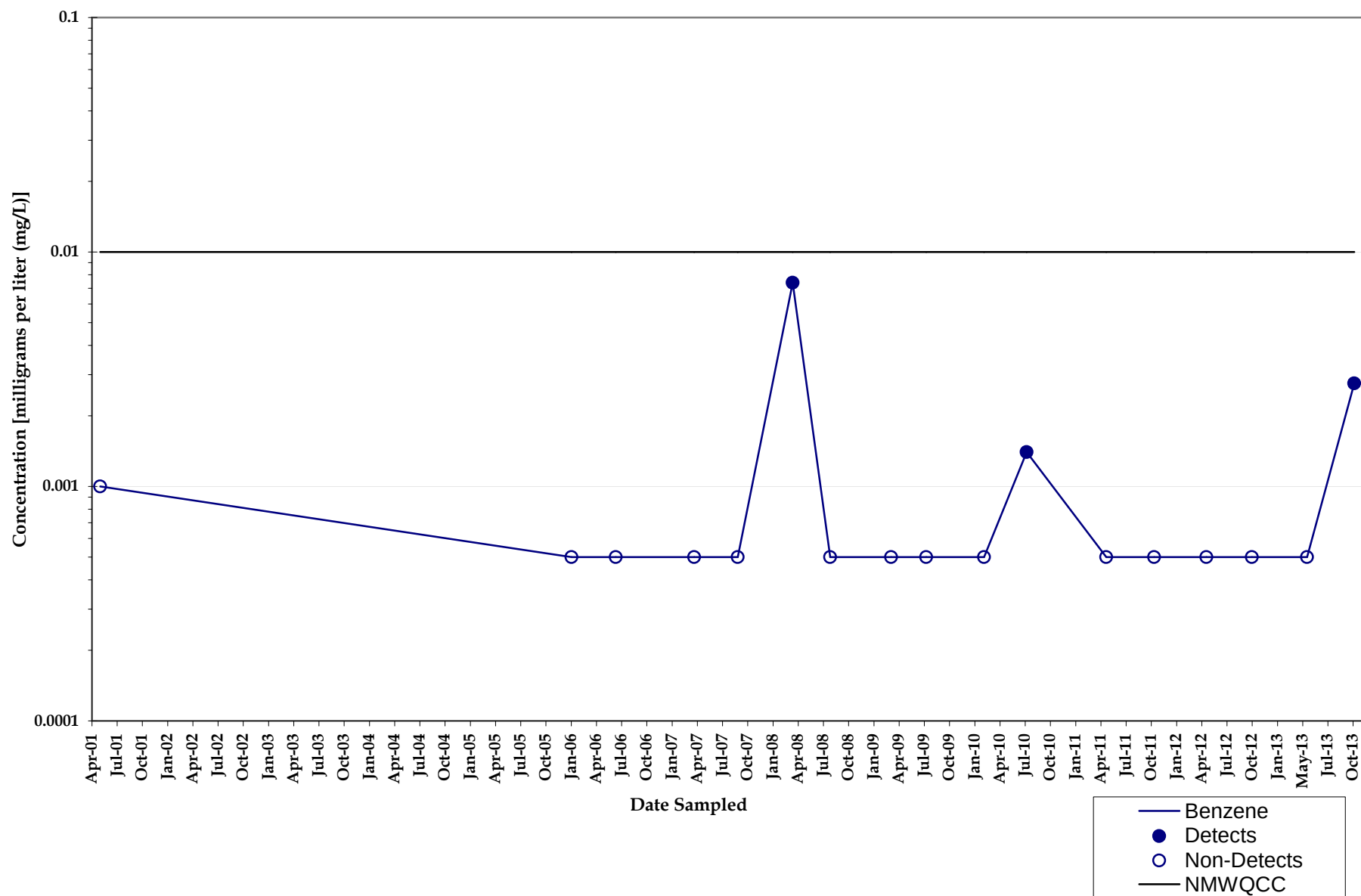


Benzene Concentrations Monitoring Well MW013

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

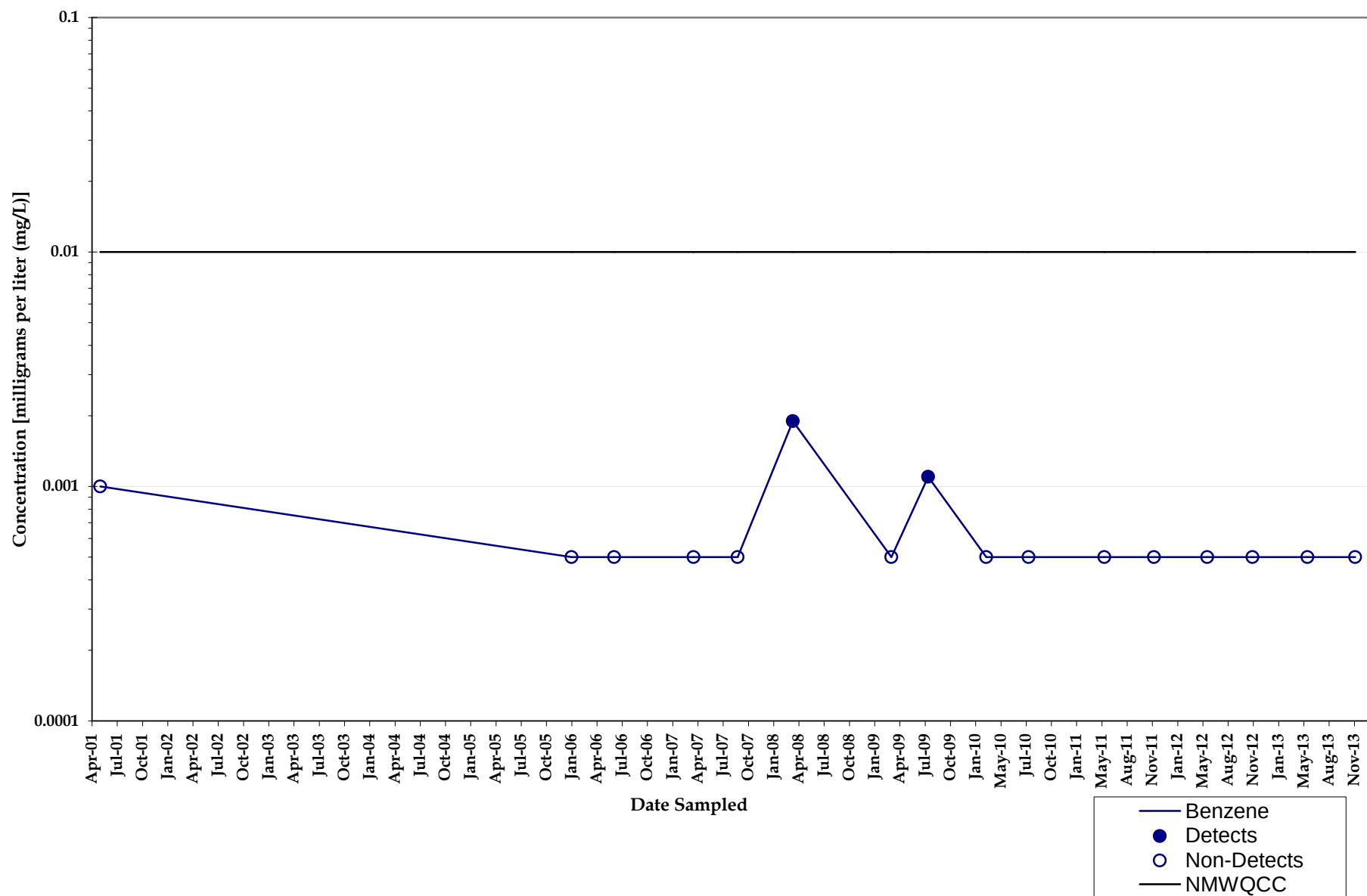


Benzene Concentrations Monitoring Well MW013A

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

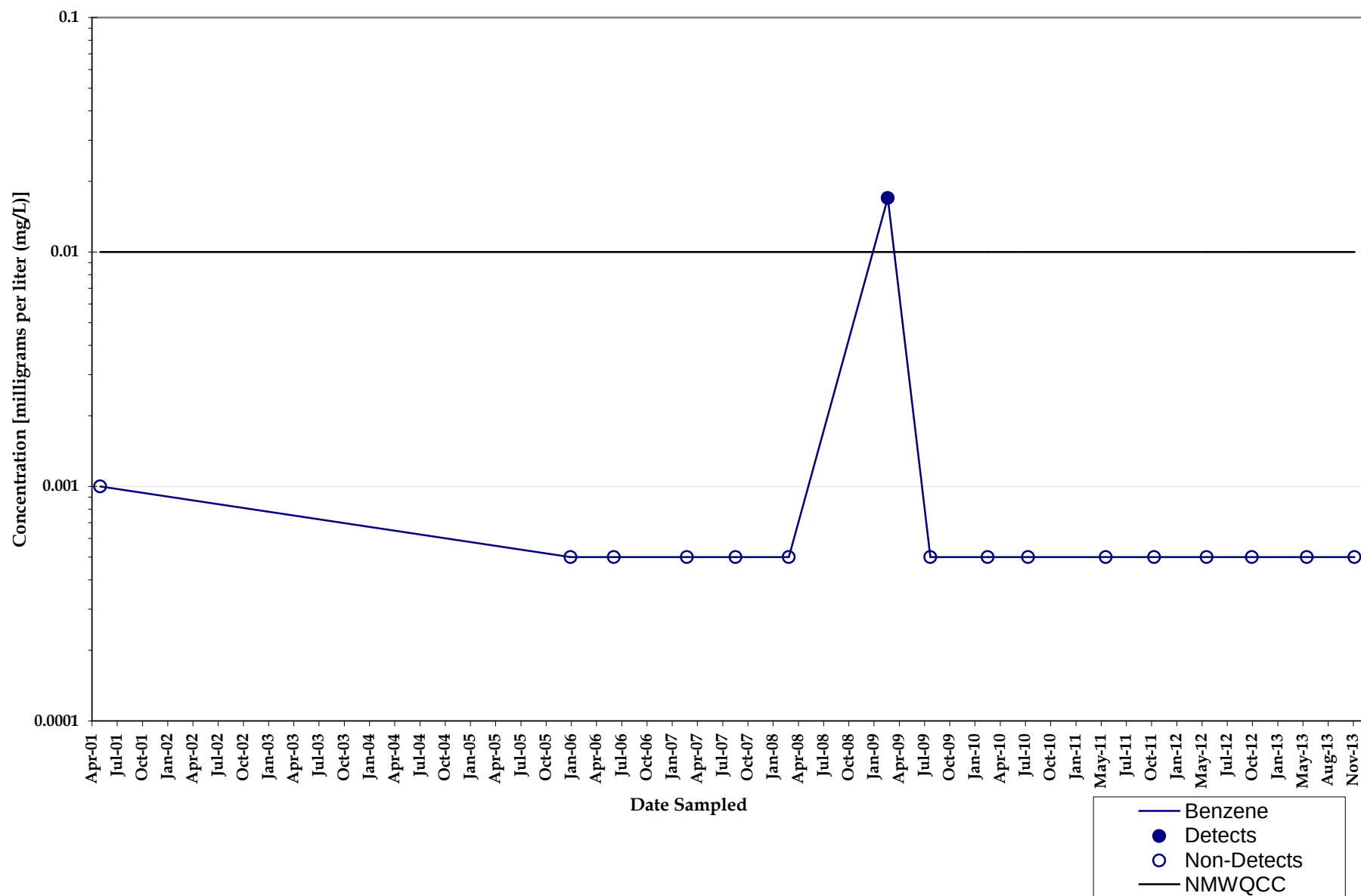


Benzene Concentrations Monitoring Well MW014

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

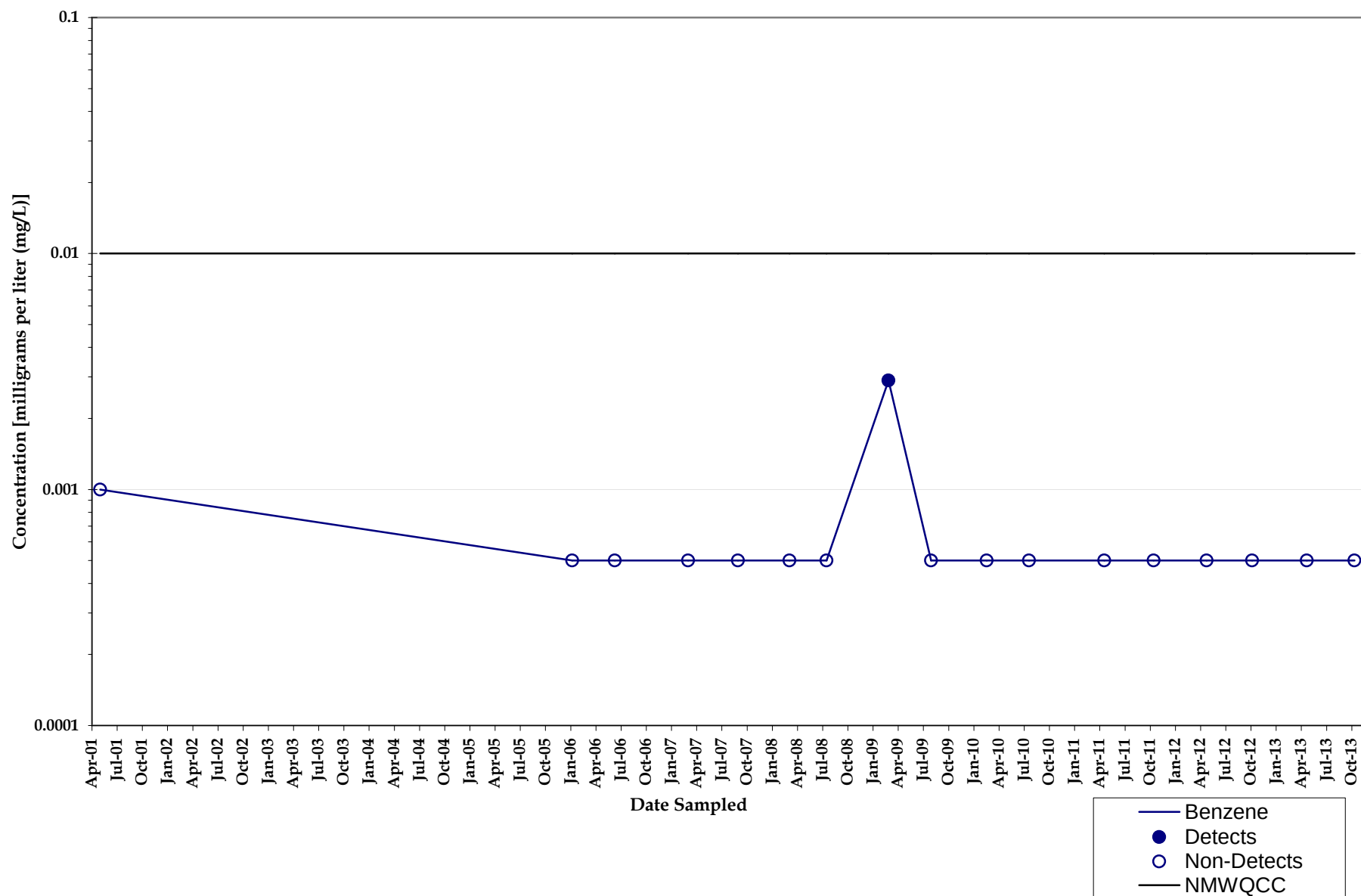


Benzene Concentrations Monitoring Well MW014A

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

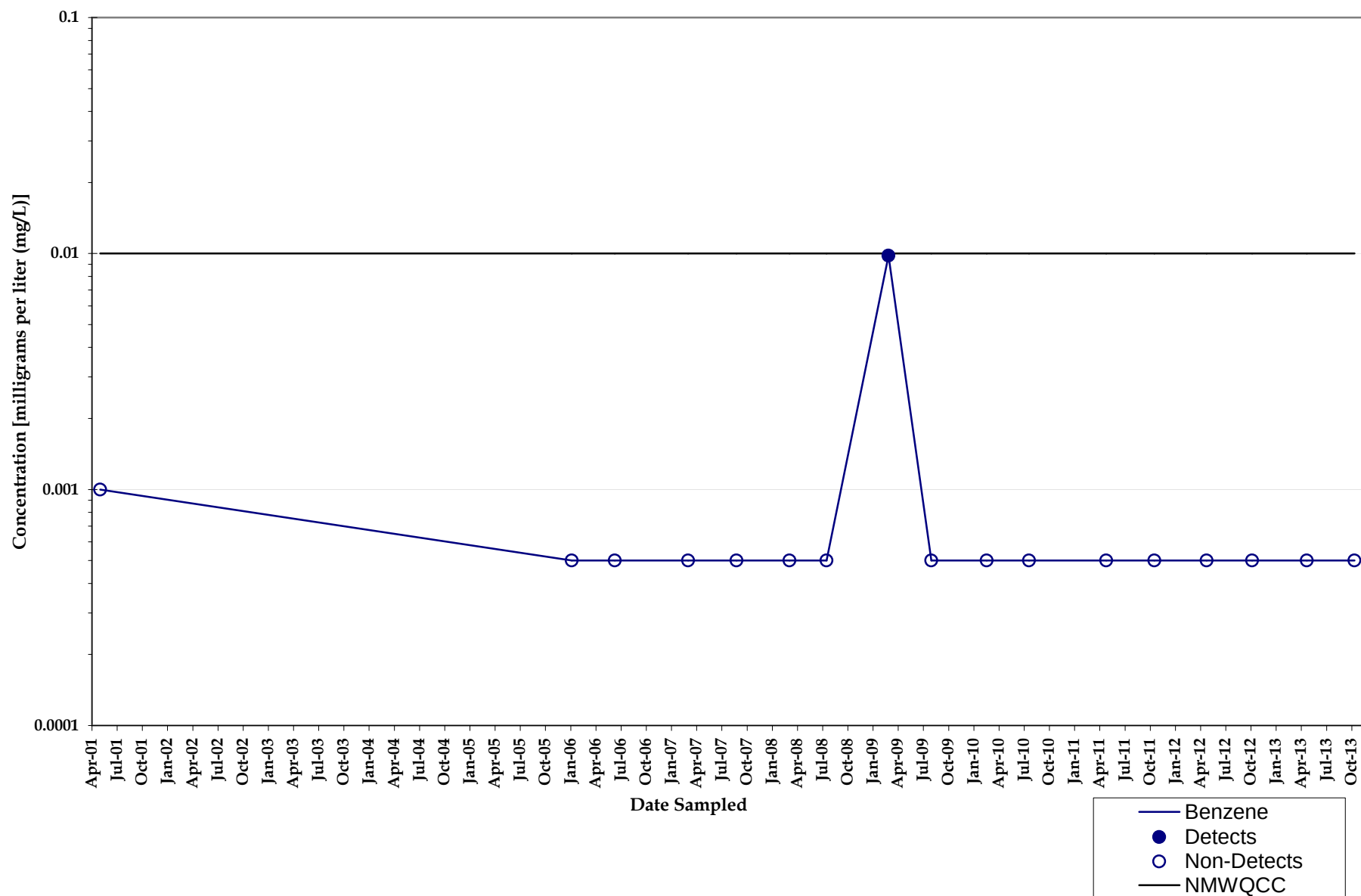


Benzene Concentrations Monitoring Well MW015

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

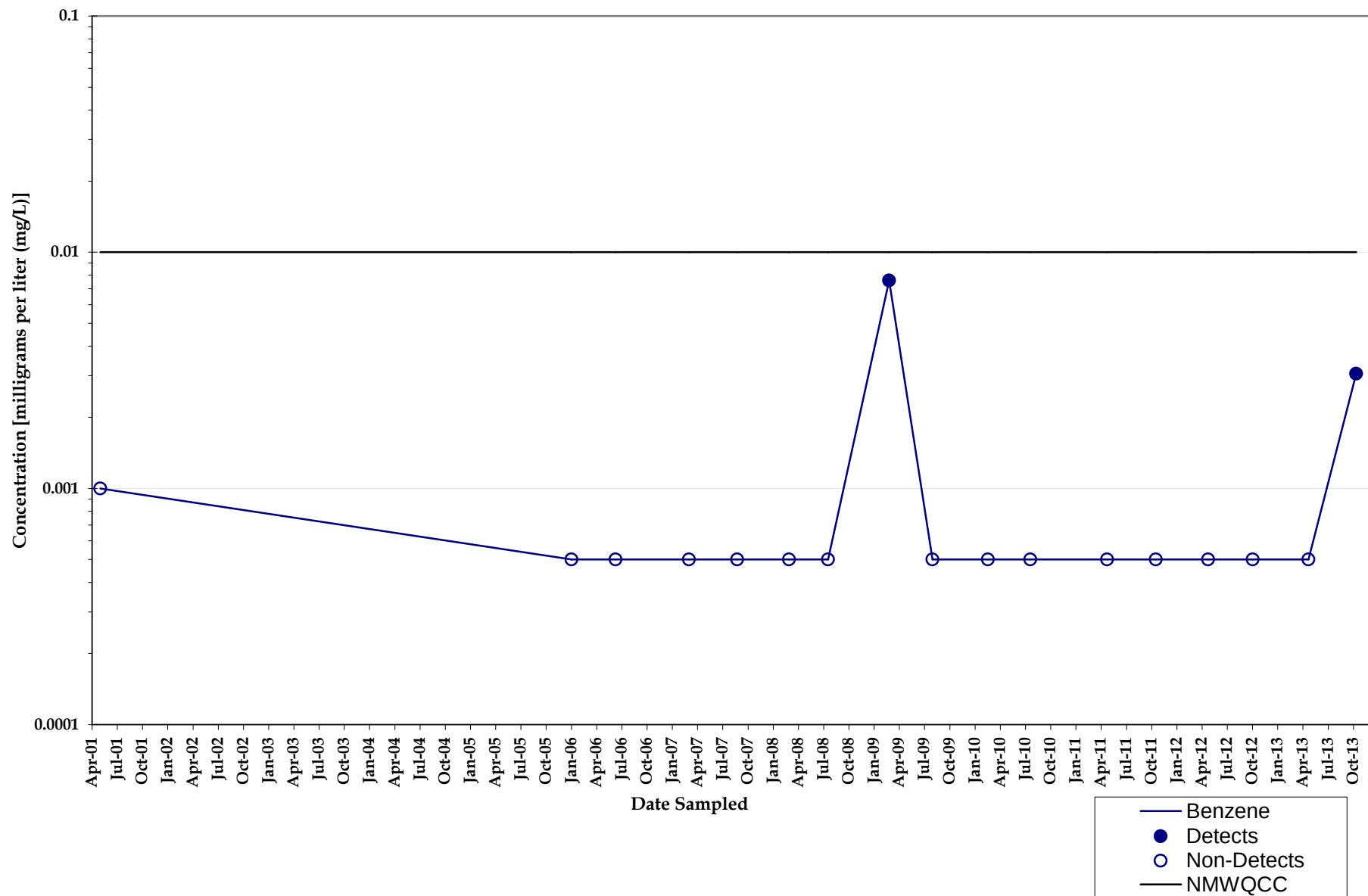


Benzene Concentrations Monitoring Well MW015A

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

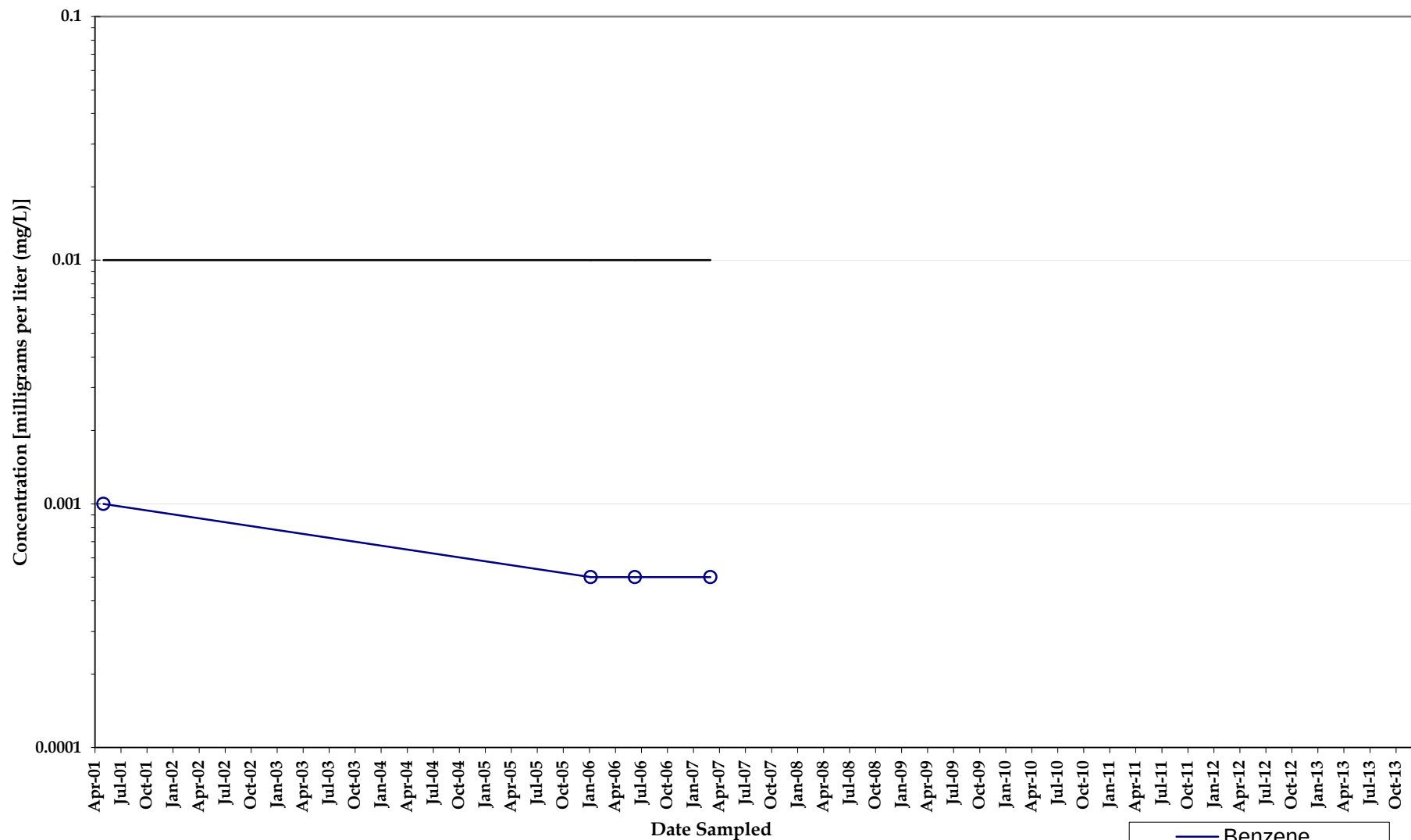


Benzene Concentrations Monitoring Well MW016A

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

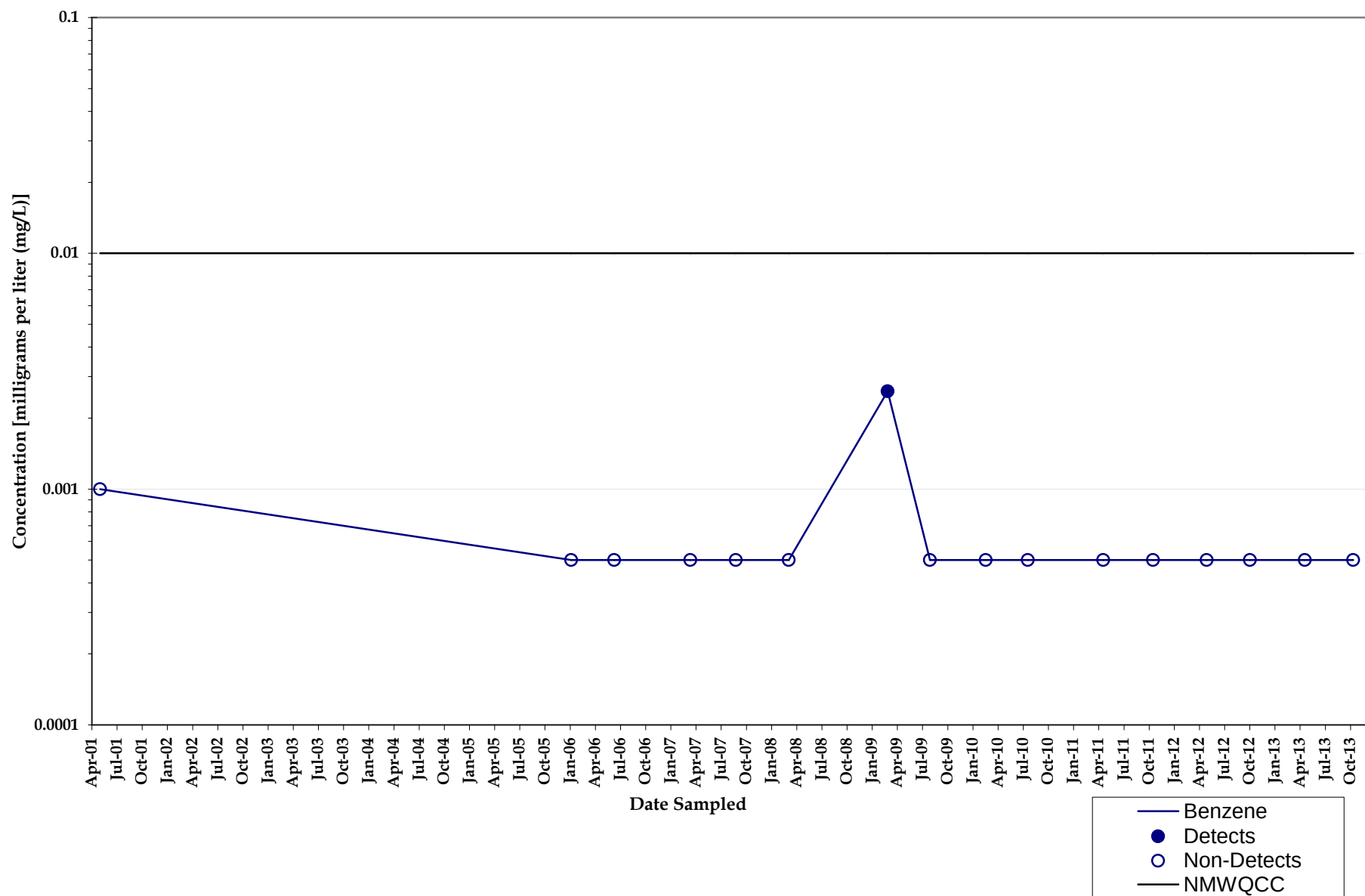


Benzene Concentrations Monitoring Well MW017A

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

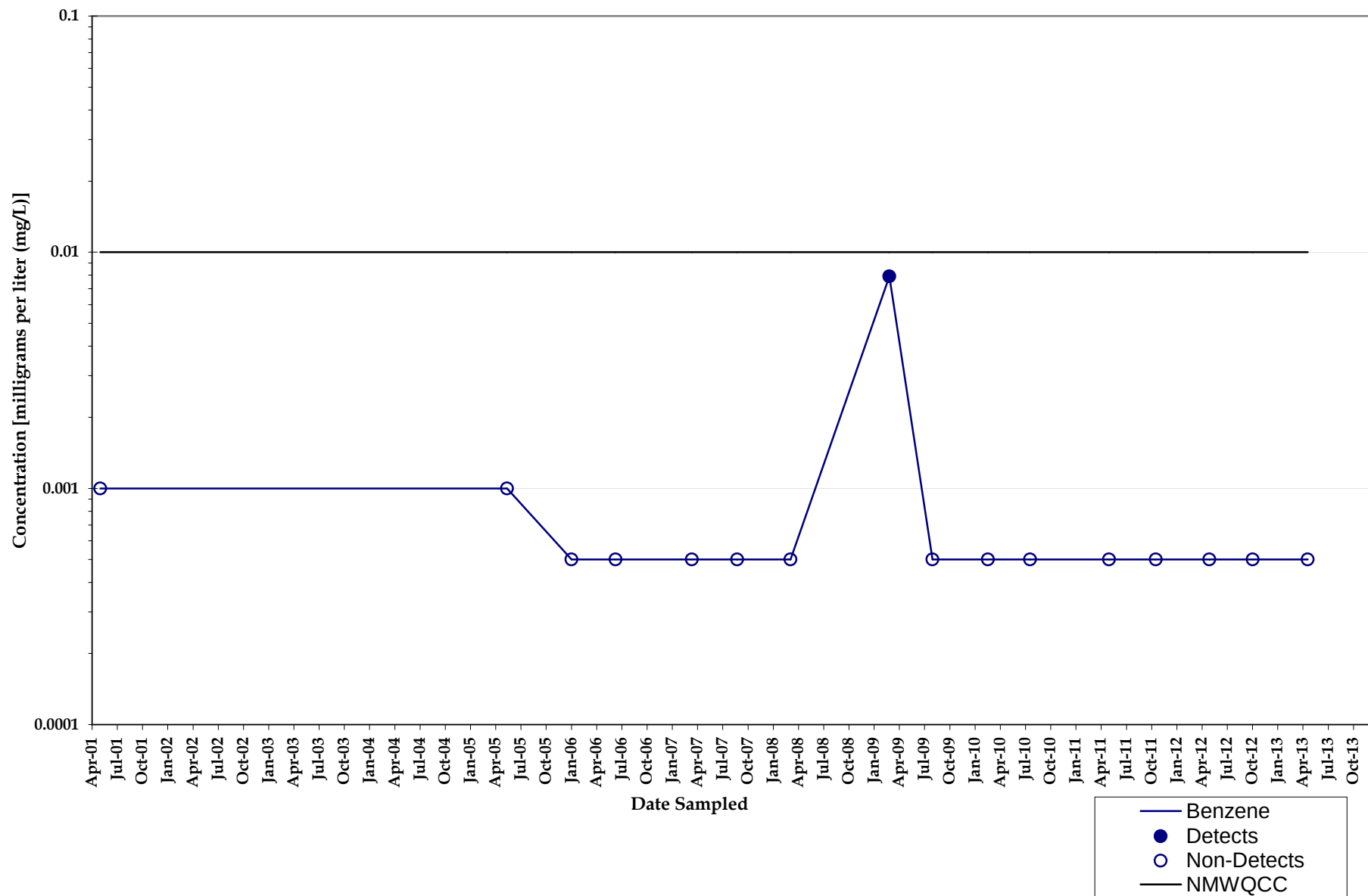


Benzene Concentrations Monitoring Well MW018

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

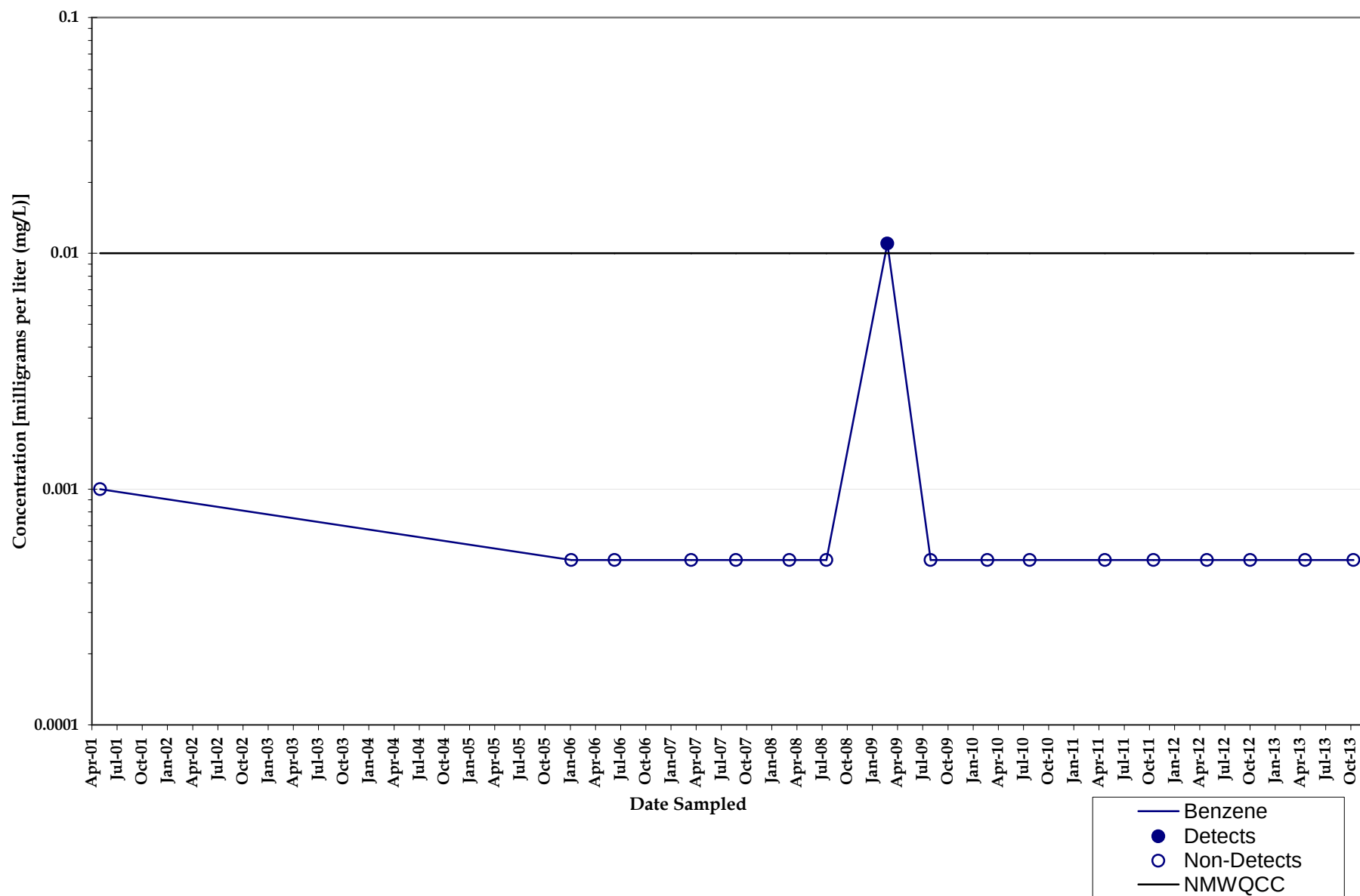


Benzene Concentrations Monitoring Well MW018A

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

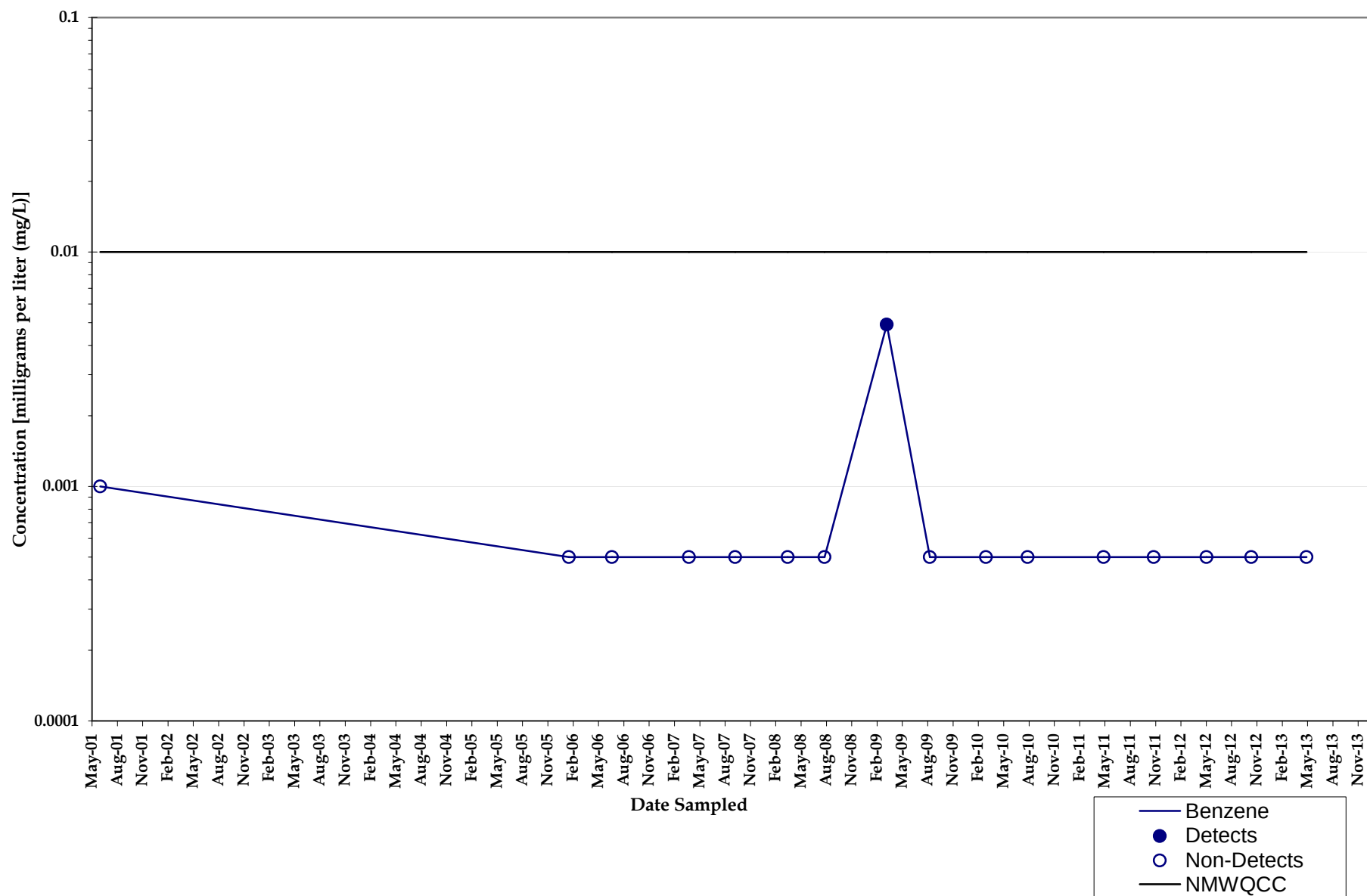


Benzene Concentrations Monitoring Well MW019A

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

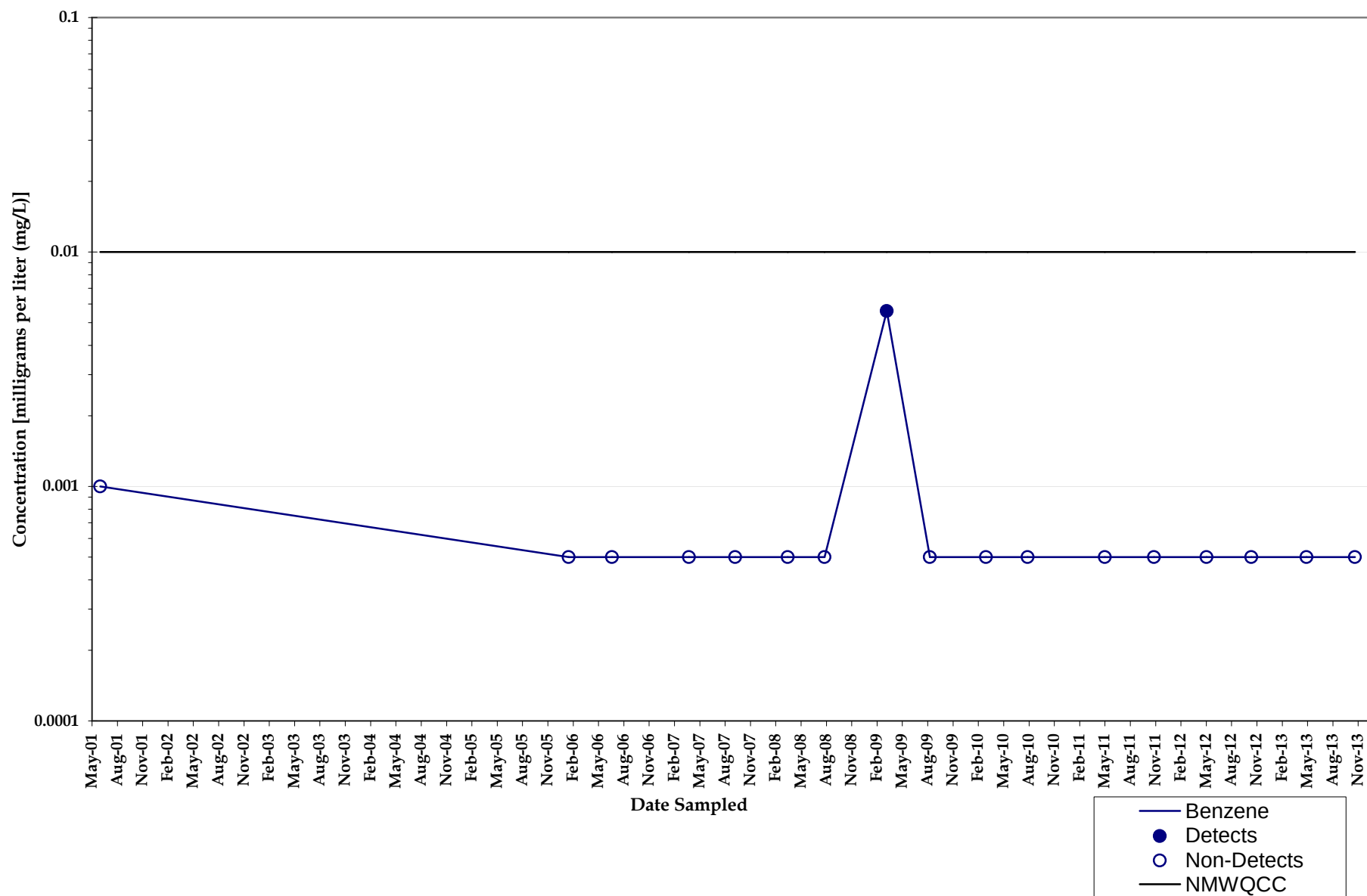


Benzene Concentrations Monitoring Well MW020

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

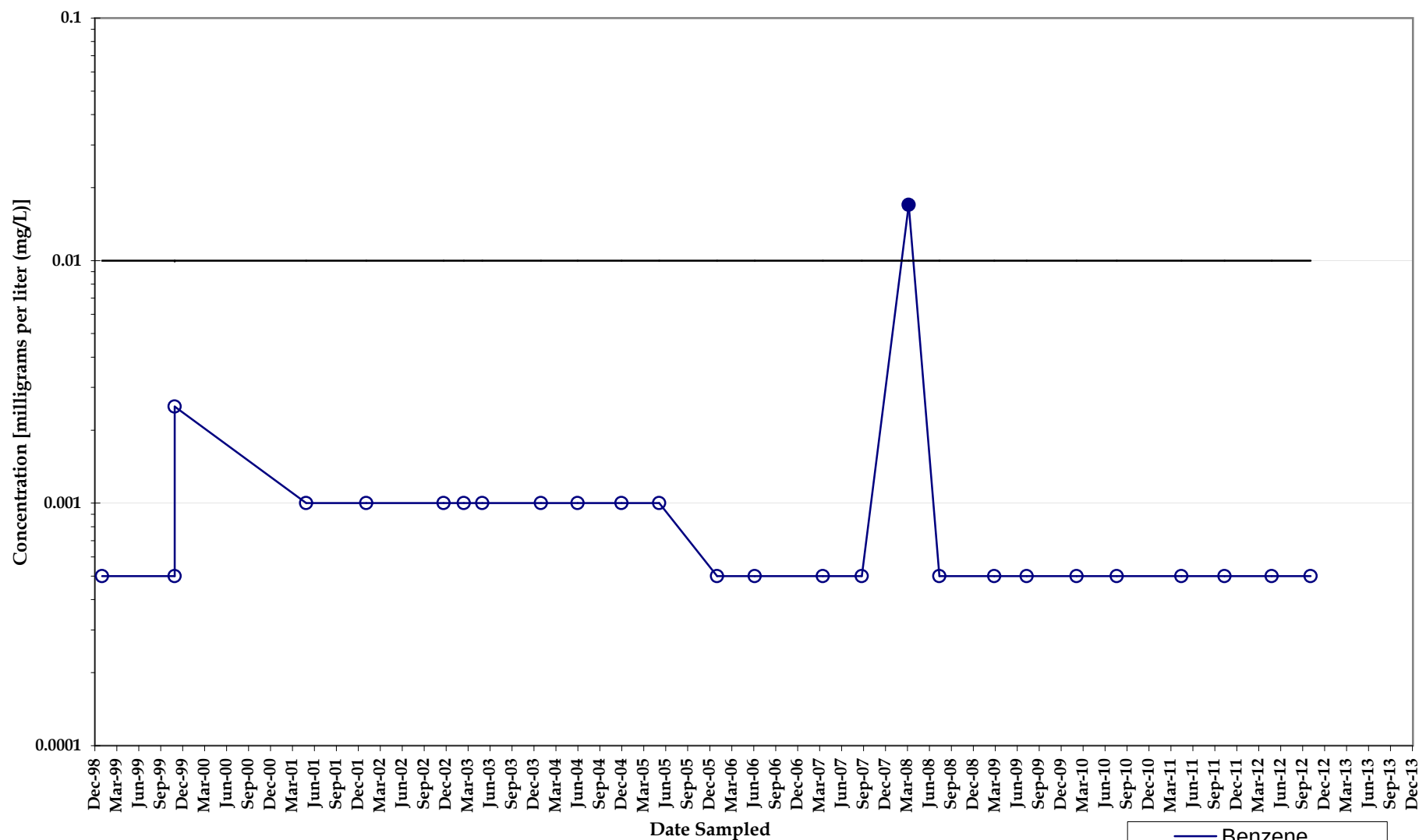


Benzene Concentrations Monitoring Well MW020A

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

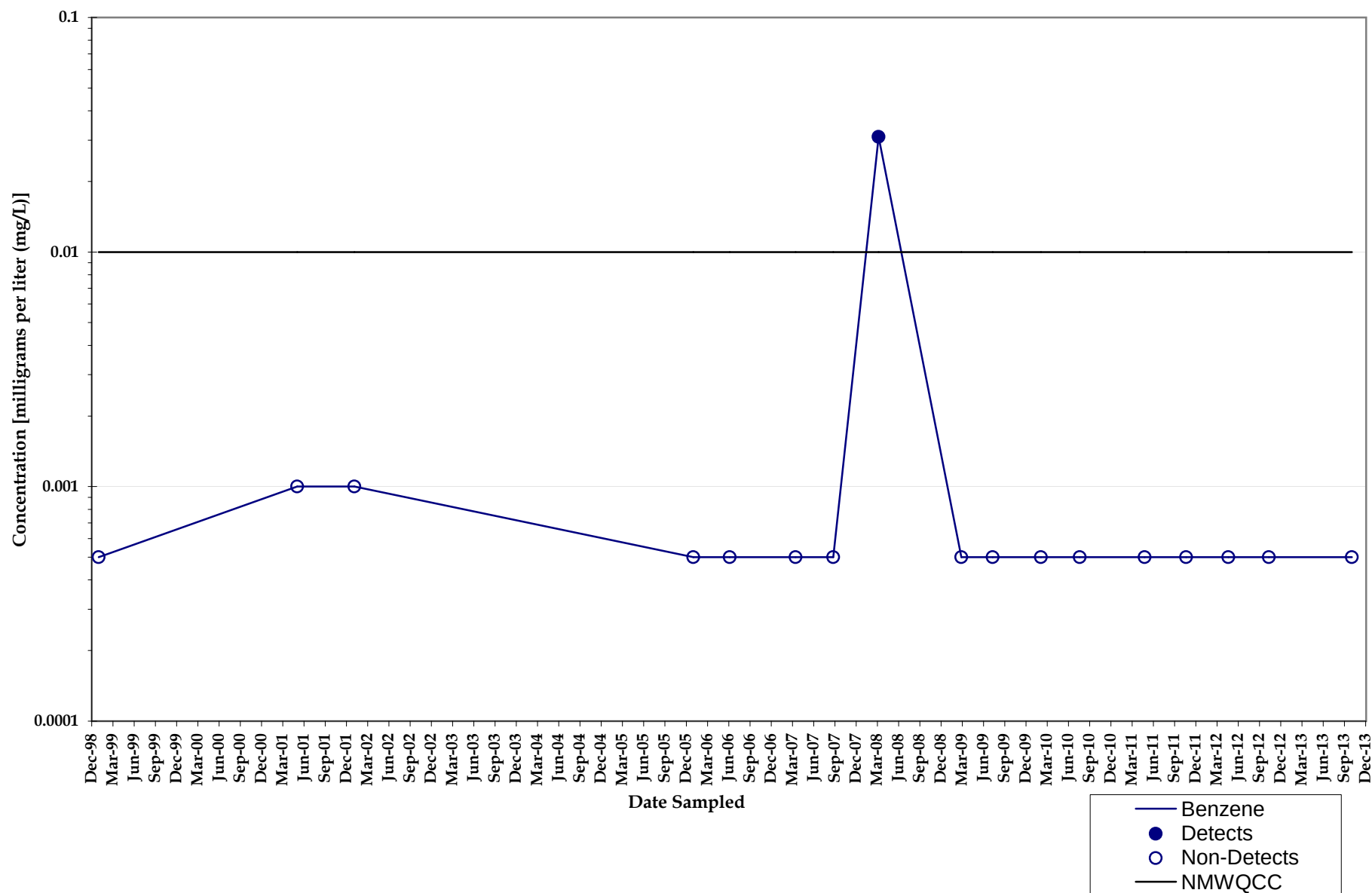


Benzene Concentrations Monitoring Well MW021

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

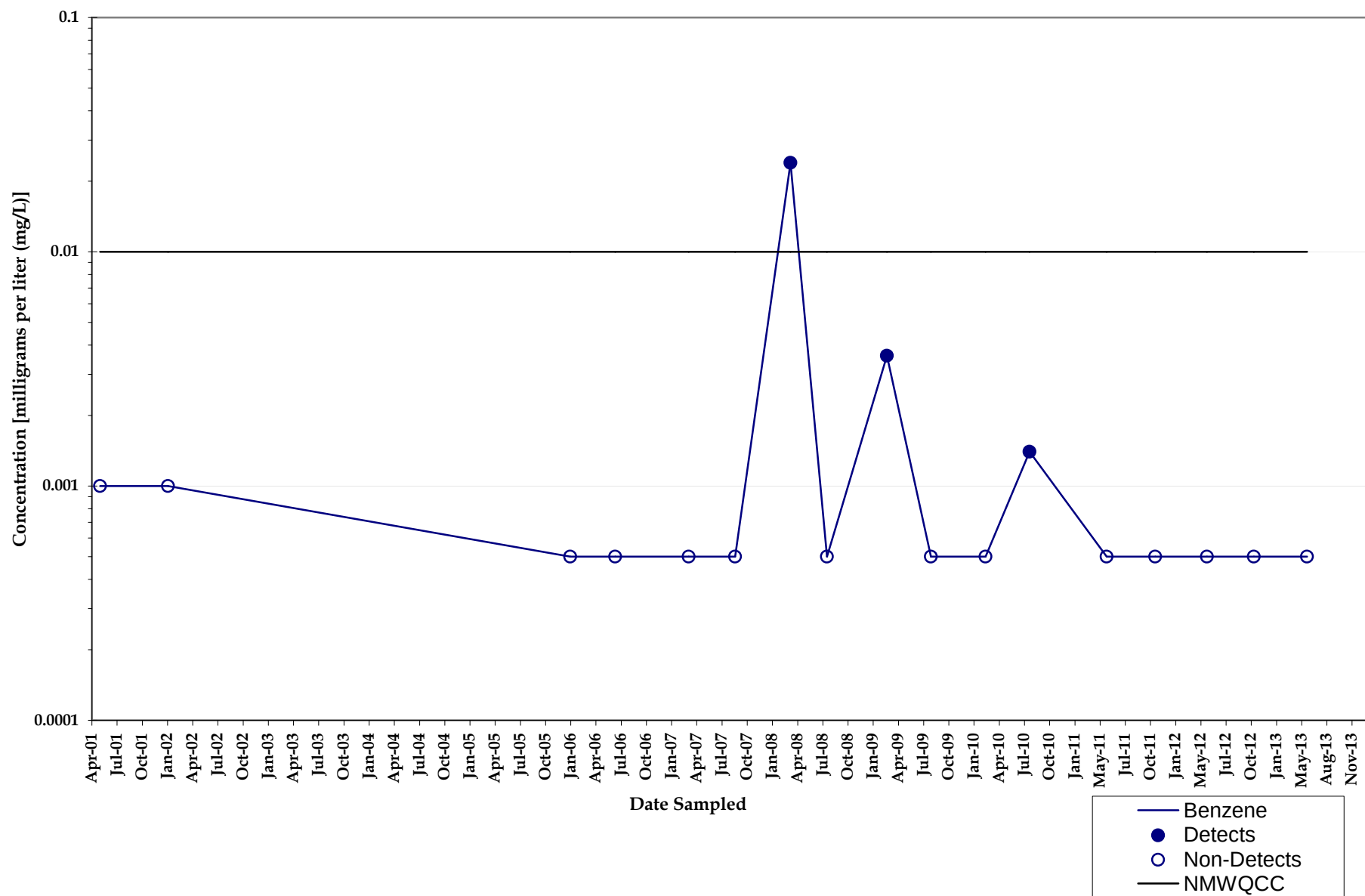


Benzene Concentrations Monitoring Well MW021A

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

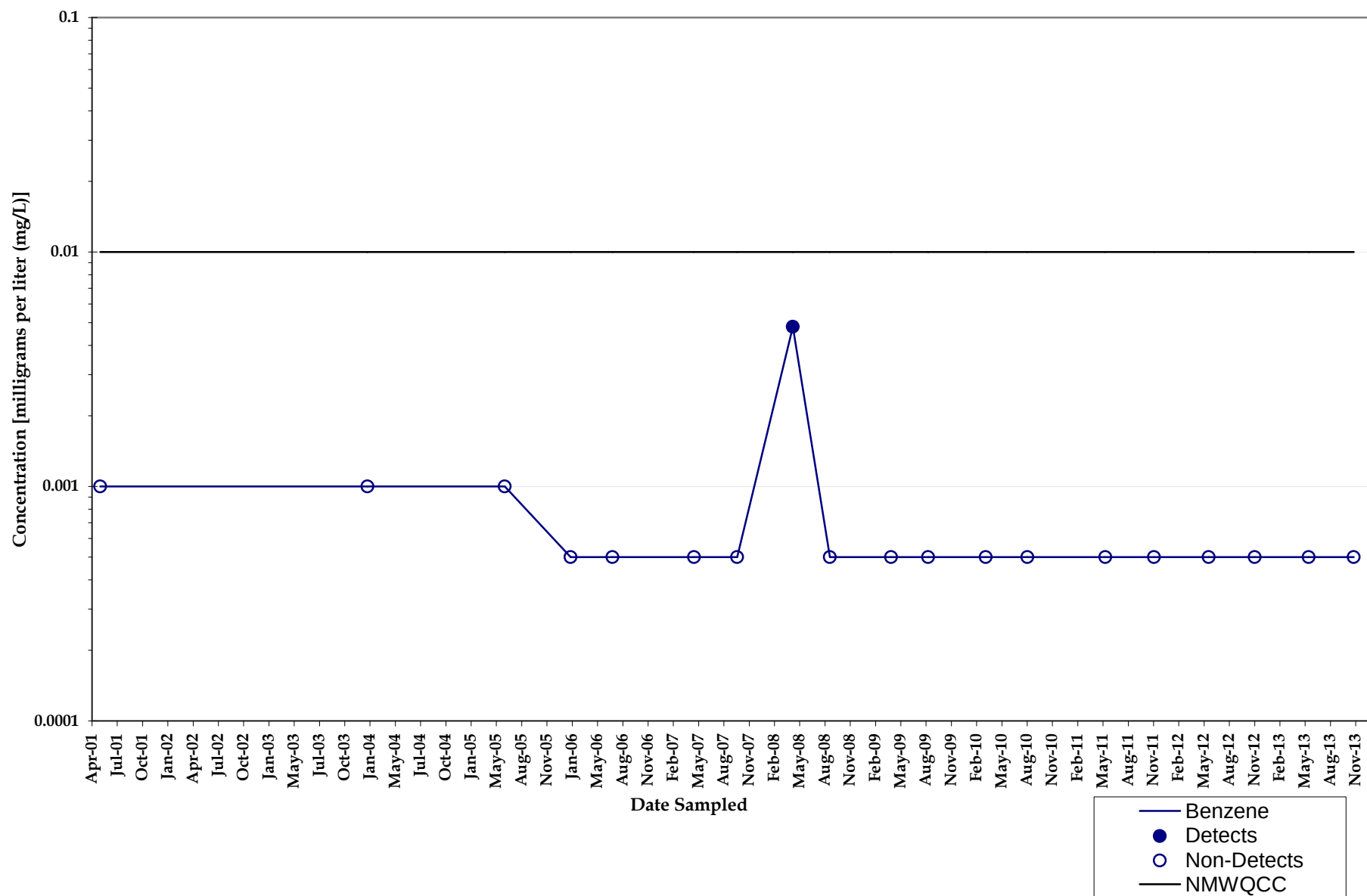


Benzene Concentrations Monitoring Well MW022A

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

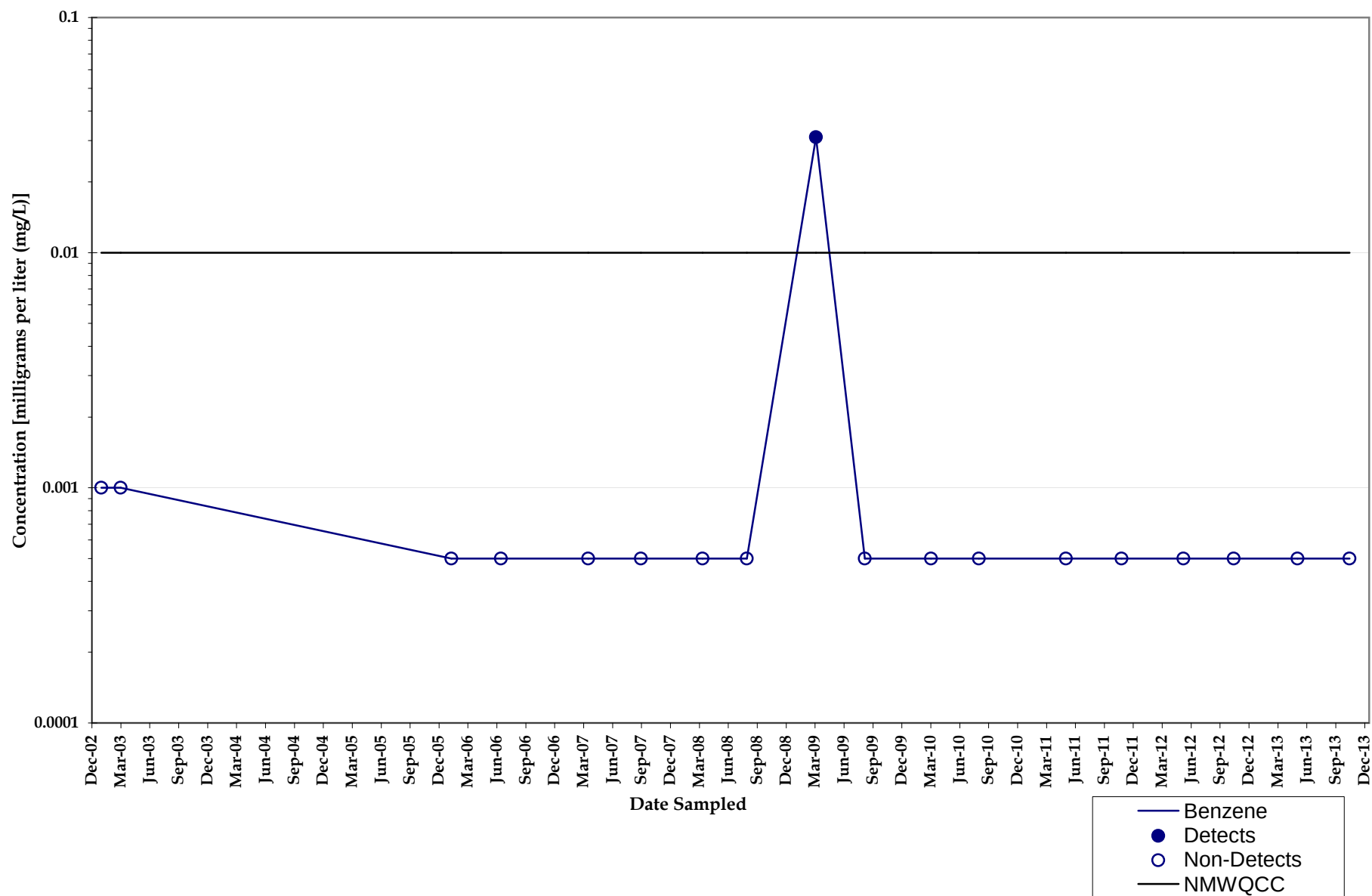


Benzene Concentrations Monitoring Well MW023

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

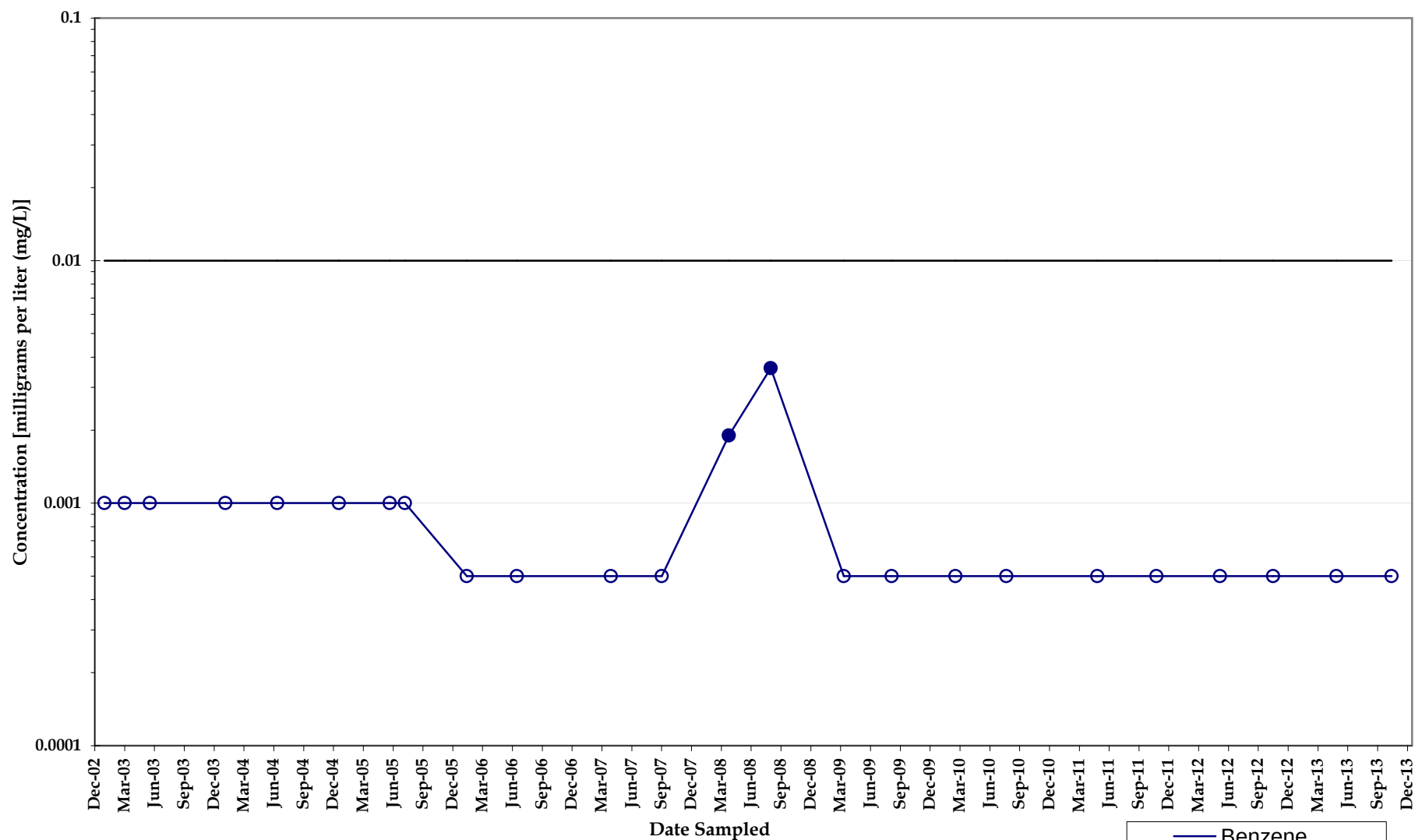


Benzene Concentrations Monitoring Well MW023A

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

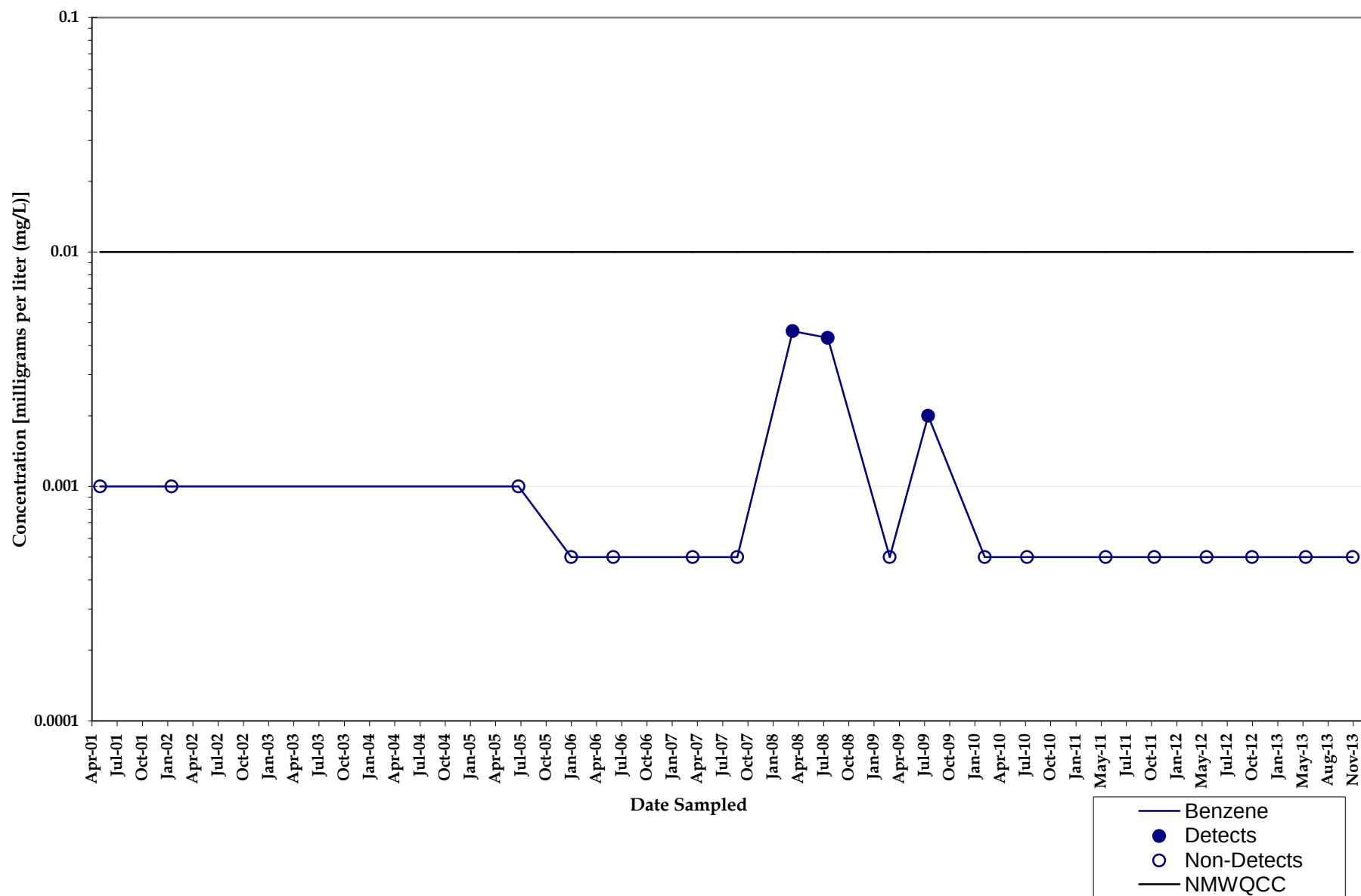


Benzene Concentrations Monitoring Well MW024

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

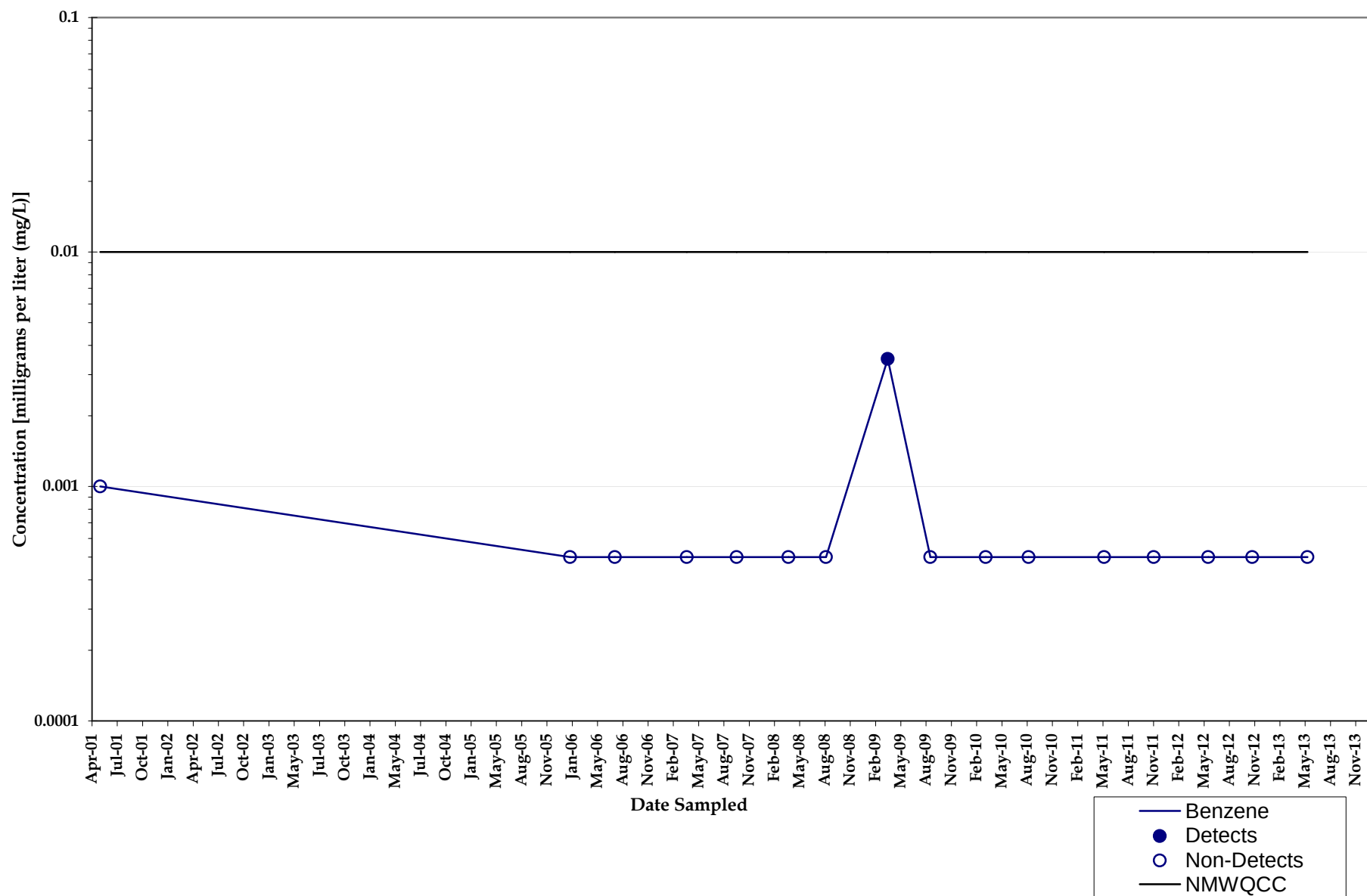


Benzene Concentrations Monitoring Well MW024A

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

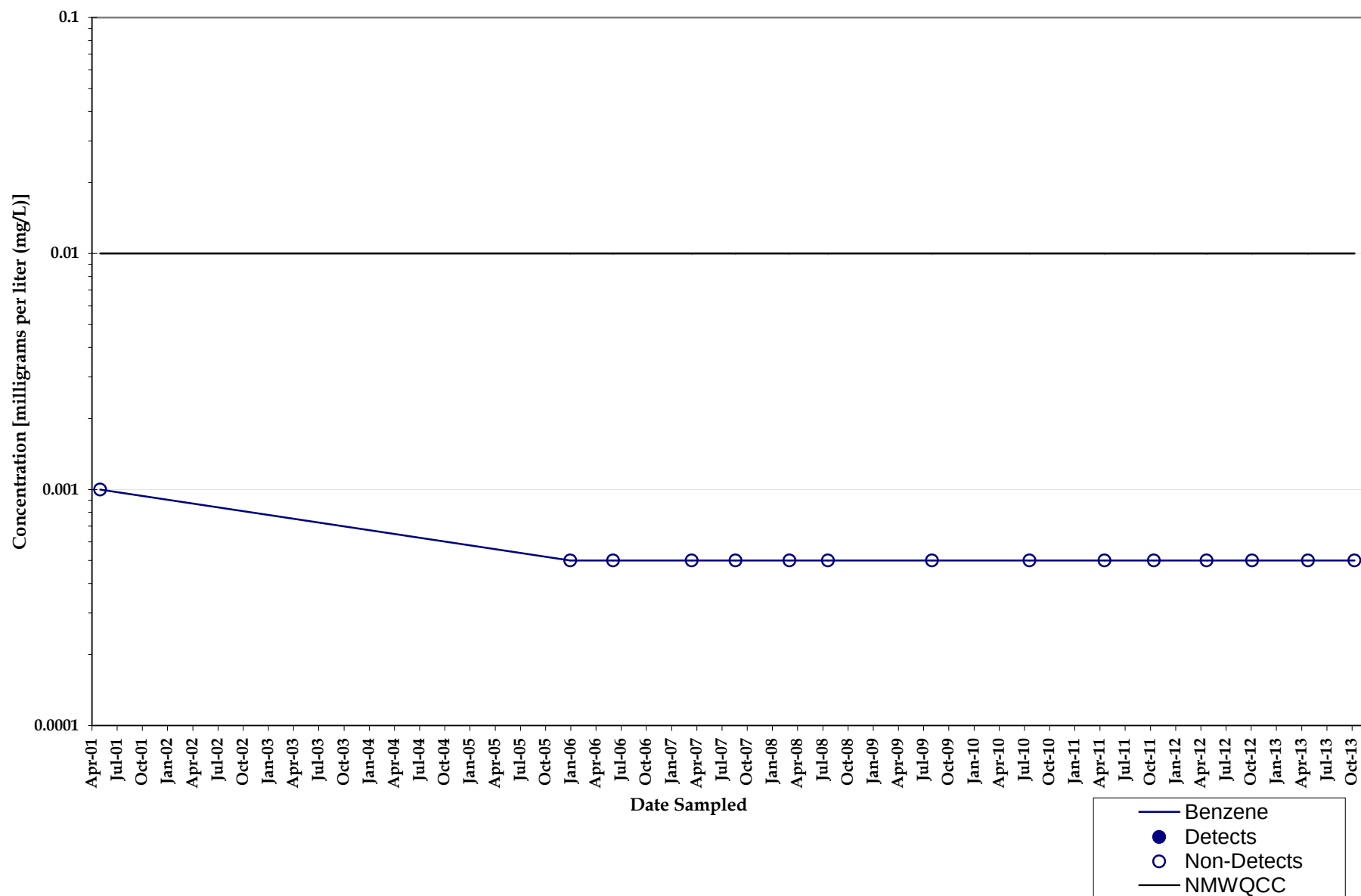


Benzene Concentrations Monitoring Well MW025

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

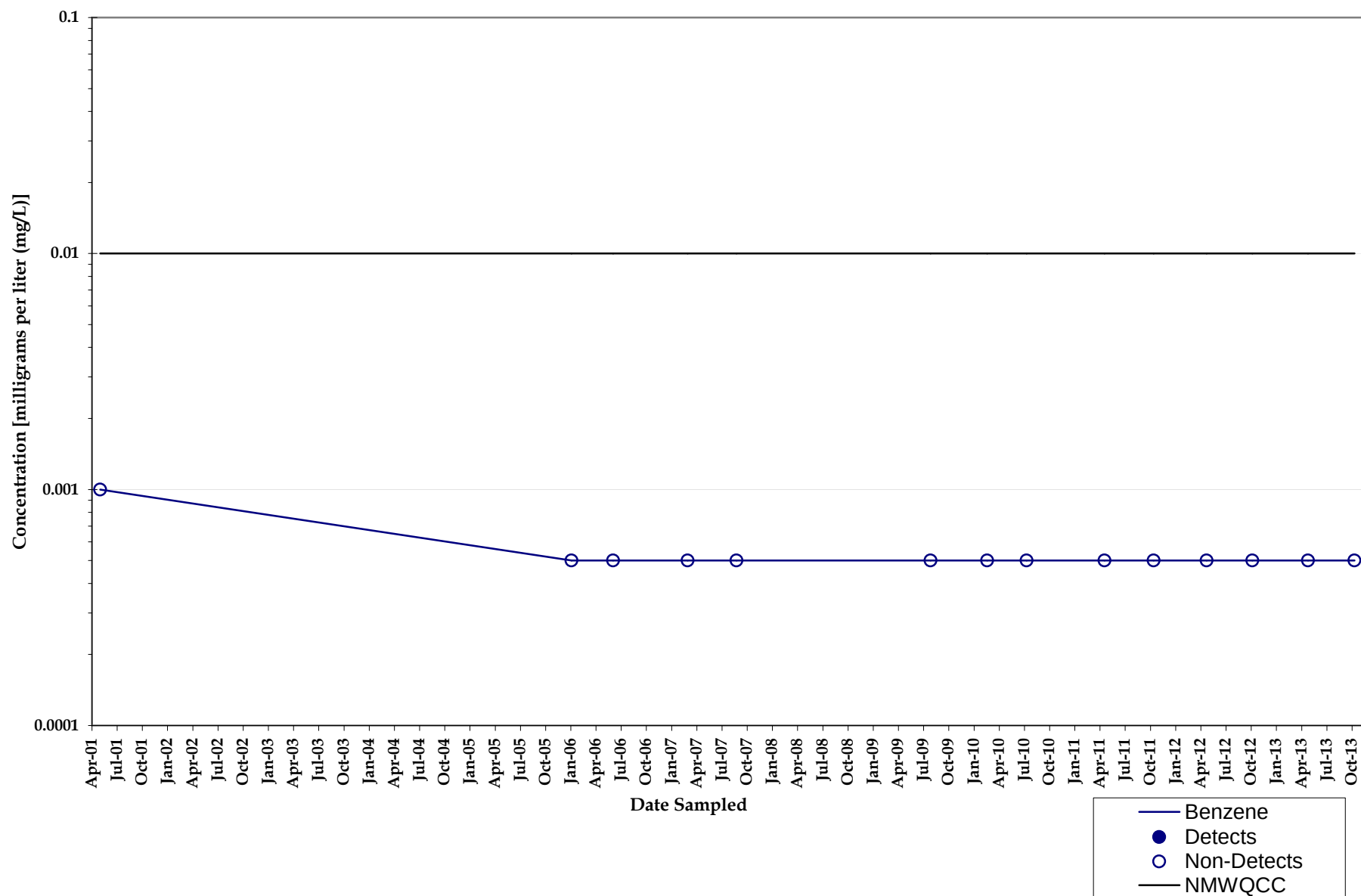


Benzene Concentrations Monitoring Well MW026

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

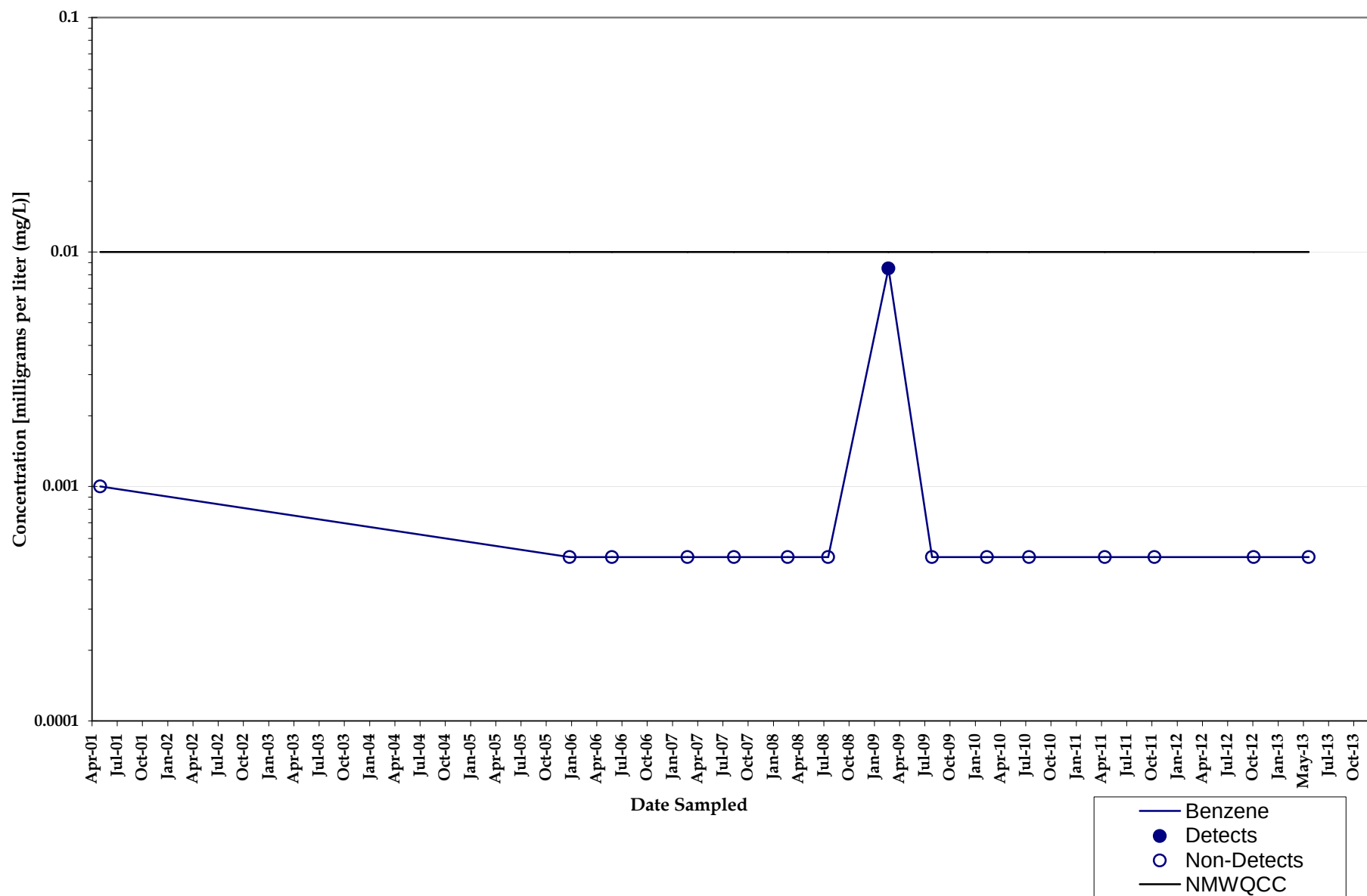


Benzene Concentrations Monitoring Well MW027

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

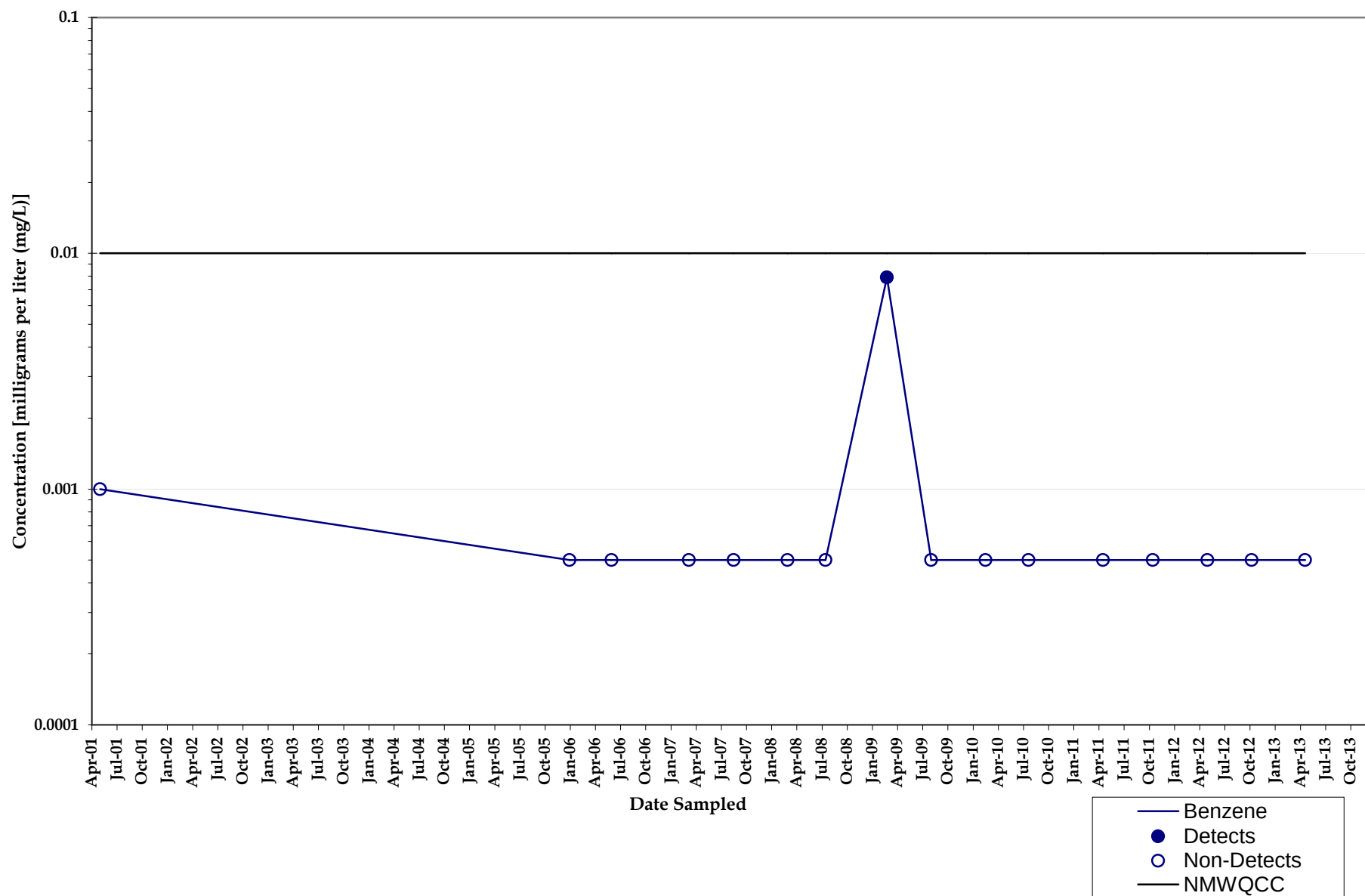


Benzene Concentrations Monitoring Well MW028

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

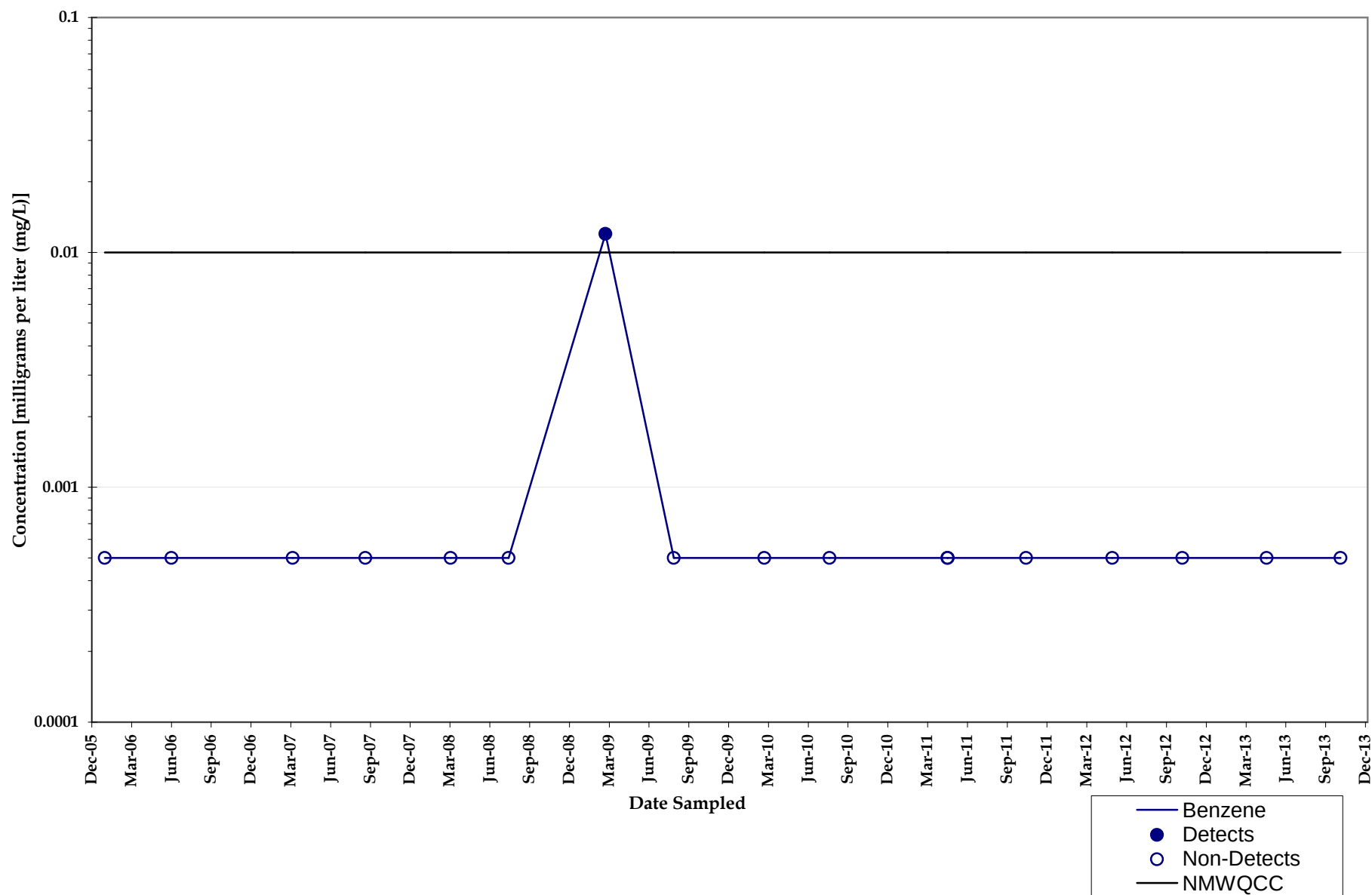


Benzene Concentrations Monitoring Well MW029

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

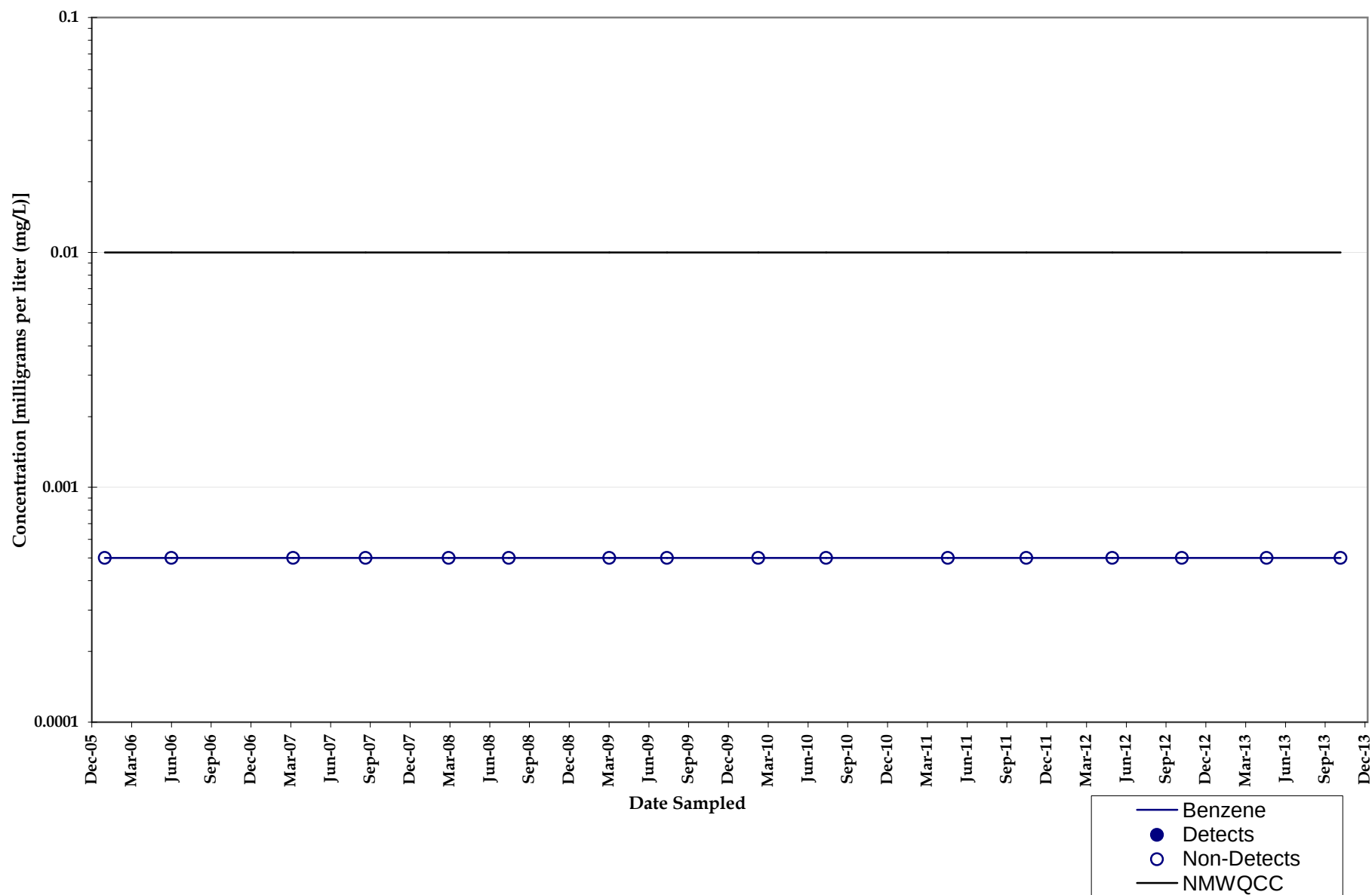


Benzene Concentrations Monitoring Well MW030

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by shaded symbol and detection values greater than the RL denoted by shaded symbol.

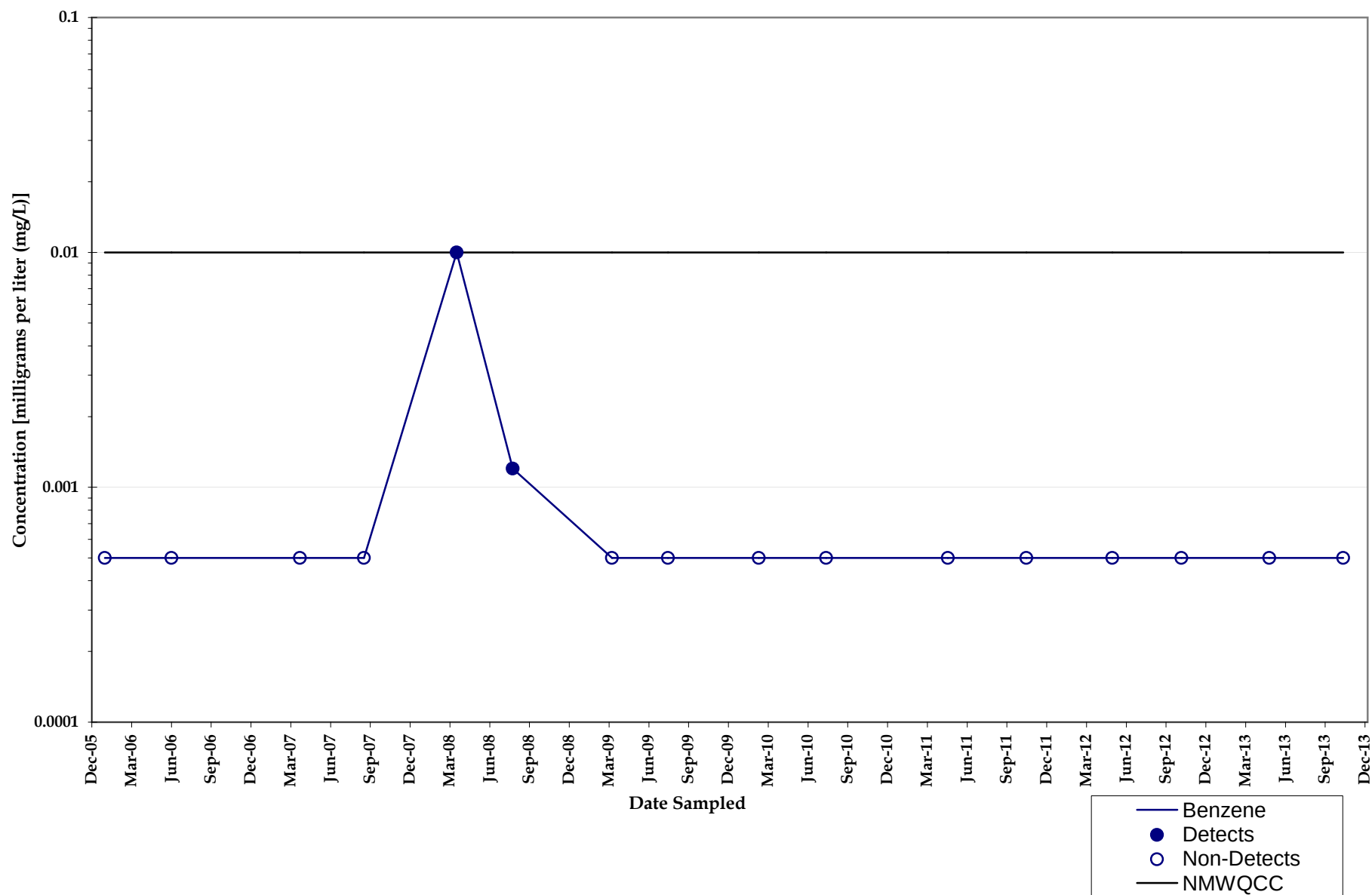


Benzene Concentrations Monitoring Well MW031

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

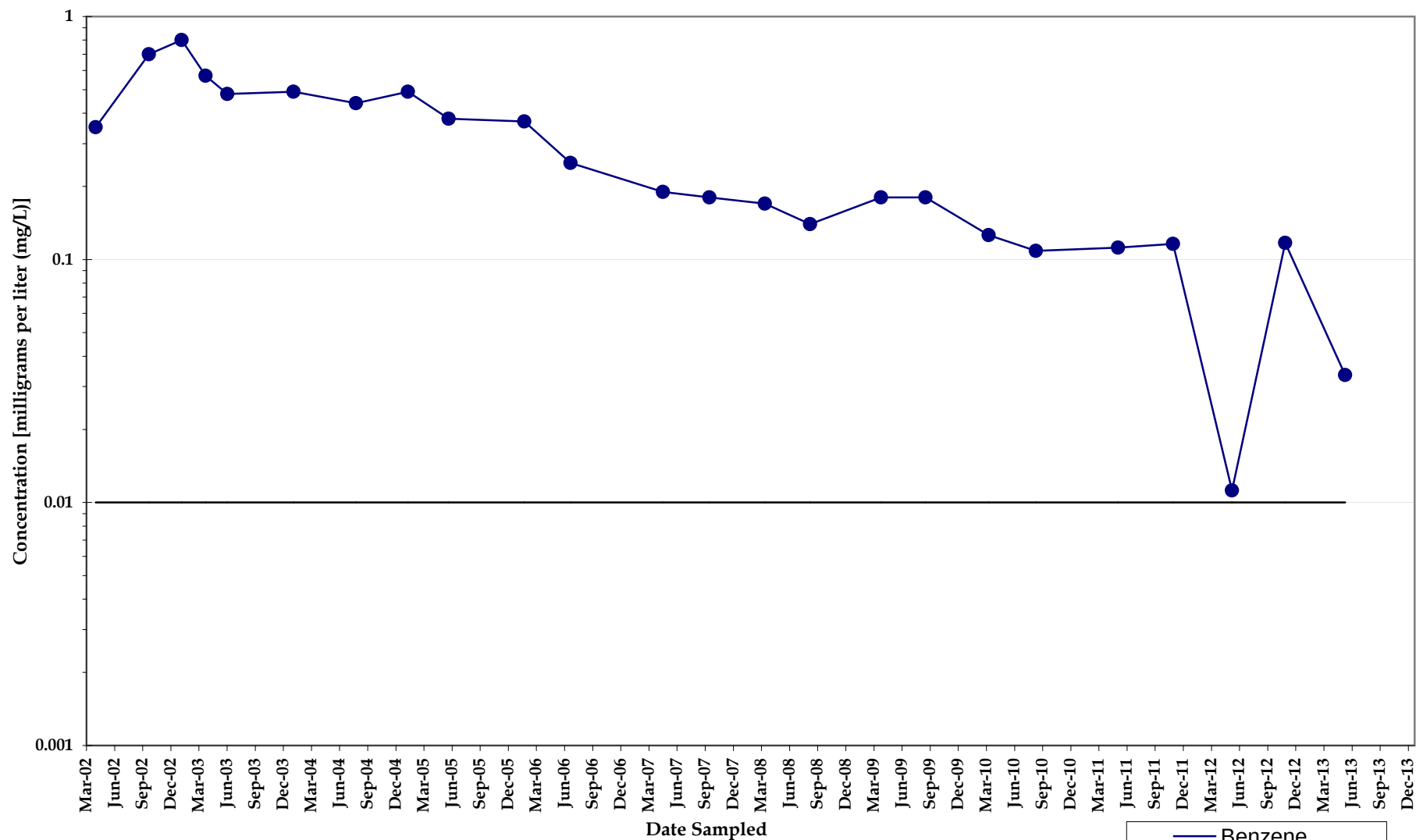


Benzene Concentrations Monitoring Well MW032

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

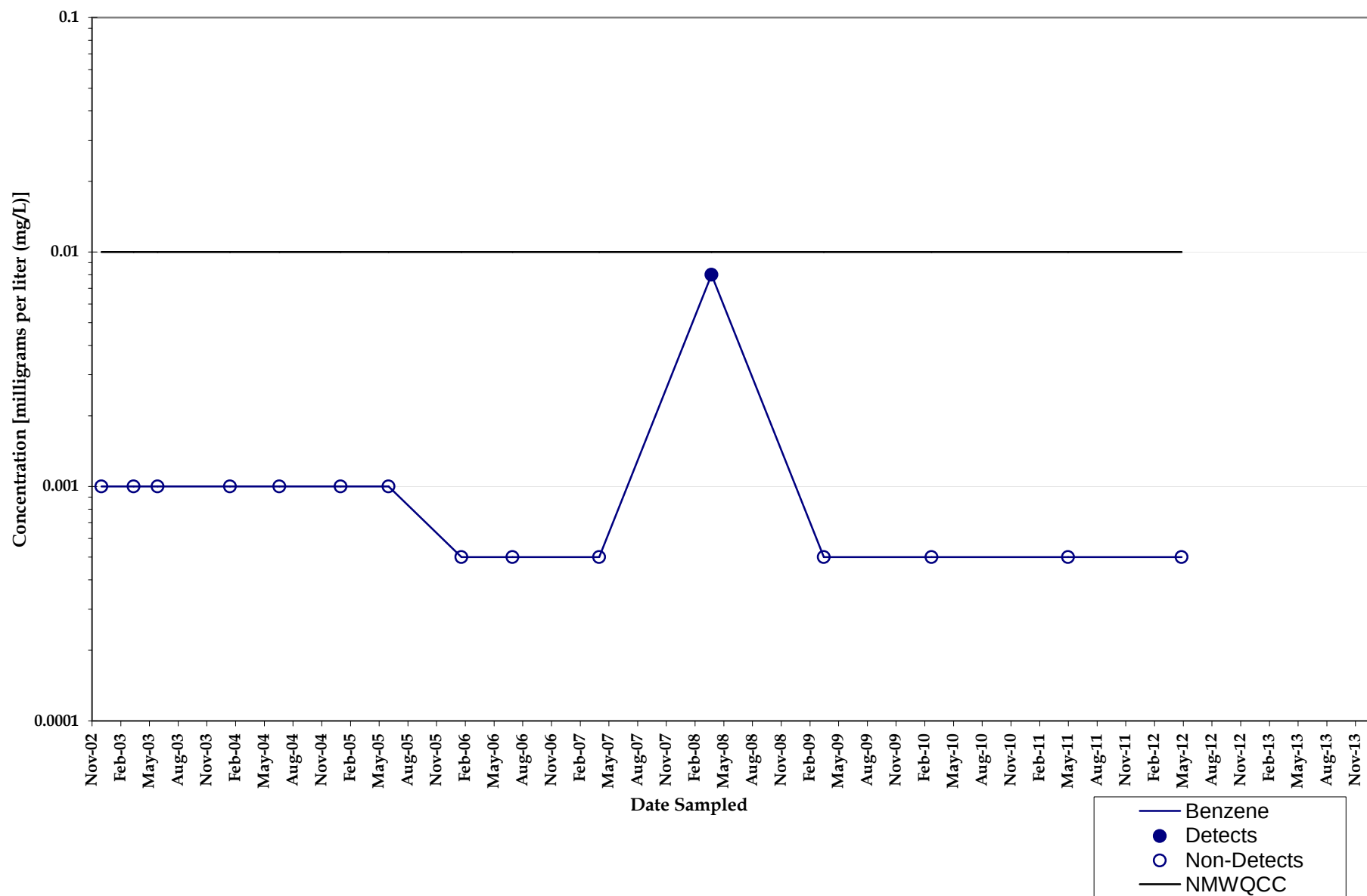


Benzene Concentrations Monitoring Well MW033

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

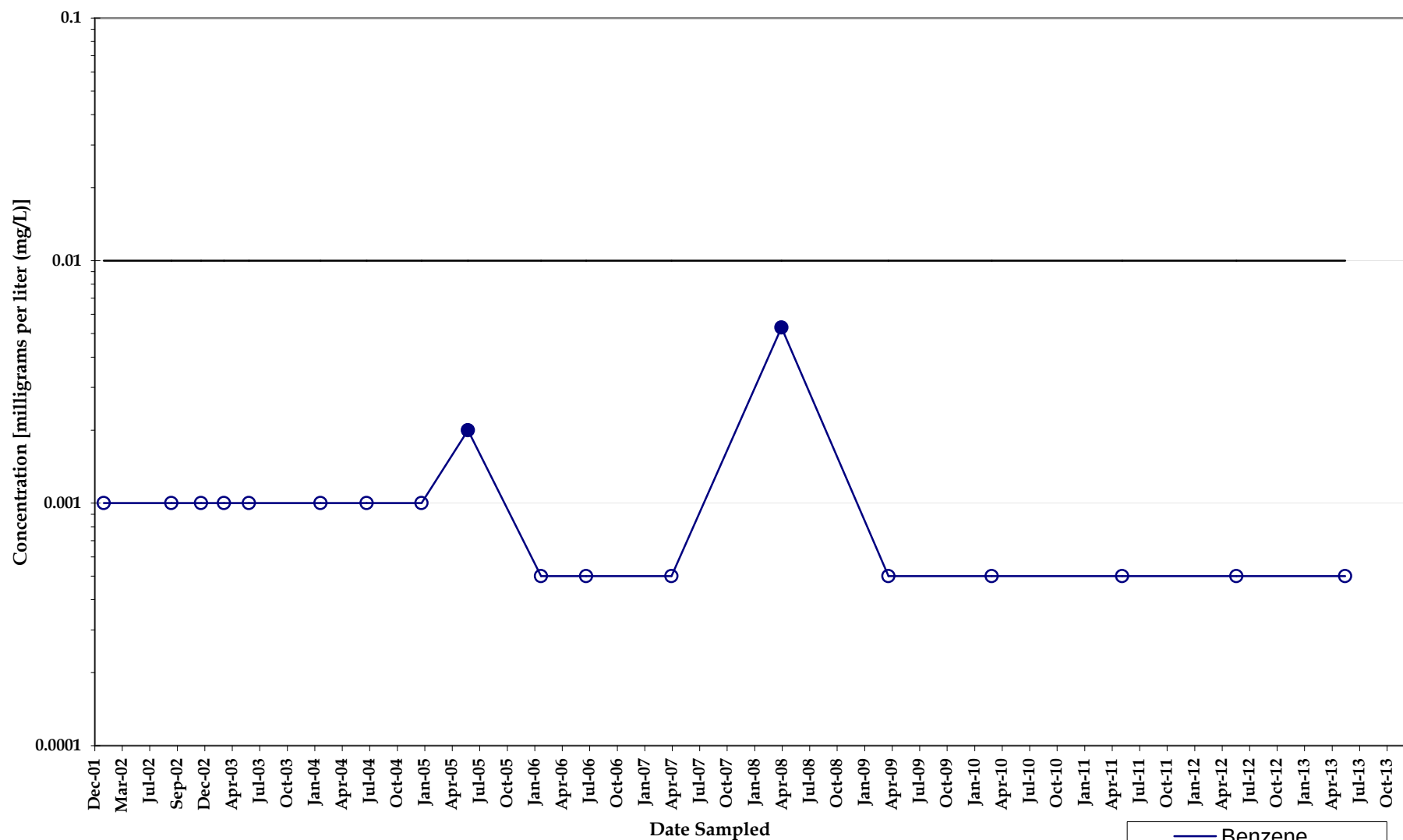


Benzene Concentrations Monitoring Well MW034

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

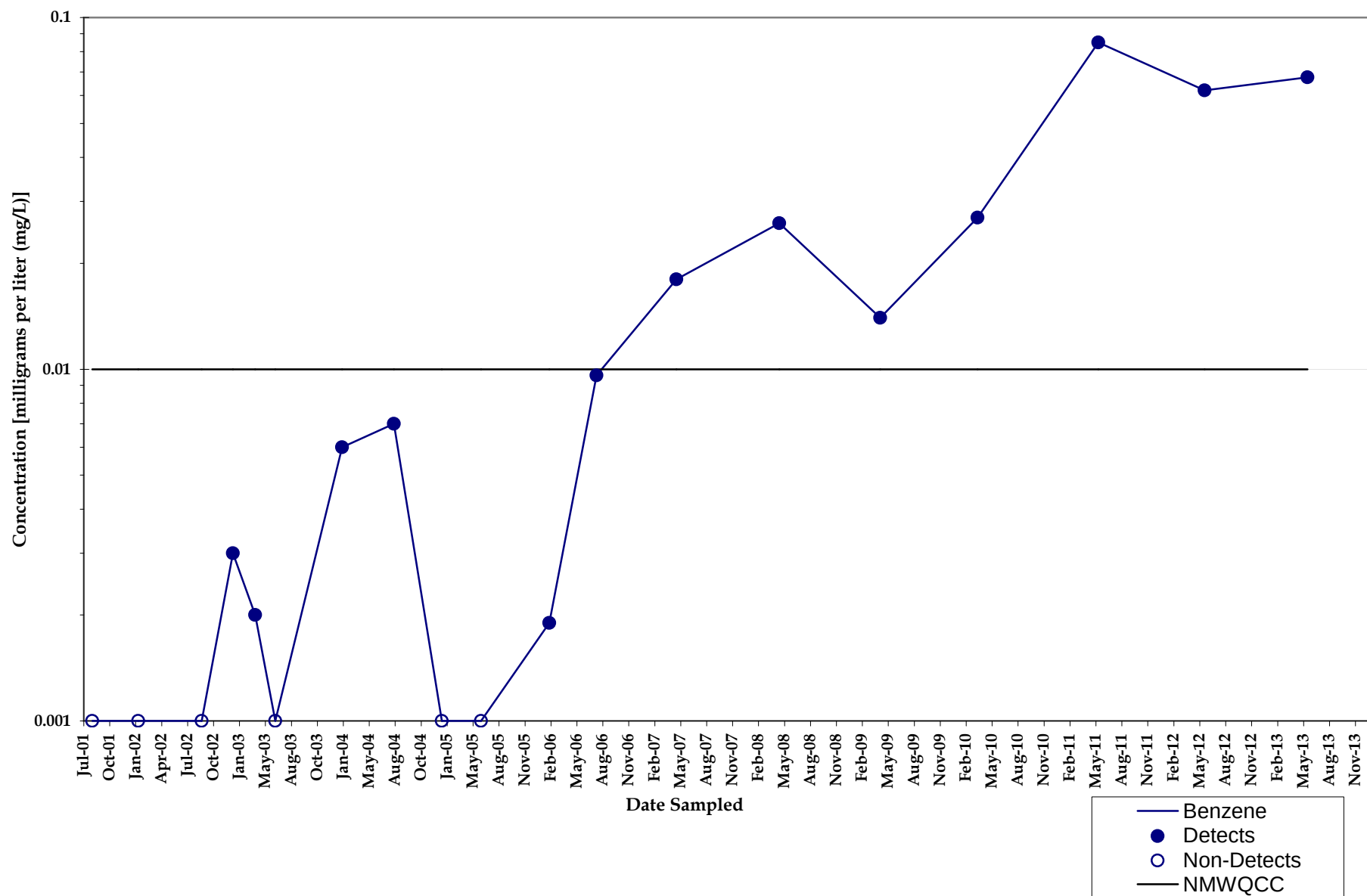


Benzene Concentrations Monitoring Well MW035

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

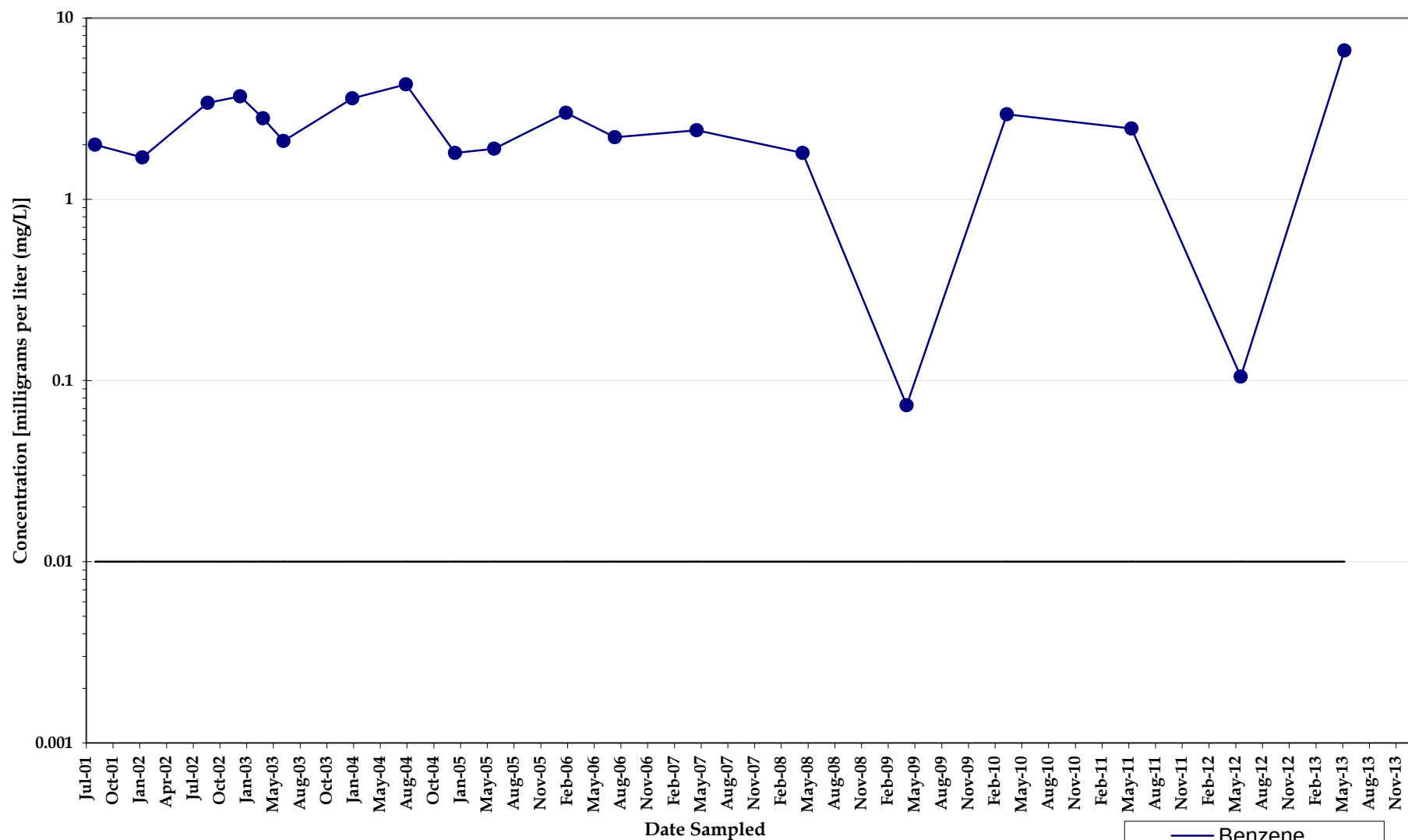


Benzene Concentrations Monitoring Well MW036

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

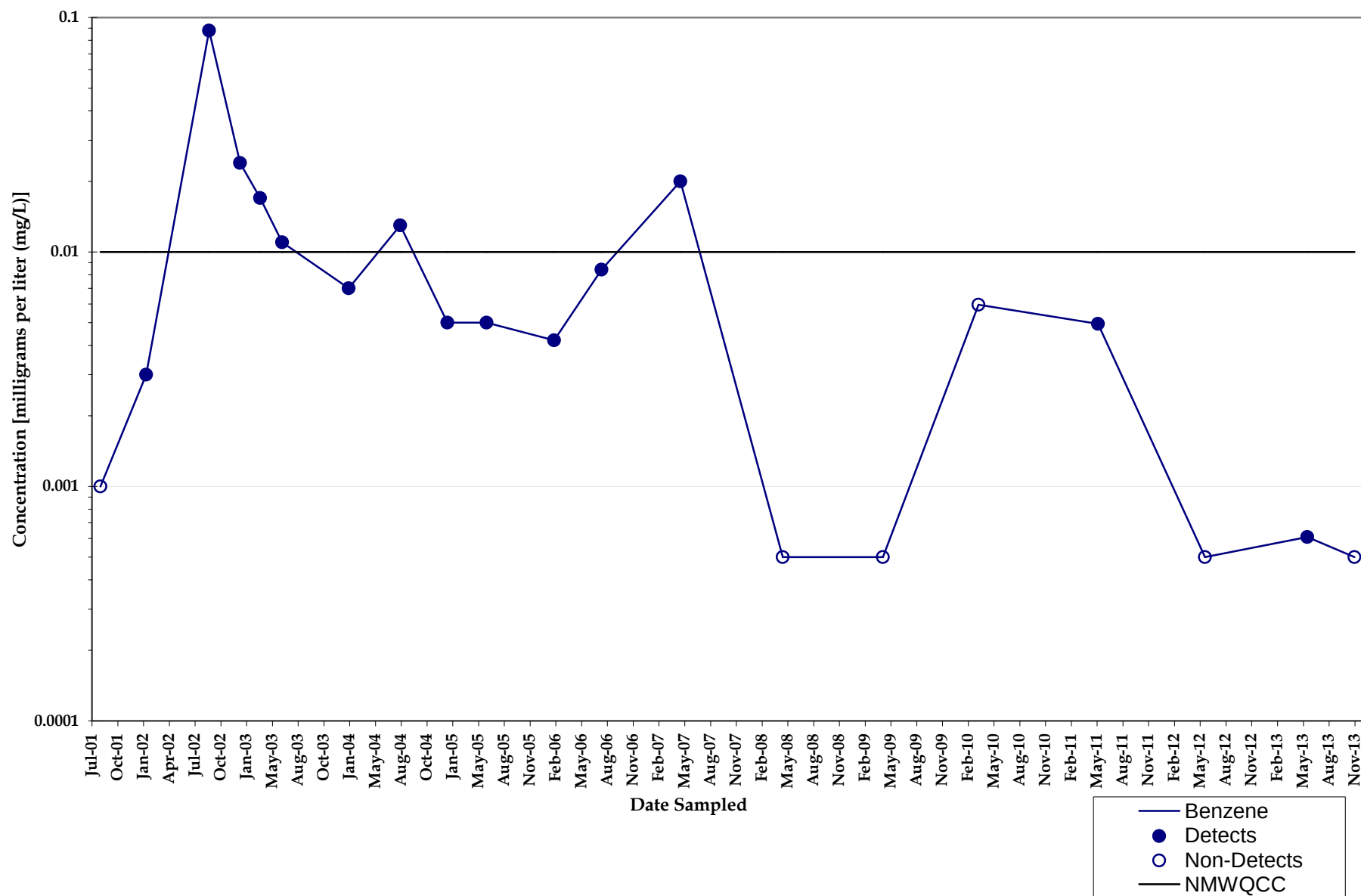


Benzene Concentrations Monitoring Well MW037

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

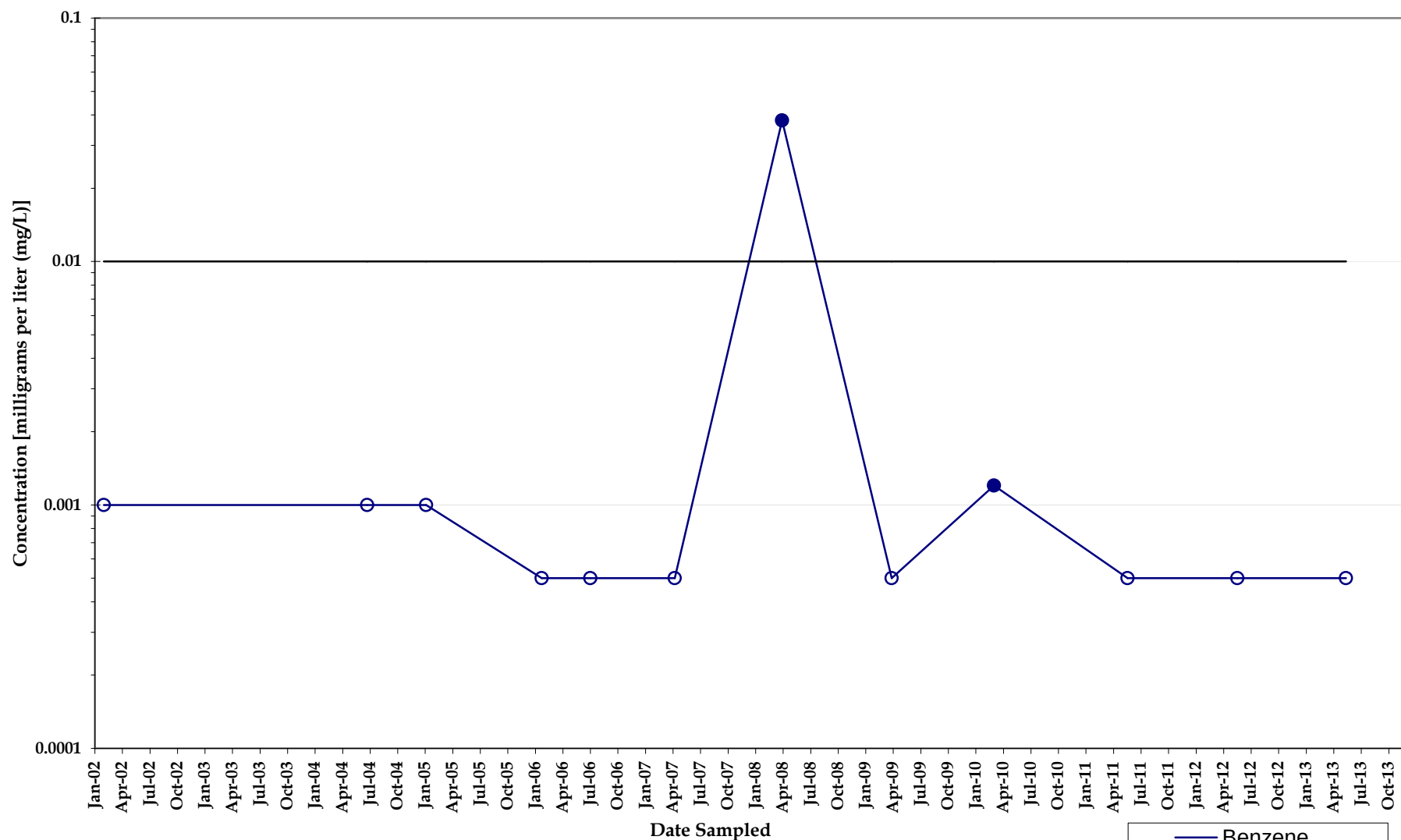


Benzene Concentrations Monitoring Well MW038

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

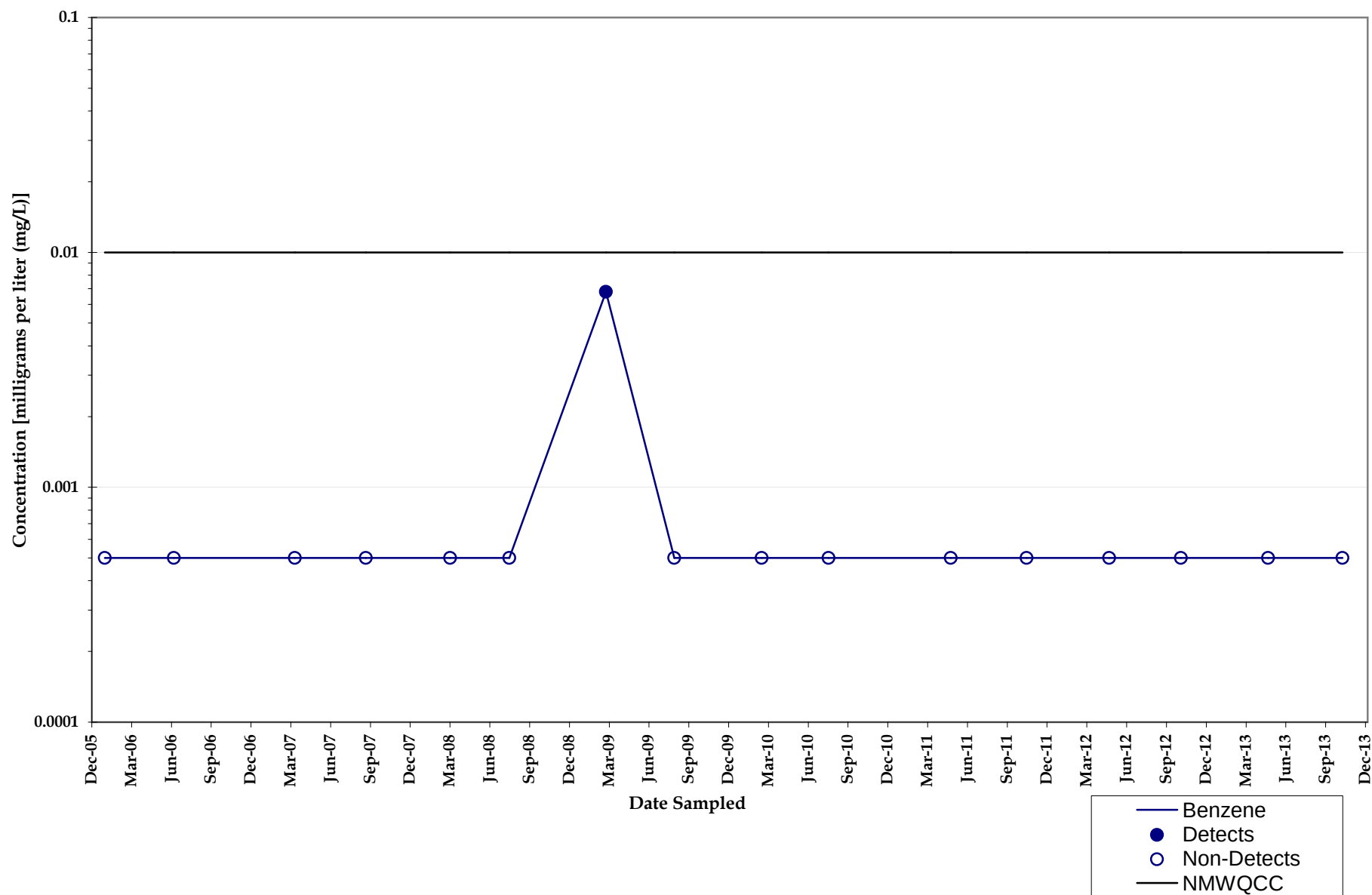


Benzene Concentrations Monitoring Well MW039A

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

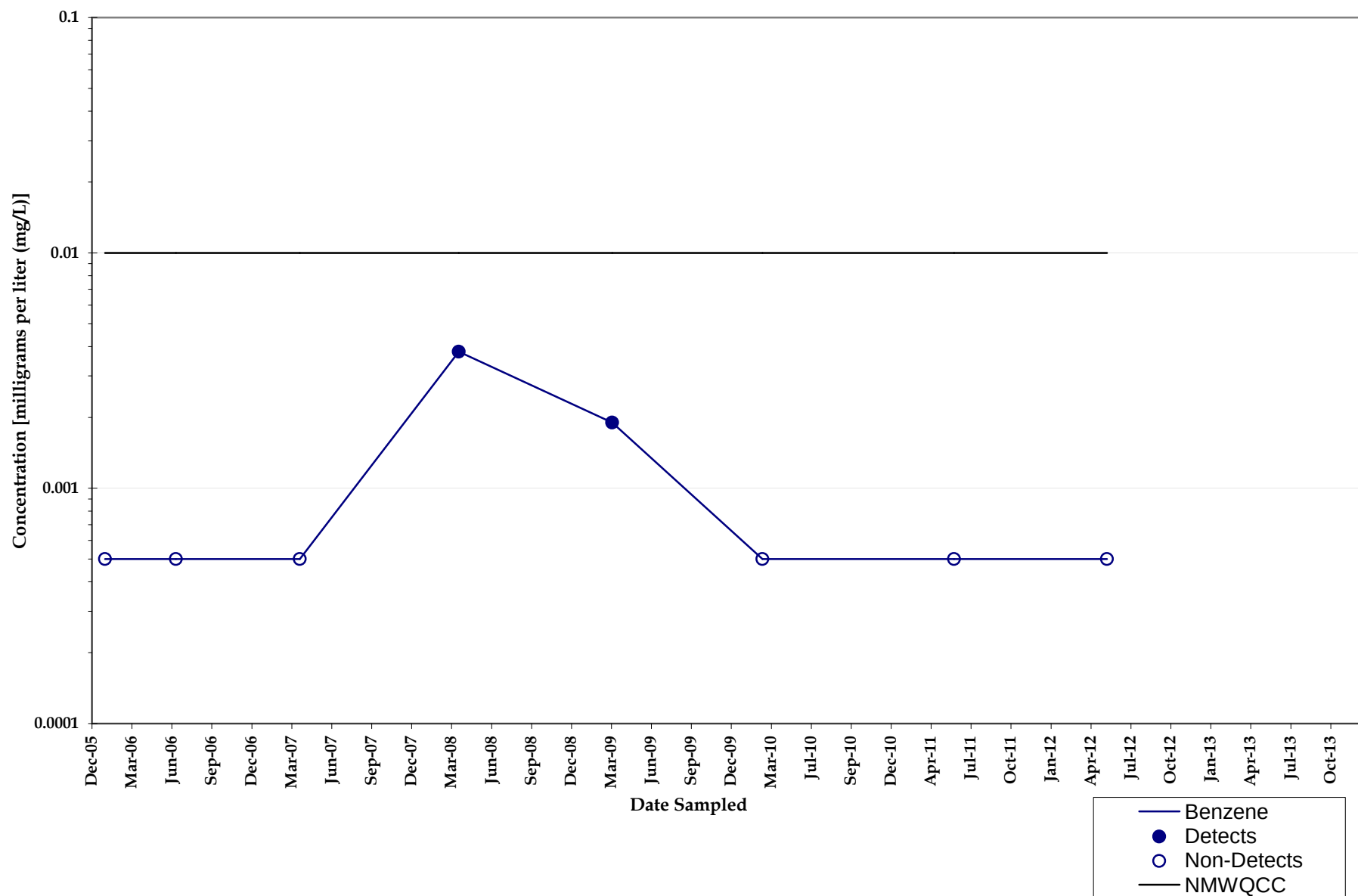


Benzene Concentrations Monitoring Well MW040A

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

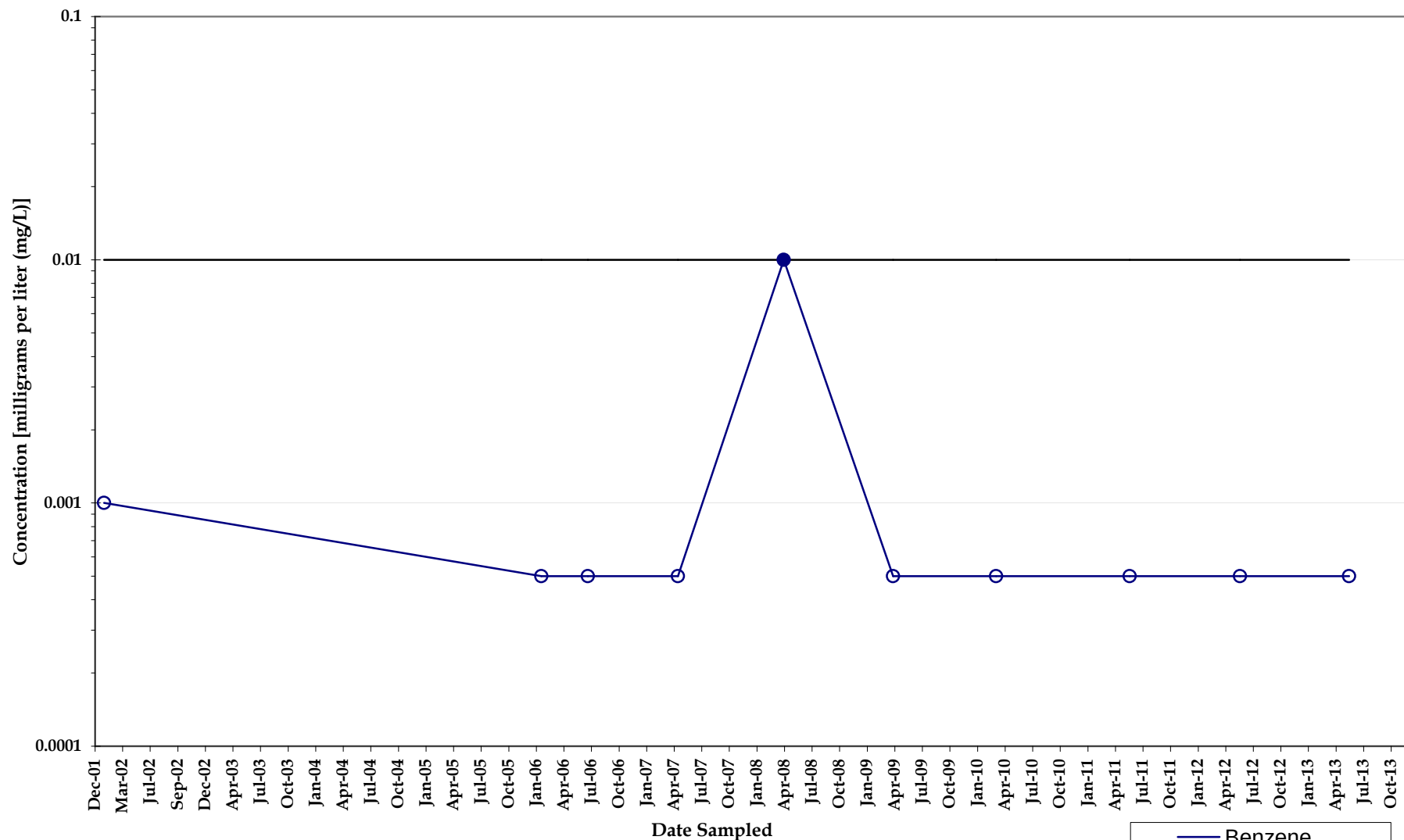


Benzene Concentrations Monitoring Well MW041A

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by shaded symbol and detection values greater than the RL denoted by shaded symbol.

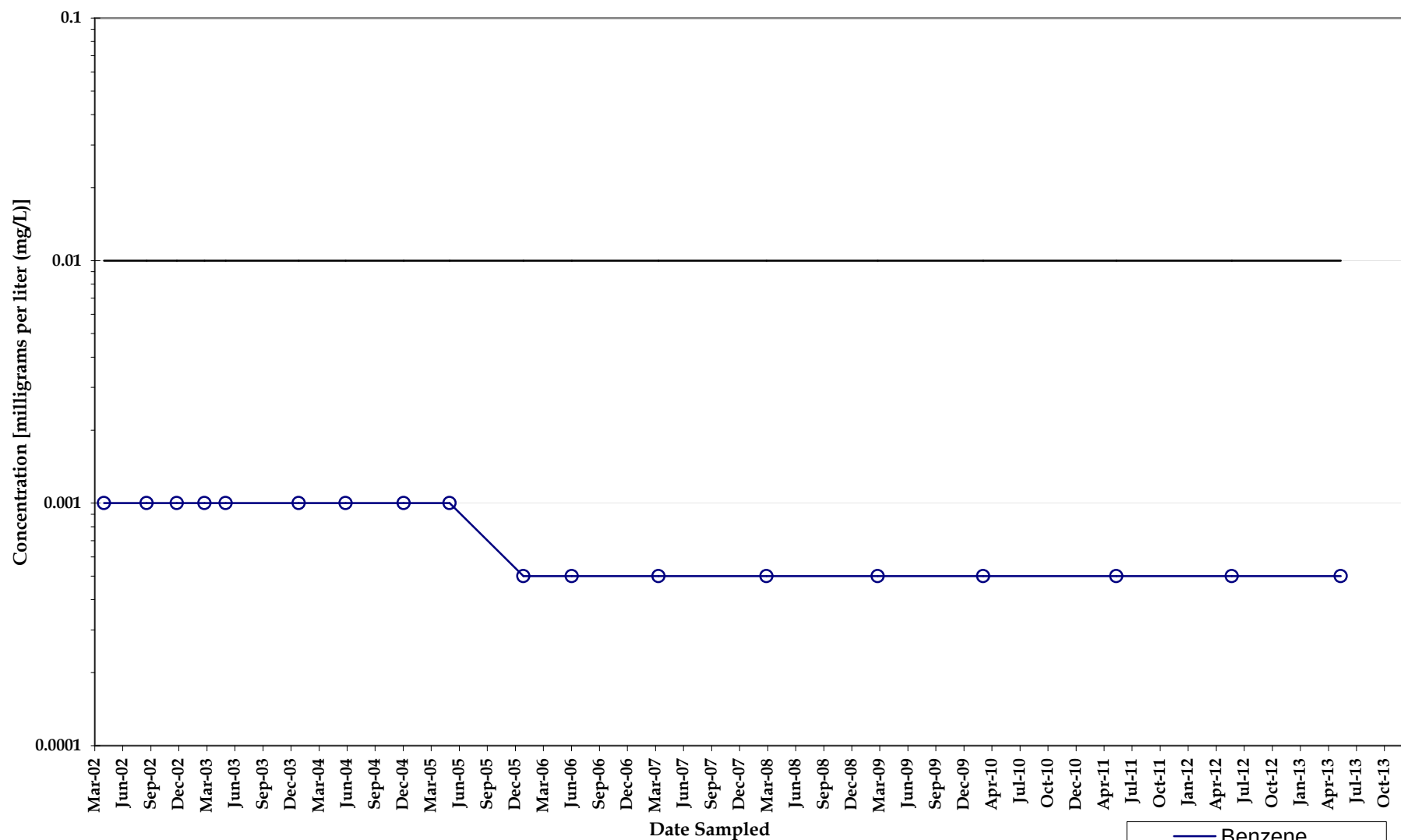


Benzene Concentrations Monitoring Well MW042A

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

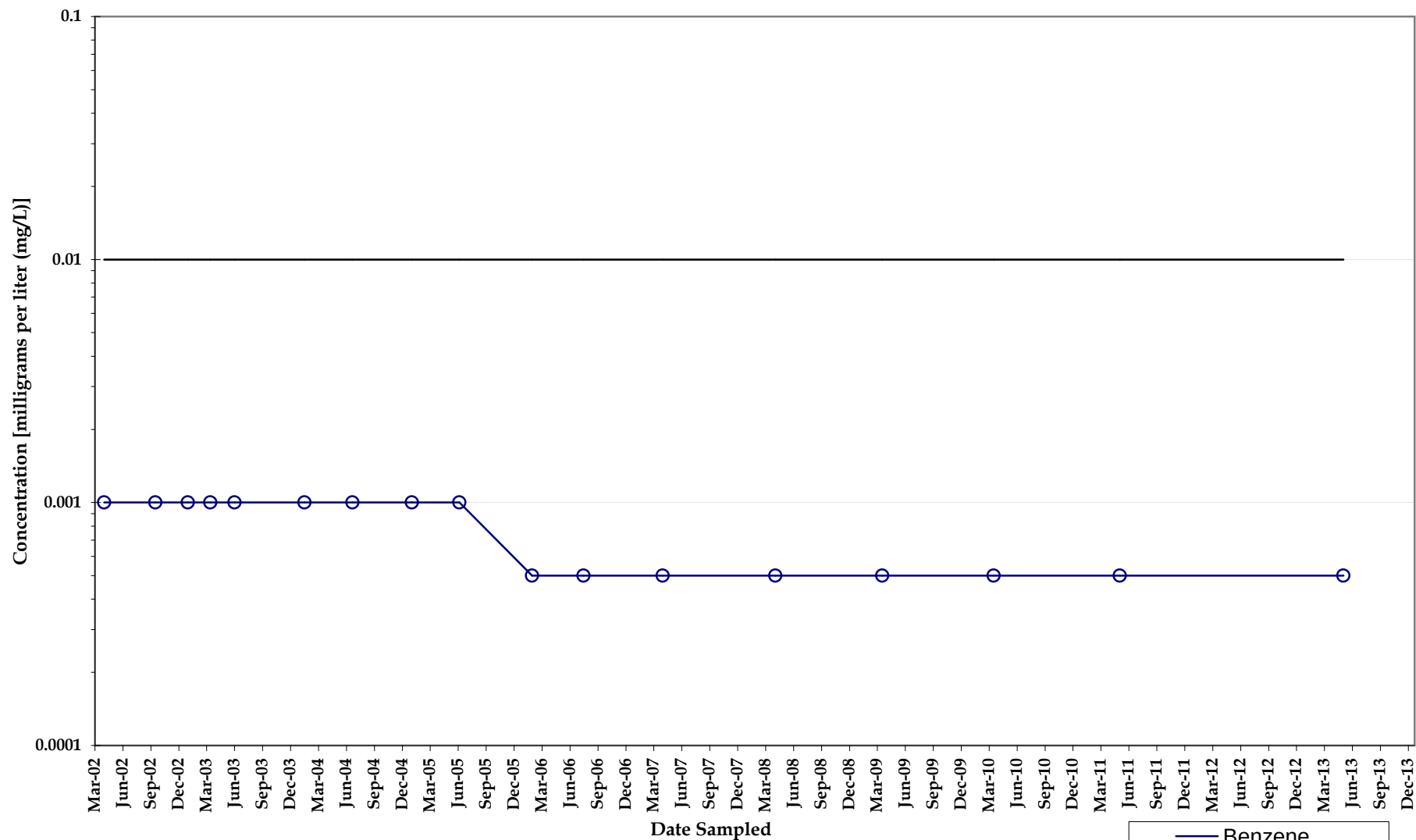


Benzene Concentrations Monitoring Well MW043

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

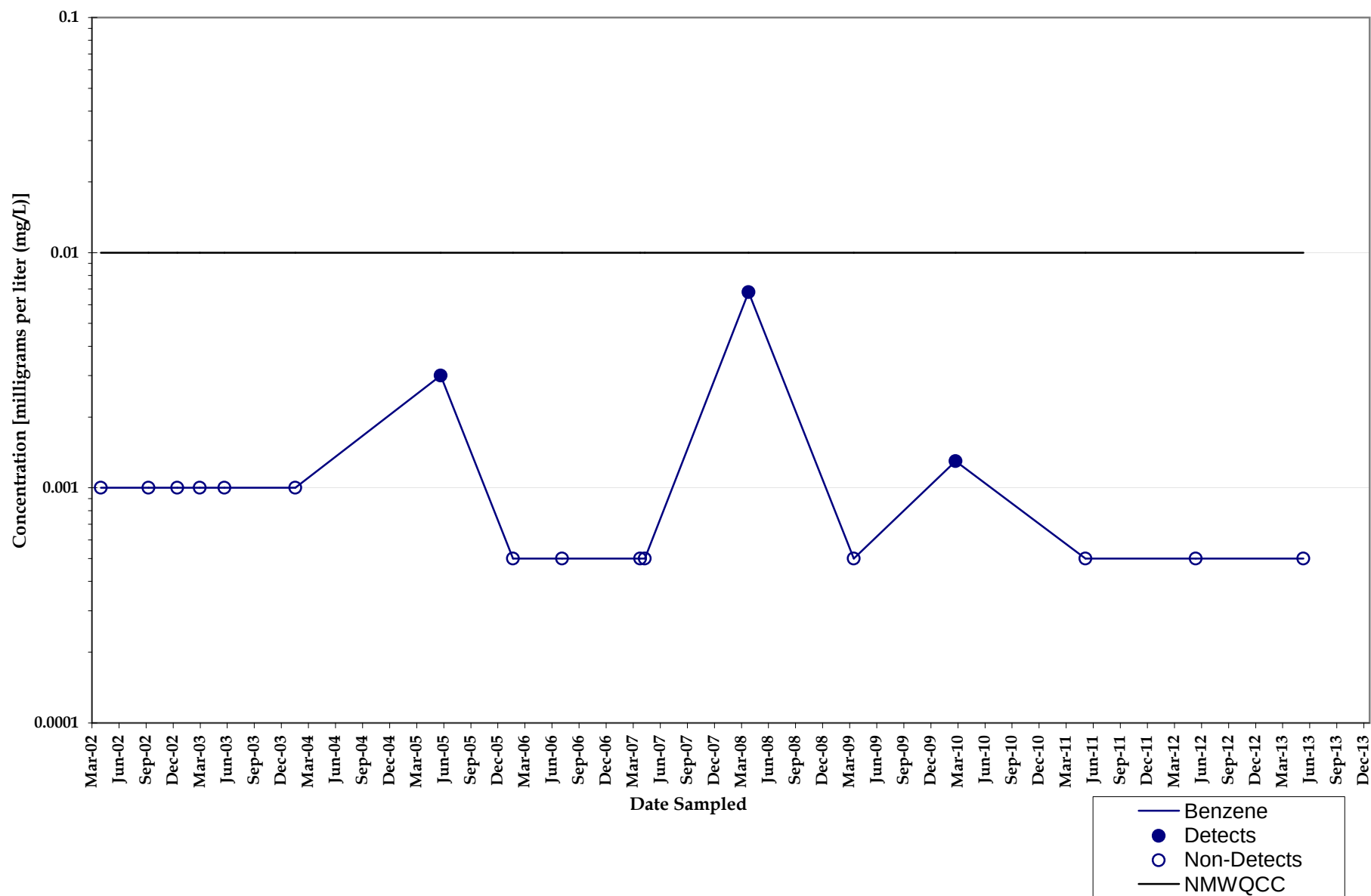


Benzene Concentrations Monitoring Well MW044

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

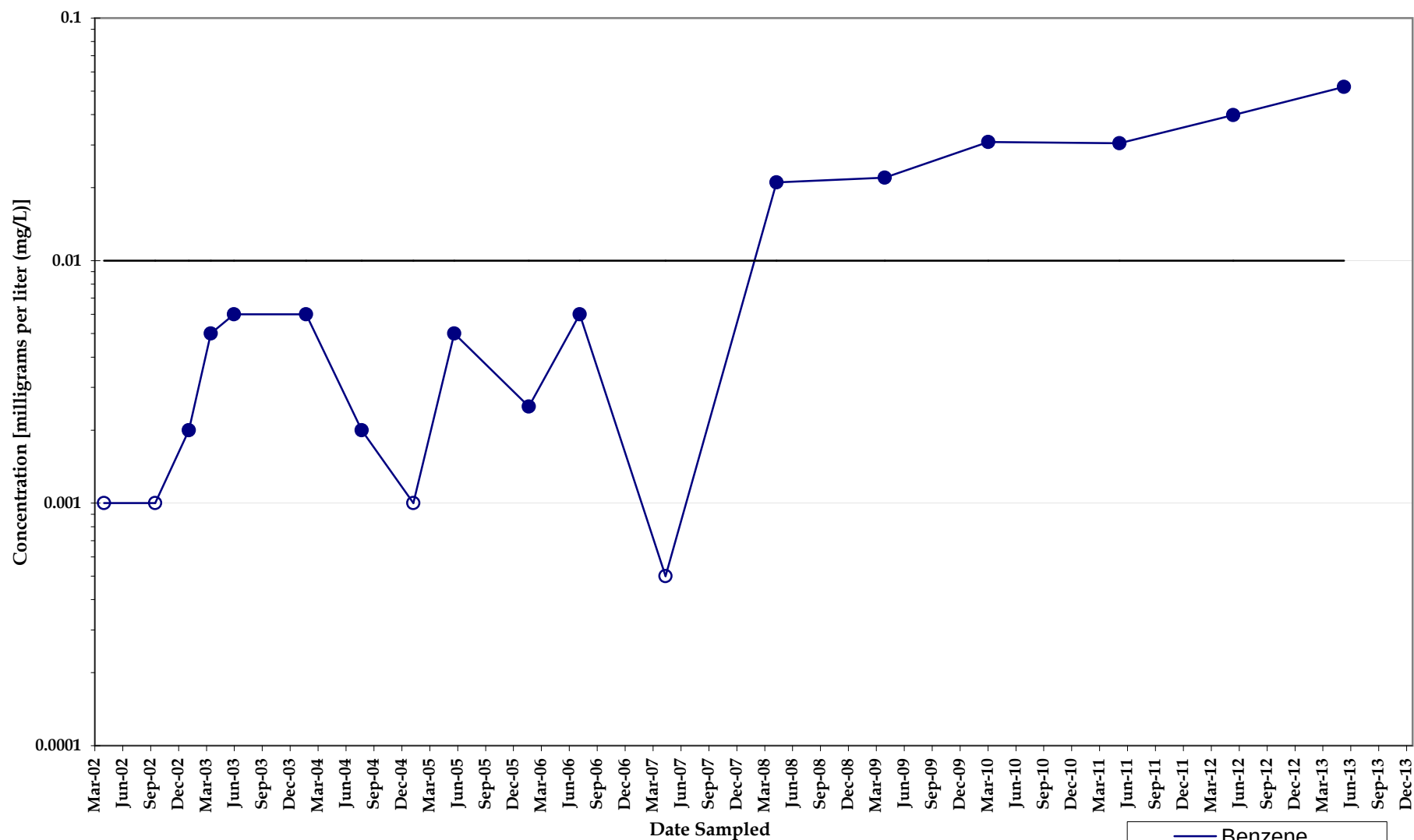


Benzene Concentrations Monitoring Well MW045

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

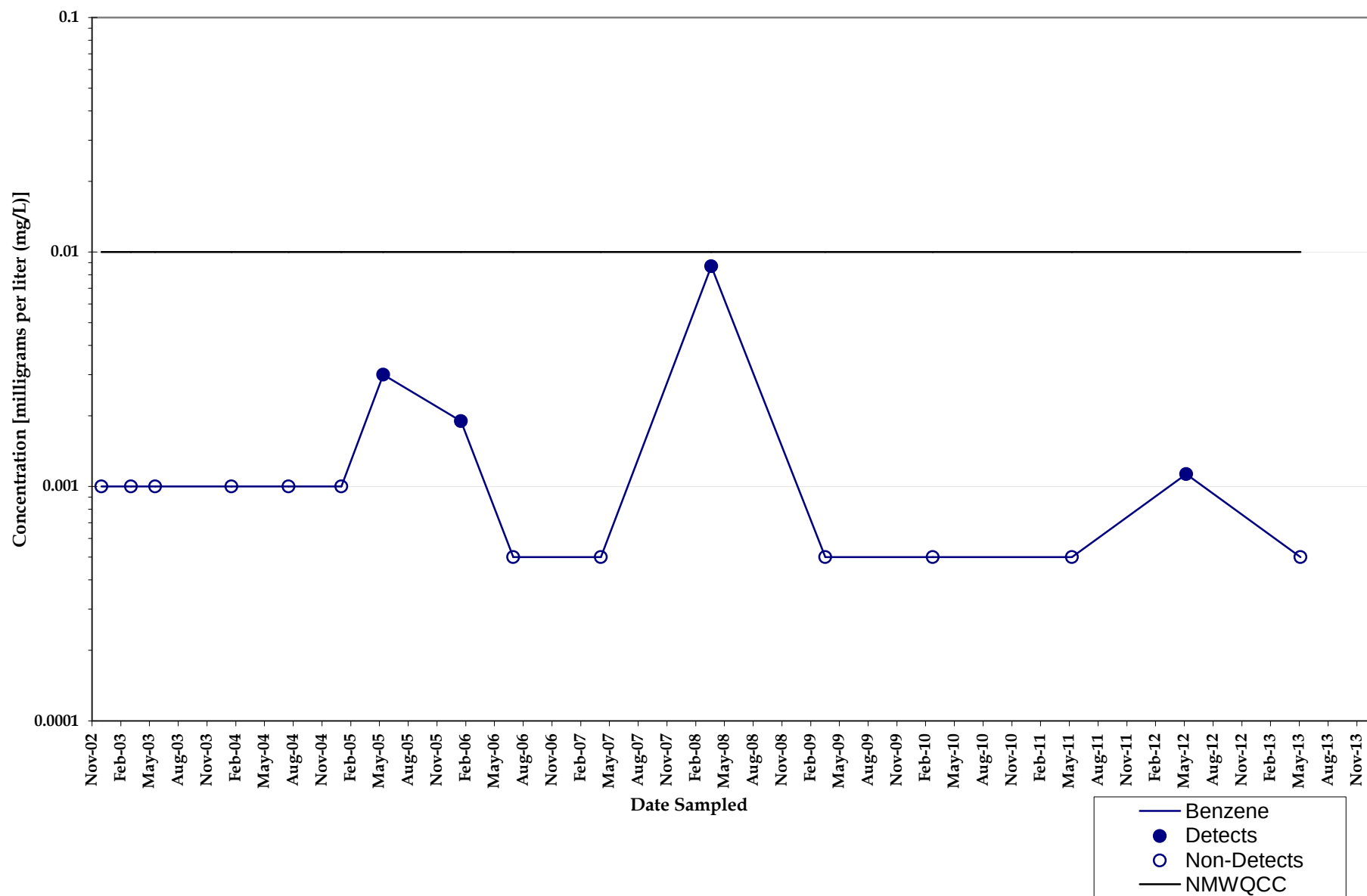


Benzene Concentrations Monitoring Well MW046

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

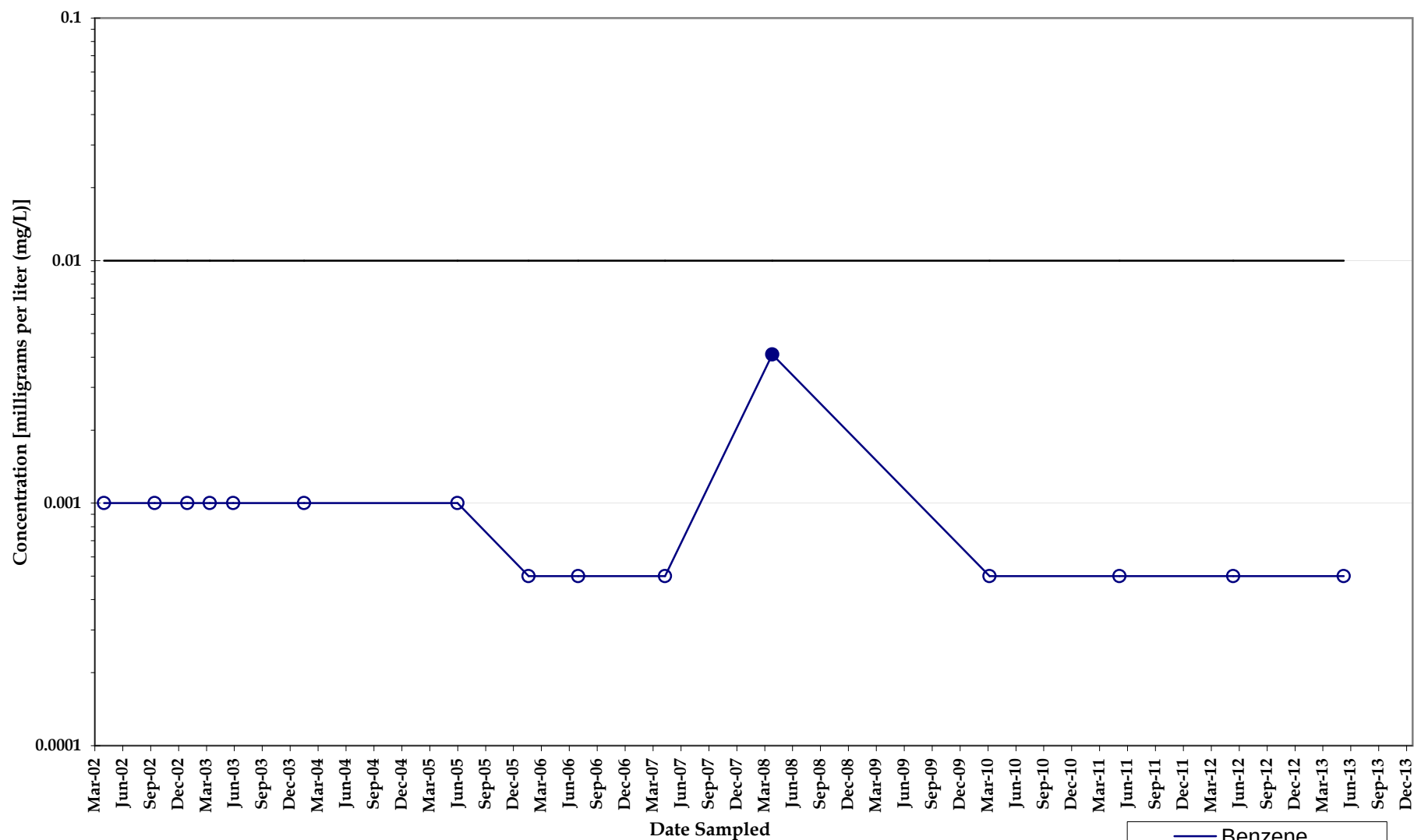


Benzene Concentrations Monitoring Well MW046A

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

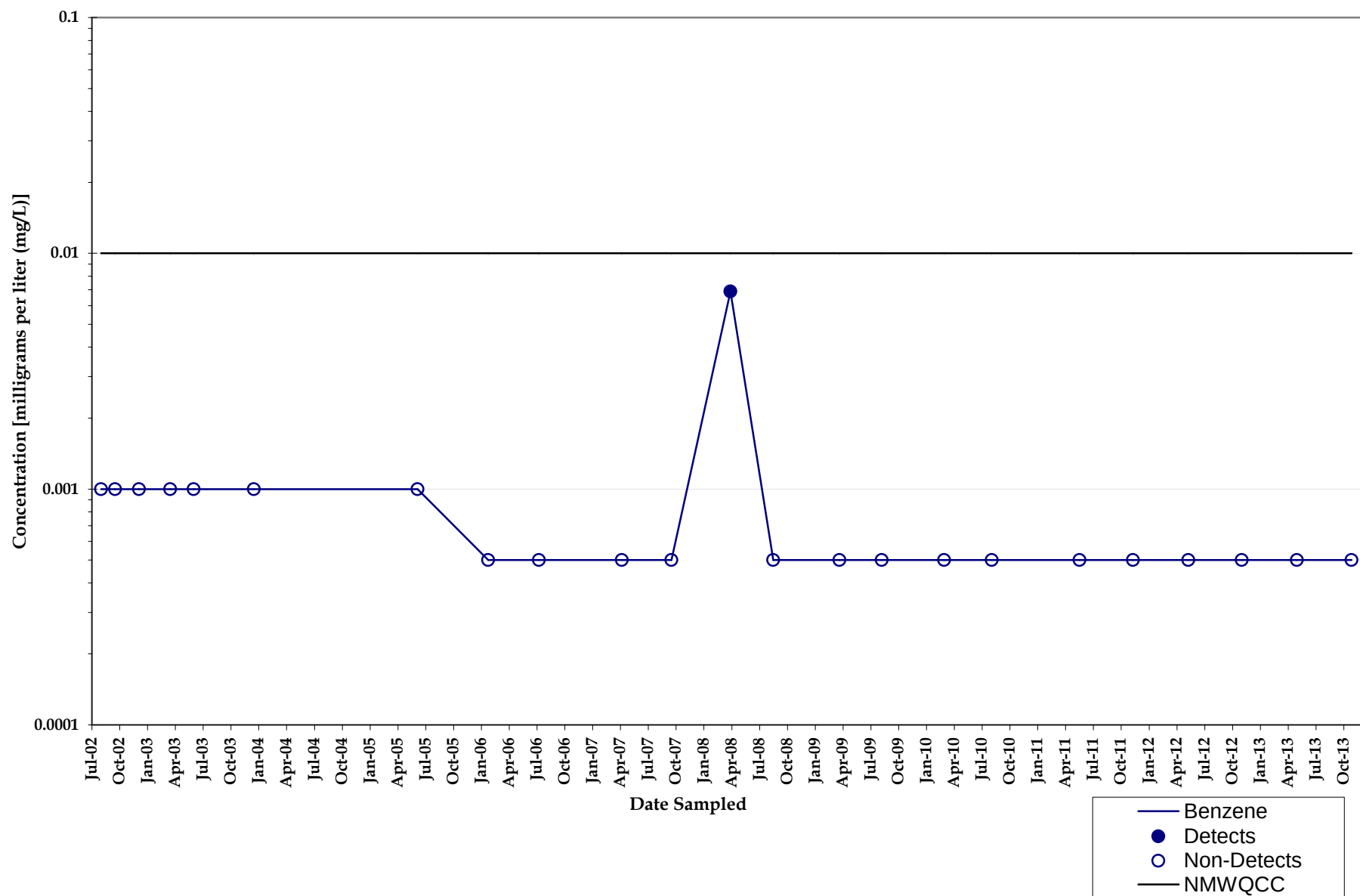


Benzene Concentrations Monitoring Well MW047

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

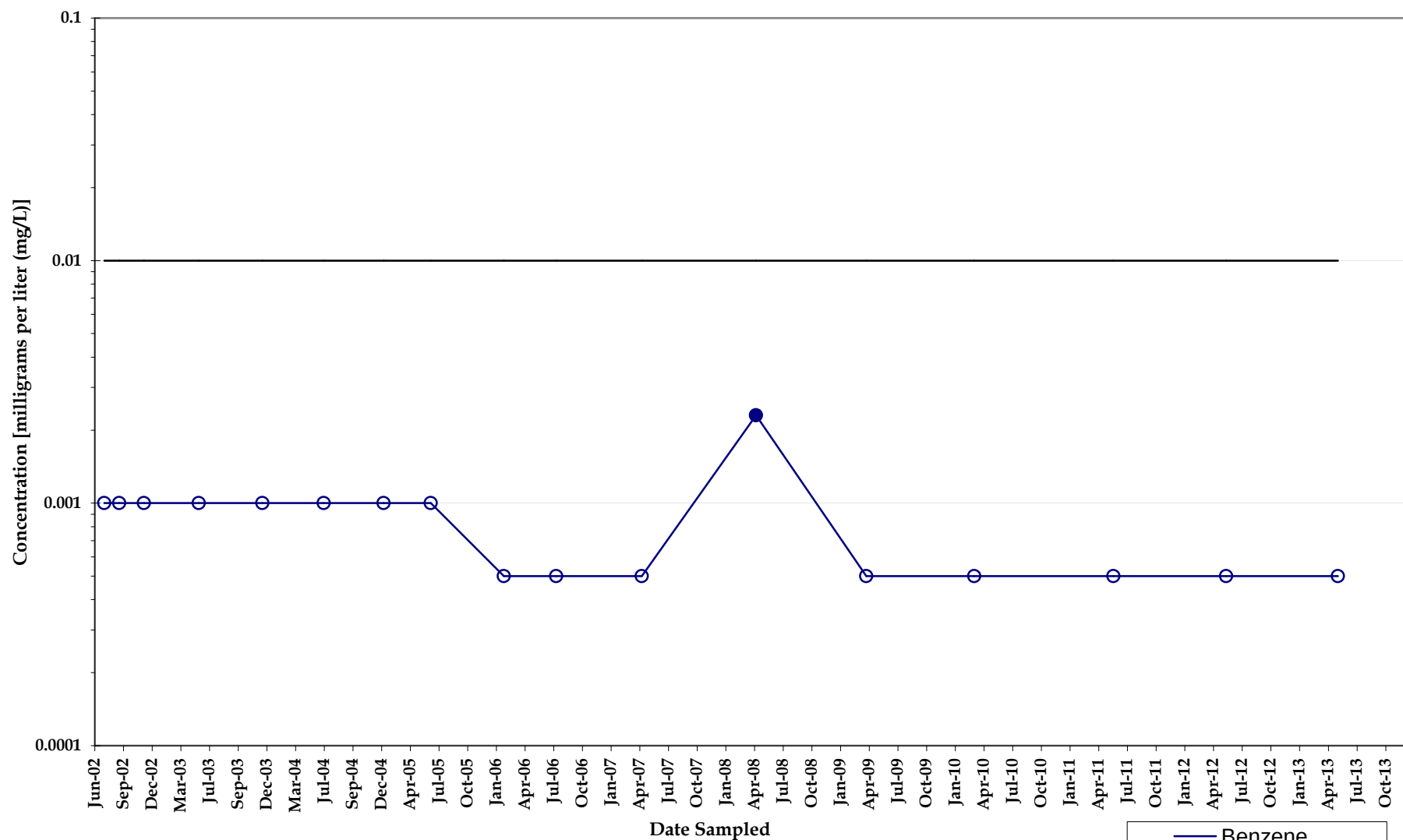


Benzene Concentrations Monitoring Well MW048SA

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

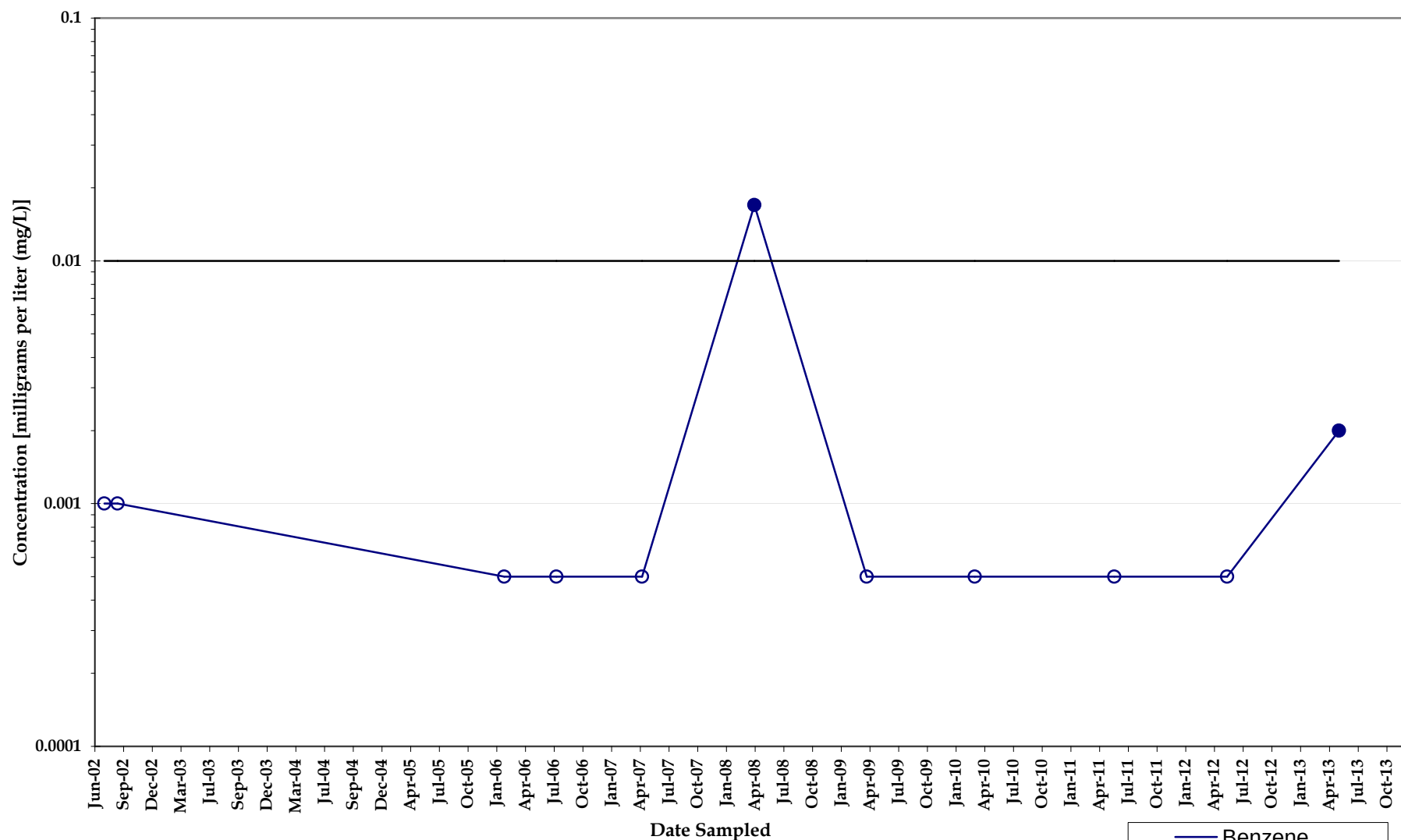


Benzene Concentrations Monitoring Well MW049SA

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

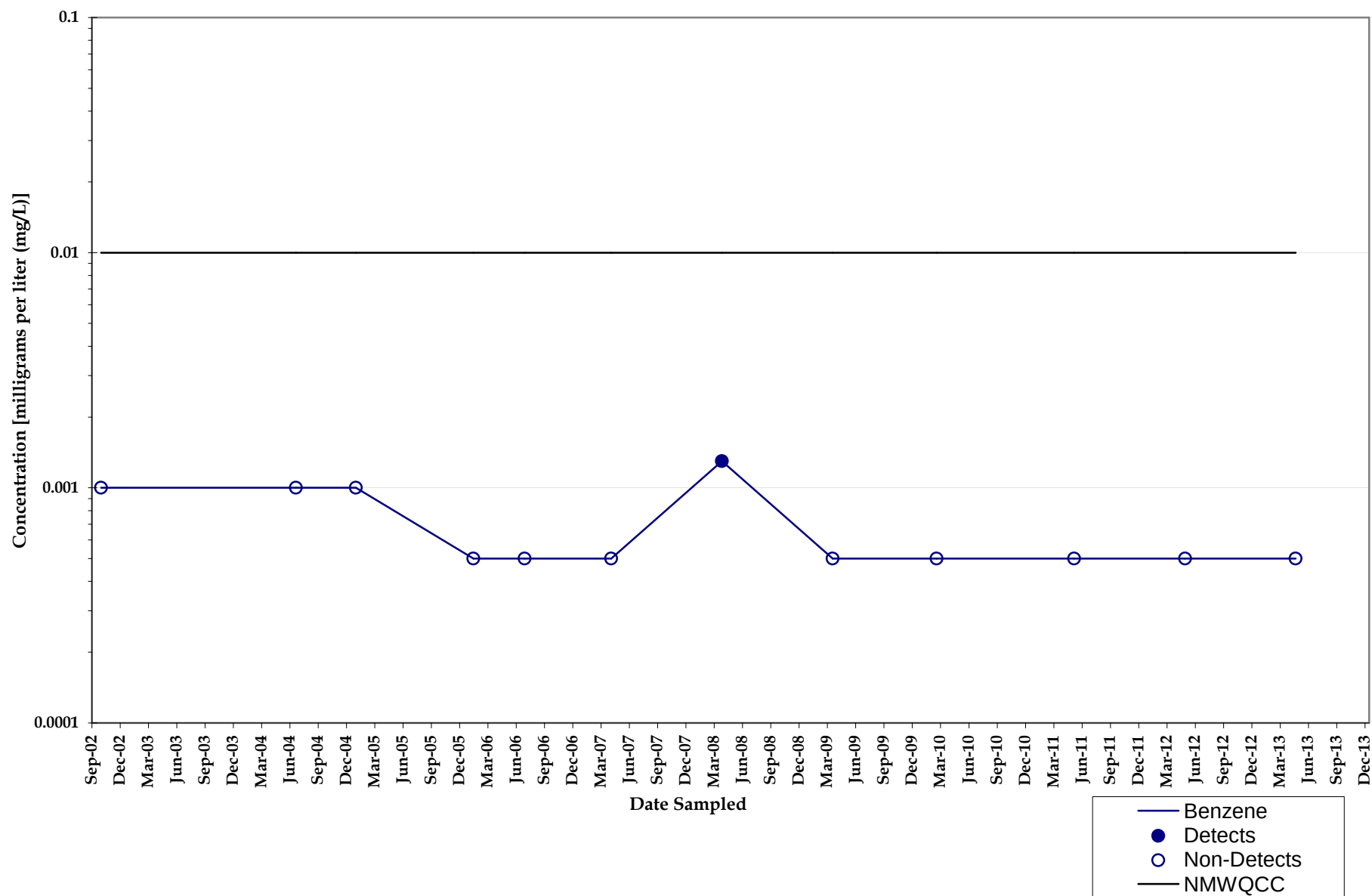


Benzene Concentrations Monitoring Well MW050SA

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

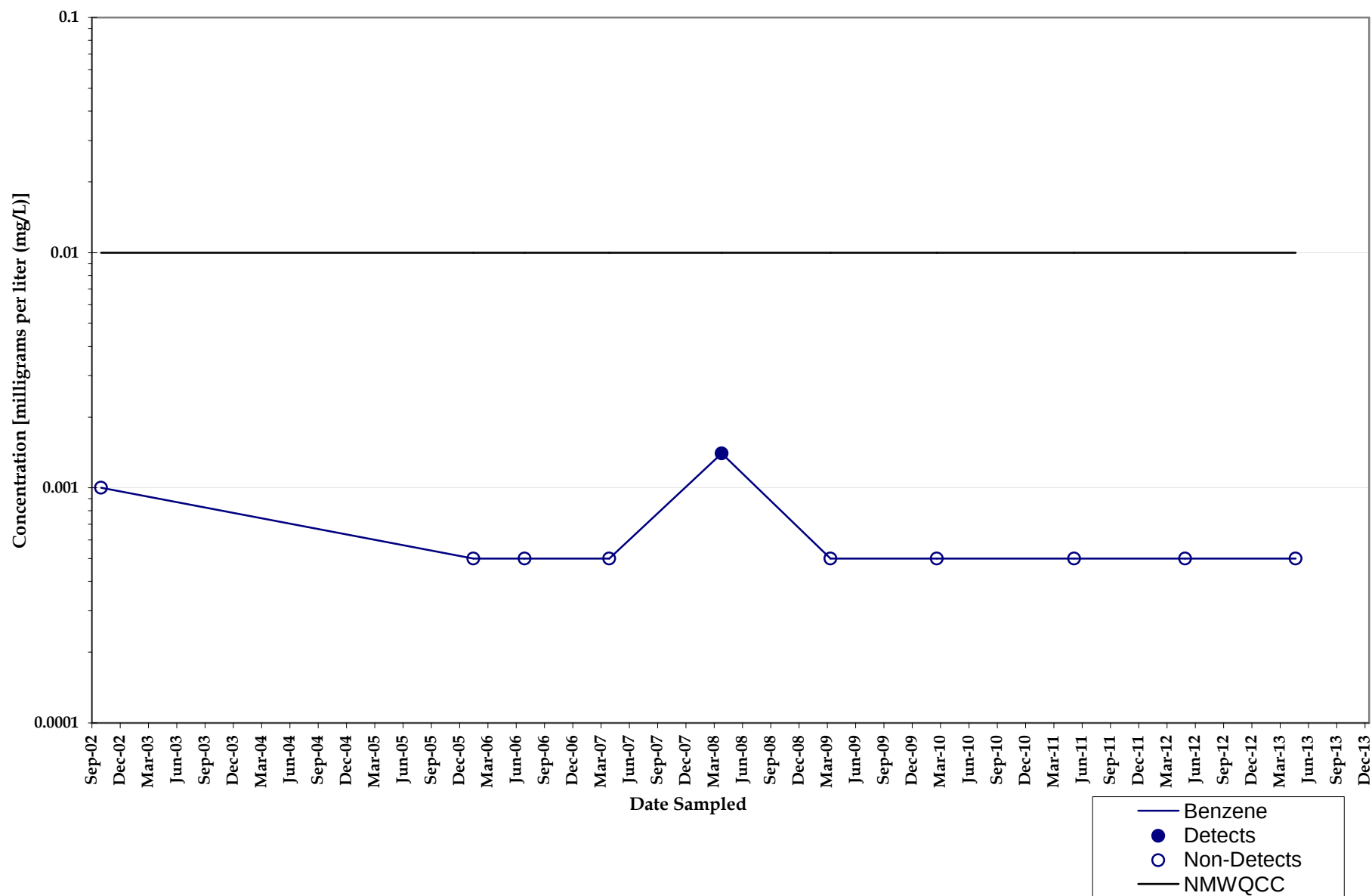


Benzene Concentrations Monitoring Well MW051SA

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

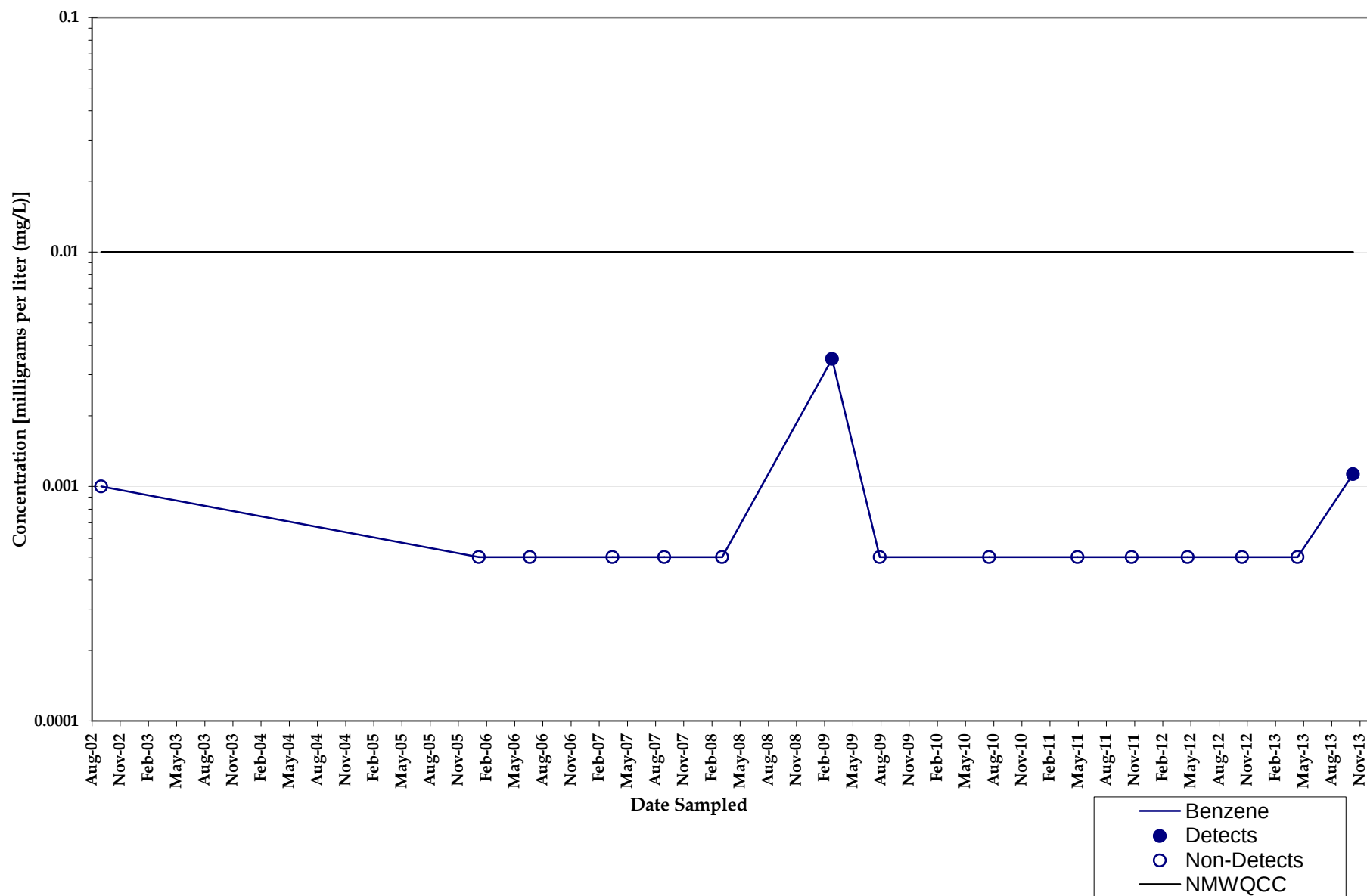


Benzene Concentrations Monitoring Well MW052SA

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

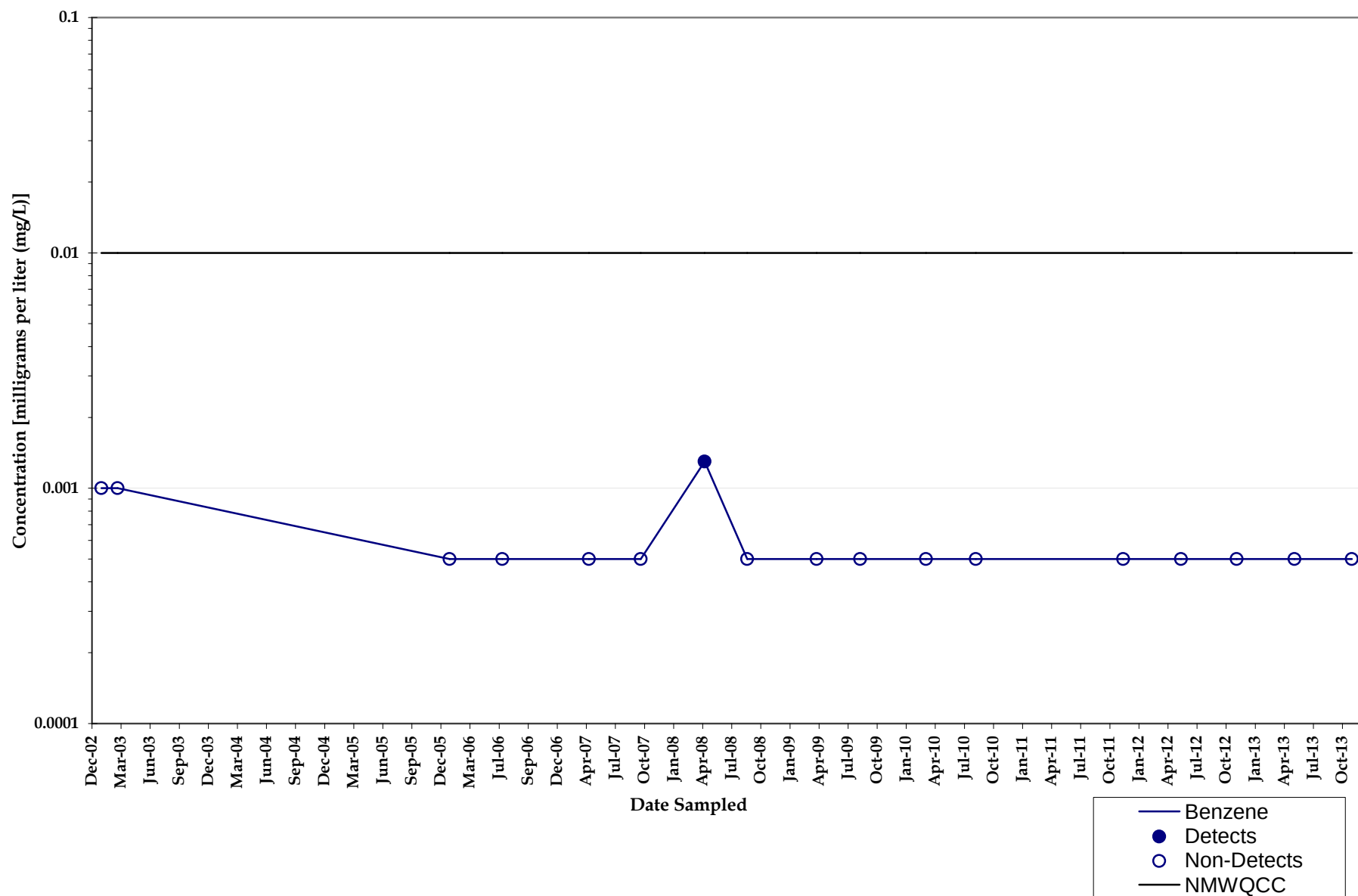


Benzene Concentrations Monitoring Well MW053SA

*North Eunice Gas Plant
Lea County, New Mexico*



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

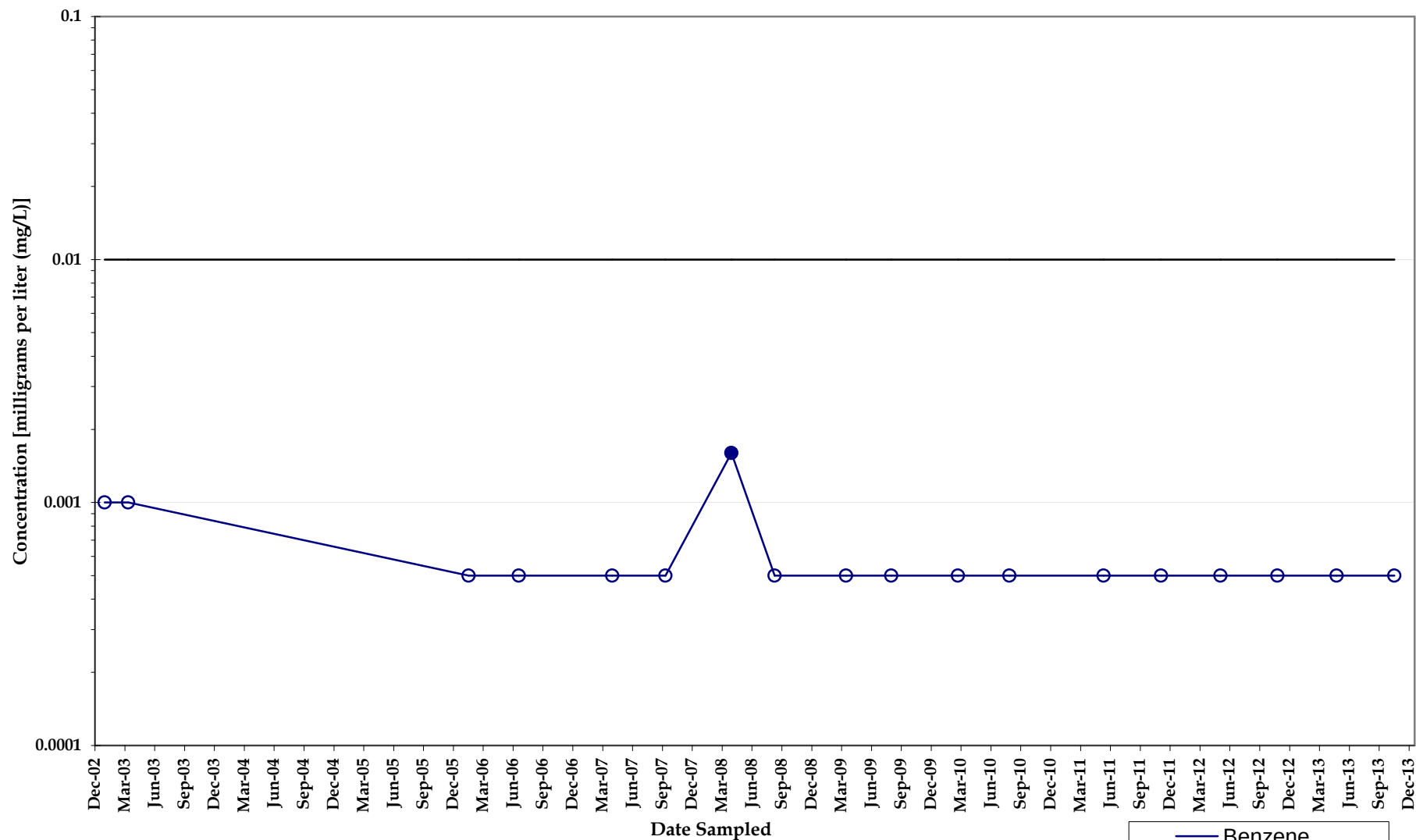


Benzene Concentrations Monitoring Well MW054SA

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.

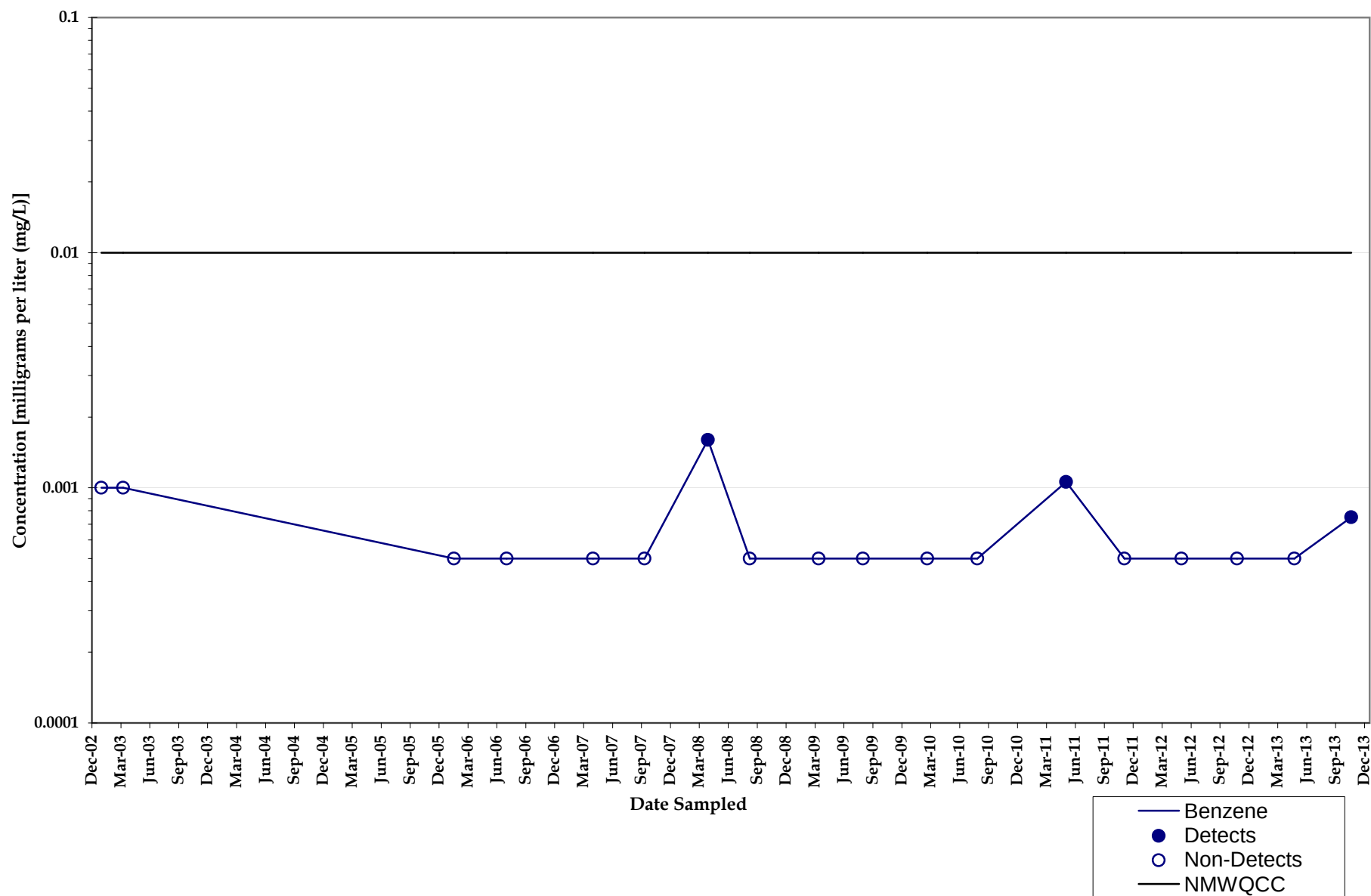


Benzene Concentrations Monitoring Well MW055SA

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.



Benzene Concentrations Monitoring Well MW056SA

North Eunice Gas Plant
Lea County, New Mexico



Note: Non-detect analyses plotted at the method detection limit or half the reporting limit (RL). Detections denoted by symbol and detection values greater than the RL denoted by shaded symbol.