



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Friday, May 19, 2023

John Renda
Anchor QEA, LLC
6720 SW Macadam Ave. Suite 125
Portland, OR 97219

RE: A3D1208 - Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon. - 000029-02.84 T-01.001 H

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A3D1208, which was received by the laboratory on 4/14/2023 at 8:19:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: dthomas@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1 2.1 degC

Cooler #2 1.8 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.

All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**

Project Number: **000029-02.84 T-01.001 H**

Project Manager: **John Renda**

Report ID:

A3D1208 - 05 19 23 1331

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GS-041323-69	A3D1208-01	WG	04/13/23 09:40	04/14/23 08:19
GS-041323-70	A3D1208-02	WG	04/13/23 10:10	04/14/23 08:19
GS-041323-71	A3D1208-03	WG	04/13/23 10:20	04/14/23 08:19
GS-041323-72	A3D1208-04	WG	04/13/23 11:05	04/14/23 08:19
GS-041323-73	A3D1208-05	WG	04/13/23 13:20	04/14/23 08:19
GS-041323-74	A3D1208-06	WG	04/13/23 14:35	04/14/23 08:19
TB-041323	A3D1208-07	W	04/13/23 15:15	04/14/23 08:19

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Anchor QEA, LLC**6720 SW Macadam Ave. Suite 125
Portland, OR 97219Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-69 (A3D1208-01RE1)				Matrix: WG		Batch: 23D0859		
Acetone	ND	100	200	ug/L	10	04/21/23 17:04	EPA 8260D	
Acrylonitrile	ND	10.0	20.0	ug/L	10	04/21/23 17:04	EPA 8260D	
Benzene	295	1.00	2.00	ug/L	10	04/21/23 17:04	EPA 8260D	
Bromobenzene	ND	2.50	5.00	ug/L	10	04/21/23 17:04	EPA 8260D	
Bromochloromethane	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
Bromodichloromethane	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
Bromoform	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
Bromomethane	ND	50.0	50.0	ug/L	10	04/21/23 17:04	EPA 8260D	
2-Butanone (MEK)	ND	50.0	100	ug/L	10	04/21/23 17:04	EPA 8260D	
n-Butylbenzene	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
sec-Butylbenzene	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
tert-Butylbenzene	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
Carbon disulfide	ND	50.0	100	ug/L	10	04/21/23 17:04	EPA 8260D	
Carbon tetrachloride	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
Chlorobenzene	ND	2.50	5.00	ug/L	10	04/21/23 17:04	EPA 8260D	
Chloroethane	ND	50.0	50.0	ug/L	10	04/21/23 17:04	EPA 8260D	
Chloroform	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
Chloromethane	ND	25.0	50.0	ug/L	10	04/21/23 17:04	EPA 8260D	
2-Chlorotoluene	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
4-Chlorotoluene	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
Dibromochloromethane	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	50.0	50.0	ug/L	10	04/21/23 17:04	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	2.50	5.00	ug/L	10	04/21/23 17:04	EPA 8260D	
Dibromomethane	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
1,2-Dichlorobenzene	ND	2.50	5.00	ug/L	10	04/21/23 17:04	EPA 8260D	
1,3-Dichlorobenzene	ND	2.50	5.00	ug/L	10	04/21/23 17:04	EPA 8260D	
1,4-Dichlorobenzene	ND	2.50	5.00	ug/L	10	04/21/23 17:04	EPA 8260D	
Dichlorodifluoromethane	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
1,1-Dichloroethane	ND	2.00	4.00	ug/L	10	04/21/23 17:04	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	2.00	4.00	ug/L	10	04/21/23 17:04	EPA 8260D	
1,2-Dichloropropane	ND	2.50	5.00	ug/L	10	04/21/23 17:04	EPA 8260D	
1,3-Dichloropropane	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
2,2-Dichloropropane	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-69 (A3D1208-01RE1)		Matrix: WG			Batch: 23D0859			
1,1-Dichloropropene	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
cis-1,3-Dichloropropene	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
trans-1,3-Dichloropropene	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
Ethylbenzene	29.1	2.50	5.00	ug/L	10	04/21/23 17:04	EPA 8260D	
Hexachlorobutadiene	ND	25.0	50.0	ug/L	10	04/21/23 17:04	EPA 8260D	
2-Hexanone	ND	50.0	100	ug/L	10	04/21/23 17:04	EPA 8260D	
Isopropylbenzene	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
4-Isopropyltoluene	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
Methylene chloride	ND	50.0	100	ug/L	10	04/21/23 17:04	EPA 8260D	
4-Methyl-2-pentanone (MiBK)	ND	50.0	100	ug/L	10	04/21/23 17:04	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
Naphthalene	902	10.0	20.0	ug/L	10	04/21/23 17:04	EPA 8260D	
n-Propylbenzene	ND	2.50	5.00	ug/L	10	04/21/23 17:04	EPA 8260D	
Styrene	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	2.00	4.00	ug/L	10	04/21/23 17:04	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	2.50	5.00	ug/L	10	04/21/23 17:04	EPA 8260D	
Tetrachloroethene (PCE)	ND	2.00	4.00	ug/L	10	04/21/23 17:04	EPA 8260D	
Toluene	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
1,2,3-Trichlorobenzene	ND	10.0	20.0	ug/L	10	04/21/23 17:04	EPA 8260D	
1,2,4-Trichlorobenzene	ND	10.0	20.0	ug/L	10	04/21/23 17:04	EPA 8260D	
1,1,1-Trichloroethane	ND	2.00	4.00	ug/L	10	04/21/23 17:04	EPA 8260D	
1,1,2-Trichloroethane	ND	2.50	5.00	ug/L	10	04/21/23 17:04	EPA 8260D	
Trichlorofluoromethane	ND	10.0	20.0	ug/L	10	04/21/23 17:04	EPA 8260D	
1,2,3-Trichloropropane	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
1,2,4-Trimethylbenzene	9.40	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	J
1,3,5-Trimethylbenzene	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
m,p-Xylene	ND	5.00	10.0	ug/L	10	04/21/23 17:04	EPA 8260D	
o-Xylene	6.30	2.50	5.00	ug/L	10	04/21/23 17:04	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 108 %		Limits: 80-120 %	1	04/21/23 17:04	EPA 8260D	
Toluene-d8 (Surr)		106 %		80-120 %	1	04/21/23 17:04	EPA 8260D	
4-Bromofluorobenzene (Surr)		95 %		80-120 %	1	04/21/23 17:04	EPA 8260D	

GS-041323-70 (A3D1208-02)

Matrix: WG

Batch: 23D0759

Acetone	ND	500	1000	ug/L	50	04/19/23 17:45	EPA 8260D
---------	----	-----	------	------	----	----------------	-----------

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-70 (A3D1208-02)		Matrix: WG			Batch: 23D0759			
Acrylonitrile	ND	50.0	100	ug/L	50	04/19/23 17:45	EPA 8260D	
Benzene	147	5.00	10.0	ug/L	50	04/19/23 17:45	EPA 8260D	
Bromobenzene	ND	12.5	25.0	ug/L	50	04/19/23 17:45	EPA 8260D	
Bromochloromethane	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
Bromodichloromethane	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
Bromoform	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
Bromomethane	ND	250	250	ug/L	50	04/19/23 17:45	EPA 8260D	
2-Butanone (MEK)	ND	250	500	ug/L	50	04/19/23 17:45	EPA 8260D	
n-Butylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
sec-Butylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
tert-Butylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
Carbon disulfide	ND	250	500	ug/L	50	04/19/23 17:45	EPA 8260D	
Carbon tetrachloride	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
Chlorobenzene	ND	12.5	25.0	ug/L	50	04/19/23 17:45	EPA 8260D	
Chloroethane	ND	250	250	ug/L	50	04/19/23 17:45	EPA 8260D	
Chloroform	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
Chloromethane	ND	125	250	ug/L	50	04/19/23 17:45	EPA 8260D	
2-Chlorotoluene	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
4-Chlorotoluene	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
Dibromochloromethane	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	125	250	ug/L	50	04/19/23 17:45	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	12.5	25.0	ug/L	50	04/19/23 17:45	EPA 8260D	
Dibromomethane	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
1,2-Dichlorobenzene	ND	12.5	25.0	ug/L	50	04/19/23 17:45	EPA 8260D	
1,3-Dichlorobenzene	ND	12.5	25.0	ug/L	50	04/19/23 17:45	EPA 8260D	
1,4-Dichlorobenzene	ND	12.5	25.0	ug/L	50	04/19/23 17:45	EPA 8260D	
Dichlorodifluoromethane	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
1,1-Dichloroethane	ND	10.0	20.0	ug/L	50	04/19/23 17:45	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	10.0	20.0	ug/L	50	04/19/23 17:45	EPA 8260D	
1,2-Dichloropropane	ND	12.5	25.0	ug/L	50	04/19/23 17:45	EPA 8260D	
1,3-Dichloropropane	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
2,2-Dichloropropane	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
1,1-Dichloropropene	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-70 (A3D1208-02)		Matrix: WG			Batch: 23D0759			
cis-1,3-Dichloropropene	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
trans-1,3-Dichloropropene	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
Ethylbenzene	87.0	12.5	25.0	ug/L	50	04/19/23 17:45	EPA 8260D	
Hexachlorobutadiene	ND	125	250	ug/L	50	04/19/23 17:45	EPA 8260D	
2-Hexanone	ND	250	500	ug/L	50	04/19/23 17:45	EPA 8260D	
Isopropylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
4-Isopropyltoluene	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
Methylene chloride	ND	250	500	ug/L	50	04/19/23 17:45	EPA 8260D	
4-Methyl-2-pentanone (MiBK)	ND	250	500	ug/L	50	04/19/23 17:45	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
Naphthalene	2020	50.0	100	ug/L	50	04/19/23 17:45	EPA 8260D	
n-Propylbenzene	ND	12.5	25.0	ug/L	50	04/19/23 17:45	EPA 8260D	
Styrene	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	10.0	20.0	ug/L	50	04/19/23 17:45	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	12.5	25.0	ug/L	50	04/19/23 17:45	EPA 8260D	
Tetrachloroethene (PCE)	ND	10.0	20.0	ug/L	50	04/19/23 17:45	EPA 8260D	
Toluene	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
1,2,3-Trichlorobenzene	ND	50.0	100	ug/L	50	04/19/23 17:45	EPA 8260D	
1,2,4-Trichlorobenzene	ND	50.0	100	ug/L	50	04/19/23 17:45	EPA 8260D	
1,1,1-Trichloroethane	ND	10.0	20.0	ug/L	50	04/19/23 17:45	EPA 8260D	
1,1,2-Trichloroethane	ND	12.5	25.0	ug/L	50	04/19/23 17:45	EPA 8260D	
Trichlorofluoromethane	ND	50.0	100	ug/L	50	04/19/23 17:45	EPA 8260D	
1,2,3-Trichloropropane	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
1,2,4-Trimethylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
1,3,5-Trimethylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
m,p-Xylene	ND	25.0	50.0	ug/L	50	04/19/23 17:45	EPA 8260D	
o-Xylene	18.0	12.5	25.0	ug/L	50	04/19/23 17:45	EPA 8260D	J
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 105 %		Limits: 80-120 %	1	04/19/23 17:45	EPA 8260D	
Toluene-d8 (Surr)		107 %		80-120 %	1	04/19/23 17:45	EPA 8260D	
4-Bromofluorobenzene (Surr)		99 %		80-120 %	1	04/19/23 17:45	EPA 8260D	
GS-041323-71 (A3D1208-03)		Matrix: WG			Batch: 23D0759			
Acetone	ND	500	1000	ug/L	50	04/19/23 18:07	EPA 8260D	
Acrylonitrile	ND	50.0	100	ug/L	50	04/19/23 18:07	EPA 8260D	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-71 (A3D1208-03)		Matrix: WG			Batch: 23D0759			
Benzene	147	5.00	10.0	ug/L	50	04/19/23 18:07	EPA 8260D	
Bromobenzene	ND	12.5	25.0	ug/L	50	04/19/23 18:07	EPA 8260D	
Bromochloromethane	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
Bromodichloromethane	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
Bromoform	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
Bromomethane	ND	250	250	ug/L	50	04/19/23 18:07	EPA 8260D	
2-Butanone (MEK)	ND	250	500	ug/L	50	04/19/23 18:07	EPA 8260D	
n-Butylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
sec-Butylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
tert-Butylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
Carbon disulfide	ND	250	500	ug/L	50	04/19/23 18:07	EPA 8260D	
Carbon tetrachloride	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
Chlorobenzene	ND	12.5	25.0	ug/L	50	04/19/23 18:07	EPA 8260D	
Chloroethane	ND	250	250	ug/L	50	04/19/23 18:07	EPA 8260D	
Chloroform	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
Chloromethane	ND	125	250	ug/L	50	04/19/23 18:07	EPA 8260D	
2-Chlorotoluene	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
4-Chlorotoluene	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
Dibromochloromethane	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	125	250	ug/L	50	04/19/23 18:07	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	12.5	25.0	ug/L	50	04/19/23 18:07	EPA 8260D	
Dibromomethane	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
1,2-Dichlorobenzene	ND	12.5	25.0	ug/L	50	04/19/23 18:07	EPA 8260D	
1,3-Dichlorobenzene	ND	12.5	25.0	ug/L	50	04/19/23 18:07	EPA 8260D	
1,4-Dichlorobenzene	ND	12.5	25.0	ug/L	50	04/19/23 18:07	EPA 8260D	
Dichlorodifluoromethane	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
1,1-Dichloroethane	ND	10.0	20.0	ug/L	50	04/19/23 18:07	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	10.0	20.0	ug/L	50	04/19/23 18:07	EPA 8260D	
1,2-Dichloropropane	ND	12.5	25.0	ug/L	50	04/19/23 18:07	EPA 8260D	
1,3-Dichloropropane	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
2,2-Dichloropropane	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
1,1-Dichloropropene	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
cis-1,3-Dichloropropene	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-71 (A3D1208-03)		Matrix: WG			Batch: 23D0759			
trans-1,3-Dichloropropene	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
Ethylbenzene	85.5	12.5	25.0	ug/L	50	04/19/23 18:07	EPA 8260D	
Hexachlorobutadiene	ND	125	250	ug/L	50	04/19/23 18:07	EPA 8260D	
2-Hexanone	ND	250	500	ug/L	50	04/19/23 18:07	EPA 8260D	
Isopropylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
4-Isopropyltoluene	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
Methylene chloride	ND	250	500	ug/L	50	04/19/23 18:07	EPA 8260D	
4-Methyl-2-pentanone (MiBK)	ND	250	500	ug/L	50	04/19/23 18:07	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
Naphthalene	1930	50.0	100	ug/L	50	04/19/23 18:07	EPA 8260D	
n-Propylbenzene	ND	12.5	25.0	ug/L	50	04/19/23 18:07	EPA 8260D	
Styrene	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	10.0	20.0	ug/L	50	04/19/23 18:07	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	12.5	25.0	ug/L	50	04/19/23 18:07	EPA 8260D	
Tetrachloroethene (PCE)	ND	10.0	20.0	ug/L	50	04/19/23 18:07	EPA 8260D	
Toluene	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
1,2,3-Trichlorobenzene	ND	50.0	100	ug/L	50	04/19/23 18:07	EPA 8260D	
1,2,4-Trichlorobenzene	ND	50.0	100	ug/L	50	04/19/23 18:07	EPA 8260D	
1,1,1-Trichloroethane	ND	10.0	20.0	ug/L	50	04/19/23 18:07	EPA 8260D	
1,1,2-Trichloroethane	ND	12.5	25.0	ug/L	50	04/19/23 18:07	EPA 8260D	
Trichlorofluoromethane	ND	50.0	100	ug/L	50	04/19/23 18:07	EPA 8260D	
1,2,3-Trichloropropane	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
1,2,4-Trimethylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
1,3,5-Trimethylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
m,p-Xylene	ND	25.0	50.0	ug/L	50	04/19/23 18:07	EPA 8260D	
o-Xylene	18.5	12.5	25.0	ug/L	50	04/19/23 18:07	EPA 8260D	J
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 104 %		Limits: 80-120 %	1	04/19/23 18:07	EPA 8260D	
Toluene-d8 (Surr)		107 %		80-120 %	1	04/19/23 18:07	EPA 8260D	
4-Bromofluorobenzene (Surr)		96 %		80-120 %	1	04/19/23 18:07	EPA 8260D	

GS-041323-72 (A3D1208-04)

Matrix: WG

Batch: 23D0759

Acetone	ND	500	1000	ug/L	50	04/19/23 18:30	EPA 8260D
Acrylonitrile	ND	50.0	100	ug/L	50	04/19/23 18:30	EPA 8260D
Benzene	181	5.00	10.0	ug/L	50	04/19/23 18:30	EPA 8260D

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Anchor QEA, LLC**6720 SW Macadam Ave. Suite 125
Portland, OR 97219Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331****ANALYTICAL SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-72 (A3D1208-04)		Matrix: WG			Batch: 23D0759			
Bromobenzene	ND	12.5	25.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Bromochloromethane	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Bromodichloromethane	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Bromoform	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Bromomethane	ND	250	250	ug/L	50	04/19/23 18:30	EPA 8260D	
2-Butanone (MEK)	ND	250	500	ug/L	50	04/19/23 18:30	EPA 8260D	
n-Butylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
sec-Butylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
tert-Butylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Carbon disulfide	ND	250	500	ug/L	50	04/19/23 18:30	EPA 8260D	
Carbon tetrachloride	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Chlorobenzene	ND	12.5	25.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Chloroethane	ND	250	250	ug/L	50	04/19/23 18:30	EPA 8260D	
Chloroform	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Chloromethane	ND	125	250	ug/L	50	04/19/23 18:30	EPA 8260D	
2-Chlorotoluene	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
4-Chlorotoluene	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Dibromochloromethane	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	125	250	ug/L	50	04/19/23 18:30	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	12.5	25.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Dibromomethane	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
1,2-Dichlorobenzene	ND	12.5	25.0	ug/L	50	04/19/23 18:30	EPA 8260D	
1,3-Dichlorobenzene	ND	12.5	25.0	ug/L	50	04/19/23 18:30	EPA 8260D	
1,4-Dichlorobenzene	ND	12.5	25.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Dichlorodifluoromethane	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
1,1-Dichloroethane	ND	10.0	20.0	ug/L	50	04/19/23 18:30	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	10.0	20.0	ug/L	50	04/19/23 18:30	EPA 8260D	
1,1-Dichloroethene	ND	10.0	20.0	ug/L	50	04/19/23 18:30	EPA 8260D	
cis-1,2-Dichloroethene	ND	10.0	20.0	ug/L	50	04/19/23 18:30	EPA 8260D	
trans-1,2-Dichloroethene	ND	10.0	20.0	ug/L	50	04/19/23 18:30	EPA 8260D	
1,2-Dichloropropane	ND	12.5	25.0	ug/L	50	04/19/23 18:30	EPA 8260D	
1,3-Dichloropropane	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
2,2-Dichloropropane	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-72 (A3D1208-04)		Matrix: WG			Batch: 23D0759			
1,1-Dichloropropene	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
cis-1,3-Dichloropropene	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
trans-1,3-Dichloropropene	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Ethylbenzene	154	12.5	25.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Hexachlorobutadiene	ND	125	250	ug/L	50	04/19/23 18:30	EPA 8260D	
2-Hexanone	ND	250	500	ug/L	50	04/19/23 18:30	EPA 8260D	
Isopropylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
4-Isopropyltoluene	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Methylene chloride	ND	250	500	ug/L	50	04/19/23 18:30	EPA 8260D	
4-Methyl-2-pentanone (MiBK)	ND	250	500	ug/L	50	04/19/23 18:30	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Naphthalene	8850	50.0	100	ug/L	50	04/19/23 18:30	EPA 8260D	
n-Propylbenzene	ND	12.5	25.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Styrene	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	10.0	20.0	ug/L	50	04/19/23 18:30	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	12.5	25.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Tetrachloroethene (PCE)	ND	10.0	20.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Toluene	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
1,2,3-Trichlorobenzene	ND	50.0	100	ug/L	50	04/19/23 18:30	EPA 8260D	
1,2,4-Trichlorobenzene	ND	50.0	100	ug/L	50	04/19/23 18:30	EPA 8260D	
1,1,1-Trichloroethane	ND	10.0	20.0	ug/L	50	04/19/23 18:30	EPA 8260D	
1,1,2-Trichloroethane	ND	12.5	25.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Trichloroethene (TCE)	ND	10.0	20.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Trichlorofluoromethane	ND	50.0	100	ug/L	50	04/19/23 18:30	EPA 8260D	
1,2,3-Trichloropropane	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
1,2,4-Trimethylbenzene	56.5	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
1,3,5-Trimethylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Vinyl chloride	ND	10.0	20.0	ug/L	50	04/19/23 18:30	EPA 8260D	
m,p-Xylene	51.5	25.0	50.0	ug/L	50	04/19/23 18:30	EPA 8260D	
o-Xylene	47.5	12.5	25.0	ug/L	50	04/19/23 18:30	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery:	108 %	Limits:	80-120 %	1	04/19/23 18:30	EPA 8260D
Toluene-d8 (Surr)			108 %		80-120 %	1	04/19/23 18:30	EPA 8260D
4-Bromofluorobenzene (Surr)			97 %		80-120 %	1	04/19/23 18:30	EPA 8260D

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Page 10 of 92



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Anchor QEA, LLC**6720 SW Macadam Ave. Suite 125
Portland, OR 97219Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-73 (A3D1208-05)				Matrix: WG		Batch: 23D0759		
Acetone	ND	500	1000	ug/L	50	04/19/23 19:14	EPA 8260D	
Acrylonitrile	ND	50.0	100	ug/L	50	04/19/23 19:14	EPA 8260D	
Benzene	2470	5.00	10.0	ug/L	50	04/19/23 19:14	EPA 8260D	Q-42
Bromobenzene	ND	12.5	25.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Bromochloromethane	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Bromodichloromethane	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Bromoform	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Bromomethane	ND	250	250	ug/L	50	04/19/23 19:14	EPA 8260D	
2-Butanone (MEK)	ND	250	500	ug/L	50	04/19/23 19:14	EPA 8260D	
n-Butylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
sec-Butylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
tert-Butylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Carbon disulfide	ND	250	500	ug/L	50	04/19/23 19:14	EPA 8260D	
Carbon tetrachloride	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Chlorobenzene	ND	12.5	25.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Chloroethane	ND	250	250	ug/L	50	04/19/23 19:14	EPA 8260D	
Chloroform	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Chloromethane	ND	125	250	ug/L	50	04/19/23 19:14	EPA 8260D	
2-Chlorotoluene	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
4-Chlorotoluene	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Dibromochloromethane	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	125	250	ug/L	50	04/19/23 19:14	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	12.5	25.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Dibromomethane	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
1,2-Dichlorobenzene	ND	12.5	25.0	ug/L	50	04/19/23 19:14	EPA 8260D	
1,3-Dichlorobenzene	ND	12.5	25.0	ug/L	50	04/19/23 19:14	EPA 8260D	
1,4-Dichlorobenzene	ND	12.5	25.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Dichlorodifluoromethane	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
1,1-Dichloroethane	ND	10.0	20.0	ug/L	50	04/19/23 19:14	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	10.0	20.0	ug/L	50	04/19/23 19:14	EPA 8260D	
1,1-Dichloroethene	ND	10.0	20.0	ug/L	50	04/19/23 19:14	EPA 8260D	
cis-1,2-Dichloroethene	ND	10.0	20.0	ug/L	50	04/19/23 19:14	EPA 8260D	
trans-1,2-Dichloroethene	ND	10.0	20.0	ug/L	50	04/19/23 19:14	EPA 8260D	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-73 (A3D1208-05)		Matrix: WG			Batch: 23D0759			
1,2-Dichloropropane	ND	12.5	25.0	ug/L	50	04/19/23 19:14	EPA 8260D	
1,3-Dichloropropane	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
2,2-Dichloropropane	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
1,1-Dichloropropene	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
cis-1,3-Dichloropropene	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
trans-1,3-Dichloropropene	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Ethylbenzene	340	12.5	25.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Hexachlorobutadiene	ND	125	250	ug/L	50	04/19/23 19:14	EPA 8260D	
2-Hexanone	ND	250	500	ug/L	50	04/19/23 19:14	EPA 8260D	
Isopropylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
4-Isopropyltoluene	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Methylene chloride	ND	250	500	ug/L	50	04/19/23 19:14	EPA 8260D	
4-Methyl-2-pentanone (MIBK)	ND	250	500	ug/L	50	04/19/23 19:14	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Naphthalene	7550	50.0	100	ug/L	50	04/19/23 19:14	EPA 8260D	
n-Propylbenzene	ND	12.5	25.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Styrene	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	10.0	20.0	ug/L	50	04/19/23 19:14	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	12.5	25.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Tetrachloroethene (PCE)	ND	10.0	20.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Toluene	37.0	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	J
1,2,3-Trichlorobenzene	ND	50.0	100	ug/L	50	04/19/23 19:14	EPA 8260D	
1,2,4-Trichlorobenzene	ND	50.0	100	ug/L	50	04/19/23 19:14	EPA 8260D	
1,1,1-Trichloroethane	ND	10.0	20.0	ug/L	50	04/19/23 19:14	EPA 8260D	
1,1,2-Trichloroethane	ND	12.5	25.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Trichloroethene (TCE)	ND	10.0	20.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Trichlorofluoromethane	ND	50.0	100	ug/L	50	04/19/23 19:14	EPA 8260D	
1,2,3-Trichloropropane	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
1,2,4-Trimethylbenzene	56.0	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
1,3,5-Trimethylbenzene	ND	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
Vinyl chloride	ND	10.0	20.0	ug/L	50	04/19/23 19:14	EPA 8260D	
m,p-Xylene	126	25.0	50.0	ug/L	50	04/19/23 19:14	EPA 8260D	
o-Xylene	90.5	12.5	25.0	ug/L	50	04/19/23 19:14	EPA 8260D	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Anchor QEA, LLC**6720 SW Macadam Ave. Suite 125
Portland, OR 97219Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-73 (A3D1208-05)		Matrix: WG			Batch: 23D0759			
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 105 %	Limits: 80-120 %	1	04/19/23 19:14	EPA 8260D		
Toluene-d8 (Surr)		107 %	80-120 %	1	04/19/23 19:14	EPA 8260D		
4-Bromofluorobenzene (Surr)		96 %	80-120 %	1	04/19/23 19:14	EPA 8260D		
GS-041323-74 (A3D1208-06RE1)		Matrix: WG			Batch: 23D0815			
Acetone	ND	20.0	20.0	ug/L	1	04/20/23 14:22	EPA 8260D	
Acrylonitrile	ND	1.00	2.00	ug/L	1	04/20/23 14:22	EPA 8260D	
Benzene	ND	0.100	0.200	ug/L	1	04/20/23 14:22	EPA 8260D	
Bromobenzene	ND	0.250	0.500	ug/L	1	04/20/23 14:22	EPA 8260D	
Bromochloromethane	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
Bromoform	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
Bromomethane	ND	5.00	5.00	ug/L	1	04/20/23 14:22	EPA 8260D	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	04/20/23 14:22	EPA 8260D	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
Carbon disulfide	ND	5.00	10.0	ug/L	1	04/20/23 14:22	EPA 8260D	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
Chlorobenzene	ND	0.250	0.500	ug/L	1	04/20/23 14:22	EPA 8260D	
Chloroethane	ND	5.00	5.00	ug/L	1	04/20/23 14:22	EPA 8260D	
Chloroform	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
Chloromethane	ND	2.50	5.00	ug/L	1	04/20/23 14:22	EPA 8260D	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	04/20/23 14:22	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	04/20/23 14:22	EPA 8260D	
Dibromomethane	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	04/20/23 14:22	EPA 8260D	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	04/20/23 14:22	EPA 8260D	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	04/20/23 14:22	EPA 8260D	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	04/20/23 14:22	EPA 8260D	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Anchor QEA, LLC**6720 SW Macadam Ave. Suite 125
Portland, OR 97219Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-74 (A3D1208-06RE1)				Matrix: WG		Batch: 23D0815		
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	04/20/23 14:22	EPA 8260D	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	04/20/23 14:22	EPA 8260D	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	04/20/23 14:22	EPA 8260D	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	04/20/23 14:22	EPA 8260D	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	04/20/23 14:22	EPA 8260D	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	04/20/23 14:22	EPA 8260D	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	04/20/23 14:22	EPA 8260D	
2-Hexanone	ND	5.00	10.0	ug/L	1	04/20/23 14:22	EPA 8260D	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
Methylene chloride	ND	5.00	10.0	ug/L	1	04/20/23 14:22	EPA 8260D	
4-Methyl-2-pentanone (MIBK)	ND	5.00	10.0	ug/L	1	04/20/23 14:22	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
Naphthalene	ND	1.00	2.00	ug/L	1	04/20/23 14:22	EPA 8260D	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	04/20/23 14:22	EPA 8260D	
Styrene	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	04/20/23 14:22	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	04/20/23 14:22	EPA 8260D	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	04/20/23 14:22	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
1,2,3-Trichlorobenzene	ND	2.00	2.00	ug/L	1	04/20/23 14:22	EPA 8260D	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	04/20/23 14:22	EPA 8260D	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	04/20/23 14:22	EPA 8260D	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	04/20/23 14:22	EPA 8260D	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	04/20/23 14:22	EPA 8260D	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	04/20/23 14:22	EPA 8260D	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-74 (A3D1208-06RE1)		Matrix: WG			Batch: 23D0815			
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
Vinyl chloride	ND	0.200	0.400	ug/L	1	04/20/23 14:22	EPA 8260D	
m,p-Xylene	ND	0.500	1.00	ug/L	1	04/20/23 14:22	EPA 8260D	
o-Xylene	ND	0.250	0.500	ug/L	1	04/20/23 14:22	EPA 8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 106 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>04/20/23 14:22</i>	<i>EPA 8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>107 %</i>		<i>80-120 %</i>	<i>1</i>	<i>04/20/23 14:22</i>	<i>EPA 8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>97 %</i>		<i>80-120 %</i>	<i>1</i>	<i>04/20/23 14:22</i>	<i>EPA 8260D</i>	
TB-041323 (A3D1208-07)		Matrix: W			Batch: 23D0759			
Acetone	26.6	10.0	20.0	ug/L	1	04/19/23 12:56	EPA 8260D	
Acrylonitrile	ND	1.00	2.00	ug/L	1	04/19/23 12:56	EPA 8260D	
Benzene	ND	0.100	0.200	ug/L	1	04/19/23 12:56	EPA 8260D	
Bromobenzene	ND	0.250	0.500	ug/L	1	04/19/23 12:56	EPA 8260D	
Bromochloromethane	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
Bromoform	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
Bromomethane	ND	5.00	5.00	ug/L	1	04/19/23 12:56	EPA 8260D	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	04/19/23 12:56	EPA 8260D	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
Carbon disulfide	ND	5.00	10.0	ug/L	1	04/19/23 12:56	EPA 8260D	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
Chlorobenzene	ND	0.250	0.500	ug/L	1	04/19/23 12:56	EPA 8260D	
Chloroethane	ND	5.00	5.00	ug/L	1	04/19/23 12:56	EPA 8260D	
Chloroform	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
Chloromethane	ND	2.50	5.00	ug/L	1	04/19/23 12:56	EPA 8260D	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	04/19/23 12:56	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	04/19/23 12:56	EPA 8260D	
Dibromomethane	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	04/19/23 12:56	EPA 8260D	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Anchor QEA, LLC**6720 SW Macadam Ave. Suite 125
Portland, OR 97219Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
TB-041323 (A3D1208-07)		Matrix: W			Batch: 23D0759			
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	04/19/23 12:56	EPA 8260D	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	04/19/23 12:56	EPA 8260D	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	04/19/23 12:56	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	04/19/23 12:56	EPA 8260D	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	04/19/23 12:56	EPA 8260D	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	04/19/23 12:56	EPA 8260D	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	04/19/23 12:56	EPA 8260D	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	04/19/23 12:56	EPA 8260D	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	04/19/23 12:56	EPA 8260D	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	04/19/23 12:56	EPA 8260D	
2-Hexanone	ND	5.00	10.0	ug/L	1	04/19/23 12:56	EPA 8260D	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
Methylene chloride	ND	5.00	10.0	ug/L	1	04/19/23 12:56	EPA 8260D	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	04/19/23 12:56	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
Naphthalene	ND	1.00	2.00	ug/L	1	04/19/23 12:56	EPA 8260D	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	04/19/23 12:56	EPA 8260D	
Styrene	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	04/19/23 12:56	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	04/19/23 12:56	EPA 8260D	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	04/19/23 12:56	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	04/19/23 12:56	EPA 8260D	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	04/19/23 12:56	EPA 8260D	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	04/19/23 12:56	EPA 8260D	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	04/19/23 12:56	EPA 8260D	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**

Project Number: **000029-02.84 T-01.001 H**

Project Manager: **John Renda**

Report ID:

A3D1208 - 05 19 23 1331

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
TB-041323 (A3D1208-07)		Matrix: W			Batch: 23D0759			
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	04/19/23 12:56	EPA 8260D	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	04/19/23 12:56	EPA 8260D	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
Vinyl chloride	ND	0.200	0.400	ug/L	1	04/19/23 12:56	EPA 8260D	
m,p-Xylene	ND	0.500	1.00	ug/L	1	04/19/23 12:56	EPA 8260D	
o-Xylene	ND	0.250	0.500	ug/L	1	04/19/23 12:56	EPA 8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 105 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>04/19/23 12:56</i>	<i>EPA 8260D</i>	
<i>Toluene-d8 (Surr)</i>		<i>108 %</i>		<i>80-120 %</i>	<i>1</i>	<i>04/19/23 12:56</i>	<i>EPA 8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>		<i>95 %</i>		<i>80-120 %</i>	<i>1</i>	<i>04/19/23 12:56</i>	<i>EPA 8260D</i>	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-69 (A3D1208-01)		Matrix: WG			Batch: 23D0991			
1,1-Dichloroethene	ND	0.250	0.500	ug/L	25	04/25/23 18:29	EPA 8260D SIM	
cis-1,2-Dichloroethene	ND	0.500	0.500	ug/L	25	04/25/23 18:29	EPA 8260D SIM	
trans-1,2-Dichloroethene	ND	0.250	0.500	ug/L	25	04/25/23 18:29	EPA 8260D SIM	
Trichloroethene (TCE)	ND	1.00	1.00	ug/L	25	04/25/23 18:29	EPA 8260D SIM	R-06
Vinyl chloride	ND	0.250	0.500	ug/L	25	04/25/23 18:29	EPA 8260D SIM	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	<i>103 %</i>	<i>Limits:</i>	<i>80-120 %</i>	<i>1</i>	<i>04/25/23 18:29</i>	<i>EPA 8260D SIM</i>
<i>Toluene-d8 (Surr)</i>			<i>101 %</i>		<i>80-120 %</i>	<i>1</i>	<i>04/25/23 18:29</i>	<i>EPA 8260D SIM</i>
<i>4-Bromofluorobenzene (Surr)</i>			<i>95 %</i>		<i>80-120 %</i>	<i>1</i>	<i>04/25/23 18:29</i>	<i>EPA 8260D SIM</i>
GS-041323-70 (A3D1208-02)		Matrix: WG			Batch: 23D0991			
1,1-Dichloroethene	ND	0.250	0.500	ug/L	25	04/25/23 19:23	EPA 8260D SIM	
cis-1,2-Dichloroethene	2.24	0.250	0.500	ug/L	25	04/25/23 19:23	EPA 8260D SIM	
trans-1,2-Dichloroethene	ND	0.250	0.500	ug/L	25	04/25/23 19:23	EPA 8260D SIM	
Trichloroethene (TCE)	ND	0.500	0.500	ug/L	25	04/25/23 19:23	EPA 8260D SIM	
Vinyl chloride	1.63	0.250	0.500	ug/L	25	04/25/23 19:23	EPA 8260D SIM	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	<i>104 %</i>	<i>Limits:</i>	<i>80-120 %</i>	<i>1</i>	<i>04/25/23 19:23</i>	<i>EPA 8260D SIM</i>
<i>Toluene-d8 (Surr)</i>			<i>101 %</i>		<i>80-120 %</i>	<i>1</i>	<i>04/25/23 19:23</i>	<i>EPA 8260D SIM</i>
<i>4-Bromofluorobenzene (Surr)</i>			<i>94 %</i>		<i>80-120 %</i>	<i>1</i>	<i>04/25/23 19:23</i>	<i>EPA 8260D SIM</i>
GS-041323-71 (A3D1208-03)		Matrix: WG			Batch: 23D0991			
1,1-Dichloroethene	ND	0.250	0.500	ug/L	25	04/25/23 19:50	EPA 8260D SIM	
cis-1,2-Dichloroethene	1.80	0.250	0.500	ug/L	25	04/25/23 19:50	EPA 8260D SIM	
trans-1,2-Dichloroethene	ND	0.250	0.500	ug/L	25	04/25/23 19:50	EPA 8260D SIM	
Trichloroethene (TCE)	ND	0.250	0.500	ug/L	25	04/25/23 19:50	EPA 8260D SIM	
Vinyl chloride	1.37	0.250	0.500	ug/L	25	04/25/23 19:50	EPA 8260D SIM	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	<i>103 %</i>	<i>Limits:</i>	<i>80-120 %</i>	<i>1</i>	<i>04/25/23 19:50</i>	<i>EPA 8260D SIM</i>
<i>Toluene-d8 (Surr)</i>			<i>102 %</i>		<i>80-120 %</i>	<i>1</i>	<i>04/25/23 19:50</i>	<i>EPA 8260D SIM</i>
<i>4-Bromofluorobenzene (Surr)</i>			<i>95 %</i>		<i>80-120 %</i>	<i>1</i>	<i>04/25/23 19:50</i>	<i>EPA 8260D SIM</i>

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-69 (A3D1208-01)		Matrix: WG			Batch: 23D0686			
Acenaphthene	15.1	1.97	3.95	ug/L	100	04/18/23 16:32	EPA 8270E LVI	
Acenaphthylene	ND	1.97	3.95	ug/L	100	04/18/23 16:32	EPA 8270E LVI	
Anthracene	ND	1.97	3.95	ug/L	100	04/18/23 16:32	EPA 8270E LVI	
Benz(a)anthracene	ND	0.987	1.97	ug/L	100	04/18/23 16:32	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.987	1.97	ug/L	100	04/18/23 16:32	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.987	1.97	ug/L	100	04/18/23 16:32	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.987	1.97	ug/L	100	04/18/23 16:32	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	1.97	3.95	ug/L	100	04/18/23 16:32	EPA 8270E LVI	
Chrysene	ND	0.987	1.97	ug/L	100	04/18/23 16:32	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.987	1.97	ug/L	100	04/18/23 16:32	EPA 8270E LVI	
Fluoranthene	ND	1.97	3.95	ug/L	100	04/18/23 16:32	EPA 8270E LVI	
Fluorene	2.22	1.97	3.95	ug/L	100	04/18/23 16:32	EPA 8270E LVI	J
Indeno(1,2,3-cd)pyrene	ND	0.987	1.97	ug/L	100	04/18/23 16:32	EPA 8270E LVI	
1-Methylnaphthalene	34.2	3.95	7.90	ug/L	100	04/18/23 16:32	EPA 8270E LVI	
2-Methylnaphthalene	36.3	3.95	7.90	ug/L	100	04/18/23 16:32	EPA 8270E LVI	
Naphthalene	583	3.95	7.90	ug/L	100	04/18/23 16:32	EPA 8270E LVI	
Phenanthrene	ND	3.95	7.90	ug/L	100	04/18/23 16:32	EPA 8270E LVI	
Pyrene	ND	1.97	3.95	ug/L	100	04/18/23 16:32	EPA 8270E LVI	
Carbazole	10.1	1.97	3.95	ug/L	100	04/18/23 16:32	EPA 8270E LVI	
Dibenzofuran	ND	1.97	3.95	ug/L	100	04/18/23 16:32	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		Recovery: 348 %		Limits: 78-134 %	100	04/18/23 16:32	EPA 8270E LVI	S-05
Benzo(a)pyrene-d12 (Surr)		96 %		80-132 %	100	04/18/23 16:32	EPA 8270E LVI	S-05
GS-041323-70 (A3D1208-02)		Matrix: WG			Batch: 23D0686			
Acenaphthene	71.1	1.90	3.80	ug/L	100	04/18/23 17:05	EPA 8270E LVI	
Acenaphthylene	ND	6.53	6.53	ug/L	100	04/18/23 17:05	EPA 8270E LVI	R-02
Anthracene	4.42	1.90	3.80	ug/L	100	04/18/23 17:05	EPA 8270E LVI	
Benz(a)anthracene	ND	0.950	1.90	ug/L	100	04/18/23 17:05	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.950	1.90	ug/L	100	04/18/23 17:05	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.950	1.90	ug/L	100	04/18/23 17:05	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.950	1.90	ug/L	100	04/18/23 17:05	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	1.90	3.80	ug/L	100	04/18/23 17:05	EPA 8270E LVI	
Chrysene	ND	0.950	1.90	ug/L	100	04/18/23 17:05	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-70 (A3D1208-02)		Matrix: WG			Batch: 23D0686			
Dibenz(a,h)anthracene	ND	0.950	1.90	ug/L	100	04/18/23 17:05	EPA 8270E LVI	
Fluoranthene	ND	1.90	3.80	ug/L	100	04/18/23 17:05	EPA 8270E LVI	
Fluorene	18.8	1.90	3.80	ug/L	100	04/18/23 17:05	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.950	1.90	ug/L	100	04/18/23 17:05	EPA 8270E LVI	
1-Methylnaphthalene	114	3.80	7.60	ug/L	100	04/18/23 17:05	EPA 8270E LVI	
2-Methylnaphthalene	66.8	3.80	7.60	ug/L	100	04/18/23 17:05	EPA 8270E LVI	
Naphthalene	1590	3.80	7.60	ug/L	100	04/18/23 17:05	EPA 8270E LVI	
Phenanthrene	21.9	3.80	7.60	ug/L	100	04/18/23 17:05	EPA 8270E LVI	
Pyrene	ND	1.90	3.80	ug/L	100	04/18/23 17:05	EPA 8270E LVI	
Carbazole	45.9	1.90	3.80	ug/L	100	04/18/23 17:05	EPA 8270E LVI	
Dibenzofuran	4.75	1.90	3.80	ug/L	100	04/18/23 17:05	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		Recovery: 498 %		Limits: 78-134 %	100	04/18/23 17:05	EPA 8270E LVI	S-05
Benzo(a)pyrene-d12 (Surr)		80 %		80-132 %	100	04/18/23 17:05	EPA 8270E LVI	S-05
GS-041323-71 (A3D1208-03)		Matrix: WG			Batch: 23D0686			
Acenaphthene	66.6	1.98	3.96	ug/L	100	04/18/23 17:38	EPA 8270E LVI	
Acenaphthylene	ND	6.81	6.81	ug/L	100	04/18/23 17:38	EPA 8270E LVI	R-02
Anthracene	4.11	1.98	3.96	ug/L	100	04/18/23 17:38	EPA 8270E LVI	
Benz(a)anthracene	ND	0.991	1.98	ug/L	100	04/18/23 17:38	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.991	1.98	ug/L	100	04/18/23 17:38	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.991	1.98	ug/L	100	04/18/23 17:38	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.991	1.98	ug/L	100	04/18/23 17:38	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	1.98	3.96	ug/L	100	04/18/23 17:38	EPA 8270E LVI	
Chrysene	ND	0.991	1.98	ug/L	100	04/18/23 17:38	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.991	1.98	ug/L	100	04/18/23 17:38	EPA 8270E LVI	
Fluoranthene	ND	1.98	3.96	ug/L	100	04/18/23 17:38	EPA 8270E LVI	
Fluorene	17.7	1.98	3.96	ug/L	100	04/18/23 17:38	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.991	1.98	ug/L	100	04/18/23 17:38	EPA 8270E LVI	
1-Methylnaphthalene	111	3.96	7.93	ug/L	100	04/18/23 17:38	EPA 8270E LVI	
2-Methylnaphthalene	63.0	3.96	7.93	ug/L	100	04/18/23 17:38	EPA 8270E LVI	
Naphthalene	1560	3.96	7.93	ug/L	100	04/18/23 17:38	EPA 8270E LVI	
Phenanthrene	20.7	3.96	7.93	ug/L	100	04/18/23 17:38	EPA 8270E LVI	
Pyrene	ND	1.98	3.96	ug/L	100	04/18/23 17:38	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-71 (A3D1208-03)		Matrix: WG			Batch: 23D0686			
Carbazole	43.1	1.98	3.96	ug/L	100	04/18/23 17:38	EPA 8270E LVI	
Dibenzofuran	4.71	1.98	3.96	ug/L	100	04/18/23 17:38	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		Recovery: 542 %		Limits: 78-134 %	100	04/18/23 17:38	EPA 8270E LVI	S-05
Benzo(a)pyrene-d12 (Surr)		94 %		80-132 %	100	04/18/23 17:38	EPA 8270E LVI	S-05
GS-041323-72 (A3D1208-04)		Matrix: WG			Batch: 23D0686			
Acenaphthene	305	2.07	4.15	ug/L	100	04/18/23 18:11	EPA 8270E LVI	
Acenaphthylene	ND	25.9	25.9	ug/L	100	04/18/23 18:11	EPA 8270E LVI	R-02
Anthracene	21.3	2.07	4.15	ug/L	100	04/18/23 18:11	EPA 8270E LVI	
Benz(a)anthracene	ND	1.04	2.07	ug/L	100	04/18/23 18:11	EPA 8270E LVI	
Benzo(a)pyrene	ND	1.04	2.07	ug/L	100	04/18/23 18:11	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	1.04	2.07	ug/L	100	04/18/23 18:11	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	1.04	2.07	ug/L	100	04/18/23 18:11	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	2.07	4.15	ug/L	100	04/18/23 18:11	EPA 8270E LVI	
Chrysene	ND	1.04	2.07	ug/L	100	04/18/23 18:11	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	1.04	2.07	ug/L	100	04/18/23 18:11	EPA 8270E LVI	
Fluoranthene	13.9	2.07	4.15	ug/L	100	04/18/23 18:11	EPA 8270E LVI	
Fluorene	76.0	2.07	4.15	ug/L	100	04/18/23 18:11	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	1.04	2.07	ug/L	100	04/18/23 18:11	EPA 8270E LVI	
1-Methylnaphthalene	466	4.15	8.29	ug/L	100	04/18/23 18:11	EPA 8270E LVI	
2-Methylnaphthalene	713	4.15	8.29	ug/L	100	04/18/23 18:11	EPA 8270E LVI	
Phenanthrene	137	4.15	8.29	ug/L	100	04/18/23 18:11	EPA 8270E LVI	
Pyrene	14.3	2.07	4.15	ug/L	100	04/18/23 18:11	EPA 8270E LVI	
Carbazole	120	2.07	4.15	ug/L	100	04/18/23 18:11	EPA 8270E LVI	
Dibenzofuran	18.8	2.07	4.15	ug/L	100	04/18/23 18:11	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		Recovery: 572 %		Limits: 78-134 %	100	04/18/23 18:11	EPA 8270E LVI	S-05
Benzo(a)pyrene-d12 (Surr)		98 %		80-132 %	100	04/18/23 18:11	EPA 8270E LVI	S-05
GS-041323-72 (A3D1208-04RE1)		Matrix: WG			Batch: 23D0686			
Naphthalene	7240	41.5	82.9	ug/L	1000	04/19/23 10:12	EPA 8270E LVI	
GS-041323-73 (A3D1208-05)		Matrix: WG			Batch: 23D0686			
Acenaphthene	108	0.988	1.98	ug/L	50	04/18/23 14:20	EPA 8270E LVI	
Acenaphthylene	ND	6.17	6.17	ug/L	50	04/18/23 14:20	EPA 8270E LVI	R-02

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-73 (A3D1208-05)		Matrix: WG			Batch: 23D0686			
Anthracene	4.15	0.988	1.98	ug/L	50	04/18/23 14:20	EPA 8270E LVI	
Benz(a)anthracene	ND	0.494	0.988	ug/L	50	04/18/23 14:20	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.494	0.988	ug/L	50	04/18/23 14:20	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.494	0.988	ug/L	50	04/18/23 14:20	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.494	0.988	ug/L	50	04/18/23 14:20	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.988	1.98	ug/L	50	04/18/23 14:20	EPA 8270E LVI	
Chrysene	ND	0.494	0.988	ug/L	50	04/18/23 14:20	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.494	0.988	ug/L	50	04/18/23 14:20	EPA 8270E LVI	
Fluoranthene	1.41	0.988	1.98	ug/L	50	04/18/23 14:20	EPA 8270E LVI	J
Fluorene	23.8	0.988	1.98	ug/L	50	04/18/23 14:20	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.494	0.988	ug/L	50	04/18/23 14:20	EPA 8270E LVI	
1-Methylnaphthalene	301	1.98	3.95	ug/L	50	04/18/23 14:20	EPA 8270E LVI	
2-Methylnaphthalene	472	1.98	3.95	ug/L	50	04/18/23 14:20	EPA 8270E LVI	
Phenanthrene	24.0	1.98	3.95	ug/L	50	04/18/23 14:20	EPA 8270E LVI	
Pyrene	1.28	0.988	1.98	ug/L	50	04/18/23 14:20	EPA 8270E LVI	J
Carbazole	99.0	0.988	1.98	ug/L	50	04/18/23 14:20	EPA 8270E LVI	
Dibenzofuran	5.58	0.988	1.98	ug/L	50	04/18/23 14:20	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		Recovery: 195 %		Limits: 78-134 %	50	04/18/23 14:20	EPA 8270E LVI	S-05
Benzo(a)pyrene-d12 (Surr)		98 %		80-132 %	50	04/18/23 14:20	EPA 8270E LVI	S-05
GS-041323-73 (A3D1208-05RE1)		Matrix: WG			Batch: 23D0686			
Naphthalene	6100	39.5	79.0	ug/L	1000	04/19/23 10:45	EPA 8270E LVI	
GS-041323-74 (A3D1208-06)		Matrix: WG			Batch: 23D0686			
Acenaphthene	ND	0.120	0.120	ug/L	1	04/18/23 18:44	EPA 8270E LVI	R-02
Acenaphthylene	ND	0.0175	0.0349	ug/L	1	04/18/23 18:44	EPA 8270E LVI	
Anthracene	ND	0.0175	0.0349	ug/L	1	04/18/23 18:44	EPA 8270E LVI	
Benz(a)anthracene	ND	0.00873	0.0175	ug/L	1	04/18/23 18:44	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.00873	0.0175	ug/L	1	04/18/23 18:44	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.00873	0.0175	ug/L	1	04/18/23 18:44	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.00873	0.0175	ug/L	1	04/18/23 18:44	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.0175	0.0349	ug/L	1	04/18/23 18:44	EPA 8270E LVI	
Chrysene	ND	0.00873	0.0175	ug/L	1	04/18/23 18:44	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	0.00873	0.0175	ug/L	1	04/18/23 18:44	EPA 8270E LVI	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-74 (A3D1208-06)		Matrix: WG			Batch: 23D0686			
Fluoranthene	ND	0.0175	0.0349	ug/L	1	04/18/23 18:44	EPA 8270E LVI	
Fluorene	ND	0.0175	0.0349	ug/L	1	04/18/23 18:44	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.00873	0.0175	ug/L	1	04/18/23 18:44	EPA 8270E LVI	
1-Methylnaphthalene	0.0545	0.0349	0.0698	ug/L	1	04/18/23 18:44	EPA 8270E LVI	J
2-Methylnaphthalene	0.0877	0.0349	0.0698	ug/L	1	04/18/23 18:44	EPA 8270E LVI	
Naphthalene	0.360	0.0349	0.0698	ug/L	1	04/18/23 18:44	EPA 8270E LVI	
Phenanthrene	ND	0.0349	0.0698	ug/L	1	04/18/23 18:44	EPA 8270E LVI	
Pyrene	ND	0.0175	0.0349	ug/L	1	04/18/23 18:44	EPA 8270E LVI	
Carbazole	ND	0.0175	0.0349	ug/L	1	04/18/23 18:44	EPA 8270E LVI	
Dibenzofuran	ND	0.0175	0.0349	ug/L	1	04/18/23 18:44	EPA 8270E LVI	
<i>Surrogate: Acenaphthylene-d8 (Surr)</i>		<i>Recovery: 124 %</i>		<i>Limits: 78-134 %</i>	<i>1</i>	<i>04/18/23 18:44</i>	<i>EPA 8270E LVI</i>	
<i>Benzo(a)pyrene-d12 (Surr)</i>		<i>120 %</i>		<i>80-132 %</i>	<i>1</i>	<i>04/18/23 18:44</i>	<i>EPA 8270E LVI</i>	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-69 (A3D1208-01)		Matrix: WG						
Batch: 23D1024								
Aluminum	ND	25.0	50.0	ug/L	1	04/28/23 02:03	EPA 6020B	
Antimony	ND	0.500	1.00	ug/L	1	04/28/23 02:03	EPA 6020B	
Arsenic	3.01	0.500	1.00	ug/L	1	04/28/23 02:03	EPA 6020B	
Barium	47.8	1.00	2.00	ug/L	1	04/28/23 02:03	EPA 6020B	
Beryllium	ND	0.100	0.200	ug/L	1	04/28/23 02:03	EPA 6020B	
Cadmium	ND	0.100	0.200	ug/L	1	04/28/23 02:03	EPA 6020B	
Calcium	48300	300	600	ug/L	1	04/28/23 02:03	EPA 6020B	
Chromium	ND	1.00	2.00	ug/L	1	04/28/23 02:03	EPA 6020B	
Copper	ND	1.00	2.00	ug/L	1	04/28/23 02:03	EPA 6020B	
Iron	31800	25.0	50.0	ug/L	1	04/28/23 02:03	EPA 6020B	
Lead	0.118	0.110	0.200	ug/L	1	04/28/23 02:03	EPA 6020B	J
Magnesium	30000	75.0	150	ug/L	1	04/28/23 02:03	EPA 6020B	
Manganese	2190	0.500	1.00	ug/L	1	04/28/23 02:03	EPA 6020B	
Mercury	ND	0.0400	0.0800	ug/L	1	04/28/23 02:03	EPA 6020B	
Nickel	ND	1.00	2.00	ug/L	1	04/28/23 02:03	EPA 6020B	
Potassium	2390	50.0	100	ug/L	1	04/28/23 02:03	EPA 6020B	
Selenium	ND	0.500	1.00	ug/L	1	04/28/23 02:03	EPA 6020B	
Silver	ND	0.100	0.200	ug/L	1	04/28/23 02:03	EPA 6020B	
Sodium	16600	50.0	100	ug/L	1	04/28/23 02:03	EPA 6020B	
Thallium	ND	0.100	0.200	ug/L	1	04/28/23 02:03	EPA 6020B	
Vanadium	ND	1.00	2.00	ug/L	1	04/28/23 02:03	EPA 6020B	
Zinc	18.2	2.00	4.00	ug/L	1	04/28/23 02:03	EPA 6020B	

GS-041323-70 (A3D1208-02)**Matrix: WG**

Batch: 23D1024								
Aluminum	ND	25.0	50.0	ug/L	1	04/28/23 02:08	EPA 6020B	
Antimony	ND	0.500	1.00	ug/L	1	04/28/23 02:08	EPA 6020B	
Arsenic	5.22	0.500	1.00	ug/L	1	04/28/23 02:08	EPA 6020B	
Barium	101	1.00	2.00	ug/L	1	04/28/23 02:08	EPA 6020B	
Beryllium	ND	0.100	0.200	ug/L	1	04/28/23 02:08	EPA 6020B	
Cadmium	ND	0.100	0.200	ug/L	1	04/28/23 02:08	EPA 6020B	
Chromium	ND	1.00	2.00	ug/L	1	04/28/23 02:08	EPA 6020B	
Copper	ND	1.00	2.00	ug/L	1	04/28/23 02:08	EPA 6020B	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-70 (A3D1208-02)		Matrix: WG						
Iron	35500	25.0	50.0	ug/L	1	04/28/23 02:08	EPA 6020B	
Lead	ND	0.110	0.200	ug/L	1	04/28/23 02:08	EPA 6020B	
Magnesium	31400	75.0	150	ug/L	1	04/28/23 02:08	EPA 6020B	
Mercury	ND	0.0400	0.0800	ug/L	1	04/28/23 02:08	EPA 6020B	
Nickel	ND	1.00	2.00	ug/L	1	04/28/23 02:08	EPA 6020B	
Potassium	4680	50.0	100	ug/L	1	04/28/23 02:08	EPA 6020B	
Selenium	ND	0.500	1.00	ug/L	1	04/28/23 02:08	EPA 6020B	
Silver	ND	0.100	0.200	ug/L	1	04/28/23 02:08	EPA 6020B	
Sodium	27200	50.0	100	ug/L	1	04/28/23 02:08	EPA 6020B	
Thallium	ND	0.100	0.200	ug/L	1	04/28/23 02:08	EPA 6020B	
Vanadium	ND	1.00	2.00	ug/L	1	04/28/23 02:08	EPA 6020B	
Zinc	2.21	2.00	4.00	ug/L	1	04/28/23 02:08	EPA 6020B	J
GS-041323-70 (A3D1208-02RE1)		Matrix: WG						
Batch: 23D1024								
Calcium	86000	7500	15000	ug/L	25	05/02/23 16:35	EPA 6020B	
Manganese	3660	12.5	25.0	ug/L	25	05/02/23 16:35	EPA 6020B	
GS-041323-71 (A3D1208-03)		Matrix: WG						
Batch: 23D1024								
Aluminum	ND	25.0	50.0	ug/L	1	04/28/23 02:13	EPA 6020B	
Antimony	ND	0.500	1.00	ug/L	1	04/28/23 02:13	EPA 6020B	
Arsenic	5.24	0.500	1.00	ug/L	1	04/28/23 02:13	EPA 6020B	
Barium	102	1.00	2.00	ug/L	1	04/28/23 02:13	EPA 6020B	
Beryllium	ND	0.100	0.200	ug/L	1	04/28/23 02:13	EPA 6020B	
Cadmium	ND	0.100	0.200	ug/L	1	04/28/23 02:13	EPA 6020B	
Chromium	ND	1.00	2.00	ug/L	1	04/28/23 02:13	EPA 6020B	
Copper	ND	1.00	2.00	ug/L	1	04/28/23 02:13	EPA 6020B	
Iron	35300	25.0	50.0	ug/L	1	04/28/23 02:13	EPA 6020B	
Lead	ND	0.110	0.200	ug/L	1	04/28/23 02:13	EPA 6020B	
Magnesium	31200	75.0	150	ug/L	1	04/28/23 02:13	EPA 6020B	
Mercury	ND	0.0400	0.0800	ug/L	1	04/28/23 02:13	EPA 6020B	
Nickel	ND	1.00	2.00	ug/L	1	04/28/23 02:13	EPA 6020B	
Potassium	4630	50.0	100	ug/L	1	04/28/23 02:13	EPA 6020B	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Anchor QEA, LLC**6720 SW Macadam Ave. Suite 125
Portland, OR 97219Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-71 (A3D1208-03)		Matrix: WG						
Selenium	ND	0.500	1.00	ug/L	1	04/28/23 02:13	EPA 6020B	
Silver	ND	0.100	0.200	ug/L	1	04/28/23 02:13	EPA 6020B	
Sodium	27000	50.0	100	ug/L	1	04/28/23 02:13	EPA 6020B	
Thallium	ND	0.100	0.200	ug/L	1	04/28/23 02:13	EPA 6020B	
Vanadium	ND	1.00	2.00	ug/L	1	04/28/23 02:13	EPA 6020B	
Zinc	2.06	2.00	4.00	ug/L	1	04/28/23 02:13	EPA 6020B	J
GS-041323-71 (A3D1208-03RE1)		Matrix: WG						
Batch: 23D1024								
Calcium	85300	7500	15000	ug/L	25	05/02/23 16:40	EPA 6020B	
Manganese	3580	12.5	25.0	ug/L	25	05/02/23 16:40	EPA 6020B	
GS-041323-72 (A3D1208-04)		Matrix: WG						
Batch: 23D1024								
Aluminum	ND	25.0	50.0	ug/L	1	04/28/23 02:28	EPA 6020B	
Antimony	ND	0.500	1.00	ug/L	1	04/28/23 02:28	EPA 6020B	
Arsenic	3.12	0.500	1.00	ug/L	1	04/28/23 02:28	EPA 6020B	
Barium	63.4	1.00	2.00	ug/L	1	04/28/23 02:28	EPA 6020B	
Beryllium	ND	0.100	0.200	ug/L	1	04/28/23 02:28	EPA 6020B	
Cadmium	ND	0.100	0.200	ug/L	1	04/28/23 02:28	EPA 6020B	
Chromium	ND	1.00	2.00	ug/L	1	04/28/23 02:28	EPA 6020B	
Copper	3.09	1.00	2.00	ug/L	1	04/28/23 02:28	EPA 6020B	
Iron	42000	25.0	50.0	ug/L	1	04/28/23 02:28	EPA 6020B	
Lead	ND	0.110	0.200	ug/L	1	04/28/23 02:28	EPA 6020B	
Magnesium	27300	75.0	150	ug/L	1	04/28/23 02:28	EPA 6020B	
Manganese	2560	0.500	1.00	ug/L	1	04/28/23 02:28	EPA 6020B	
Mercury	ND	0.0400	0.0800	ug/L	1	04/28/23 02:28	EPA 6020B	
Nickel	ND	1.00	2.00	ug/L	1	04/28/23 02:28	EPA 6020B	
Potassium	2510	50.0	100	ug/L	1	04/28/23 02:28	EPA 6020B	
Selenium	ND	0.500	1.00	ug/L	1	04/28/23 02:28	EPA 6020B	
Silver	ND	0.100	0.200	ug/L	1	04/28/23 02:28	EPA 6020B	
Sodium	14600	50.0	100	ug/L	1	04/28/23 02:28	EPA 6020B	
Vanadium	ND	1.00	2.00	ug/L	1	04/28/23 02:28	EPA 6020B	
Zinc	27.9	2.00	4.00	ug/L	1	04/28/23 02:28	EPA 6020B	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Anchor QEA, LLC**6720 SW Macadam Ave. Suite 125
Portland, OR 97219Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-72 (A3D1208-04RE1) Matrix: WG								
Batch: 23D1024								
Calcium	63300	3000	6000	ug/L	10	05/02/23 16:45	EPA 6020B	
GS-041323-72 (A3D1208-04RE2) Matrix: WG								
Batch: 23D1024								
Thallium	ND	0.100	0.200	ug/L	1	05/02/23 16:55	EPA 6020B	
GS-041323-73 (A3D1208-05) Matrix: WG								
Batch: 23D1024								
Aluminum	ND	25.0	50.0	ug/L	1	04/28/23 02:32	EPA 6020B	
Antimony	ND	0.500	1.00	ug/L	1	04/28/23 02:32	EPA 6020B	
Arsenic	3.99	0.500	1.00	ug/L	1	04/28/23 02:32	EPA 6020B	
Barium	58.1	1.00	2.00	ug/L	1	04/28/23 02:32	EPA 6020B	
Beryllium	ND	0.100	0.200	ug/L	1	04/28/23 02:32	EPA 6020B	
Cadmium	ND	0.100	0.200	ug/L	1	04/28/23 02:32	EPA 6020B	
Chromium	ND	1.00	2.00	ug/L	1	04/28/23 02:32	EPA 6020B	
Copper	ND	1.00	2.00	ug/L	1	04/28/23 02:32	EPA 6020B	
Iron	38600	25.0	50.0	ug/L	1	04/28/23 02:32	EPA 6020B	
Lead	ND	0.110	0.200	ug/L	1	04/28/23 02:32	EPA 6020B	
Magnesium	30700	75.0	150	ug/L	1	04/28/23 02:32	EPA 6020B	
Mercury	ND	0.0400	0.0800	ug/L	1	04/28/23 02:32	EPA 6020B	
Nickel	ND	1.00	2.00	ug/L	1	04/28/23 02:32	EPA 6020B	
Potassium	2580	50.0	100	ug/L	1	04/28/23 02:32	EPA 6020B	
Selenium	ND	0.500	1.00	ug/L	1	04/28/23 02:32	EPA 6020B	
Silver	ND	0.100	0.200	ug/L	1	04/28/23 02:32	EPA 6020B	
Sodium	17000	50.0	100	ug/L	1	04/28/23 02:32	EPA 6020B	
Vanadium	ND	1.00	2.00	ug/L	1	04/28/23 02:32	EPA 6020B	
Zinc	6.00	2.00	4.00	ug/L	1	04/28/23 02:32	EPA 6020B	
GS-041323-73 (A3D1208-05RE1) Matrix: WG								
Batch: 23D1024								
Calcium	64900	7500	15000	ug/L	25	05/02/23 16:50	EPA 6020B	
Manganese	2800	12.5	25.0	ug/L	25	05/02/23 16:50	EPA 6020B	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Anchor QEA, LLC**6720 SW Macadam Ave. Suite 125
Portland, OR 97219Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-73 (A3D1208-05RE2)				Matrix: WG				
Batch: 23D1024								
Thallium	ND	0.100	0.200	ug/L	1	05/02/23 17:00	EPA 6020B	
GS-041323-74 (A3D1208-06)				Matrix: WG				
Batch: 23D1024								
Aluminum	ND	25.0	50.0	ug/L	1	04/28/23 02:47	EPA 6020B	
Antimony	ND	0.500	1.00	ug/L	1	04/28/23 02:47	EPA 6020B	
Arsenic	ND	0.500	1.00	ug/L	1	04/28/23 02:47	EPA 6020B	
Barium	ND	1.00	2.00	ug/L	1	04/28/23 02:47	EPA 6020B	
Beryllium	ND	0.100	0.200	ug/L	1	04/28/23 02:47	EPA 6020B	
Cadmium	ND	0.100	0.200	ug/L	1	04/28/23 02:47	EPA 6020B	
Calcium	ND	300	600	ug/L	1	04/28/23 02:47	EPA 6020B	
Chromium	ND	1.00	2.00	ug/L	1	04/28/23 02:47	EPA 6020B	
Copper	ND	1.00	2.00	ug/L	1	04/28/23 02:47	EPA 6020B	
Iron	35.7	25.0	50.0	ug/L	1	04/28/23 02:47	EPA 6020B	J
Lead	ND	0.110	0.200	ug/L	1	04/28/23 02:47	EPA 6020B	
Magnesium	ND	75.0	150	ug/L	1	04/28/23 02:47	EPA 6020B	
Manganese	ND	0.500	1.00	ug/L	1	04/28/23 02:47	EPA 6020B	
Mercury	ND	0.0400	0.0800	ug/L	1	04/28/23 02:47	EPA 6020B	
Nickel	ND	1.00	2.00	ug/L	1	04/28/23 02:47	EPA 6020B	
Potassium	ND	50.0	100	ug/L	1	04/28/23 02:47	EPA 6020B	
Selenium	ND	0.500	1.00	ug/L	1	04/28/23 02:47	EPA 6020B	
Silver	ND	0.100	0.200	ug/L	1	04/28/23 02:47	EPA 6020B	
Sodium	ND	50.0	100	ug/L	1	04/28/23 02:47	EPA 6020B	
Vanadium	ND	1.00	2.00	ug/L	1	04/28/23 02:47	EPA 6020B	
Zinc	ND	2.00	4.00	ug/L	1	04/28/23 02:47	EPA 6020B	
GS-041323-74 (A3D1208-06RE1)				Matrix: WG				
Batch: 23D1024								
Thallium	ND	0.100	0.200	ug/L	1	05/02/23 17:24	EPA 6020B	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Anchor QEA, LLC**6720 SW Macadam Ave. Suite 125
Portland, OR 97219Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-69 (A3D1208-01)		Matrix: WG						
Batch: 23D0955								
Iron	30800	25.0	50.0	ug/L	1	04/27/23 20:04	EPA 6020B (Diss)	
Magnesium	29900	75.0	150	ug/L	1	04/27/23 20:04	EPA 6020B (Diss)	
GS-041323-70 (A3D1208-02)		Matrix: WG						
Batch: 23D0955								
Iron	34900	25.0	50.0	ug/L	1	04/27/23 20:09	EPA 6020B (Diss)	
Magnesium	32000	75.0	150	ug/L	1	04/27/23 20:09	EPA 6020B (Diss)	
GS-041323-71 (A3D1208-03)		Matrix: WG						
Batch: 23D0955								
Iron	34800	25.0	50.0	ug/L	1	04/27/23 20:14	EPA 6020B (Diss)	
Magnesium	31900	75.0	150	ug/L	1	04/27/23 20:14	EPA 6020B (Diss)	
GS-041323-72 (A3D1208-04)		Matrix: WG						
Batch: 23D0955								
Iron	41600	25.0	50.0	ug/L	1	04/27/23 20:19	EPA 6020B (Diss)	
Magnesium	28200	75.0	150	ug/L	1	04/27/23 20:19	EPA 6020B (Diss)	
GS-041323-73 (A3D1208-05)		Matrix: WG						
Batch: 23D0955								
Iron	37800	25.0	50.0	ug/L	1	04/27/23 20:24	EPA 6020B (Diss)	
Magnesium	31000	75.0	150	ug/L	1	04/27/23 20:24	EPA 6020B (Diss)	
GS-041323-74 (A3D1208-06)		Matrix: WG						
Batch: 23D0955								
Iron	79.6	25.0	50.0	ug/L	1	04/27/23 20:39	EPA 6020B (Diss)	
Magnesium	ND	75.0	150	ug/L	1	04/27/23 20:39	EPA 6020B (Diss)	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Anchor QEA, LLC**6720 SW Macadam Ave. Suite 125
Portland, OR 97219Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331**

ANALYTICAL SAMPLE RESULTS

Anions by Ion Chromatography

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-69 (A3D1208-01)				Matrix: WG				
Batch: 23D0605								
Chloride	17.7	0.500	1.00	mg/L	1	04/14/23 17:33	EPA 300.0	X
Nitrate-Nitrogen	ND	0.125	0.250	mg/L	1	04/14/23 17:33	EPA 300.0	X
Sulfate	ND	0.500	1.00	mg/L	1	04/14/23 17:33	EPA 300.0	X
GS-041323-70 (A3D1208-02)				Matrix: WG				
Batch: 23D0605								
Chloride	138	2.50	5.00	mg/L	5	04/14/23 17:55	EPA 300.0	X
GS-041323-70 (A3D1208-02RE1)				Matrix: WG				
Batch: 23D0605								
Nitrate-Nitrogen	ND	0.125	0.250	mg/L	1	04/14/23 18:16	EPA 300.0	X
Sulfate	39.4	0.500	1.00	mg/L	1	04/14/23 18:16	EPA 300.0	X
GS-041323-71 (A3D1208-03)				Matrix: WG				
Batch: 23D0605								
Chloride	138	2.50	5.00	mg/L	5	04/14/23 18:38	EPA 300.0	X
GS-041323-71 (A3D1208-03RE1)				Matrix: WG				
Batch: 23D0605								
Nitrate-Nitrogen	ND	0.125	0.250	mg/L	1	04/14/23 18:59	EPA 300.0	X
Sulfate	39.0	0.500	1.00	mg/L	1	04/14/23 18:59	EPA 300.0	X
GS-041323-72 (A3D1208-04)				Matrix: WG				
Batch: 23D0605								
Chloride	64.5	1.00	2.00	mg/L	2	04/14/23 19:21	EPA 300.0	X
GS-041323-72 (A3D1208-04RE1)				Matrix: WG				
Batch: 23D0605								
Nitrate-Nitrogen	ND	0.125	0.250	mg/L	1	04/14/23 19:42	EPA 300.0	X
Sulfate	ND	0.500	1.00	mg/L	1	04/14/23 19:42	EPA 300.0	X
GS-041323-73 (A3D1208-05RE1)				Matrix: WG				
Batch: 23D0605								
Nitrate-Nitrogen	ND	0.125	0.250	mg/L	1	04/14/23 21:09	EPA 300.0	Q-42, X
Sulfate	0.569	0.500	1.00	mg/L	1	04/14/23 21:09	EPA 300.0	J, Q-42, X

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

ANALYTICAL SAMPLE RESULTS

Anions by Ion Chromatography

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-73 (A3D1208-05RE2)				Matrix: WG				
Batch: 23D0605								
Chloride	81.2	2.50	5.00	mg/L	5	04/18/23 14:42	EPA 300.0	
GS-041323-74 (A3D1208-06)				Matrix: WG				
Batch: 23D0605								
Chloride	ND	0.500	1.00	mg/L	1	04/14/23 22:13	EPA 300.0	X
Nitrate-Nitrogen	ND	0.125	0.250	mg/L	1	04/14/23 22:13	EPA 300.0	X
Sulfate	ND	0.500	1.00	mg/L	1	04/14/23 22:13	EPA 300.0	X

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062Anchor QEA, LLC6720 SW Macadam Ave. Suite 125
Portland, OR 97219Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

ANALYTICAL SAMPLE RESULTS

Total Cyanide by Flow Analysis (Aqueous)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-69 (A3D1208-01)				Matrix: WG		Batch: 23D0915		
Total Cyanide	0.220	0.00500	0.00500	mg/L	1	04/25/23 11:14	EPA 335.4	
GS-041323-70 (A3D1208-02)				Matrix: WG		Batch: 23D0915		
Total Cyanide	0.0775	0.00500	0.00500	mg/L	1	04/25/23 11:16	EPA 335.4	
GS-041323-71 (A3D1208-03)				Matrix: WG		Batch: 23D0915		
Total Cyanide	0.0757	0.00500	0.00500	mg/L	1	04/25/23 11:18	EPA 335.4	
GS-041323-72 (A3D1208-04)				Matrix: WG		Batch: 23D0915		
Total Cyanide	0.104	0.00500	0.00500	mg/L	1	04/25/23 11:20	EPA 335.4	
GS-041323-73 (A3D1208-05)				Matrix: WG		Batch: 23D0915		
Total Cyanide	0.260	0.00500	0.00500	mg/L	1	04/25/23 11:30	EPA 335.4	Q-42
GS-041323-74 (A3D1208-06)				Matrix: WG		Batch: 23D0915		
Total Cyanide	ND	0.00500	0.00500	mg/L	1	04/25/23 11:22	EPA 335.4	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062Anchor QEA, LLC6720 SW Macadam Ave. Suite 125
Portland, OR 97219Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

ANALYTICAL SAMPLE RESULTS

Available Cyanide by FIA, Ligand Exchange and Amperometric Detection

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-69 (A3D1208-01)				Matrix: WG		Batch: 23D0748		
Available Cyanide	ND	0.00100	0.00200	mg/L	1	04/19/23 11:03	D6888-09	
GS-041323-70 (A3D1208-02)				Matrix: WG		Batch: 23D0748		
Available Cyanide	ND	0.00100	0.00200	mg/L	1	04/19/23 11:05	D6888-09	
GS-041323-71 (A3D1208-03)				Matrix: WG		Batch: 23D0748		
Available Cyanide	ND	0.00100	0.00200	mg/L	1	04/19/23 11:06	D6888-09	
GS-041323-72 (A3D1208-04)				Matrix: WG		Batch: 23D0748		
Available Cyanide	ND	0.00100	0.00200	mg/L	1	04/19/23 11:08	D6888-09	
GS-041323-73 (A3D1208-05)				Matrix: WG		Batch: 23D0748		
Available Cyanide	0.00102	0.00100	0.00200	mg/L	1	04/19/23 11:11	D6888-09	J
GS-041323-74 (A3D1208-06)				Matrix: WG		Batch: 23D0748		
Available Cyanide	ND	0.00100	0.00200	mg/L	1	04/19/23 11:15	D6888-09	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

ANALYTICAL SAMPLE RESULTS

Free Cyanide by Microdiffusion/Colorimetric Spectrophotometry

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-69 (A3D1208-01)				Matrix: WG		Batch: 23D0793		PRES
Free Cyanide	ND	0.00250	0.00500	mg/L	1	04/20/23 14:26	D4282-02	
GS-041323-70 (A3D1208-02)				Matrix: WG		Batch: 23D0793		PRES
Free Cyanide	ND	0.00250	0.00500	mg/L	1	04/20/23 14:26	D4282-02	
GS-041323-71 (A3D1208-03)				Matrix: WG		Batch: 23D0793		PRES
Free Cyanide	ND	0.00250	0.00500	mg/L	1	04/20/23 14:27	D4282-02	
GS-041323-72 (A3D1208-04)				Matrix: WG		Batch: 23D0793		PRES
Free Cyanide	ND	0.00250	0.00500	mg/L	1	04/20/23 14:31	D4282-02	
GS-041323-73 (A3D1208-05)				Matrix: WG		Batch: 23D0793		PRES
Free Cyanide	ND	0.00250	0.00500	mg/L	1	04/20/23 14:31	D4282-02	
GS-041323-74 (A3D1208-06)				Matrix: WG		Batch: 23D0793		
Free Cyanide	ND	0.00250	0.00500	mg/L	1	04/20/23 14:42	D4282-02	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Anchor QEA, LLC**6720 SW Macadam Ave. Suite 125
Portland, OR 97219Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331****ANALYTICAL SAMPLE RESULTS****Conventional Chemistry Parameters**

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-69 (A3D1208-01) Matrix: WG								
Batch: 23D0861								
Total Alkalinity	273	20.0	20.0	mg CaCO3/L	1	04/21/23 10:14	SM 2320 B	
Bicarbonate Alkalinity	273	20.0	20.0	mg CaCO3/L	1	04/21/23 10:14	SM 2320 B	
Carbonate Alkalinity	ND	20.0	20.0	mg CaCO3/L	1	04/21/23 10:14	SM 2320 B	
Hydroxide Alkalinity	ND	20.0	20.0	mg CaCO3/L	1	04/21/23 10:14	SM 2320 B	
GS-041323-70 (A3D1208-02) Matrix: WG								
Batch: 23D0861								
Total Alkalinity	218	20.0	20.0	mg CaCO3/L	1	04/21/23 10:28	SM 2320 B	
Bicarbonate Alkalinity	218	20.0	20.0	mg CaCO3/L	1	04/21/23 10:28	SM 2320 B	
Carbonate Alkalinity	ND	20.0	20.0	mg CaCO3/L	1	04/21/23 10:28	SM 2320 B	
Hydroxide Alkalinity	ND	20.0	20.0	mg CaCO3/L	1	04/21/23 10:28	SM 2320 B	
GS-041323-71 (A3D1208-03) Matrix: WG								
Batch: 23D0861								
Total Alkalinity	218	20.0	20.0	mg CaCO3/L	1	04/21/23 10:39	SM 2320 B	
Bicarbonate Alkalinity	218	20.0	20.0	mg CaCO3/L	1	04/21/23 10:39	SM 2320 B	
Carbonate Alkalinity	ND	20.0	20.0	mg CaCO3/L	1	04/21/23 10:39	SM 2320 B	
Hydroxide Alkalinity	ND	20.0	20.0	mg CaCO3/L	1	04/21/23 10:39	SM 2320 B	
GS-041323-72 (A3D1208-04) Matrix: WG								
Batch: 23D0861								
Total Alkalinity	240	20.0	20.0	mg CaCO3/L	1	04/21/23 11:02	SM 2320 B	
Bicarbonate Alkalinity	240	20.0	20.0	mg CaCO3/L	1	04/21/23 11:02	SM 2320 B	
Carbonate Alkalinity	ND	20.0	20.0	mg CaCO3/L	1	04/21/23 11:02	SM 2320 B	
Hydroxide Alkalinity	ND	20.0	20.0	mg CaCO3/L	1	04/21/23 11:02	SM 2320 B	
GS-041323-73 (A3D1208-05) Matrix: WG								
Batch: 23D0861								
Total Alkalinity	232	20.0	20.0	mg CaCO3/L	1	04/21/23 11:13	SM 2320 B	
Bicarbonate Alkalinity	232	20.0	20.0	mg CaCO3/L	1	04/21/23 11:13	SM 2320 B	
Carbonate Alkalinity	ND	20.0	20.0	mg CaCO3/L	1	04/21/23 11:13	SM 2320 B	
Hydroxide Alkalinity	ND	20.0	20.0	mg CaCO3/L	1	04/21/23 11:13	SM 2320 B	
GS-041323-74 (A3D1208-06) Matrix: WG								

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**

Project Number: **000029-02.84 T-01.001 H**

Project Manager: **John Renda**

Report ID:

A3D1208 - 05 19 23 1331

ANALYTICAL SAMPLE RESULTS

Conventional Chemistry Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-041323-74 (A3D1208-06)				Matrix: WG				
Batch: 23D0861								
Total Alkalinity	ND	20.0	20.0	mg CaCO3/L	1	04/21/23 11:33	SM 2320 B	
Bicarbonate Alkalinity	ND	20.0	20.0	mg CaCO3/L	1	04/21/23 11:33	SM 2320 B	
Carbonate Alkalinity	ND	20.0	20.0	mg CaCO3/L	1	04/21/23 11:33	SM 2320 B	
Hydroxide Alkalinity	ND	20.0	20.0	mg CaCO3/L	1	04/21/23 11:33	SM 2320 B	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**

Project Number: **000029-02.84 T-01.001 H**

Project Manager: **John Renda**

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0759 - EPA 5030C						Water						
Blank (23D0759-BLK1)			Prepared: 04/19/23 10:00		Analyzed: 04/19/23 12:34							
EPA 8260D												
Acetone	ND	10.0	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0759 - EPA 5030C						Water						
Blank (23D0759-BLK1)						Prepared: 04/19/23 10:00 Analyzed: 04/19/23 12:34						
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr) Recovery: 104 % Limits: 80-120 % Dilution: 1x												

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0759 - EPA 5030C						Water						
Blank (23D0759-BLK1)			Prepared: 04/19/23 10:00		Analyzed: 04/19/23 12:34							
Surr: Toluene-d8 (Surr)		Recovery: 106 %		Limits: 80-120 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		99 %		80-120 %		"						
LCS (23D0759-BS1)			Prepared: 04/19/23 10:00		Analyzed: 04/19/23 11:49							
EPA 8260D												
Acetone	46.7	10.0	20.0	ug/L	1	40.0	---	117	80-120%	---	---	
Acrylonitrile	23.4	1.00	2.00	ug/L	1	20.0	---	117	80-120%	---	---	
Benzene	20.7	0.100	0.200	ug/L	1	20.0	---	103	80-120%	---	---	
Bromobenzene	18.4	0.250	0.500	ug/L	1	20.0	---	92	80-120%	---	---	
Bromochloromethane	29.4	0.500	1.00	ug/L	1	20.0	---	147	80-120%	---	---	Q-56
Bromodichloromethane	20.4	0.500	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
Bromoform	18.6	0.500	1.00	ug/L	1	20.0	---	93	80-120%	---	---	
Bromomethane	23.7	5.00	5.00	ug/L	1	20.0	---	119	80-120%	---	---	
2-Butanone (MEK)	50.2	5.00	10.0	ug/L	1	40.0	---	126	80-120%	---	---	Q-56
n-Butylbenzene	20.6	0.500	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
sec-Butylbenzene	20.4	0.500	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
tert-Butylbenzene	17.9	0.500	1.00	ug/L	1	20.0	---	90	80-120%	---	---	
Carbon disulfide	23.4	5.00	10.0	ug/L	1	20.0	---	117	80-120%	---	---	
Carbon tetrachloride	19.6	0.500	1.00	ug/L	1	20.0	---	98	80-120%	---	---	
Chlorobenzene	19.6	0.250	0.500	ug/L	1	20.0	---	98	80-120%	---	---	
Chloroethane	28.6	5.00	5.00	ug/L	1	20.0	---	143	80-120%	---	---	Q-56
Chloroform	20.4	0.500	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
Chloromethane	20.5	2.50	5.00	ug/L	1	20.0	---	103	80-120%	---	---	
2-Chlorotoluene	18.3	0.500	1.00	ug/L	1	20.0	---	91	80-120%	---	---	
4-Chlorotoluene	18.9	0.500	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
Dibromochloromethane	19.8	0.500	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
1,2-Dibromo-3-chloropropane	16.9	2.50	5.00	ug/L	1	20.0	---	85	80-120%	---	---	
1,2-Dibromoethane (EDB)	19.7	0.250	0.500	ug/L	1	20.0	---	99	80-120%	---	---	
Dibromomethane	21.6	0.500	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
1,2-Dichlorobenzene	19.2	0.250	0.500	ug/L	1	20.0	---	96	80-120%	---	---	
1,3-Dichlorobenzene	19.0	0.250	0.500	ug/L	1	20.0	---	95	80-120%	---	---	
1,4-Dichlorobenzene	18.6	0.250	0.500	ug/L	1	20.0	---	93	80-120%	---	---	
Dichlorodifluoromethane	21.2	0.500	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
1,1-Dichloroethane	23.1	0.200	0.400	ug/L	1	20.0	---	115	80-120%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

**ANALYTICAL REPORT****Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0759 - EPA 5030C						Water						
LCS (23D0759-BS1)						Prepared: 04/19/23 10:00 Analyzed: 04/19/23 11:49						
1,2-Dichloroethane (EDC)	21.0	0.200	0.400	ug/L	1	20.0	---	105	80-120%	---	---	
1,1-Dichloroethene	23.5	0.200	0.400	ug/L	1	20.0	---	117	80-120%	---	---	
cis-1,2-Dichloroethene	21.7	0.200	0.400	ug/L	1	20.0	---	109	80-120%	---	---	
trans-1,2-Dichloroethene	21.9	0.200	0.400	ug/L	1	20.0	---	109	80-120%	---	---	
1,2-Dichloropropane	23.7	0.250	0.500	ug/L	1	20.0	---	119	80-120%	---	---	
1,3-Dichloropropane	21.5	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
2,2-Dichloropropane	21.7	0.500	1.00	ug/L	1	20.0	---	109	80-120%	---	---	
1,1-Dichloropropene	21.1	0.500	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
cis-1,3-Dichloropropene	20.5	0.500	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
trans-1,3-Dichloropropene	21.3	0.500	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
Ethylbenzene	19.7	0.250	0.500	ug/L	1	20.0	---	98	80-120%	---	---	
Hexachlorobutadiene	16.5	2.50	5.00	ug/L	1	20.0	---	82	80-120%	---	---	
2-Hexanone	44.7	5.00	10.0	ug/L	1	40.0	---	112	80-120%	---	---	
Isopropylbenzene	19.4	0.500	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
4-Isopropyltoluene	18.9	0.500	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
Methylene chloride	22.4	5.00	10.0	ug/L	1	20.0	---	112	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	46.1	5.00	10.0	ug/L	1	40.0	---	115	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	21.8	0.500	1.00	ug/L	1	20.0	---	109	80-120%	---	---	
Naphthalene	17.3	1.00	2.00	ug/L	1	20.0	---	87	80-120%	---	---	
n-Propylbenzene	19.5	0.250	0.500	ug/L	1	20.0	---	98	80-120%	---	---	
Styrene	19.6	0.500	1.00	ug/L	1	20.0	---	98	80-120%	---	---	
1,1,1,2-Tetrachloroethane	17.6	0.200	0.400	ug/L	1	20.0	---	88	80-120%	---	---	
1,1,2,2-Tetrachloroethane	21.5	0.250	0.500	ug/L	1	20.0	---	108	80-120%	---	---	
Tetrachloroethene (PCE)	18.4	0.200	0.400	ug/L	1	20.0	---	92	80-120%	---	---	
Toluene	19.9	0.500	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
1,2,3-Trichlorobenzene	17.4	1.00	2.00	ug/L	1	20.0	---	87	80-120%	---	---	
1,2,4-Trichlorobenzene	16.6	1.00	2.00	ug/L	1	20.0	---	83	80-120%	---	---	
1,1,1-Trichloroethane	19.6	0.200	0.400	ug/L	1	20.0	---	98	80-120%	---	---	
1,1,2-Trichloroethane	19.5	0.250	0.500	ug/L	1	20.0	---	98	80-120%	---	---	
Trichloroethene (TCE)	19.9	0.200	0.400	ug/L	1	20.0	---	100	80-120%	---	---	
Trichlorofluoromethane	21.1	1.00	2.00	ug/L	1	20.0	---	106	80-120%	---	---	
1,2,3-Trichloropropane	19.5	0.500	1.00	ug/L	1	20.0	---	98	80-120%	---	---	
1,2,4-Trimethylbenzene	19.2	0.500	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
1,3,5-Trimethylbenzene	19.3	0.500	1.00	ug/L	1	20.0	---	96	80-120%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0759 - EPA 5030C						Water						
LCS (23D0759-BS1)			Prepared: 04/19/23 10:00		Analyzed: 04/19/23 11:49							
Vinyl chloride	23.6	0.200	0.400	ug/L	1	20.0	---	118	80-120%	---	---	
m,p-Xylene	39.3	0.500	1.00	ug/L	1	40.0	---	98	80-120%	---	---	
o-Xylene	18.5	0.250	0.500	ug/L	1	20.0	---	93	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 105 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		105 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		91 %		80-120 %		"						

Duplicate (23D0759-DUP1)

Prepared: 04/19/23 12:31 Analyzed: 04/19/23 15:32

QC Source Sample: Non-SDG (A3D1293-01)

Acetone	ND	500	1000	ug/L	50	---	ND	---	---	---	30%
Acrylonitrile	ND	50.0	100	ug/L	50	---	ND	---	---	---	30%
Benzene	1410	5.00	10.0	ug/L	50	---	1420	---	---	0.6	30%
Bromobenzene	ND	12.5	25.0	ug/L	50	---	ND	---	---	---	30%
Bromochloromethane	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%
Bromodichloromethane	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%
Bromoform	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%
Bromomethane	ND	250	250	ug/L	50	---	ND	---	---	---	30%
2-Butanone (MEK)	ND	250	500	ug/L	50	---	ND	---	---	---	30%
n-Butylbenzene	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%
sec-Butylbenzene	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%
tert-Butylbenzene	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%
Carbon disulfide	ND	250	500	ug/L	50	---	ND	---	---	---	30%
Carbon tetrachloride	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%
Chlorobenzene	ND	12.5	25.0	ug/L	50	---	ND	---	---	---	30%
Chloroethane	ND	250	250	ug/L	50	---	ND	---	---	---	30%
Chloroform	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%
Chloromethane	ND	125	250	ug/L	50	---	ND	---	---	---	30%
2-Chlorotoluene	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%
4-Chlorotoluene	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%
Dibromochloromethane	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%
1,2-Dibromo-3-chloropropane	ND	125	250	ug/L	50	---	ND	---	---	---	30%
1,2-Dibromoethane (EDB)	ND	12.5	25.0	ug/L	50	---	ND	---	---	---	30%
Dibromomethane	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%
1,2-Dichlorobenzene	ND	12.5	25.0	ug/L	50	---	ND	---	---	---	30%

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0759 - EPA 5030C						Water						
Duplicate (23D0759-DUP1)			Prepared: 04/19/23 12:31 Analyzed: 04/19/23 15:32									
QC Source Sample: Non-SDG (A3D1293-01)												
1,3-Dichlorobenzene	ND	12.5	25.0	ug/L	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	12.5	25.0	ug/L	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	10.0	20.0	ug/L	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	10.0	20.0	ug/L	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	10.0	20.0	ug/L	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	10.0	20.0	ug/L	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	10.0	20.0	ug/L	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	12.5	25.0	ug/L	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%	
Ethylbenzene	68.0	12.5	25.0	ug/L	50	---	66.0	---	---	3	30%	
Hexachlorobutadiene	ND	125	250	ug/L	50	---	ND	---	---	---	30%	
2-Hexanone	ND	250	500	ug/L	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%	
Methylene chloride	ND	250	500	ug/L	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	250	500	ug/L	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%	
Naphthalene	1370	50.0	100	ug/L	50	---	1360	---	---	0.7	30%	
n-Propylbenzene	ND	12.5	25.0	ug/L	50	---	ND	---	---	---	30%	
Styrene	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	10.0	20.0	ug/L	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	12.5	25.0	ug/L	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	10.0	20.0	ug/L	50	---	ND	---	---	---	30%	
Toluene	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	50.0	100	ug/L	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	50.0	100	ug/L	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	10.0	20.0	ug/L	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	12.5	25.0	ug/L	50	---	ND	---	---	---	30%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	Limits	RPD	RPD Limit	Notes
Batch 23D0759 - EPA 5030C						Water						
Duplicate (23D0759-DUP1)			Prepared: 04/19/23 12:31 Analyzed: 04/19/23 15:32									
QC Source Sample: Non-SDG (A3D1293-01)												
Trichloroethene (TCE)	ND	10.0	20.0	ug/L	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	50.0	100	ug/L	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	10.0	20.0	ug/L	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%	
o-Xylene	ND	12.5	25.0	ug/L	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 103 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		108 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		96 %		80-120 %		"						
Matrix Spike (23D0759-MS1)						Prepared: 04/19/23 12:31 Analyzed: 04/19/23 19:36						
QC Source Sample: GS-041323-73 (A3D1208-05)												
EPA 8260D												
Acetone	2670	500	1000	ug/L	50	2000	ND	133	39-160%	---	---	
Acrylonitrile	1330	50.0	100	ug/L	50	1000	ND	133	63-135%	---	---	
Benzene	3730	5.00	10.0	ug/L	50	1000	2470	126	79-120%	---	---	Q-01
Bromobenzene	1030	12.5	25.0	ug/L	50	1000	ND	103	80-120%	---	---	
Bromochloromethane	1630	25.0	50.0	ug/L	50	1000	ND	163	78-123%	---	---	Q-54e
Bromodichloromethane	1140	25.0	50.0	ug/L	50	1000	ND	114	79-125%	---	---	
Bromoform	1010	25.0	50.0	ug/L	50	1000	ND	101	66-130%	---	---	
Bromomethane	1490	250	250	ug/L	50	1000	ND	149	53-141%	---	---	Q-01
2-Butanone (MEK)	2810	250	500	ug/L	50	2000	ND	141	56-143%	---	---	Q-54h
n-Butylbenzene	1290	25.0	50.0	ug/L	50	1000	ND	129	75-128%	---	---	Q-01
sec-Butylbenzene	1210	25.0	50.0	ug/L	50	1000	ND	121	77-126%	---	---	
tert-Butylbenzene	1070	25.0	50.0	ug/L	50	1000	ND	107	78-124%	---	---	
Carbon disulfide	1410	250	500	ug/L	50	1000	ND	141	64-133%	---	---	Q-01
Carbon tetrachloride	1160	25.0	50.0	ug/L	50	1000	ND	116	72-136%	---	---	
Chlorobenzene	1110	12.5	25.0	ug/L	50	1000	ND	111	80-120%	---	---	
Chloroethane	1610	250	250	ug/L	50	1000	ND	161	60-138%	---	---	Q-54d
Chloroform	1170	25.0	50.0	ug/L	50	1000	ND	117	79-124%	---	---	
Chloromethane	1240	125	250	ug/L	50	1000	ND	124	50-139%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Page 43 of 92



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0759 - EPA 5030C						Water						
Matrix Spike (23D0759-MS1)			Prepared: 04/19/23 12:31		Analyzed: 04/19/23 19:36							
QC Source Sample: GS-041323-73 (A3D1208-05)												
2-Chlorotoluene	1090	25.0	50.0	ug/L	50	1000	ND	109	79-122%	---	---	
4-Chlorotoluene	1110	25.0	50.0	ug/L	50	1000	ND	111	78-122%	---	---	
Dibromochloromethane	1090	25.0	50.0	ug/L	50	1000	ND	109	74-126%	---	---	
1,2-Dibromo-3-chloropropane	912	125	250	ug/L	50	1000	ND	91	62-128%	---	---	
1,2-Dibromoethane (EDB)	1080	12.5	25.0	ug/L	50	1000	ND	108	77-121%	---	---	
Dibromomethane	1210	25.0	50.0	ug/L	50	1000	ND	121	79-123%	---	---	
1,2-Dichlorobenzene	1100	12.5	25.0	ug/L	50	1000	ND	110	80-120%	---	---	
1,3-Dichlorobenzene	1140	12.5	25.0	ug/L	50	1000	ND	114	80-120%	---	---	
1,4-Dichlorobenzene	1100	12.5	25.0	ug/L	50	1000	ND	110	79-120%	---	---	
Dichlorodifluoromethane	1330	25.0	50.0	ug/L	50	1000	ND	133	32-152%	---	---	
1,1-Dichloroethane	1360	10.0	20.0	ug/L	50	1000	ND	136	77-125%	---	---	Q-01
1,2-Dichloroethane (EDC)	1180	10.0	20.0	ug/L	50	1000	ND	118	73-128%	---	---	
1,1-Dichloroethene	1420	10.0	20.0	ug/L	50	1000	ND	142	71-131%	---	---	Q-01
cis-1,2-Dichloroethene	1330	10.0	20.0	ug/L	50	1000	ND	133	78-123%	---	---	Q-01
trans-1,2-Dichloroethene	1340	10.0	20.0	ug/L	50	1000	ND	134	75-124%	---	---	Q-01
1,2-Dichloropropane	1380	12.5	25.0	ug/L	50	1000	ND	138	78-122%	---	---	Q-01
1,3-Dichloropropane	1200	25.0	50.0	ug/L	50	1000	ND	120	80-120%	---	---	
2,2-Dichloropropane	1160	25.0	50.0	ug/L	50	1000	ND	116	60-139%	---	---	
1,1-Dichloropropene	1310	25.0	50.0	ug/L	50	1000	ND	131	79-125%	---	---	Q-01
cis-1,3-Dichloropropene	1100	25.0	50.0	ug/L	50	1000	ND	110	75-124%	---	---	
trans-1,3-Dichloropropene	1170	25.0	50.0	ug/L	50	1000	ND	117	73-127%	---	---	
Ethylbenzene	1520	12.5	25.0	ug/L	50	1000	340	118	79-121%	---	---	
Hexachlorobutadiene	1060	125	250	ug/L	50	1000	ND	106	66-134%	---	---	
2-Hexanone	2510	250	500	ug/L	50	2000	ND	125	57-139%	---	---	
Isopropylbenzene	1160	25.0	50.0	ug/L	50	1000	ND	116	72-131%	---	---	
4-Isopropyltoluene	1140	25.0	50.0	ug/L	50	1000	ND	114	77-127%	---	---	
Methylene chloride	1230	250	500	ug/L	50	1000	ND	123	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	2470	250	500	ug/L	50	2000	ND	123	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	1190	25.0	50.0	ug/L	50	1000	ND	119	71-124%	---	---	
Naphthalene	8540	50.0	100	ug/L	50	1000	7550	99	61-128%	---	---	
n-Propylbenzene	1200	12.5	25.0	ug/L	50	1000	ND	120	76-126%	---	---	
Styrene	1140	25.0	50.0	ug/L	50	1000	ND	114	78-123%	---	---	
1,1,1,2-Tetrachloroethane	989	10.0	20.0	ug/L	50	1000	ND	99	78-124%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Page 44 of 92



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0759 - EPA 5030C						Water						
Matrix Spike (23D0759-MS1)			Prepared: 04/19/23 12:31		Analyzed: 04/19/23 19:36							
QC Source Sample: GS-041323-73 (A3D1208-05)												
1,1,2,2-Tetrachloroethane	1180	12.5	25.0	ug/L	50	1000	ND	118	71-121%	---	---	Q-01
Tetrachloroethene (PCE)	1070	10.0	20.0	ug/L	50	1000	ND	107	74-129%	---	---	
Toluene	1160	25.0	50.0	ug/L	50	1000	37.0	113	80-121%	---	---	
1,2,3-Trichlorobenzene	1050	50.0	100	ug/L	50	1000	ND	105	69-129%	---	---	
1,2,4-Trichlorobenzene	1030	50.0	100	ug/L	50	1000	ND	103	69-130%	---	---	
1,1,1-Trichloroethane	1160	10.0	20.0	ug/L	50	1000	ND	116	74-131%	---	---	
1,1,2-Trichloroethane	1070	12.5	25.0	ug/L	50	1000	ND	107	80-120%	---	---	
Trichloroethene (TCE)	1210	10.0	20.0	ug/L	50	1000	ND	121	79-123%	---	---	
Trichlorofluoromethane	1260	50.0	100	ug/L	50	1000	ND	126	65-141%	---	---	
1,2,3-Trichloropropane	1080	25.0	50.0	ug/L	50	1000	ND	108	73-122%	---	---	
1,2,4-Trimethylbenzene	1210	25.0	50.0	ug/L	50	1000	56.0	116	76-124%	---	---	
1,3,5-Trimethylbenzene	1170	25.0	50.0	ug/L	50	1000	ND	117	75-124%	---	---	
Vinyl chloride	1470	10.0	20.0	ug/L	50	1000	ND	147	58-137%	---	---	
m,p-Xylene	2400	25.0	50.0	ug/L	50	2000	126	114	80-121%	---	---	
o-Xylene	1170	12.5	25.0	ug/L	50	1000	90.5	108	78-122%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 107 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		103 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		91 %		80-120 %		"						

Matrix Spike Dup (23D0759-MSD1)

Prepared: 04/19/23 12:31 Analyzed: 04/19/23 19:59

QC Source Sample: GS-041323-73 (A3D1208-05)

EPA 8260D

Acetone	2360	500	1000	ug/L	50	2000	ND	118	39-160%	12	30%	
Acrylonitrile	1240	50.0	100	ug/L	50	1000	ND	124	63-135%	7	30%	
Benzene	3580	5.00	10.0	ug/L	50	1000	2470	111	79-120%	4	30%	
Bromobenzene	1070	12.5	25.0	ug/L	50	1000	ND	107	80-120%	4	30%	
Bromochloromethane	1580	25.0	50.0	ug/L	50	1000	ND	158	78-123%	3	30%	Q-54e
Bromodichloromethane	1120	25.0	50.0	ug/L	50	1000	ND	112	79-125%	2	30%	
Bromoform	1010	25.0	50.0	ug/L	50	1000	ND	101	66-130%	0.3	30%	
Bromomethane	1490	250	250	ug/L	50	1000	ND	149	53-141%	0.03	30%	Q-01
2-Butanone (MEK)	2590	250	500	ug/L	50	2000	ND	129	56-143%	8	30%	Q-54h
n-Butylbenzene	1310	25.0	50.0	ug/L	50	1000	ND	131	75-128%	1	30%	Q-01
sec-Butylbenzene	1210	25.0	50.0	ug/L	50	1000	ND	121	77-126%	0.3	30%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0759 - EPA 5030C						Water						
Matrix Spike Dup (23D0759-MSD1)			Prepared: 04/19/23 12:31		Analyzed: 04/19/23 19:59							
QC Source Sample: GS-041323-73 (A3D1208-05)												
tert-Butylbenzene	1080	25.0	50.0	ug/L	50	1000	ND	108	78-124%	1	30%	
Carbon disulfide	1370	250	500	ug/L	50	1000	ND	137	64-133%	3	30%	Q-01
Carbon tetrachloride	1130	25.0	50.0	ug/L	50	1000	ND	113	72-136%	3	30%	
Chlorobenzene	1110	12.5	25.0	ug/L	50	1000	ND	111	80-120%	0.5	30%	
Chloroethane	1440	250	250	ug/L	50	1000	ND	144	60-138%	11	30%	Q-54d
Chloroform	1140	25.0	50.0	ug/L	50	1000	ND	114	79-124%	3	30%	
Chloromethane	1210	125	250	ug/L	50	1000	ND	121	50-139%	3	30%	
2-Chlorotoluene	1100	25.0	50.0	ug/L	50	1000	ND	110	79-122%	1	30%	
4-Chlorotoluene	1100	25.0	50.0	ug/L	50	1000	ND	110	78-122%	1	30%	
Dibromochloromethane	1070	25.0	50.0	ug/L	50	1000	ND	107	74-126%	2	30%	
1,2-Dibromo-3-chloropropane	1010	125	250	ug/L	50	1000	ND	101	62-128%	10	30%	
1,2-Dibromoethane (EDB)	1080	12.5	25.0	ug/L	50	1000	ND	108	77-121%	0.8	30%	
Dibromomethane	1180	25.0	50.0	ug/L	50	1000	ND	118	79-123%	3	30%	
1,2-Dichlorobenzene	1140	12.5	25.0	ug/L	50	1000	ND	114	80-120%	4	30%	
1,3-Dichlorobenzene	1160	12.5	25.0	ug/L	50	1000	ND	116	80-120%	1	30%	
1,4-Dichlorobenzene	1100	12.5	25.0	ug/L	50	1000	ND	110	79-120%	0.05	30%	
Dichlorodifluoromethane	1320	25.0	50.0	ug/L	50	1000	ND	132	32-152%	0.8	30%	
1,1-Dichloroethane	1320	10.0	20.0	ug/L	50	1000	ND	132	77-125%	3	30%	Q-01
1,2-Dichloroethane (EDC)	1130	10.0	20.0	ug/L	50	1000	ND	113	73-128%	4	30%	
1,1-Dichloroethene	1400	10.0	20.0	ug/L	50	1000	ND	140	71-131%	2	30%	Q-01
cis-1,2-Dichloroethene	1240	10.0	20.0	ug/L	50	1000	ND	124	78-123%	7	30%	Q-01
trans-1,2-Dichloroethene	1280	10.0	20.0	ug/L	50	1000	ND	128	75-124%	4	30%	Q-01
1,2-Dichloropropane	1370	12.5	25.0	ug/L	50	1000	ND	137	78-122%	0.8	30%	Q-01
1,3-Dichloropropane	1170	25.0	50.0	ug/L	50	1000	ND	117	80-120%	3	30%	
2,2-Dichloropropane	1120	25.0	50.0	ug/L	50	1000	ND	112	60-139%	3	30%	
1,1-Dichloropropene	1270	25.0	50.0	ug/L	50	1000	ND	127	79-125%	3	30%	Q-01
cis-1,3-Dichloropropene	1080	25.0	50.0	ug/L	50	1000	ND	108	75-124%	3	30%	
trans-1,3-Dichloropropene	1120	25.0	50.0	ug/L	50	1000	ND	112	73-127%	4	30%	
Ethylbenzene	1500	12.5	25.0	ug/L	50	1000	340	116	79-121%	1	30%	
Hexachlorobutadiene	1000	125	250	ug/L	50	1000	ND	100	66-134%	5	30%	
2-Hexanone	2360	250	500	ug/L	50	2000	ND	118	57-139%	6	30%	
Isopropylbenzene	1160	25.0	50.0	ug/L	50	1000	ND	116	72-131%	0.4	30%	
4-Isopropyltoluene	1160	25.0	50.0	ug/L	50	1000	ND	116	77-127%	1	30%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Page 46 of 92



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0759 - EPA 5030C						Water						
Matrix Spike Dup (23D0759-MSD1)				Prepared: 04/19/23 12:31 Analyzed: 04/19/23 19:59								
QC Source Sample: GS-041323-73 (A3D1208-05)												
Methylene chloride	1190	250	500	ug/L	50	1000	ND	119	74-124%	3	30%	
4-Methyl-2-pentanone (MiBK)	2360	250	500	ug/L	50	2000	ND	118	67-130%	4	30%	
Methyl tert-butyl ether (MTBE)	1140	25.0	50.0	ug/L	50	1000	ND	114	71-124%	4	30%	
Naphthalene	8470	50.0	100	ug/L	50	1000	7550	92	61-128%	0.8	30%	
n-Propylbenzene	1210	12.5	25.0	ug/L	50	1000	ND	121	76-126%	0.7	30%	
Styrene	1130	25.0	50.0	ug/L	50	1000	ND	113	78-123%	1	30%	
1,1,1,2-Tetrachloroethane	985	10.0	20.0	ug/L	50	1000	ND	98	78-124%	0.4	30%	
1,1,2,2-Tetrachloroethane	1200	12.5	25.0	ug/L	50	1000	ND	120	71-121%	2	30%	
Tetrachloroethene (PCE)	1060	10.0	20.0	ug/L	50	1000	ND	106	74-129%	0.7	30%	
Toluene	1160	25.0	50.0	ug/L	50	1000	37.0	112	80-121%	0.7	30%	
1,2,3-Trichlorobenzene	1070	50.0	100	ug/L	50	1000	ND	107	69-129%	2	30%	
1,2,4-Trichlorobenzene	1050	50.0	100	ug/L	50	1000	ND	105	69-130%	2	30%	
1,1,1-Trichloroethane	1120	10.0	20.0	ug/L	50	1000	ND	112	74-131%	4	30%	
1,1,2-Trichloroethane	1050	12.5	25.0	ug/L	50	1000	ND	105	80-120%	2	30%	
Trichloroethene (TCE)	1190	10.0	20.0	ug/L	50	1000	ND	119	79-123%	1	30%	
Trichlorofluoromethane	1230	50.0	100	ug/L	50	1000	ND	123	65-141%	3	30%	
1,2,3-Trichloropropane	1080	25.0	50.0	ug/L	50	1000	ND	108	73-122%	0.4	30%	
1,2,4-Trimethylbenzene	1210	25.0	50.0	ug/L	50	1000	56.0	115	76-124%	0.3	30%	
1,3,5-Trimethylbenzene	1160	25.0	50.0	ug/L	50	1000	ND	116	75-124%	0.8	30%	
Vinyl chloride	1420	10.0	20.0	ug/L	50	1000	ND	142	58-137%	4	30%	Q-01
m,p-Xylene	2400	25.0	50.0	ug/L	50	2000	126	114	80-121%	0.1	30%	
o-Xylene	1190	12.5	25.0	ug/L	50	1000	90.5	110	78-122%	0.9	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 107 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		104 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		94 %		80-120 %		"						

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0815 - EPA 5030C						Water						
Blank (23D0815-BLK1)			Prepared: 04/20/23 12:00		Analyzed: 04/20/23 12:53							
EPA 8260D												
Acetone	ND	10.0	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0815 - EPA 5030C						Water						
Blank (23D0815-BLK1)						Prepared: 04/20/23 12:00 Analyzed: 04/20/23 12:53						
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	2.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr) Recovery: 105 % Limits: 80-120 % Dilution: 1x												

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0815 - EPA 5030C						Water						
Blank (23D0815-BLK1)			Prepared: 04/20/23 12:00		Analyzed: 04/20/23 12:53							
Surr: Toluene-d8 (Surr)		Recovery: 108 %		Limits: 80-120 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		99 %		80-120 %		"						
LCS (23D0815-BS1)			Prepared: 04/20/23 12:00		Analyzed: 04/20/23 12:08							
EPA 8260D												
Acetone	44.2	10.0	20.0	ug/L	1	40.0	---	111	80-120%	---	---	
Acrylonitrile	21.9	1.00	2.00	ug/L	1	20.0	---	110	80-120%	---	---	
Benzene	19.7	0.100	0.200	ug/L	1	20.0	---	99	80-120%	---	---	
Bromobenzene	17.1	0.250	0.500	ug/L	1	20.0	---	86	80-120%	---	---	
Bromochloromethane	28.7	0.500	1.00	ug/L	1	20.0	---	143	80-120%	---	---	Q-56
Bromodichloromethane	19.6	0.500	1.00	ug/L	1	20.0	---	98	80-120%	---	---	
Bromoform	16.9	0.500	1.00	ug/L	1	20.0	---	85	80-120%	---	---	
Bromomethane	25.0	5.00	5.00	ug/L	1	20.0	---	125	80-120%	---	---	Q-56
2-Butanone (MEK)	47.4	5.00	10.0	ug/L	1	40.0	---	118	80-120%	---	---	
n-Butylbenzene	20.4	0.500	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
sec-Butylbenzene	19.5	0.500	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
tert-Butylbenzene	17.6	0.500	1.00	ug/L	1	20.0	---	88	80-120%	---	---	
Carbon disulfide	22.3	5.00	10.0	ug/L	1	20.0	---	112	80-120%	---	---	
Carbon tetrachloride	18.7	0.500	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
Chlorobenzene	18.6	0.250	0.500	ug/L	1	20.0	---	93	80-120%	---	---	
Chloroethane	25.2	5.00	5.00	ug/L	1	20.0	---	126	80-120%	---	---	Q-56
Chloroform	19.5	0.500	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
Chloromethane	21.0	2.50	5.00	ug/L	1	20.0	---	105	80-120%	---	---	
2-Chlorotoluene	17.7	0.500	1.00	ug/L	1	20.0	---	88	80-120%	---	---	
4-Chlorotoluene	18.5	0.500	1.00	ug/L	1	20.0	---	92	80-120%	---	---	
Dibromochloromethane	18.5	0.500	1.00	ug/L	1	20.0	---	93	80-120%	---	---	
1,2-Dibromo-3-chloropropane	16.8	2.50	5.00	ug/L	1	20.0	---	84	80-120%	---	---	
1,2-Dibromoethane (EDB)	18.6	0.250	0.500	ug/L	1	20.0	---	93	80-120%	---	---	
Dibromomethane	20.3	0.500	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
1,2-Dichlorobenzene	18.4	0.250	0.500	ug/L	1	20.0	---	92	80-120%	---	---	
1,3-Dichlorobenzene	18.8	0.250	0.500	ug/L	1	20.0	---	94	80-120%	---	---	
1,4-Dichlorobenzene	18.2	0.250	0.500	ug/L	1	20.0	---	91	80-120%	---	---	
Dichlorodifluoromethane	21.5	0.500	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
1,1-Dichloroethane	22.1	0.200	0.400	ug/L	1	20.0	---	110	80-120%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Page 50 of 92



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0815 - EPA 5030C						Water						
LCS (23D0815-BS1)			Prepared: 04/20/23 12:00		Analyzed: 04/20/23 12:08							
1,2-Dichloroethane (EDC)	20.3	0.200	0.400	ug/L	1	20.0	---	101	80-120%	---	---	
1,1-Dichloroethene	23.1	0.200	0.400	ug/L	1	20.0	---	115	80-120%	---	---	
cis-1,2-Dichloroethene	21.3	0.200	0.400	ug/L	1	20.0	---	106	80-120%	---	---	
trans-1,2-Dichloroethene	21.1	0.200	0.400	ug/L	1	20.0	---	106	80-120%	---	---	
1,2-Dichloropropane	22.8	0.250	0.500	ug/L	1	20.0	---	114	80-120%	---	---	
1,3-Dichloropropane	20.3	0.500	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
2,2-Dichloropropane	21.1	0.500	1.00	ug/L	1	20.0	---	105	80-120%	---	---	
1,1-Dichloropropene	21.3	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
cis-1,3-Dichloropropene	20.1	0.500	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
trans-1,3-Dichloropropene	20.5	0.500	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
Ethylbenzene	19.5	0.250	0.500	ug/L	1	20.0	---	98	80-120%	---	---	
Hexachlorobutadiene	16.2	2.50	5.00	ug/L	1	20.0	---	81	80-120%	---	---	
2-Hexanone	42.1	5.00	10.0	ug/L	1	40.0	---	105	80-120%	---	---	
Isopropylbenzene	18.8	0.500	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
4-Isopropyltoluene	18.7	0.500	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
Methylene chloride	20.4	5.00	10.0	ug/L	1	20.0	---	102	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	43.3	5.00	10.0	ug/L	1	40.0	---	108	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	19.8	0.500	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
Naphthalene	16.8	1.00	2.00	ug/L	1	20.0	---	84	80-120%	---	---	
n-Propylbenzene	19.5	0.250	0.500	ug/L	1	20.0	---	98	80-120%	---	---	
Styrene	18.7	0.500	1.00	ug/L	1	20.0	---	93	80-120%	---	---	
1,1,1,2-Tetrachloroethane	16.8	0.200	0.400	ug/L	1	20.0	---	84	80-120%	---	---	
1,1,2,2-Tetrachloroethane	20.2	0.250	0.500	ug/L	1	20.0	---	101	80-120%	---	---	
Tetrachloroethene (PCE)	17.5	0.200	0.400	ug/L	1	20.0	---	87	80-120%	---	---	
Toluene	19.2	0.250	0.500	ug/L	1	20.0	---	96	80-120%	---	---	
1,2,3-Trichlorobenzene	15.7	2.00	2.00	ug/L	1	20.0	---	79	80-120%	---	---	Q-55
1,2,4-Trichlorobenzene	16.4	1.00	2.00	ug/L	1	20.0	---	82	80-120%	---	---	
1,1,1-Trichloroethane	18.8	0.200	0.400	ug/L	1	20.0	---	94	80-120%	---	---	
1,1,2-Trichloroethane	18.7	0.250	0.500	ug/L	1	20.0	---	94	80-120%	---	---	
Trichloroethene (TCE)	19.2	0.200	0.400	ug/L	1	20.0	---	96	80-120%	---	---	
Trichlorofluoromethane	20.2	1.00	2.00	ug/L	1	20.0	---	101	80-120%	---	---	
1,2,3-Trichloropropane	18.7	0.500	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
1,2,4-Trimethylbenzene	18.5	0.500	1.00	ug/L	1	20.0	---	92	80-120%	---	---	
1,3,5-Trimethylbenzene	18.5	0.500	1.00	ug/L	1	20.0	---	93	80-120%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Page 51 of 92



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0815 - EPA 5030C						Water						
LCS (23D0815-BS1)			Prepared: 04/20/23 12:00		Analyzed: 04/20/23 12:08							
Vinyl chloride	22.4	0.200	0.400	ug/L	1	20.0	---	112	80-120%	---	---	
m,p-Xylene	37.4	0.500	1.00	ug/L	1	40.0	---	93	80-120%	---	---	
o-Xylene	17.8	0.250	0.500	ug/L	1	20.0	---	89	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 106 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		106 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		92 %		80-120 %		"						

Duplicate (23D0815-DUP1)

Prepared: 04/20/23 12:00 Analyzed: 04/20/23 21:47

QC Source Sample: Non-SDG (A3D1353-03)

Acetone	ND	100	200	ug/L	10	---	ND	---	---	---	30%
Acrylonitrile	ND	10.0	20.0	ug/L	10	---	ND	---	---	---	30%
Benzene	693	1.00	2.00	ug/L	10	---	666	---	---	4	30%
Bromobenzene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%
Bromochloromethane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%
Bromodichloromethane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%
Bromoform	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%
Bromomethane	ND	50.0	50.0	ug/L	10	---	ND	---	---	---	30%
2-Butanone (MEK)	ND	50.0	100	ug/L	10	---	ND	---	---	---	30%
n-Butylbenzene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%
sec-Butylbenzene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%
tert-Butylbenzene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%
Carbon disulfide	ND	50.0	100	ug/L	10	---	ND	---	---	---	30%
Carbon tetrachloride	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%
Chlorobenzene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%
Chloroethane	ND	50.0	50.0	ug/L	10	---	ND	---	---	---	30%
Chloroform	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%
Chloromethane	ND	25.0	50.0	ug/L	10	---	ND	---	---	---	30%
2-Chlorotoluene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%
4-Chlorotoluene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%
Dibromochloromethane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%
1,2-Dibromo-3-chloropropane	ND	25.0	50.0	ug/L	10	---	ND	---	---	---	30%
1,2-Dibromoethane (EDB)	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%
Dibromomethane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%
1,2-Dichlorobenzene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0815 - EPA 5030C						Water						
Duplicate (23D0815-DUP1)			Prepared: 04/20/23 12:00 Analyzed: 04/20/23 21:47									
QC Source Sample: Non-SDG (A3D1353-03)												
1,3-Dichlorobenzene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Ethylbenzene	52.1	2.50	5.00	ug/L	10	---	49.1	---	---	6	30%	
Hexachlorobutadiene	ND	25.0	50.0	ug/L	10	---	ND	---	---	---	30%	
2-Hexanone	ND	50.0	100	ug/L	10	---	ND	---	---	---	30%	
Isopropylbenzene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Methylene chloride	ND	50.0	100	ug/L	10	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	50.0	100	ug/L	10	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Naphthalene	581	10.0	20.0	ug/L	10	---	548	---	---	6	30%	
n-Propylbenzene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
Styrene	17.8	5.00	10.0	ug/L	10	---	16.5	---	---	8	30%	
1,1,1,2-Tetrachloroethane	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
Toluene	435	2.50	5.00	ug/L	10	---	414	---	---	5	30%	
1,2,3-Trichlorobenzene	ND	20.0	20.0	ug/L	10	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	10.0	20.0	ug/L	10	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	Limits	RPD	RPD Limit	Notes
Batch 23D0815 - EPA 5030C						Water						
Duplicate (23D0815-DUP1)			Prepared: 04/20/23 12:00 Analyzed: 04/20/23 21:47									
QC Source Sample: Non-SDG (A3D1353-03)												
Trichloroethene (TCE)	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	10.0	20.0	ug/L	10	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	21.6	5.00	10.0	ug/L	10	---	20.7	---	---	4	30%	
1,3,5-Trimethylbenzene	11.7	5.00	10.0	ug/L	10	---	10.6	---	---	10	30%	
Vinyl chloride	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
m,p-Xylene	156	5.00	10.0	ug/L	10	---	149	---	---	5	30%	
o-Xylene	62.7	2.50	5.00	ug/L	10	---	59.5	---	---	5	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 108 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		105 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		99 %		80-120 %		"						
Matrix Spike (23D0815-MS1)						Prepared: 04/20/23 12:00 Analyzed: 04/20/23 20:40						
QC Source Sample: Non-SDG (A3D1353-08)												
EPA 8260D												
Acetone	221	50.0	100	ug/L	5	200	ND	111	39-160%	---	---	
Acrylonitrile	105	5.00	10.0	ug/L	5	100	ND	105	63-135%	---	---	
Benzene	551	0.500	1.00	ug/L	5	100	462	88	79-120%	---	---	
Bromobenzene	94.6	1.25	2.50	ug/L	5	100	ND	95	80-120%	---	---	
Bromochloromethane	136	2.50	5.00	ug/L	5	100	ND	136	78-123%	---	---	Q-54d
Bromodichloromethane	99.8	2.50	5.00	ug/L	5	100	ND	100	79-125%	---	---	
Bromoform	87.8	2.50	5.00	ug/L	5	100	ND	88	66-130%	---	---	
Bromomethane	147	25.0	25.0	ug/L	5	100	ND	147	53-141%	---	---	Q-54g
2-Butanone (MEK)	222	25.0	50.0	ug/L	5	200	ND	111	56-143%	---	---	
n-Butylbenzene	111	2.50	5.00	ug/L	5	100	ND	111	75-128%	---	---	
sec-Butylbenzene	106	2.50	5.00	ug/L	5	100	ND	106	77-126%	---	---	
tert-Butylbenzene	92.5	2.50	5.00	ug/L	5	100	ND	92	78-124%	---	---	
Carbon disulfide	118	25.0	50.0	ug/L	5	100	ND	118	64-133%	---	---	
Carbon tetrachloride	100	2.50	5.00	ug/L	5	100	ND	100	72-136%	---	---	
Chlorobenzene	96.8	1.25	2.50	ug/L	5	100	ND	97	80-120%	---	---	
Chloroethane	124	25.0	25.0	ug/L	5	100	ND	124	60-138%	---	---	Q-54h
Chloroform	99.9	2.50	5.00	ug/L	5	100	ND	100	79-124%	---	---	
Chloromethane	111	12.5	25.0	ug/L	5	100	ND	111	50-139%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0815 - EPA 5030C						Water						
Matrix Spike (23D0815-MS1)			Prepared: 04/20/23 12:00		Analyzed: 04/20/23 20:40							
QC Source Sample: Non-SDG (A3D1353-08)												
2-Chlorotoluene	96.2	2.50	5.00	ug/L	5	100	ND	96	79-122%	---	---	
4-Chlorotoluene	97.4	2.50	5.00	ug/L	5	100	ND	97	78-122%	---	---	
Dibromochloromethane	92.6	2.50	5.00	ug/L	5	100	ND	93	74-126%	---	---	
1,2-Dibromo-3-chloropropane	89.8	12.5	25.0	ug/L	5	100	ND	90	62-128%	---	---	
1,2-Dibromoethane (EDB)	95.6	1.25	2.50	ug/L	5	100	ND	96	77-121%	---	---	
Dibromomethane	103	2.50	5.00	ug/L	5	100	ND	103	79-123%	---	---	
1,2-Dichlorobenzene	98.2	1.25	2.50	ug/L	5	100	ND	98	80-120%	---	---	
1,3-Dichlorobenzene	99.8	1.25	2.50	ug/L	5	100	ND	100	80-120%	---	---	
1,4-Dichlorobenzene	97.2	1.25	2.50	ug/L	5	100	ND	97	79-120%	---	---	
Dichlorodifluoromethane	115	2.50	5.00	ug/L	5	100	ND	115	32-152%	---	---	
1,1-Dichloroethane	115	1.00	2.00	ug/L	5	100	ND	115	77-125%	---	---	
1,2-Dichloroethane (EDC)	99.4	1.00	2.00	ug/L	5	100	ND	99	73-128%	---	---	
1,1-Dichloroethene	121	1.00	2.00	ug/L	5	100	ND	121	71-131%	---	---	
cis-1,2-Dichloroethene	112	1.00	2.00	ug/L	5	100	ND	112	78-123%	---	---	
trans-1,2-Dichloroethene	114	1.00	2.00	ug/L	5	100	ND	114	75-124%	---	---	
1,2-Dichloropropane	118	1.25	2.50	ug/L	5	100	ND	118	78-122%	---	---	
1,3-Dichloropropane	99.4	2.50	5.00	ug/L	5	100	ND	99	80-120%	---	---	
2,2-Dichloropropane	98.4	2.50	5.00	ug/L	5	100	ND	98	60-139%	---	---	
1,1-Dichloropropene	114	2.50	5.00	ug/L	5	100	ND	114	79-125%	---	---	
cis-1,3-Dichloropropene	94.2	2.50	5.00	ug/L	5	100	ND	94	75-124%	---	---	
trans-1,3-Dichloropropene	99.1	2.50	5.00	ug/L	5	100	ND	99	73-127%	---	---	
Ethylbenzene	128	1.25	2.50	ug/L	5	100	28.5	100	79-121%	---	---	
Hexachlorobutadiene	87.3	12.5	25.0	ug/L	5	100	ND	87	66-134%	---	---	
2-Hexanone	199	25.0	50.0	ug/L	5	200	ND	99	57-139%	---	---	
Isopropylbenzene	101	2.50	5.00	ug/L	5	100	ND	101	72-131%	---	---	
4-Isopropyltoluene	103	2.50	5.00	ug/L	5	100	ND	103	77-127%	---	---	
Methylene chloride	108	25.0	50.0	ug/L	5	100	ND	108	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	199	25.0	50.0	ug/L	5	200	ND	99	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	101	2.50	5.00	ug/L	5	100	ND	101	71-124%	---	---	
Naphthalene	1090	5.00	10.0	ug/L	5	100	1040	45	61-128%	---	---	Q-03, E
n-Propylbenzene	105	1.25	2.50	ug/L	5	100	ND	105	76-126%	---	---	
Styrene	97.8	2.50	5.00	ug/L	5	100	ND	98	78-123%	---	---	
1,1,1,2-Tetrachloroethane	83.4	1.00	2.00	ug/L	5	100	ND	83	78-124%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Page 55 of 92



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 23D0815 - EPA 5030C						Water							
Matrix Spike (23D0815-MS1)			Prepared: 04/20/23 12:00		Analyzed: 04/20/23 20:40								
QC Source Sample: Non-SDG (A3D1353-08)													
1,1,2,2-Tetrachloroethane	104	1.25	2.50	ug/L	5	100	ND	104	71-121%	---	---	Q-54j	
Tetrachloroethene (PCE)	97.0	1.00	2.00	ug/L	5	100	ND	97	74-129%	---	---		
Toluene	116	1.25	2.50	ug/L	5	100	18.4	98	80-121%	---	---		
1,2,3-Trichlorobenzene	94.7	10.0	10.0	ug/L	5	100	ND	95	69-129%	---	---		
1,2,4-Trichlorobenzene	95.9	5.00	10.0	ug/L	5	100	ND	96	69-130%	---	---		
1,1,1-Trichloroethane	99.4	1.00	2.00	ug/L	5	100	ND	99	74-131%	---	---		
1,1,2-Trichloroethane	93.2	1.25	2.50	ug/L	5	100	ND	93	80-120%	---	---		
Trichloroethene (TCE)	106	1.00	2.00	ug/L	5	100	ND	106	79-123%	---	---		
Trichlorofluoromethane	106	5.00	10.0	ug/L	5	100	ND	106	65-141%	---	---		
1,2,3-Trichloropropane	91.0	2.50	5.00	ug/L	5	100	ND	91	73-122%	---	---		
1,2,4-Trimethylbenzene	111	2.50	5.00	ug/L	5	100	12.6	99	76-124%	---	---	Q-54j	
1,3,5-Trimethylbenzene	105	2.50	5.00	ug/L	5	100	3.25	102	75-124%	---	---		
Vinyl chloride	134	1.00	2.00	ug/L	5	100	ND	134	58-137%	---	---		
m,p-Xylene	210	2.50	5.00	ug/L	5	200	13.6	98	80-121%	---	---		
o-Xylene	110	1.25	2.50	ug/L	5	100	15.2	94	78-122%	---	---		
Surr: 1,4-Difluorobenzene (Surr)													
		Recovery:	110 %	Limits:	80-120 %	Dilution: 1x							
Toluene-d8 (Surr)			103 %		80-120 %	"							
4-Bromofluorobenzene (Surr)			99 %		80-120 %	"							

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Page 56 of 92

**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Anchor QEA, LLC**6720 SW Macadam Ave. Suite 125
Portland, OR 97219Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331****QUALITY CONTROL (QC) SAMPLE RESULTS****Volatile Organic Compounds by EPA 8260D**

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0859 - EPA 5030C						Water						
Blank (23D0859-BLK1)			Prepared: 04/21/23 09:00		Analyzed: 04/21/23 10:46							
EPA 8260D												
Acetone	ND	10.0	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0859 - EPA 5030C						Water						
Blank (23D0859-BLK1)						Prepared: 04/21/23 09:00 Analyzed: 04/21/23 10:46						
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr) Recovery: 109 % Limits: 80-120 % Dilution: 1x												

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0859 - EPA 5030C						Water						
Blank (23D0859-BLK1)			Prepared: 04/21/23 09:00		Analyzed: 04/21/23 10:46							
Surr: Toluene-d8 (Surr)		Recovery: 110 %		Limits: 80-120 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		97 %		80-120 %		"						
LCS (23D0859-BS1)			Prepared: 04/21/23 09:00		Analyzed: 04/21/23 09:51							
EPA 8260D												
Acetone	47.1	10.0	20.0	ug/L	1	40.0	---	118	80-120%	---	---	
Acrylonitrile	23.7	1.00	2.00	ug/L	1	20.0	---	119	80-120%	---	---	
Benzene	21.4	0.100	0.200	ug/L	1	20.0	---	107	80-120%	---	---	
Bromobenzene	18.1	0.250	0.500	ug/L	1	20.0	---	90	80-120%	---	---	
Bromochloromethane	30.8	0.500	1.00	ug/L	1	20.0	---	154	80-120%	---	---	Q-56
Bromodichloromethane	20.6	0.500	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
Bromoform	17.7	0.500	1.00	ug/L	1	20.0	---	88	80-120%	---	---	
Bromomethane	29.3	5.00	5.00	ug/L	1	20.0	---	147	80-120%	---	---	Q-56
2-Butanone (MEK)	51.3	5.00	10.0	ug/L	1	40.0	---	128	80-120%	---	---	Q-56
n-Butylbenzene	21.6	0.500	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
sec-Butylbenzene	20.8	0.500	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
tert-Butylbenzene	17.4	0.500	1.00	ug/L	1	20.0	---	87	80-120%	---	---	
Carbon disulfide	24.3	5.00	10.0	ug/L	1	20.0	---	122	80-120%	---	---	Q-56
Carbon tetrachloride	19.1	0.500	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
Chlorobenzene	19.3	0.250	0.500	ug/L	1	20.0	---	97	80-120%	---	---	
Chloroethane	27.1	5.00	5.00	ug/L	1	20.0	---	135	80-120%	---	---	Q-56
Chloroform	20.8	0.500	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
Chloromethane	23.9	2.50	5.00	ug/L	1	20.0	---	120	80-120%	---	---	
2-Chlorotoluene	18.4	0.500	1.00	ug/L	1	20.0	---	92	80-120%	---	---	
4-Chlorotoluene	19.2	0.500	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
Dibromochloromethane	19.0	0.500	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
1,2-Dibromo-3-chloropropane	15.6	5.00	5.00	ug/L	1	20.0	---	78	80-120%	---	---	Q-55
1,2-Dibromoethane (EDB)	19.4	0.250	0.500	ug/L	1	20.0	---	97	80-120%	---	---	
Dibromomethane	21.6	0.500	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
1,2-Dichlorobenzene	19.4	0.250	0.500	ug/L	1	20.0	---	97	80-120%	---	---	
1,3-Dichlorobenzene	19.1	0.250	0.500	ug/L	1	20.0	---	96	80-120%	---	---	
1,4-Dichlorobenzene	19.0	0.250	0.500	ug/L	1	20.0	---	95	80-120%	---	---	
Dichlorodifluoromethane	21.6	0.500	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
1,1-Dichloroethane	23.8	0.200	0.400	ug/L	1	20.0	---	119	80-120%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0859 - EPA 5030C						Water						
LCS (23D0859-BS1)						Prepared: 04/21/23 09:00 Analyzed: 04/21/23 09:51						
1,2-Dichloroethane (EDC)	21.1	0.200	0.400	ug/L	1	20.0	---	105	80-120%	---	---	
1,1-Dichloroethene	24.5	0.200	0.400	ug/L	1	20.0	---	122	80-120%	---	---	Q-56
cis-1,2-Dichloroethene	22.0	0.200	0.400	ug/L	1	20.0	---	110	80-120%	---	---	
trans-1,2-Dichloroethene	23.3	0.200	0.400	ug/L	1	20.0	---	116	80-120%	---	---	
1,2-Dichloropropane	24.3	0.250	0.500	ug/L	1	20.0	---	121	80-120%	---	---	Q-56
1,3-Dichloropropane	21.1	0.500	1.00	ug/L	1	20.0	---	105	80-120%	---	---	
2,2-Dichloropropane	21.3	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
1,1-Dichloropropene	21.7	0.500	1.00	ug/L	1	20.0	---	109	80-120%	---	---	
cis-1,3-Dichloropropene	20.4	0.500	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
trans-1,3-Dichloropropene	20.7	0.500	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
Ethylbenzene	19.4	0.250	0.500	ug/L	1	20.0	---	97	80-120%	---	---	
Hexachlorobutadiene	17.2	2.50	5.00	ug/L	1	20.0	---	86	80-120%	---	---	
2-Hexanone	43.5	5.00	10.0	ug/L	1	40.0	---	109	80-120%	---	---	
Isopropylbenzene	19.2	0.500	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
4-Isopropyltoluene	19.5	0.500	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
Methylene chloride	22.6	5.00	10.0	ug/L	1	20.0	---	113	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	46.2	5.00	10.0	ug/L	1	40.0	---	116	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	20.7	0.500	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
Naphthalene	17.2	1.00	2.00	ug/L	1	20.0	---	86	80-120%	---	---	
n-Propylbenzene	20.5	0.250	0.500	ug/L	1	20.0	---	103	80-120%	---	---	
Styrene	19.6	0.500	1.00	ug/L	1	20.0	---	98	80-120%	---	---	
1,1,1,2-Tetrachloroethane	17.6	0.200	0.400	ug/L	1	20.0	---	88	80-120%	---	---	
1,1,2,2-Tetrachloroethane	21.3	0.250	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
Tetrachloroethene (PCE)	17.4	0.200	0.400	ug/L	1	20.0	---	87	80-120%	---	---	
Toluene	19.9	0.500	1.00	ug/L	1	20.0	---	100	80-120%	---	---	
1,2,3-Trichlorobenzene	16.9	1.00	2.00	ug/L	1	20.0	---	84	80-120%	---	---	
1,2,4-Trichlorobenzene	17.0	1.00	2.00	ug/L	1	20.0	---	85	80-120%	---	---	
1,1,1-Trichloroethane	19.3	0.200	0.400	ug/L	1	20.0	---	97	80-120%	---	---	
1,1,2-Trichloroethane	18.9	0.250	0.500	ug/L	1	20.0	---	94	80-120%	---	---	
Trichloroethene (TCE)	20.2	0.200	0.400	ug/L	1	20.0	---	101	80-120%	---	---	
Trichlorofluoromethane	20.1	1.00	2.00	ug/L	1	20.0	---	101	80-120%	---	---	
1,2,3-Trichloropropane	19.4	0.500	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
1,2,4-Trimethylbenzene	19.4	0.500	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
1,3,5-Trimethylbenzene	19.7	0.500	1.00	ug/L	1	20.0	---	98	80-120%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Page 60 of 92



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0859 - EPA 5030C												
Water												
LCS (23D0859-BS1)			Prepared: 04/21/23 09:00		Analyzed: 04/21/23 09:51							
Vinyl chloride	25.9	0.200	0.400	ug/L	1	20.0	---	130	80-120%	---	---	Q-56
m,p-Xylene	39.2	0.500	1.00	ug/L	1	40.0	---	98	80-120%	---	---	
o-Xylene	18.1	0.250	0.500	ug/L	1	20.0	---	91	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 109 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		106 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		89 %		80-120 %		"						
Duplicate (23D0859-DUP1)												
Prepared: 04/21/23 09:00 Analyzed: 04/21/23 14:06												
QC Source Sample: Non-SDG (A3D1358-01)												
Acetone	ND	20.0	20.0	ug/L	1	---	ND	---	---	---	30%	J
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
Benzene	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	30%	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromoform	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromomethane	ND	5.00	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Chloroethane	ND	5.00	5.00	ug/L	1	---	ND	---	---	---	30%	
Chloroform	0.870	0.500	1.00	ug/L	1	---	0.830	---	---	5	30%	
Chloromethane	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	5.00	5.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0859 - EPA 5030C						Water						
Duplicate (23D0859-DUP1)			Prepared: 04/21/23 09:00		Analyzed: 04/21/23 14:06							
QC Source Sample: Non-SDG (A3D1358-01)												
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Naphthalene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Styrene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
Toluene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0859 - EPA 5030C						Water						
Duplicate (23D0859-DUP1)			Prepared: 04/21/23 09:00 Analyzed: 04/21/23 14:06									
QC Source Sample: Non-SDG (A3D1358-01)												
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	ND	---	---	---	30%	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	30%	
o-Xylene	ND	0.250	0.500	ug/L	1	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 108 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		106 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		99 %		80-120 %		"						

Matrix Spike (23D0859-MS1)

Prepared: 04/21/23 09:00 Analyzed: 04/21/23 14:51

QC Source Sample: Non-SDG (A3D1437-02)

EPA 8260D

Acetone	56.4	10.0	20.0	ug/L	1	40.0	ND	141	39-160%	---	---	
Acrylonitrile	25.2	1.00	2.00	ug/L	1	20.0	ND	126	63-135%	---	---	
Benzene	25.5	0.100	0.200	ug/L	1	20.0	ND	128	79-120%	---	---	Q-01
Bromobenzene	20.8	0.250	0.500	ug/L	1	20.0	ND	104	80-120%	---	---	
Bromochloromethane	33.0	0.500	1.00	ug/L	1	20.0	ND	165	78-123%	---	---	Q-54f
Bromodichloromethane	23.2	0.500	1.00	ug/L	1	20.0	ND	116	79-125%	---	---	
Bromoform	18.7	0.500	1.00	ug/L	1	20.0	ND	93	66-130%	---	---	
Bromomethane	33.5	5.00	5.00	ug/L	1	20.0	ND	167	53-141%	---	---	Q-54e
2-Butanone (MEK)	54.8	5.00	10.0	ug/L	1	40.0	ND	137	56-143%	---	---	Q-54i
n-Butylbenzene	24.5	0.500	1.00	ug/L	1	20.0	ND	123	75-128%	---	---	
sec-Butylbenzene	24.0	0.500	1.00	ug/L	1	20.0	ND	120	77-126%	---	---	
tert-Butylbenzene	20.7	0.500	1.00	ug/L	1	20.0	ND	103	78-124%	---	---	
Carbon disulfide	28.3	5.00	10.0	ug/L	1	20.0	ND	142	64-133%	---	---	Q-54c
Carbon tetrachloride	22.9	0.500	1.00	ug/L	1	20.0	ND	114	72-136%	---	---	
Chlorobenzene	21.8	0.250	0.500	ug/L	1	20.0	ND	109	80-120%	---	---	
Chloroethane	32.8	5.00	5.00	ug/L	1	20.0	ND	164	60-138%	---	---	Q-54b
Chloroform	23.8	0.500	1.00	ug/L	1	20.0	ND	119	79-124%	---	---	
Chloromethane	27.4	2.50	5.00	ug/L	1	20.0	ND	137	50-139%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Page 63 of 92



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0859 - EPA 5030C						Water						
Matrix Spike (23D0859-MS1)			Prepared: 04/21/23 09:00		Analyzed: 04/21/23 14:51							
QC Source Sample: Non-SDG (A3D1437-02)												
2-Chlorotoluene	21.8	0.500	1.00	ug/L	1	20.0	ND	109	79-122%	---	---	
4-Chlorotoluene	22.0	0.500	1.00	ug/L	1	20.0	ND	110	78-122%	---	---	
Dibromochloromethane	20.7	0.500	1.00	ug/L	1	20.0	ND	103	74-126%	---	---	
1,2-Dibromo-3-chloropropane	17.8	5.00	5.00	ug/L	1	20.0	ND	89	62-128%	---	---	Q-54k
1,2-Dibromoethane (EDB)	21.7	0.250	0.500	ug/L	1	20.0	ND	108	77-121%	---	---	
Dibromomethane	24.5	0.500	1.00	ug/L	1	20.0	ND	123	79-123%	---	---	
1,2-Dichlorobenzene	22.0	0.250	0.500	ug/L	1	20.0	ND	110	80-120%	---	---	
1,3-Dichlorobenzene	22.0	0.250	0.500	ug/L	1	20.0	ND	110	80-120%	---	---	
1,4-Dichlorobenzene	22.0	0.250	0.500	ug/L	1	20.0	ND	110	79-120%	---	---	
Dichlorodifluoromethane	26.0	0.500	1.00	ug/L	1	20.0	ND	130	32-152%	---	---	
1,1-Dichloroethane	27.4	0.200	0.400	ug/L	1	20.0	ND	137	77-125%	---	---	Q-01
1,2-Dichloroethane (EDC)	22.8	0.200	0.400	ug/L	1	20.0	ND	114	73-128%	---	---	
1,1-Dichloroethene	28.4	0.200	0.400	ug/L	1	20.0	ND	142	71-131%	---	---	Q-54c
cis-1,2-Dichloroethene	26.5	0.200	0.400	ug/L	1	20.0	ND	133	78-123%	---	---	Q-01
trans-1,2-Dichloroethene	27.1	0.200	0.400	ug/L	1	20.0	ND	136	75-124%	---	---	Q-01
1,2-Dichloropropane	28.3	0.250	0.500	ug/L	1	20.0	ND	141	78-122%	---	---	Q-54
1,3-Dichloropropane	23.5	0.500	1.00	ug/L	1	20.0	ND	117	80-120%	---	---	
2,2-Dichloropropane	24.1	0.500	1.00	ug/L	1	20.0	ND	120	60-139%	---	---	
1,1-Dichloropropene	26.5	0.500	1.00	ug/L	1	20.0	ND	133	79-125%	---	---	Q-01
cis-1,3-Dichloropropene	22.8	0.500	1.00	ug/L	1	20.0	ND	114	75-124%	---	---	
trans-1,3-Dichloropropene	22.9	0.500	1.00	ug/L	1	20.0	ND	114	73-127%	---	---	
Ethylbenzene	22.6	0.250	0.500	ug/L	1	20.0	ND	113	79-121%	---	---	
Hexachlorobutadiene	19.1	2.50	5.00	ug/L	1	20.0	ND	95	66-134%	---	---	
2-Hexanone	46.6	5.00	10.0	ug/L	1	40.0	ND	116	57-139%	---	---	
Isopropylbenzene	22.7	0.500	1.00	ug/L	1	20.0	ND	114	72-131%	---	---	
4-Isopropyltoluene	22.6	0.500	1.00	ug/L	1	20.0	ND	113	77-127%	---	---	
Methylene chloride	24.6	5.00	10.0	ug/L	1	20.0	ND	123	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	48.2	5.00	10.0	ug/L	1	40.0	ND	121	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	23.1	0.500	1.00	ug/L	1	20.0	ND	115	71-124%	---	---	
Naphthalene	19.8	1.00	2.00	ug/L	1	20.0	ND	99	61-128%	---	---	
n-Propylbenzene	23.8	0.250	0.500	ug/L	1	20.0	ND	119	76-126%	---	---	
Styrene	21.8	0.500	1.00	ug/L	1	20.0	ND	109	78-123%	---	---	
1,1,1,2-Tetrachloroethane	18.6	0.200	0.400	ug/L	1	20.0	ND	93	78-124%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Page 64 of 92



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0859 - EPA 5030C						Water						
Matrix Spike (23D0859-MS1)			Prepared: 04/21/23 09:00		Analyzed: 04/21/23 14:51							
QC Source Sample: Non-SDG (A3D1437-02)												
1,1,2,2-Tetrachloroethane	23.0	0.250	0.500	ug/L	1	20.0	ND	115	71-121%	---	---	Q-01
Tetrachloroethene (PCE)	21.5	0.200	0.400	ug/L	1	20.0	ND	107	74-129%	---	---	
Toluene	23.0	0.500	1.00	ug/L	1	20.0	ND	115	80-121%	---	---	
1,2,3-Trichlorobenzene	19.7	1.00	2.00	ug/L	1	20.0	ND	99	69-129%	---	---	
1,2,4-Trichlorobenzene	19.6	1.00	2.00	ug/L	1	20.0	ND	98	69-130%	---	---	
1,1,1-Trichloroethane	23.2	0.200	0.400	ug/L	1	20.0	ND	116	74-131%	---	---	
1,1,2-Trichloroethane	21.2	0.250	0.500	ug/L	1	20.0	ND	106	80-120%	---	---	
Trichloroethene (TCE)	25.1	0.200	0.400	ug/L	1	20.0	ND	125	79-123%	---	---	
Trichlorofluoromethane	24.0	1.00	2.00	ug/L	1	20.0	ND	120	65-141%	---	---	
1,2,3-Trichloropropane	20.7	0.500	1.00	ug/L	1	20.0	ND	103	73-122%	---	---	
1,2,4-Trimethylbenzene	22.2	0.500	1.00	ug/L	1	20.0	ND	111	76-124%	---	---	Q-54a
1,3,5-Trimethylbenzene	22.4	0.500	1.00	ug/L	1	20.0	ND	112	75-124%	---	---	
Vinyl chloride	32.1	0.200	0.400	ug/L	1	20.0	ND	160	58-137%	---	---	
m,p-Xylene	44.7	0.500	1.00	ug/L	1	40.0	ND	112	80-121%	---	---	
o-Xylene	20.9	0.250	0.500	ug/L	1	20.0	ND	105	78-122%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 109 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		103 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		93 %		80-120 %		"						

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Page 65 of 92



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0991 - EPA 5030C						Water						
Blank (23D0991-BLK1)			Prepared: 04/25/23 11:00		Analyzed: 04/25/23 14:00							
EPA 8260D SIM												
1,1-Dichloroethene	ND	0.0100	0.0200	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	0.0100	0.0200	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	0.0100	0.0200	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	0.0100	0.0200	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 106 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		103 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		101 %		80-120 %		"						
LCS (23D0991-BS1)			Prepared: 04/25/23 11:00		Analyzed: 04/25/23 13:03							
EPA 8260D SIM												
1,1-Dichloroethene	0.204	0.0100	0.0200	ug/L	1	0.200	---	102	80-120%	---	---	
cis-1,2-Dichloroethene	0.222	0.0100	0.0200	ug/L	1	0.200	---	111	80-120%	---	---	
trans-1,2-Dichloroethene	0.205	0.0100	0.0200	ug/L	1	0.200	---	102	80-120%	---	---	
Trichloroethene (TCE)	0.191	0.0100	0.0200	ug/L	1	0.200	---	96	80-120%	---	---	
Vinyl chloride	0.197	0.0100	0.0200	ug/L	1	0.200	---	98	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 106 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		102 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		98 %		80-120 %		"						
Duplicate (23D0991-DUP1)			Prepared: 04/25/23 11:00		Analyzed: 04/25/23 18:56							
QC Source Sample: GS-041323-69 (A3D1208-01)												
EPA 8260D SIM												
1,1-Dichloroethene	ND	0.250	0.500	ug/L	25	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	0.500	0.500	ug/L	25	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	0.250	0.500	ug/L	25	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	1.00	1.00	ug/L	25	---	ND	---	---	---	30%	
Vinyl chloride	ND	0.250	0.500	ug/L	25	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 103 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		101 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		96 %		80-120 %		"						

R-06

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Page 66 of 92



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0991 - EPA 5030C						Water						
Matrix Spike (23D0991-MS1)			Prepared: 04/25/23 11:00			Analyzed: 04/26/23 01:13			T-02			
QC Source Sample: Non-SDG (A3D1354-03)												
EPA 8260D SIM												
1,1-Dichloroethene	5.64	0.250	0.500	ug/L	25	5.00	ND	113	71-131%	---	---	
cis-1,2-Dichloroethene	5.78	0.250	0.500	ug/L	25	5.00	ND	116	78-123%	---	---	
trans-1,2-Dichloroethene	5.49	0.250	0.500	ug/L	25	5.00	ND	110	75-124%	---	---	
Trichloroethene (TCE)	5.81	0.250	0.500	ug/L	25	5.00	ND	116	79-123%	---	---	
Vinyl chloride	5.54	0.250	0.500	ug/L	25	5.00	ND	111	58-137%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 101 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		101 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		98 %		80-120 %		"						
Matrix Spike Dup (23D0991-MSD1)			Prepared: 04/25/23 11:00			Analyzed: 04/26/23 01:40			T-02			
QC Source Sample: Non-SDG (A3D1354-03)												
1,1-Dichloroethene	5.54	0.250	0.500	ug/L	25	5.00	ND	111	71-131%	2	30%	
cis-1,2-Dichloroethene	5.48	0.250	0.500	ug/L	25	5.00	ND	110	78-123%	5	30%	
trans-1,2-Dichloroethene	5.39	0.250	0.500	ug/L	25	5.00	ND	108	75-124%	2	30%	
Trichloroethene (TCE)	5.57	0.250	0.500	ug/L	25	5.00	ND	111	79-123%	4	30%	
Vinyl chloride	5.48	0.250	0.500	ug/L	25	5.00	ND	110	58-137%	1	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 101 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		101 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		97 %		80-120 %		"						

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0686 - EPA 3511 (Bottle Extraction)						Water						
Blank (23D0686-BLK1)			Prepared: 04/18/23 08:15		Analyzed: 04/18/23 13:14							
EPA 8270E LVI												
Acenaphthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Carbazole	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Surr: Acenaphthylene-d8 (Surr)		Recovery: 121 %		Limits: 78-134 %		Dilution: 1x						
Benzo(a)pyrene-d12 (Surr)		122 %		80-132 %		"						

LCS (23D0686-BS1)

Prepared: 04/18/23 08:15 Analyzed: 04/18/23 13:47

EPA 8270E LVI												
Acenaphthene	1.59	0.0160	0.0320	ug/L	1	1.60	---	100	80-120%	---	---	
Acenaphthylene	1.80	0.0160	0.0320	ug/L	1	1.60	---	113	80-124%	---	---	
Anthracene	1.63	0.0160	0.0320	ug/L	1	1.60	---	102	80-123%	---	---	
Benz(a)anthracene	1.82	0.00800	0.0160	ug/L	1	1.60	---	114	80-122%	---	---	
Benzo(a)pyrene	1.95	0.00800	0.0160	ug/L	1	1.60	---	122	80-129%	---	---	
Benzo(b)fluoranthene	1.88	0.00800	0.0160	ug/L	1	1.60	---	118	80-124%	---	---	
Benzo(k)fluoranthene	1.93	0.00800	0.0160	ug/L	1	1.60	---	121	80-125%	---	---	
Benzo(g,h,i)perylene	1.67	0.0160	0.0320	ug/L	1	1.60	---	104	80-120%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0686 - EPA 3511 (Bottle Extraction)						Water						
LCS (23D0686-BS1)			Prepared: 04/18/23 08:15		Analyzed: 04/18/23 13:47							
Chrysene	1.67	0.00800	0.0160	ug/L	1	1.60	---	104	80-120%	---	---	
Dibenz(a,h)anthracene	1.56	0.00800	0.0160	ug/L	1	1.60	---	97	80-120%	---	---	
Fluoranthene	1.63	0.0160	0.0320	ug/L	1	1.60	---	102	80-126%	---	---	
Fluorene	1.59	0.0160	0.0320	ug/L	1	1.60	---	99	77-127%	---	---	
Indeno(1,2,3-cd)pyrene	1.55	0.00800	0.0160	ug/L	1	1.60	---	97	80-121%	---	---	
1-Methylnaphthalene	1.60	0.0320	0.0640	ug/L	1	1.60	---	100	53-148%	---	---	
2-Methylnaphthalene	1.60	0.0320	0.0640	ug/L	1	1.60	---	100	48-150%	---	---	
Naphthalene	1.58	0.0320	0.0640	ug/L	1	1.60	---	99	78-120%	---	---	
Phenanthrene	1.55	0.0320	0.0640	ug/L	1	1.60	---	97	80-120%	---	---	
Pyrene	1.64	0.0160	0.0320	ug/L	1	1.60	---	103	80-125%	---	---	
Carbazole	1.83	0.0160	0.0320	ug/L	1	1.60	---	115	65-141%	---	---	
Dibenzofuran	1.66	0.0160	0.0320	ug/L	1	1.60	---	104	76-121%	---	---	
Surr: Acenaphthylene-d8 (Surr)		Recovery: 124 %		Limits: 78-134 %		Dilution: 1x						
Benzo(a)pyrene-d12 (Surr)		123 %		80-132 %		"						

Matrix Spike (23D0686-MS1)

Prepared: 04/18/23 08:15 Analyzed: 04/18/23 14:53

QC Source Sample: GS-041323-73 (A3D1208-05)

EPA 8270E LVI

Acenaphthene	122	1.05	2.10	ug/L	50	2.10	108	679	80-120%	---	---	Q-03
Acenaphthylene	8.08	6.56	6.56	ug/L	50	2.10	ND	385	80-124%	---	---	Q-02
Anthracene	6.14	1.05	2.10	ug/L	50	2.10	4.15	95	80-123%	---	---	
Benz(a)anthracene	2.20	0.525	1.05	ug/L	50	2.10	ND	105	80-122%	---	---	
Benzo(a)pyrene	1.94	0.525	1.05	ug/L	50	2.10	ND	93	80-129%	---	---	
Benzo(b)fluoranthene	1.81	0.525	1.05	ug/L	50	2.10	ND	86	80-124%	---	---	
Benzo(k)fluoranthene	1.84	0.525	1.05	ug/L	50	2.10	ND	88	80-125%	---	---	
Benzo(g,h,i)perylene	1.86	1.05	2.10	ug/L	50	2.10	ND	89	80-120%	---	---	J
Chrysene	2.39	0.525	1.05	ug/L	50	2.10	ND	114	80-120%	---	---	
Dibenz(a,h)anthracene	2.20	0.525	1.05	ug/L	50	2.10	ND	105	80-120%	---	---	
Fluoranthene	3.25	1.05	2.10	ug/L	50	2.10	1.41	88	80-126%	---	---	
Fluorene	24.4	1.05	2.10	ug/L	50	2.10	23.8	28	77-127%	---	---	Q-03
Indeno(1,2,3-cd)pyrene	1.84	0.525	1.05	ug/L	50	2.10	ND	88	80-121%	---	---	
1-Methylnaphthalene	256	2.10	4.20	ug/L	50	2.10	301	-2170	53-148%	---	---	Q-03
2-Methylnaphthalene	396	2.10	4.20	ug/L	50	2.10	472	-3630	48-150%	---	---	Q-03
Naphthalene	5580	2.10	4.20	ug/L	50	2.10	5960	-18200	78-120%	---	---	Q-03, E

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes	
Batch 23D0686 - EPA 3511 (Bottle Extraction)							Water						
Matrix Spike (23D0686-MS1)			Prepared: 04/18/23 08:15 Analyzed: 04/18/23 14:53										
QC Source Sample: GS-041323-73 (A3D1208-05)													
Phenanthrene	25.9	2.10	4.20	ug/L	50	2.10	24.0	87	80-120%	---	---	Q-03	
Pyrene	3.25	1.05	2.10	ug/L	50	2.10	1.28	94	80-125%	---	---		
Carbazole	99.4	1.05	2.10	ug/L	50	2.10	99.0	19	65-141%	---	---		
Dibenzofuran	7.32	1.05	2.10	ug/L	50	2.10	5.58	83	76-121%	---	---		
Surr: Acenaphthylene-d8 (Surr)		Recovery: 165 %		Limits: 78-134 %	Dilution: 50x							S-05	
Benzo(a)pyrene-d12 (Surr)		87 %		80-132 %		"							S-05

Matrix Spike Dup (23D0686-MSD1)

Prepared: 04/18/23 08:15 Analyzed: 04/18/23 15:27

QC Source Sample: GS-041323-73 (A3D1208-05)												
EPA 8270E LVI												
Acenaphthene	120	0.914	1.83	ug/L	50	1.83	108	666	80-120%	2	30%	Q-03
Acenaphthylene	8.44	5.72	5.72	ug/L	50	1.83	ND	133	80-124%	4	30%	Q-02
Anthracene	5.74	0.914	1.83	ug/L	50	1.83	4.15	87	80-123%	7	30%	
Benz(a)anthracene	2.08	0.457	0.914	ug/L	50	1.83	ND	114	80-122%	6	30%	
Benzo(a)pyrene	1.69	0.457	0.914	ug/L	50	1.83	ND	92	80-129%	14	30%	
Benzo(b)fluoranthene	1.62	0.457	0.914	ug/L	50	1.83	ND	89	80-124%	11	30%	
Benzo(k)fluoranthene	1.65	0.457	0.914	ug/L	50	1.83	ND	90	80-125%	11	30%	
Benzo(g,h,i)perylene	1.76	0.914	1.83	ug/L	50	1.83	ND	96	80-120%	6	30%	J
Chrysene	1.99	0.457	0.914	ug/L	50	1.83	ND	109	80-120%	18	30%	
Dibenz(a,h)anthracene	1.74	0.457	0.914	ug/L	50	1.83	ND	95	80-120%	24	30%	
Fluoranthene	3.29	0.914	1.83	ug/L	50	1.83	1.41	103	80-126%	1	30%	
Fluorene	24.5	0.914	1.83	ug/L	50	1.83	23.8	34	77-127%	0.07	30%	Q-03
Indeno(1,2,3-cd)pyrene	1.99	0.457	0.914	ug/L	50	1.83	ND	109	80-121%	8	30%	
1-Methylnaphthalene	271	1.83	3.66	ug/L	50	1.83	301	-1650	53-148%	6	30%	Q-03
2-Methylnaphthalene	424	1.83	3.66	ug/L	50	1.83	472	-2590	48-150%	7	30%	Q-03
Naphthalene	5620	1.83	3.66	ug/L	50	1.83	5960	-18700	78-120%	0.7	30%	Q-03, E
Phenanthrene	26.2	1.83	3.66	ug/L	50	1.83	24.0	120	80-120%	1	30%	
Pyrene	2.99	0.914	1.83	ug/L	50	1.83	1.28	94	80-125%	8	30%	
Carbazole	97.9	0.914	1.83	ug/L	50	1.83	99.0	-60	65-141%	2	30%	Q-03
Dibenzofuran	7.57	0.914	1.83	ug/L	50	1.83	5.58	109	76-121%	3	30%	
Surr: Acenaphthylene-d8 (Surr)		Recovery: 192 %		Limits: 78-134 %		Dilution: 50x		S-05				
Benzo(a)pyrene-d12 (Surr)		84 %		80-132 %		"		S-05				

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Page 70 of 92



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D1024 - EPA 3015A						Water						
Blank (23D1024-BLK1)			Prepared: 04/26/23 07:57 Analyzed: 04/28/23 01:29									
EPA 6020B												
Aluminum	ND	25.0	50.0	ug/L	1	---	---	---	---	---	---	
Antimony	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Arsenic	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Barium	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Beryllium	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Cadmium	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Calcium	ND	300	600	ug/L	1	---	---	---	---	---	---	
Chromium	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Copper	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Iron	ND	25.0	50.0	ug/L	1	---	---	---	---	---	---	
Lead	ND	0.110	0.200	ug/L	1	---	---	---	---	---	---	
Magnesium	ND	75.0	150	ug/L	1	---	---	---	---	---	---	
Manganese	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Mercury	ND	0.0400	0.0800	ug/L	1	---	---	---	---	---	---	
Nickel	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Potassium	ND	50.0	100	ug/L	1	---	---	---	---	---	---	
Selenium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Silver	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Sodium	ND	50.0	100	ug/L	1	---	---	---	---	---	---	
Thallium	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Vanadium	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Zinc	ND	2.00	4.00	ug/L	1	---	---	---	---	---	---	

LCS (23D1024-BS1)

Prepared: 04/26/23 07:57 Analyzed: 04/28/23 01:33

EPA 6020B												
Aluminum	2700	25.0	50.0	ug/L	1	2780	---	97	80-120%	---	---	
Antimony	26.6	0.500	1.00	ug/L	1	27.8	---	96	80-120%	---	---	
Arsenic	52.3	0.500	1.00	ug/L	1	55.6	---	94	80-120%	---	---	
Barium	57.3	1.00	2.00	ug/L	1	55.6	---	103	80-120%	---	---	
Beryllium	26.9	0.100	0.200	ug/L	1	27.8	---	97	80-120%	---	---	
Cadmium	52.1	0.100	0.200	ug/L	1	55.6	---	94	80-120%	---	---	
Calcium	2720	300	600	ug/L	1	2780	---	98	80-120%	---	---	
Chromium	53.2	1.00	2.00	ug/L	1	55.6	---	96	80-120%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D1024 - EPA 3015A						Water						
LCS (23D1024-BS1)						Prepared: 04/26/23 07:57 Analyzed: 04/28/23 01:33						
Copper	54.5	1.00	2.00	ug/L	1	55.6	---	98	80-120%	---	---	
Iron	2750	25.0	50.0	ug/L	1	2780	---	99	80-120%	---	---	
Lead	53.9	0.110	0.200	ug/L	1	55.6	---	97	80-120%	---	---	
Magnesium	2710	75.0	150	ug/L	1	2780	---	98	80-120%	---	---	
Manganese	54.4	0.500	1.00	ug/L	1	55.6	---	98	80-120%	---	---	
Mercury	1.01	0.0400	0.0800	ug/L	1	1.11	---	91	80-120%	---	---	
Nickel	54.6	1.00	2.00	ug/L	1	55.6	---	98	80-120%	---	---	
Potassium	2740	50.0	100	ug/L	1	2780	---	99	80-120%	---	---	
Selenium	26.0	0.500	1.00	ug/L	1	27.8	---	94	80-120%	---	---	
Silver	25.5	0.100	0.200	ug/L	1	27.8	---	92	80-120%	---	---	
Sodium	2670	50.0	100	ug/L	1	2780	---	96	80-120%	---	---	
Thallium	25.0	0.100	0.200	ug/L	1	27.8	---	90	80-120%	---	---	
Vanadium	52.8	1.00	2.00	ug/L	1	55.6	---	95	80-120%	---	---	
Zinc	55.0	2.00	4.00	ug/L	1	55.6	---	99	80-120%	---	---	

Matrix Spike (23D1024-MS1)

Prepared: 04/26/23 07:57 Analyzed: 04/28/23 02:37

QC Source Sample: GS-041323-73 (A3D1208-05)

EPA 6020B

Aluminum	2680	25.0	50.0	ug/L	1	2780	ND	97	75-125%	---	---	
Antimony	26.9	0.500	1.00	ug/L	1	27.8	ND	97	75-125%	---	---	
Arsenic	57.4	0.500	1.00	ug/L	1	55.6	3.99	96	75-125%	---	---	
Barium	122	1.00	2.00	ug/L	1	55.6	58.1	115	75-125%	---	---	
Beryllium	27.0	0.100	0.200	ug/L	1	27.8	ND	97	75-125%	---	---	
Cadmium	53.3	0.100	0.200	ug/L	1	55.6	ND	96	75-125%	---	---	
Calcium	62600	300	600	ug/L	1	2780	60200	87	75-125%	---	---	E
Chromium	53.3	1.00	2.00	ug/L	1	55.6	ND	96	75-125%	---	---	
Copper	52.5	1.00	2.00	ug/L	1	55.6	ND	94	75-125%	---	---	
Iron	40500	25.0	50.0	ug/L	1	2780	38600	68	75-125%	---	---	Q-65
Lead	52.4	0.110	0.200	ug/L	1	55.6	ND	94	75-125%	---	---	
Magnesium	32800	75.0	150	ug/L	1	2780	30700	78	75-125%	---	---	
Manganese	2820	0.500	1.00	ug/L	1	55.6	2820	8	75-125%	---	---	E, Q-65
Mercury	1.00	0.0400	0.0800	ug/L	1	1.11	ND	90	75-125%	---	---	
Nickel	52.0	1.00	2.00	ug/L	1	55.6	ND	94	75-125%	---	---	
Potassium	5160	50.0	100	ug/L	1	2780	2580	93	75-125%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D1024 - EPA 3015A						Water						
Matrix Spike (23D1024-MS1)			Prepared: 04/26/23 07:57 Analyzed: 04/28/23 02:37									
QC Source Sample: GS-041323-73 (A3D1208-05)												
Selenium	26.3	0.500	1.00	ug/L	1	27.8	ND	95	75-125%	---	---	
Silver	25.2	0.100	0.200	ug/L	1	27.8	ND	91	75-125%	---	---	
Sodium	19400	50.0	100	ug/L	1	2780	17000	86	75-125%	---	---	
Vanadium	53.9	1.00	2.00	ug/L	1	55.6	ND	97	75-125%	---	---	
Zinc	58.0	2.00	4.00	ug/L	1	55.6	6.00	94	75-125%	---	---	
Matrix Spike (23D1024-MS2)			Prepared: 04/26/23 07:57 Analyzed: 05/02/23 17:04									
QC Source Sample: GS-041323-73 (A3D1208-05RE2)												
EPA 6020B												
Thallium	27.9	0.100	0.200	ug/L	1	27.8	ND	101	75-125%	---	---	Q-16
Matrix Spike Dup (23D1024-MSD1)			Prepared: 04/26/23 07:57 Analyzed: 04/28/23 02:42									
QC Source Sample: GS-041323-73 (A3D1208-05)												
EPA 6020B												
Aluminum	2690	25.0	50.0	ug/L	1	2780	ND	97	75-125%	0.1	20%	
Antimony	27.2	0.500	1.00	ug/L	1	27.8	ND	98	75-125%	1	20%	
Arsenic	57.4	0.500	1.00	ug/L	1	55.6	3.99	96	75-125%	0.1	20%	
Barium	121	1.00	2.00	ug/L	1	55.6	58.1	113	75-125%	1	20%	
Beryllium	27.2	0.100	0.200	ug/L	1	27.8	ND	98	75-125%	0.8	20%	
Cadmium	53.1	0.100	0.200	ug/L	1	55.6	ND	96	75-125%	0.4	20%	
Calcium	62000	300	600	ug/L	1	2780	60200	64	75-125%	1	20%	E, Q-65
Chromium	53.8	1.00	2.00	ug/L	1	55.6	ND	97	75-125%	1	20%	
Copper	53.8	1.00	2.00	ug/L	1	55.6	ND	97	75-125%	3	20%	
Iron	40300	25.0	50.0	ug/L	1	2780	38600	64	75-125%	0.3	20%	Q-65
Lead	52.5	0.110	0.200	ug/L	1	55.6	ND	94	75-125%	0.08	20%	
Magnesium	32700	75.0	150	ug/L	1	2780	30700	71	75-125%	0.5	20%	Q-65
Manganese	2820	0.500	1.00	ug/L	1	55.6	2820	16	75-125%	0.2	20%	E, Q-65
Mercury	1.02	0.0400	0.0800	ug/L	1	1.11	ND	92	75-125%	2	20%	
Nickel	52.9	1.00	2.00	ug/L	1	55.6	ND	95	75-125%	2	20%	
Potassium	5190	50.0	100	ug/L	1	2780	2580	94	75-125%	0.6	20%	
Selenium	26.3	0.500	1.00	ug/L	1	27.8	ND	95	75-125%	0.04	20%	
Silver	25.4	0.100	0.200	ug/L	1	27.8	ND	91	75-125%	0.8	20%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Page 73 of 92



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D1024 - EPA 3015A						Water						
Matrix Spike Dup (23D1024-MSD1)			Prepared: 04/26/23 07:57 Analyzed: 04/28/23 02:42									
QC Source Sample: GS-041323-73 (A3D1208-05)												
Sodium	19300	50.0	100	ug/L	1	2780	17000	83	75-125%	0.5	20%	
Vanadium	54.3	1.00	2.00	ug/L	1	55.6	ND	98	75-125%	0.8	20%	
Zinc	58.5	2.00	4.00	ug/L	1	55.6	6.00	95	75-125%	1	20%	
Matrix Spike Dup (23D1024-MSD2)			Prepared: 04/26/23 07:57 Analyzed: 05/02/23 17:09									
QC Source Sample: GS-041323-73 (A3D1208-05RE2)												
EPA 6020B												
Thallium	28.1	0.100	0.200	ug/L	1	27.8	ND	101	75-125%	0.8	20%	Q-16

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 6020B (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0955 - Matrix Matched Direct Inject						Water						
Blank (23D0955-BLK1)			Prepared: 04/24/23 14:21		Analyzed: 04/27/23 19:20							
EPA 6020B (Diss)												
Iron	ND	25.0	50.0	ug/L	1	---	---	---	---	---	---	
Magnesium	ND	75.0	150	ug/L	1	---	---	---	---	---	---	
LCS (23D0955-BS1)			Prepared: 04/24/23 14:21		Analyzed: 04/27/23 19:25							
EPA 6020B (Diss)												
Iron	2640	25.0	50.0	ug/L	1	2780	---	95	80-120%	---	---	
Magnesium	2670	75.0	150	ug/L	1	2780	---	96	80-120%	---	---	
Duplicate (23D0955-DUP1)			Prepared: 04/24/23 14:21		Analyzed: 04/27/23 20:29							
QC Source Sample: GS-041323-73 (A3D1208-05)												
EPA 6020B (Diss)												
Iron	37800	25.0	50.0	ug/L	1	---	37800	---	---	0.2	20%	
Magnesium	31000	75.0	150	ug/L	1	---	31000	---	---	0.2	20%	
Matrix Spike (23D0955-MS1)			Prepared: 04/24/23 14:21		Analyzed: 04/27/23 20:34							
QC Source Sample: GS-041323-73 (A3D1208-05)												
EPA 6020B (Diss)												
Iron	40800	25.0	50.0	ug/L	1	2780	37800	110	75-125%	---	---	
Magnesium	33800	75.0	150	ug/L	1	2780	31000	103	75-125%	---	---	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Page 75 of 92



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Anions by Ion Chromatography

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0605 - Method Prep: Aq						Water						
Blank (23D0605-BLK1)			Prepared: 04/14/23 14:41 Analyzed: 04/14/23 16:50									
EPA 300.0												
Chloride	ND	0.500	1.00	mg/L	1	---	---	---	---	---	---	X
Nitrate-Nitrogen	ND	0.125	0.250	mg/L	1	---	---	---	---	---	---	X
Sulfate	ND	0.500	1.00	mg/L	1	---	---	---	---	---	---	X
LCS (23D0605-BS1)			Prepared: 04/14/23 14:41 Analyzed: 04/14/23 17:11									
EPA 300.0												
Chloride	7.69	0.500	1.00	mg/L	1	8.00	---	96	90-110%	---	---	X
Nitrate-Nitrogen	2.08	0.125	0.250	mg/L	1	2.00	---	104	90-110%	---	---	X
Sulfate	8.12	0.500	1.00	mg/L	1	8.00	---	101	90-110%	---	---	X
Matrix Spike (23D0605-MS1)			Prepared: 04/14/23 14:41 Analyzed: 04/14/23 21:30									
QC Source Sample: GS-041323-73 (A3D1208-05RE1)												
EPA 300.0												
Nitrate-Nitrogen	2.10	0.125	0.250	mg/L	1	2.00	ND	105	87-112%	---	---	Q-16, X
Sulfate	8.35	0.500	1.00	mg/L	1	8.00	0.569	97	88-115%	---	---	Q-16, X
Matrix Spike (23D0605-MS3)			Prepared: 04/14/23 14:41 Analyzed: 04/18/23 15:03									
QC Source Sample: GS-041323-73 (A3D1208-05RE2)												
EPA 300.0												
Chloride	119	2.50	5.00	mg/L	5	40.0	81.2	95	90-113%	---	---	
Nitrate-Nitrogen	9.71	0.625	1.25	mg/L	5	10.0	ND	97	87-112%	---	---	
Sulfate	38.9	2.50	5.00	mg/L	5	40.0	ND	97	88-115%	---	---	
Matrix Spike Dup (23D0605-MSD1)			Prepared: 04/14/23 14:41 Analyzed: 04/14/23 21:52									
QC Source Sample: GS-041323-73 (A3D1208-05RE1)												
EPA 300.0												
Nitrate-Nitrogen	2.11	0.125	0.250	mg/L	1	2.00	ND	105	87-112%	0.6	3%	Q-16, X
Sulfate	8.49	0.500	1.00	mg/L	1	8.00	0.569	99	88-115%	2	4%	Q-16, X
Matrix Spike Dup (23D0605-MSD3)			Prepared: 04/14/23 14:41 Analyzed: 04/18/23 15:25									
QC Source Sample: GS-041323-73 (A3D1208-05RE2)												
EPA 300.0												

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Anions by Ion Chromatography

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0605 - Method Prep: Aq							Water					
Matrix Spike Dup (23D0605-MSD3)			Prepared: 04/14/23 14:41		Analyzed: 04/18/23 15:25							
QC Source Sample: GS-041323-73 (A3D1208-05RE2)												
Chloride	119	2.50	5.00	mg/L	5	40.0	81.2	96	90-113%	0.07	3%	Q-16
Nitrate-Nitrogen	9.70	0.625	1.25	mg/L	5	10.0	ND	97	87-112%	0.1	3%	
Sulfate	39.0	2.50	5.00	mg/L	5	40.0	ND	97	88-115%	0.2	4%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Cyanide by Flow Analysis (Aqueous)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0915 - Lachat Micro Dist - aqueous						Water						
Blank (23D0915-BLK1)			Prepared: 04/24/23 08:16 Analyzed: 04/25/23 10:24									
EPA 335.4												
Total Cyanide	ND	0.00500	0.00500	mg/L	1	---	---	---	---	---	---	
LCS (23D0915-BS1)			Prepared: 04/24/23 08:16 Analyzed: 04/25/23 10:26									
EPA 335.4												
Total Cyanide	0.250	0.00500	0.00500	mg/L	1	0.250	---	100	90-110%	---	---	
Matrix Spike (23D0915-MS1)			Prepared: 04/24/23 08:16 Analyzed: 04/25/23 10:30									
QC Source Sample: GS-041323-73 (A3D1208-05)												
EPA 335.4												
Total Cyanide	0.488	0.00500	0.00500	mg/L	1	0.250	0.260	91	90-110%	---	---	
Matrix Spike (23D0915-MS2)			Prepared: 04/24/23 08:16 Analyzed: 04/25/23 10:38									
QC Source Sample: Non-SDG (A3D1354-03)												
EPA 335.4												
Total Cyanide	0.303	0.00500	0.00500	mg/L	1	0.250	0.0623	96	90-110%	---	---	
Matrix Spike Dup (23D0915-MSD1)			Prepared: 04/24/23 08:16 Analyzed: 04/25/23 10:32									
QC Source Sample: GS-041323-73 (A3D1208-05)												
EPA 335.4												
Total Cyanide	0.481	0.00500	0.00500	mg/L	1	0.250	0.260	88	90-110%	1	10%	Q-01
Matrix Spike Dup (23D0915-MSD2)			Prepared: 04/24/23 08:16 Analyzed: 04/25/23 10:48									
QC Source Sample: Non-SDG (A3D1354-03)												
Total Cyanide	0.275	0.00500	0.00500	mg/L	1	0.250	0.0623	85	90-110%	10	10%	Q-01

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Available Cyanide by FIA, Ligand Exchange and Amperometric Detection

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0748 - Method Prep: Aq						Water						
Blank (23D0748-BLK1)			Prepared: 04/19/23 08:48 Analyzed: 04/19/23 10:59									
<u>D6888-09</u>												
Available Cyanide	ND	0.00100	0.00200	mg/L	1	---	---	---	---	---	---	
LCS (23D0748-BS1)			Prepared: 04/19/23 08:48 Analyzed: 04/19/23 11:00									
<u>D6888-09</u>												
Available Cyanide	0.0261	0.00100	0.00200	mg/L	1	0.0250	---	104	90-117%	---	---	
Matrix Spike (23D0748-MS1)			Prepared: 04/19/23 08:48 Analyzed: 04/19/23 11:12									
<u>QC Source Sample: GS-041323-73 (A3D1208-05)</u>												
<u>D6888-09</u>												
Available Cyanide	0.0281	0.00101	0.00201	mg/L	1	0.0251	0.00102	108	82-130%	---	---	
Matrix Spike (23D0748-MS2)			Prepared: 04/19/23 08:48 Analyzed: 04/19/23 11:32									
<u>QC Source Sample: Non-SDG (A3D1293-04)</u>												
<u>D6888-09</u>												
Available Cyanide	0.0266	0.00101	0.00201	mg/L	1	0.0251	ND	106	82-130%	---	---	
Matrix Spike Dup (23D0748-MSD1)			Prepared: 04/19/23 08:48 Analyzed: 04/19/23 11:14									
<u>QC Source Sample: GS-041323-73 (A3D1208-05)</u>												
<u>D6888-09</u>												
Available Cyanide	0.0293	0.00101	0.00201	mg/L	1	0.0251	0.00102	112	82-130%	4	11%	
Matrix Spike Dup (23D0748-MSD2)			Prepared: 04/19/23 08:48 Analyzed: 04/19/23 11:33									
<u>QC Source Sample: Non-SDG (A3D1293-04)</u>												
Available Cyanide	0.0266	0.00101	0.00201	mg/L	1	0.0251	ND	106	82-130%	0.2	11%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

QUALITY CONTROL (QC) SAMPLE RESULTS

Free Cyanide by Microdiffusion/Colorimetric Spectrophotometry

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0793 - Microdiffusion						Water						
Blank (23D0793-BLK1)			Prepared: 04/20/23 08:20 Analyzed: 04/20/23 14:21									
<u>D4282-02</u>												
Free Cyanide	ND	0.00250	0.00500	mg/L	1	---	---	---	---	---	---	
LCS (23D0793-BS1)			Prepared: 04/20/23 08:20 Analyzed: 04/20/23 14:21									
<u>D4282-02</u>												
Free Cyanide	0.0624	0.00250	0.00500	mg/L	1	0.0667	---	94	74-120%	---	---	
LCS Dup (23D0793-BSD1)			Prepared: 04/20/23 08:20 Analyzed: 04/20/23 14:26									
<u>D4282-02</u>												
Free Cyanide	0.0641	0.00250	0.00500	mg/L	1	0.0667	---	96	74-120%	3	20%	
Matrix Spike (23D0793-MS1)			Prepared: 04/20/23 08:20 Analyzed: 04/20/23 14:32									
<u>QC Source Sample: GS-041323-73 (A3D1208-05)</u>												
<u>D4282-02</u>												
Free Cyanide	0.0626	0.00250	0.00500	mg/L	1	0.0667	ND	94	74-120%	---	---	
Matrix Spike Dup (23D0793-MSD1)			Prepared: 04/20/23 08:20 Analyzed: 04/20/23 14:32									
<u>QC Source Sample: GS-041323-73 (A3D1208-05)</u>												
<u>D4282-02</u>												
Free Cyanide	0.0640	0.00250	0.00500	mg/L	1	0.0667	ND	96	74-120%	2	20%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Page 80 of 92



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Anchor QEA, LLC**6720 SW Macadam Ave. Suite 125
Portland, OR 97219Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331**

QUALITY CONTROL (QC) SAMPLE RESULTS

Conventional Chemistry Parameters

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23D0861 - Method Prep: Aq						Water						
Blank (23D0861-BLK1)			Prepared: 04/21/23 08:38 Analyzed: 04/21/23 09:55									
SM 2320 B												
Total Alkalinity	ND	20.0	20.0	mg CaCO3/L	1	---	---	---	---	---	---	
Bicarbonate Alkalinity	ND	20.0	20.0	mg CaCO3/L	1	---	---	---	---	---	---	
Carbonate Alkalinity	ND	20.0	20.0	mg CaCO3/L	1	---	---	---	---	---	---	
Hydroxide Alkalinity	ND	20.0	20.0	mg CaCO3/L	1	---	---	---	---	---	---	
LCS (23D0861-BS1)			Prepared: 04/21/23 08:38 Analyzed: 04/21/23 10:02									
SM 2320 B												
Total Alkalinity	105	20.0	20.0	mg CaCO3/L	1	100	---	105	90-115%	---	---	
Duplicate (23D0861-DUP1)			Prepared: 04/21/23 08:38 Analyzed: 04/21/23 11:25									
QC Source Sample: GS-041323-73 (A3D1208-05)												
SM 2320 B												
Total Alkalinity	233	20.0	20.0	mg CaCO3/L	1	---	232	---	---	0.5	5%	
Bicarbonate Alkalinity	233	20.0	20.0	mg CaCO3/L	1	---	232	---	---	0.5	5%	
Carbonate Alkalinity	ND	20.0	20.0	mg CaCO3/L	1	---	ND	---	---	---	5%	
Hydroxide Alkalinity	ND	20.0	20.0	mg CaCO3/L	1	---	ND	---	---	---	5%	

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331**

SAMPLE PREPARATION INFORMATION

Volatile Organic Compounds by EPA 8260D

Prep: EPA 5030C

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23D0759							
A3D1208-02	WG	EPA 8260D	04/13/23 10:10	04/19/23 12:31	5mL/5mL	5mL/5mL	1.00
A3D1208-03	WG	EPA 8260D	04/13/23 10:20	04/19/23 12:31	5mL/5mL	5mL/5mL	1.00
A3D1208-04	WG	EPA 8260D	04/13/23 11:05	04/19/23 12:31	5mL/5mL	5mL/5mL	1.00
A3D1208-05	WG	EPA 8260D	04/13/23 13:20	04/19/23 12:31	5mL/5mL	5mL/5mL	1.00
A3D1208-07	W	EPA 8260D	04/13/23 15:15	04/19/23 12:31	5mL/5mL	5mL/5mL	1.00
Batch: 23D0815							
A3D1208-06RE1	WG	EPA 8260D	04/13/23 14:35	04/20/23 12:00	5mL/5mL	5mL/5mL	1.00
Batch: 23D0859							
A3D1208-01RE1	WG	EPA 8260D	04/13/23 09:40	04/21/23 09:00	5mL/5mL	5mL/5mL	1.00

Volatile Organic Compounds by EPA 8260D SIM

Prep: EPA 5030C

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23D0991							
A3D1208-01	WG	EPA 8260D SIM	04/13/23 09:40	04/25/23 11:00	5mL/5mL	5mL/5mL	1.00
A3D1208-02	WG	EPA 8260D SIM	04/13/23 10:10	04/25/23 11:00	5mL/5mL	5mL/5mL	1.00
A3D1208-03	WG	EPA 8260D SIM	04/13/23 10:20	04/25/23 11:00	5mL/5mL	5mL/5mL	1.00

Polyaromatic Hydrocarbons (PAHs) by EPA 8270E (Large Volume Injection)

Prep: EPA 3511 (Bottle Extraction)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23D0686							
A3D1208-01	WG	EPA 8270E LVI	04/13/23 09:40	04/18/23 08:15	101.29mL/5mL	125mL/5mL	1.23
A3D1208-02	WG	EPA 8270E LVI	04/13/23 10:10	04/18/23 08:15	105.29mL/5mL	125mL/5mL	1.19
A3D1208-03	WG	EPA 8270E LVI	04/13/23 10:20	04/18/23 08:15	100.89mL/5mL	125mL/5mL	1.24
A3D1208-04	WG	EPA 8270E LVI	04/13/23 11:05	04/18/23 08:15	96.46mL/5mL	125mL/5mL	1.30
A3D1208-04RE1	WG	EPA 8270E LVI	04/13/23 11:05	04/18/23 08:15	96.46mL/5mL	125mL/5mL	1.30
A3D1208-05	WG	EPA 8270E LVI	04/13/23 13:20	04/18/23 08:15	101.26mL/5mL	125mL/5mL	1.23
A3D1208-05RE1	WG	EPA 8270E LVI	04/13/23 13:20	04/18/23 08:15	101.26mL/5mL	125mL/5mL	1.23
A3D1208-06	WG	EPA 8270E LVI	04/13/23 14:35	04/18/23 08:15	114.61mL/5mL	125mL/5mL	1.09

Total Metals by EPA 6020B (ICPMS)

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Page 82 of 92

**ANALYTICAL REPORT****Apex Laboratories, LLC**

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331****SAMPLE PREPARATION INFORMATION****Total Metals by EPA 6020B (ICPMS)****Prep: EPA 3015A**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23D1024							
A3D1208-01	WG	EPA 6020B	04/13/23 09:40	04/26/23 07:57	45mL/50mL	45mL/50mL	1.00
A3D1208-02	WG	EPA 6020B	04/13/23 10:10	04/26/23 07:57	45mL/50mL	45mL/50mL	1.00
A3D1208-02RE1	WG	EPA 6020B	04/13/23 10:10	04/26/23 07:57	45mL/50mL	45mL/50mL	1.00
A3D1208-03	WG	EPA 6020B	04/13/23 10:20	04/26/23 07:57	45mL/50mL	45mL/50mL	1.00
A3D1208-03RE1	WG	EPA 6020B	04/13/23 10:20	04/26/23 07:57	45mL/50mL	45mL/50mL	1.00
A3D1208-04	WG	EPA 6020B	04/13/23 11:05	04/26/23 07:57	45mL/50mL	45mL/50mL	1.00
A3D1208-04RE1	WG	EPA 6020B	04/13/23 11:05	04/26/23 07:57	45mL/50mL	45mL/50mL	1.00
A3D1208-04RE2	WG	EPA 6020B	04/13/23 11:05	04/26/23 07:57	45mL/50mL	45mL/50mL	1.00
A3D1208-05	WG	EPA 6020B	04/13/23 13:20	04/26/23 07:57	45mL/50mL	45mL/50mL	1.00
A3D1208-05RE1	WG	EPA 6020B	04/13/23 13:20	04/26/23 07:57	45mL/50mL	45mL/50mL	1.00
A3D1208-05RE2	WG	EPA 6020B	04/13/23 13:20	04/26/23 07:57	45mL/50mL	45mL/50mL	1.00
A3D1208-06	WG	EPA 6020B	04/13/23 14:35	04/26/23 07:57	45mL/50mL	45mL/50mL	1.00
A3D1208-06RE1	WG	EPA 6020B	04/13/23 14:35	04/26/23 07:57	45mL/50mL	45mL/50mL	1.00

Dissolved Metals by EPA 6020B (ICPMS)**Prep: Matrix Matched Direct Inject**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23D0955							
A3D1208-01	WG	EPA 6020B (Diss)	04/13/23 09:40	04/24/23 14:21	45mL/50mL	45mL/50mL	1.00
A3D1208-02	WG	EPA 6020B (Diss)	04/13/23 10:10	04/24/23 14:21	45mL/50mL	45mL/50mL	1.00
A3D1208-03	WG	EPA 6020B (Diss)	04/13/23 10:20	04/24/23 14:21	45mL/50mL	45mL/50mL	1.00
A3D1208-04	WG	EPA 6020B (Diss)	04/13/23 11:05	04/24/23 14:21	45mL/50mL	45mL/50mL	1.00
A3D1208-05	WG	EPA 6020B (Diss)	04/13/23 13:20	04/24/23 14:21	45mL/50mL	45mL/50mL	1.00
A3D1208-06	WG	EPA 6020B (Diss)	04/13/23 14:35	04/24/23 14:21	45mL/50mL	45mL/50mL	1.00

Anions by Ion Chromatography**Prep: Method Prep: Ag**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23D0605							
A3D1208-01	WG	EPA 300.0	04/13/23 09:40	04/14/23 14:41	5mL/5mL	5mL/5mL	1.00
A3D1208-02	WG	EPA 300.0	04/13/23 10:10	04/14/23 14:41	5mL/5mL	5mL/5mL	1.00
A3D1208-02RE1	WG	EPA 300.0	04/13/23 10:10	04/14/23 14:41	5mL/5mL	5mL/5mL	1.00
A3D1208-03	WG	EPA 300.0	04/13/23 10:20	04/14/23 14:41	5mL/5mL	5mL/5mL	1.00
A3D1208-03RE1	WG	EPA 300.0	04/13/23 10:20	04/14/23 14:41	5mL/5mL	5mL/5mL	1.00

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331**

SAMPLE PREPARATION INFORMATION

Anions by Ion Chromatography

Prep: Method Prep: Ag

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A3D1208-04	WG	EPA 300.0	04/13/23 11:05	04/14/23 14:41	5mL/5mL	5mL/5mL	1.00
A3D1208-04RE1	WG	EPA 300.0	04/13/23 11:05	04/14/23 14:41	5mL/5mL	5mL/5mL	1.00
A3D1208-05RE1	WG	EPA 300.0	04/13/23 13:20	04/14/23 14:41	5mL/5mL	5mL/5mL	1.00
A3D1208-05RE2	WG	EPA 300.0	04/13/23 13:20	04/14/23 14:41	5mL/5mL	5mL/5mL	1.00
A3D1208-06	WG	EPA 300.0	04/13/23 14:35	04/14/23 14:41	5mL/5mL	5mL/5mL	1.00

Total Cyanide by Flow Analysis (Aqueous)

Prep: Lachat Micro Dist - aqueous

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 23D0915</u>							
A3D1208-01	WG	EPA 335.4	04/13/23 09:40	04/24/23 08:16	6mL/6mL	6mL/6mL	1.00
A3D1208-02	WG	EPA 335.4	04/13/23 10:10	04/24/23 08:16	6mL/6mL	6mL/6mL	1.00
A3D1208-03	WG	EPA 335.4	04/13/23 10:20	04/24/23 08:16	6mL/6mL	6mL/6mL	1.00
A3D1208-04	WG	EPA 335.4	04/13/23 11:05	04/24/23 08:16	6mL/6mL	6mL/6mL	1.00
A3D1208-05	WG	EPA 335.4	04/13/23 13:20	04/24/23 08:16	6mL/6mL	6mL/6mL	1.00
A3D1208-06	WG	EPA 335.4	04/13/23 14:35	04/24/23 08:16	6mL/6mL	6mL/6mL	1.00

Available Cyanide by FIA, Ligand Exchange and Amperometric Detection

Prep: Method Prep: Ag

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 23D0748</u>							
A3D1208-01	WG	D6888-09	04/13/23 09:40	04/19/23 08:48	5mL/5mL	5mL/5mL	1.00
A3D1208-02	WG	D6888-09	04/13/23 10:10	04/19/23 08:48	5mL/5mL	5mL/5mL	1.00
A3D1208-03	WG	D6888-09	04/13/23 10:20	04/19/23 08:48	5mL/5mL	5mL/5mL	1.00
A3D1208-04	WG	D6888-09	04/13/23 11:05	04/19/23 08:48	5mL/5mL	5mL/5mL	1.00
A3D1208-05	WG	D6888-09	04/13/23 13:20	04/19/23 08:48	5mL/5mL	5mL/5mL	1.00
A3D1208-06	WG	D6888-09	04/13/23 14:35	04/19/23 08:48	5mL/5mL	5mL/5mL	1.00

Free Cyanide by Microdiffusion/Colorimetric Spectrophotometry

Prep: Microdiffusion

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
<u>Batch: 23D0793</u>							
A3D1208-01	WG	D4282-02	04/13/23 09:40	04/20/23 08:20	3mL/3mL	3mL/3mL	1.00
A3D1208-02	WG	D4282-02	04/13/23 10:10	04/20/23 08:20	3mL/3mL	3mL/3mL	1.00

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

**ANALYTICAL REPORT****Apex Laboratories, LLC**6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062**Anchor QEA, LLC**6720 SW Macadam Ave. Suite 125
Portland, OR 97219Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001 H**Project Manager: **John Renda****Report ID:****A3D1208 - 05 19 23 1331****SAMPLE PREPARATION INFORMATION****Free Cyanide by Microdiffusion/Colorimetric Spectrophotometry****Prep: Microdiffusion**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A3D1208-03	WG	D4282-02	04/13/23 10:20	04/20/23 08:20	3mL/3mL	3mL/3mL	1.00
A3D1208-04	WG	D4282-02	04/13/23 11:05	04/20/23 08:20	3mL/3mL	3mL/3mL	1.00
A3D1208-05	WG	D4282-02	04/13/23 13:20	04/20/23 08:20	3mL/3mL	3mL/3mL	1.00
A3D1208-06	WG	D4282-02	04/13/23 14:35	04/20/23 08:20	3mL/3mL	3mL/3mL	1.00

Conventional Chemistry Parameters**Prep: Method Prep: Ag**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23D0861							
A3D1208-01	WG	SM 2320 B	04/13/23 09:40	04/21/23 08:38	60mL/60mL	60mL/60mL	NA
A3D1208-02	WG	SM 2320 B	04/13/23 10:10	04/21/23 08:38	60mL/60mL	60mL/60mL	NA
A3D1208-03	WG	SM 2320 B	04/13/23 10:20	04/21/23 08:38	60mL/60mL	60mL/60mL	NA
A3D1208-04	WG	SM 2320 B	04/13/23 11:05	04/21/23 08:38	60mL/60mL	60mL/60mL	NA
A3D1208-05	WG	SM 2320 B	04/13/23 13:20	04/21/23 08:38	60mL/60mL	60mL/60mL	NA
A3D1208-06	WG	SM 2320 B	04/13/23 14:35	04/21/23 08:38	60mL/60mL	60mL/60mL	NA

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**

Project Number: **000029-02.84 T-01.001 H**

Project Manager: **John Renda**

Report ID:

A3D1208 - 05 19 23 1331

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

- E** Estimated Value. The result is above the calibration range of the instrument.
- J** Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
- PRES** Incomplete field preservation. Additional preservative was added to adjust the pH within the appropriate range for this analysis.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-02** Spike recovery is outside of established control limits due to matrix interference.
- Q-03** Spike recovery and/or RPD is outside control limits due to the high concentration of analyte present in the sample.
- Q-16** Reanalysis of an original Batch QC sample.
- Q-42** Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)
- Q-54** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +1%. The results are reported as Estimated Values.
- Q-54a** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +10%. The results are reported as Estimated Values.
- Q-54b** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +15%. The results are reported as Estimated Values.
- Q-54c** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +2%. The results are reported as Estimated Values.
- Q-54d** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +23%. The results are reported as Estimated Values.
- Q-54e** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +27%. The results are reported as Estimated Values.
- Q-54f** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +34%. The results are reported as Estimated Values.
- Q-54g** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +5%. The results are reported as Estimated Values.
- Q-54h** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +6%. The results are reported as Estimated Values.
- Q-54i** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by +8%. The results are reported as Estimated Values.
- Q-54j** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -1%. The results are reported as Estimated Values.

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**

Project Number: **000029-02.84 T-01.001 H**

Project Manager: **John Renda**

Report ID:

A3D1208 - 05 19 23 1331

- Q-54k** Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260/8270 by -2%. The results are reported as Estimated Values.
- Q-55** Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260, however there is adequate sensitivity to ensure detection at the reporting level.
- Q-56** Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260
- Q-65** Spike recovery is estimated due to the high analyte concentration of the source sample.
- R-02** The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- R-06** Reporting level raised due to possible carryover from a previous sample.
- S-05** Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.
- T-02** This Batch QC sample was analyzed outside of the method specified 12 hour analysis window. Results are estimated.
- X** See Case Narrative.

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**

Project Number: **000029-02.84 T-01.001 H**

Project Manager: **John Renda**

Report ID:

A3D1208 - 05 19 23 1331

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.
ND Analyte NOT DETECTED at or above the detection or reporting limit.
NR Result Not Reported
RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ("-----"), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.

The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.

"dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")

See Percent Solids section for details of dry weight analysis.

"wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

Results for Volatiles analyses on soils and sediments that are reported on a "dry weight" basis include the water miscible solvent (WMS) correction referenced in the EPA 8000 Method guidance documents. Solid and Liquid samples reported on an "As Received" basis do not have the WMS correction applied, as dry weight was not performed.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**

Project Number: **000029-02.84 T-01.001 H**

Project Manager: **John Renda**

Report ID:

A3D1208 - 05 19 23 1331

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).

-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.

-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.

For further details, please request a copy of this document.

-Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level, if results are not reported to the MDL.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: **Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.**

Project Number: **000029-02.84 T-01.001 H**

Project Manager: **John Renda**

Report ID:

A3D1208 - 05 19 23 1331

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) -

EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
<u>All reported analytes are included in Apex Laboratories' current ORELAP scope.</u>					

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.

Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street

Tigard, OR 97223

503-718-2323

ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001 H

Project Manager: John Renda

Report ID:

A3D1208 - 05 19 23 1331

APEX LABS COOLER RECEIPT FORM

Client: Anchor QEA Element WO#: A3 D1208Project/Project #: Gasco-CMMA/TCE Prod. Wells 1Q 2023 Perf. Mon.
#000029-02.84 01.001H

Delivery Info:

Date/time received: 4/14/23 @ 819 By: JSDelivered by: Apex ☒ Client ☐ ESS ☐ FedEx ☐ UPS ☐ Radio ☐ Morgan ☐ SDS ☐ Evergreen ☐ Other ☐Cooler Inspection Date/time inspected: 4/14/23 @ 910 By: JSChain of Custody included? Yes ☒ No ☐Signed/dated by client? Yes ☒ No ☐

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>2.1</u>	<u>1.8</u>					
Custody seals? (Y/N)	<u>N</u>	<u>N</u>					
Received on ice? (Y/N)	<u>Y</u>	<u>Y</u>					
Temp. blanks? (Y/N)	<u>Y</u>	<u>Y</u>					
Ice type: (Gel/Real/Other)	<u>real</u>	<u>real</u>					
Condition (In/Out):	<u>In</u>	<u>In</u>					

Cooler out of temp? (Y/N) Possible reason why:

Green dots applied to out of temperature samples? Yes ☒ No ☐Out of temperature samples form initiated? Yes ☒ No ☐Sample Inspection: Date/time inspected: 4/14/23 @ 1025 By: JSAll samples intact? Yes ☒ No ☐ Comments:Bottle labels/COCs agree? Yes ☒ No ☐ Comments: TB# 3278COC/container discrepancies form initiated? Yes ☐ No ☒Containers/volumes received appropriate for analysis? Yes ☒ No ☐ Comments:Do VOA vials have visible headspace? Yes ☒ No ☐ NA ☐Comments: 1/18 vials have HS on GS-73Water samples: pH checked: Yes ☒ No ☐ NA ☐ pH appropriate? Yes ☐ No ☒ NA ☐Comments: pH 9 on GS-73, GS-72, GS-71, GS-70, GS-64 on 125 ml
brown NADH poly

Additional information:

Labeled by:

Witness:

Cooler Inspected by:

Form Y-003 R-00

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Page 92 of 92