



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: A3C0365 - Gasco-MGP Only Mon. Wells 1Q 2023 Perf. Mon. - 000029-02.84 T-01.001E

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 A3C0365, which was received by the laboratory on 3/10/2023 at 8:01:00AM.

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)

Default Cooler 3.9 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This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.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

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Darwin Thomas, Business Development Director



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Project: **Gasco-MGP Only Mon. Wells 1Q 2023 Perf. Mon.**

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

Project Manager: **John Renda**

Report ID:

A3C0365 - 05 19 23 0508

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GS-030923-06	A3C0365-01	WG	03/09/23 11:10	03/10/23 08:01
GS-030923-07	A3C0365-02	WG	03/09/23 12:15	03/10/23 08:01
GS-030923-08	A3C0365-03	WG	03/09/23 14:15	03/10/23 08:01
TB-030923	A3C0365-04	W	03/09/23 15:00	03/10/23 08:01

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Portland, OR 97219Project: **Gasco-MGP Only Mon. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001E**Project Manager: **John Renda****Report ID:****A3C0365 - 05 19 23 0508**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-030923-06 (A3C0365-01RE1)		Matrix: WG			Batch: 23C0453			
Acetone	ND	100	200	ug/L	10	03/13/23 19:30	EPA 8260D	
Acrylonitrile	ND	10.0	20.0	ug/L	10	03/13/23 19:30	EPA 8260D	
Benzene	34.3	1.00	2.00	ug/L	10	03/13/23 19:30	EPA 8260D	
Bromobenzene	ND	2.50	5.00	ug/L	10	03/13/23 19:30	EPA 8260D	
Bromochloromethane	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
Bromodichloromethane	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
Bromoform	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
Bromomethane	ND	50.0	50.0	ug/L	10	03/13/23 19:30	EPA 8260D	
2-Butanone (MEK)	ND	50.0	100	ug/L	10	03/13/23 19:30	EPA 8260D	
n-Butylbenzene	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
sec-Butylbenzene	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
tert-Butylbenzene	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
Carbon disulfide	ND	50.0	100	ug/L	10	03/13/23 19:30	EPA 8260D	
Carbon tetrachloride	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
Chlorobenzene	ND	2.50	5.00	ug/L	10	03/13/23 19:30	EPA 8260D	
Chloroethane	ND	50.0	50.0	ug/L	10	03/13/23 19:30	EPA 8260D	
Chloroform	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
Chloromethane	ND	25.0	50.0	ug/L	10	03/13/23 19:30	EPA 8260D	
2-Chlorotoluene	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
4-Chlorotoluene	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
Dibromochloromethane	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	25.0	50.0	ug/L	10	03/13/23 19:30	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	2.50	5.00	ug/L	10	03/13/23 19:30	EPA 8260D	
Dibromomethane	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
1,2-Dichlorobenzene	ND	2.50	5.00	ug/L	10	03/13/23 19:30	EPA 8260D	
1,3-Dichlorobenzene	ND	2.50	5.00	ug/L	10	03/13/23 19:30	EPA 8260D	
1,4-Dichlorobenzene	ND	2.50	5.00	ug/L	10	03/13/23 19:30	EPA 8260D	
Dichlorodifluoromethane	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
1,1-Dichloroethane	ND	2.00	4.00	ug/L	10	03/13/23 19:30	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	2.00	4.00	ug/L	10	03/13/23 19:30	EPA 8260D	
1,2-Dichloropropane	ND	2.50	5.00	ug/L	10	03/13/23 19:30	EPA 8260D	
1,3-Dichloropropane	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
2,2-Dichloropropane	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	

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Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-030923-06 (A3C0365-01RE1)		Matrix: WG			Batch: 23C0453			
1,1-Dichloropropene	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
cis-1,3-Dichloropropene	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
trans-1,3-Dichloropropene	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
Ethylbenzene	75.9	2.50	5.00	ug/L	10	03/13/23 19:30	EPA 8260D	
Hexachlorobutadiene	ND	25.0	50.0	ug/L	10	03/13/23 19:30	EPA 8260D	
2-Hexanone	ND	50.0	100	ug/L	10	03/13/23 19:30	EPA 8260D	
Isopropylbenzene	18.6	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
4-Isopropyltoluene	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
Methylene chloride	ND	50.0	100	ug/L	10	03/13/23 19:30	EPA 8260D	
4-Methyl-2-pentanone (MiBK)	ND	50.0	100	ug/L	10	03/13/23 19:30	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
Naphthalene	1680	10.0	20.0	ug/L	10	03/13/23 19:30	EPA 8260D	
n-Propylbenzene	8.50	2.50	5.00	ug/L	10	03/13/23 19:30	EPA 8260D	
Styrene	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	2.00	4.00	ug/L	10	03/13/23 19:30	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	2.50	5.00	ug/L	10	03/13/23 19:30	EPA 8260D	
Tetrachloroethene (PCE)	ND	2.00	4.00	ug/L	10	03/13/23 19:30	EPA 8260D	
Toluene	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
1,2,3-Trichlorobenzene	ND	10.0	20.0	ug/L	10	03/13/23 19:30	EPA 8260D	
1,2,4-Trichlorobenzene	ND	10.0	20.0	ug/L	10	03/13/23 19:30	EPA 8260D	
1,1,1-Trichloroethane	ND	2.00	4.00	ug/L	10	03/13/23 19:30	EPA 8260D	
1,1,2-Trichloroethane	ND	2.50	5.00	ug/L	10	03/13/23 19:30	EPA 8260D	
Trichlorofluoromethane	ND	10.0	20.0	ug/L	10	03/13/23 19:30	EPA 8260D	
1,2,3-Trichloropropane	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
1,2,4-Trimethylbenzene	20.3	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
1,3,5-Trimethylbenzene	ND	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	
m,p-Xylene	8.50	5.00	10.0	ug/L	10	03/13/23 19:30	EPA 8260D	J
o-Xylene	14.8	2.50	5.00	ug/L	10	03/13/23 19:30	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 97 %		Limits: 80-120 %	1	03/13/23 19:30	EPA 8260D	
Toluene-d8 (Surr)		106 %		80-120 %	1	03/13/23 19:30	EPA 8260D	
4-Bromofluorobenzene (Surr)		92 %		80-120 %	1	03/13/23 19:30	EPA 8260D	

GS-030923-07 (A3C0365-02RE1)

Matrix: WG

Batch: 23C0453

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ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-030923-07 (A3C0365-02RE1)				Matrix: WG		Batch: 23C0453		
Acetone	ND	50.0	100	ug/L	5	03/13/23 17:39	EPA 8260D	
Acrylonitrile	ND	5.00	10.0	ug/L	5	03/13/23 17:39	EPA 8260D	
Benzene	108	0.500	1.00	ug/L	5	03/13/23 17:39	EPA 8260D	
Bromobenzene	ND	1.25	2.50	ug/L	5	03/13/23 17:39	EPA 8260D	
Bromochloromethane	ND	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
Bromodichloromethane	ND	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
Bromoform	ND	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
Bromomethane	ND	25.0	25.0	ug/L	5	03/13/23 17:39	EPA 8260D	
2-Butanone (MEK)	ND	25.0	50.0	ug/L	5	03/13/23 17:39	EPA 8260D	
n-Butylbenzene	4.60	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	J
sec-Butylbenzene	8.60	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
tert-Butylbenzene	ND	10.0	10.0	ug/L	5	03/13/23 17:39	EPA 8260D	R-02
Carbon disulfide	ND	25.0	50.0	ug/L	5	03/13/23 17:39	EPA 8260D	
Carbon tetrachloride	ND	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
Chlorobenzene	ND	1.25	2.50	ug/L	5	03/13/23 17:39	EPA 8260D	
Chloroethane	ND	25.0	25.0	ug/L	5	03/13/23 17:39	EPA 8260D	
Chloroform	ND	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
Chloromethane	ND	12.5	25.0	ug/L	5	03/13/23 17:39	EPA 8260D	
2-Chlorotoluene	ND	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
4-Chlorotoluene	ND	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
Dibromochloromethane	ND	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	12.5	25.0	ug/L	5	03/13/23 17:39	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	1.25	2.50	ug/L	5	03/13/23 17:39	EPA 8260D	
Dibromomethane	ND	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
1,2-Dichlorobenzene	ND	1.25	2.50	ug/L	5	03/13/23 17:39	EPA 8260D	
1,3-Dichlorobenzene	ND	1.25	2.50	ug/L	5	03/13/23 17:39	EPA 8260D	
1,4-Dichlorobenzene	ND	1.25	2.50	ug/L	5	03/13/23 17:39	EPA 8260D	
Dichlorodifluoromethane	ND	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
1,1-Dichloroethane	ND	1.00	2.00	ug/L	5	03/13/23 17:39	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	1.00	2.00	ug/L	5	03/13/23 17:39	EPA 8260D	
1,2-Dichloropropane	ND	1.25	2.50	ug/L	5	03/13/23 17:39	EPA 8260D	
1,3-Dichloropropane	ND	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
2,2-Dichloropropane	ND	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	

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Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-030923-07 (A3C0365-02RE1)		Matrix: WG			Batch: 23C0453			
1,1-Dichloropropene	ND	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
cis-1,3-Dichloropropene	ND	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
trans-1,3-Dichloropropene	ND	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
Ethylbenzene	381	1.25	2.50	ug/L	5	03/13/23 17:39	EPA 8260D	
Hexachlorobutadiene	ND	12.5	25.0	ug/L	5	03/13/23 17:39	EPA 8260D	
2-Hexanone	ND	25.0	50.0	ug/L	5	03/13/23 17:39	EPA 8260D	
Isopropylbenzene	80.3	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
4-Isopropyltoluene	14.5	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	M-02
Methylene chloride	ND	25.0	50.0	ug/L	5	03/13/23 17:39	EPA 8260D	
4-Methyl-2-pentanone (MIBK)	ND	25.0	50.0	ug/L	5	03/13/23 17:39	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
Naphthalene	248	5.00	10.0	ug/L	5	03/13/23 17:39	EPA 8260D	
n-Propylbenzene	42.2	1.25	2.50	ug/L	5	03/13/23 17:39	EPA 8260D	
Styrene	ND	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	1.00	2.00	ug/L	5	03/13/23 17:39	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	1.25	2.50	ug/L	5	03/13/23 17:39	EPA 8260D	
Tetrachloroethene (PCE)	ND	1.00	2.00	ug/L	5	03/13/23 17:39	EPA 8260D	
Toluene	ND	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
1,2,3-Trichlorobenzene	ND	5.00	10.0	ug/L	5	03/13/23 17:39	EPA 8260D	
1,2,4-Trichlorobenzene	ND	5.00	10.0	ug/L	5	03/13/23 17:39	EPA 8260D	
1,1,1-Trichloroethane	ND	1.00	2.00	ug/L	5	03/13/23 17:39	EPA 8260D	
1,1,2-Trichloroethane	ND	1.25	2.50	ug/L	5	03/13/23 17:39	EPA 8260D	
Trichlorofluoromethane	ND	5.00	10.0	ug/L	5	03/13/23 17:39	EPA 8260D	
1,2,3-Trichloropropane	ND	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
1,2,4-Trimethylbenzene	97.8	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
1,3,5-Trimethylbenzene	15.7	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
m,p-Xylene	39.2	2.50	5.00	ug/L	5	03/13/23 17:39	EPA 8260D	
o-Xylene	114	1.25	2.50	ug/L	5	03/13/23 17:39	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 96 %		Limits: 80-120 %	1	03/13/23 17:39	EPA 8260D	
Toluene-d8 (Surr)		106 %		80-120 %	1	03/13/23 17:39	EPA 8260D	
4-Bromofluorobenzene (Surr)		86 %		80-120 %	1	03/13/23 17:39	EPA 8260D	

GS-030923-08 (A3C0365-03RE1)

Matrix: WG

Batch: 23C0453

V-25

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Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-030923-08 (A3C0365-03RE1)				Matrix: WG		Batch: 23C0453		V-25
Acetone	ND	500	1000	ug/L	50	03/13/23 18:23	EPA 8260D	
Acrylonitrile	ND	50.0	100	ug/L	50	03/13/23 18:23	EPA 8260D	
Bromobenzene	ND	12.5	25.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Bromochloromethane	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Bromodichloromethane	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Bromoform	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Bromomethane	ND	250	250	ug/L	50	03/13/23 18:23	EPA 8260D	
2-Butanone (MEK)	ND	250	500	ug/L	50	03/13/23 18:23	EPA 8260D	
n-Butylbenzene	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
sec-Butylbenzene	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
tert-Butylbenzene	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Carbon disulfide	ND	250	500	ug/L	50	03/13/23 18:23	EPA 8260D	
Carbon tetrachloride	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Chlorobenzene	ND	12.5	25.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Chloroethane	ND	250	250	ug/L	50	03/13/23 18:23	EPA 8260D	
Chloroform	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Chloromethane	ND	125	250	ug/L	50	03/13/23 18:23	EPA 8260D	
2-Chlorotoluene	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
4-Chlorotoluene	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Dibromochloromethane	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	125	250	ug/L	50	03/13/23 18:23	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	12.5	25.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Dibromomethane	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
1,2-Dichlorobenzene	ND	12.5	25.0	ug/L	50	03/13/23 18:23	EPA 8260D	
1,3-Dichlorobenzene	ND	12.5	25.0	ug/L	50	03/13/23 18:23	EPA 8260D	
1,4-Dichlorobenzene	ND	12.5	25.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Dichlorodifluoromethane	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
1,1-Dichloroethane	ND	10.0	20.0	ug/L	50	03/13/23 18:23	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	10.0	20.0	ug/L	50	03/13/23 18:23	EPA 8260D	
1,1-Dichloroethene	ND	10.0	20.0	ug/L	50	03/13/23 18:23	EPA 8260D	
cis-1,2-Dichloroethene	ND	10.0	20.0	ug/L	50	03/13/23 18:23	EPA 8260D	
trans-1,2-Dichloroethene	ND	10.0	20.0	ug/L	50	03/13/23 18:23	EPA 8260D	
1,2-Dichloropropane	ND	12.5	25.0	ug/L	50	03/13/23 18:23	EPA 8260D	

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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-MGP Only Mon. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001E**Project Manager: **John Renda****Report ID:****A3C0365 - 05 19 23 0508**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-030923-08 (A3C0365-03RE1)		Matrix: WG			Batch: 23C0453		V-25	
1,3-Dichloropropane	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
2,2-Dichloropropane	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
1,1-Dichloropropene	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
cis-1,3-Dichloropropene	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
trans-1,3-Dichloropropene	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Ethylbenzene	208	12.5	25.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Hexachlorobutadiene	ND	125	250	ug/L	50	03/13/23 18:23	EPA 8260D	
2-Hexanone	ND	250	500	ug/L	50	03/13/23 18:23	EPA 8260D	
Isopropylbenzene	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
4-Isopropyltoluene	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Methylene chloride	ND	250	500	ug/L	50	03/13/23 18:23	EPA 8260D	
4-Methyl-2-pentanone (MiBK)	ND	250	500	ug/L	50	03/13/23 18:23	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Naphthalene	4180	50.0	100	ug/L	50	03/13/23 18:23	EPA 8260D	
n-Propylbenzene	ND	12.5	25.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Styrene	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	10.0	20.0	ug/L	50	03/13/23 18:23	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	12.5	25.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Tetrachloroethene (PCE)	ND	10.0	20.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Toluene	478	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
1,2,3-Trichlorobenzene	ND	50.0	100	ug/L	50	03/13/23 18:23	EPA 8260D	
1,2,4-Trichlorobenzene	ND	50.0	100	ug/L	50	03/13/23 18:23	EPA 8260D	
1,1,1-Trichloroethane	ND	10.0	20.0	ug/L	50	03/13/23 18:23	EPA 8260D	
1,1,2-Trichloroethane	ND	12.5	25.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Trichloroethene (TCE)	ND	10.0	20.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Trichlorofluoromethane	ND	50.0	100	ug/L	50	03/13/23 18:23	EPA 8260D	
1,2,3-Trichloropropane	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
1,2,4-Trimethylbenzene	61.5	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
1,3,5-Trimethylbenzene	ND	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
Vinyl chloride	ND	10.0	20.0	ug/L	50	03/13/23 18:23	EPA 8260D	
m,p-Xylene	180	25.0	50.0	ug/L	50	03/13/23 18:23	EPA 8260D	
o-Xylene	87.5	12.5	25.0	ug/L	50	03/13/23 18:23	EPA 8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 96 %</i>		<i>Limits: 80-120 %</i>	<i>1</i>	<i>03/13/23 18:23</i>	<i>EPA 8260D</i>	

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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-MGP Only Mon. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001E**Project Manager: **John Renda****Report ID:****A3C0365 - 05 19 23 0508**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-030923-08 (A3C0365-03RE1)		Matrix: WG			Batch: 23C0453		V-25	
Surrogate: Toluene-d8 (Surr)		Recovery: 107 %	Limits: 80-120 %	1	03/13/23 18:23	EPA 8260D		
4-Bromofluorobenzene (Surr)		96 %	80-120 %	1	03/13/23 18:23	EPA 8260D		
GS-030923-08 (A3C0365-03RE2)		Matrix: WG			Batch: 23C0498			
Benzene	9240	50.0	100	ug/L	500	03/15/23 20:56	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 102 %	Limits: 80-120 %	1	03/15/23 20:56	EPA 8260D		
Toluene-d8 (Surr)		102 %	80-120 %	1	03/15/23 20:56	EPA 8260D		
4-Bromofluorobenzene (Surr)		102 %	80-120 %	1	03/15/23 20:56	EPA 8260D		
TB-030923 (A3C0365-04)		Matrix: W			Batch: 23C0453		CONT, V-01	
Acetone	ND	20.0	20.0	ug/L	1	03/13/23 11:19	EPA 8260D	
Acrylonitrile	ND	1.00	2.00	ug/L	1	03/13/23 11:19	EPA 8260D	
Benzene	ND	0.100	0.200	ug/L	1	03/13/23 11:19	EPA 8260D	
Bromobenzene	ND	0.250	0.500	ug/L	1	03/13/23 11:19	EPA 8260D	
Bromochloromethane	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
Bromoform	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
Bromomethane	ND	5.00	5.00	ug/L	1	03/13/23 11:19	EPA 8260D	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	03/13/23 11:19	EPA 8260D	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
Carbon disulfide	ND	5.00	10.0	ug/L	1	03/13/23 11:19	EPA 8260D	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
Chlorobenzene	ND	0.250	0.500	ug/L	1	03/13/23 11:19	EPA 8260D	
Chloroethane	ND	5.00	5.00	ug/L	1	03/13/23 11:19	EPA 8260D	
Chloroform	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
Chloromethane	ND	2.50	5.00	ug/L	1	03/13/23 11:19	EPA 8260D	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	03/13/23 11:19	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	03/13/23 11:19	EPA 8260D	
Dibromomethane	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	

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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-MGP Only Mon. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001E**Project Manager: **John Renda****Report ID:****A3C0365 - 05 19 23 0508**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
TB-030923 (A3C0365-04)				Matrix: W		Batch: 23C0453		CONT, V-01
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	03/13/23 11:19	EPA 8260D	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	03/13/23 11:19	EPA 8260D	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	03/13/23 11:19	EPA 8260D	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	03/13/23 11:19	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	03/13/23 11:19	EPA 8260D	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	03/13/23 11:19	EPA 8260D	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	03/13/23 11:19	EPA 8260D	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	03/13/23 11:19	EPA 8260D	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	03/13/23 11:19	EPA 8260D	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
Ethylbenzene	ND	0.250	0.500	ug/L	1	03/13/23 11:19	EPA 8260D	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	03/13/23 11:19	EPA 8260D	
2-Hexanone	ND	5.00	10.0	ug/L	1	03/13/23 11:19	EPA 8260D	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
Methylene chloride	ND	5.00	10.0	ug/L	1	03/13/23 11:19	EPA 8260D	
4-Methyl-2-pentanone (MIBK)	ND	5.00	10.0	ug/L	1	03/13/23 11:19	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
Naphthalene	ND	1.00	2.00	ug/L	1	03/13/23 11:19	EPA 8260D	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	03/13/23 11:19	EPA 8260D	
Styrene	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	03/13/23 11:19	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	03/13/23 11:19	EPA 8260D	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	03/13/23 11:19	EPA 8260D	
Toluene	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	03/13/23 11:19	EPA 8260D	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	03/13/23 11:19	EPA 8260D	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	03/13/23 11:19	EPA 8260D	

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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-MGP Only Mon. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
TB-030923 (A3C0365-04)		Matrix: W			Batch: 23C0453		CONT, V-01	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	03/13/23 11:19	EPA 8260D	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	03/13/23 11:19	EPA 8260D	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	03/13/23 11:19	EPA 8260D	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
Vinyl chloride	ND	0.200	0.400	ug/L	1	03/13/23 11:19	EPA 8260D	
m,p-Xylene	ND	0.500	1.00	ug/L	1	03/13/23 11:19	EPA 8260D	
o-Xylene	ND	0.250	0.500	ug/L	1	03/13/23 11:19	EPA 8260D	
Surrogate: 1,4-Difluorobenzene (Surr)		Recovery: 98 %		Limits: 80-120 %	1	03/13/23 11:19	EPA 8260D	
Toluene-d8 (Surr)		108 %		80-120 %	1	03/13/23 11:19	EPA 8260D	
4-Bromofluorobenzene (Surr)		97 %		80-120 %	1	03/13/23 11:19	EPA 8260D	

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6720 SW Macadam Ave. Suite 125

Portland, OR 97219

Project: **Gasco-MGP Only Mon. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001E**Project Manager: **John Renda****Report ID:****A3C0365 - 05 19 23 0508**

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-030923-06 (A3C0365-01)		Matrix: WG			Batch: 23C0807			
1,1-Dichloroethene	ND	0.250	0.500	ug/L	25	03/21/23 18:14	EPA 8260D SIM	
cis-1,2-Dichloroethene	ND	0.250	0.500	ug/L	25	03/21/23 18:14	EPA 8260D SIM	
trans-1,2-Dichloroethene	ND	0.250	0.500	ug/L	25	03/21/23 18:14	EPA 8260D SIM	
Trichloroethene (TCE)	ND	0.250	0.500	ug/L	25	03/21/23 18:14	EPA 8260D SIM	
Vinyl chloride	ND	0.250	0.500	ug/L	25	03/21/23 18:14	EPA 8260D SIM	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	104 %	<i>Limits:</i>	80-120 %	1	03/21/23 18:14	EPA 8260D SIM
<i>Toluene-d8 (Surr)</i>			99 %		80-120 %	1	03/21/23 18:14	EPA 8260D SIM
<i>4-Bromofluorobenzene (Surr)</i>			94 %		80-120 %	1	03/21/23 18:14	EPA 8260D SIM
GS-030923-07 (A3C0365-02)		Matrix: WG			Batch: 23C0807			
1,1-Dichloroethene	ND	0.250	0.500	ug/L	25	03/21/23 17:47	EPA 8260D SIM	
cis-1,2-Dichloroethene	ND	0.250	0.500	ug/L	25	03/21/23 17:47	EPA 8260D SIM	
trans-1,2-Dichloroethene	ND	0.250	0.500	ug/L	25	03/21/23 17:47	EPA 8260D SIM	
Trichloroethene (TCE)	ND	0.250	0.500	ug/L	25	03/21/23 17:47	EPA 8260D SIM	
Vinyl chloride	ND	0.250	0.500	ug/L	25	03/21/23 17:47	EPA 8260D SIM	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery:</i>	104 %	<i>Limits:</i>	80-120 %	1	03/21/23 17:47	EPA 8260D SIM
<i>Toluene-d8 (Surr)</i>			98 %		80-120 %	1	03/21/23 17:47	EPA 8260D SIM
<i>4-Bromofluorobenzene (Surr)</i>			93 %		80-120 %	1	03/21/23 17:47	EPA 8260D SIM

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ANALYTICAL REPORT

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503-718-2323
ORELAP ID: OR100062

Anchor QEA, LLC

6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: Gasco-MGP Only Mon. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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-030923-06 (A3C0365-01)		Matrix: WG			Batch: 23C0445			
Acenaphthene	160	4.07	8.14	ug/L	200	03/13/23 11:18	EPA 8270E LVI	
Acenaphthylene	ND	12.7	12.7	ug/L	200	03/13/23 11:18	EPA 8270E LVI	R-02
Anthracene	6.10	4.07	8.14	ug/L	200	03/13/23 11:18	EPA 8270E LVI	J
Benz(a)anthracene	ND	2.03	4.07	ug/L	200	03/13/23 11:18	EPA 8270E LVI	
Benzo(a)pyrene	ND	2.03	4.07	ug/L	200	03/13/23 11:18	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	2.03	4.07	ug/L	200	03/13/23 11:18	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	2.03	4.07	ug/L	200	03/13/23 11:18	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	4.07	8.14	ug/L	200	03/13/23 11:18	EPA 8270E LVI	
Chrysene	ND	2.03	4.07	ug/L	200	03/13/23 11:18	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	2.03	4.07	ug/L	200	03/13/23 11:18	EPA 8270E LVI	
Fluoranthene	ND	4.07	8.14	ug/L	200	03/13/23 11:18	EPA 8270E LVI	
Fluorene	30.2	4.07	8.14	ug/L	200	03/13/23 11:18	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	2.03	4.07	ug/L	200	03/13/23 11:18	EPA 8270E LVI	
1-Methylnaphthalene	217	8.14	16.3	ug/L	200	03/13/23 11:18	EPA 8270E LVI	
2-Methylnaphthalene	38.6	8.14	16.3	ug/L	200	03/13/23 11:18	EPA 8270E LVI	
Naphthalene	1070	8.14	16.3	ug/L	200	03/13/23 11:18	EPA 8270E LVI	
Phenanthrene	22.2	8.14	16.3	ug/L	200	03/13/23 11:18	EPA 8270E LVI	
Pyrene	ND	4.07	8.14	ug/L	200	03/13/23 11:18	EPA 8270E LVI	
Carbazole	46.3	4.07	8.14	ug/L	200	03/13/23 11:18	EPA 8270E LVI	
Dibenzofuran	7.12	4.07	8.14	ug/L	200	03/13/23 11:18	EPA 8270E LVI	J
Surrogate: Acenaphthylene-d8 (Surr)		Recovery: 472 %		Limits: 78-134 %	200	03/13/23 11:18	EPA 8270E LVI	S-05
Benzo(a)pyrene-d12 (Surr)		92 %		80-132 %	200	03/13/23 11:18	EPA 8270E LVI	S-05
GS-030923-07 (A3C0365-02)		Matrix: WG			Batch: 23C0445			
Acenaphthene	194	0.505	1.01	ug/L	25	03/13/23 12:56	EPA 8270E LVI	
Acenaphthylene	ND	14.2	14.2	ug/L	25	03/13/23 12:56	EPA 8270E LVI	R-02
Anthracene	8.72	0.505	1.01	ug/L	25	03/13/23 12:56	EPA 8270E LVI	
Benz(a)anthracene	ND	0.252	0.505	ug/L	25	03/13/23 12:56	EPA 8270E LVI	
Benzo(a)pyrene	ND	0.252	0.505	ug/L	25	03/13/23 12:56	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	0.252	0.505	ug/L	25	03/13/23 12:56	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	0.252	0.505	ug/L	25	03/13/23 12:56	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	0.505	1.01	ug/L	25	03/13/23 12:56	EPA 8270E LVI	
Chrysene	ND	0.252	0.505	ug/L	25	03/13/23 12:56	EPA 8270E LVI	

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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-MGP Only Mon. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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-030923-07 (A3C0365-02)		Matrix: WG			Batch: 23C0445			
Dibenz(a,h)anthracene	ND	0.252	0.505	ug/L	25	03/13/23 12:56	EPA 8270E LVI	
Fluoranthene	2.41	0.505	1.01	ug/L	25	03/13/23 12:56	EPA 8270E LVI	
Fluorene	66.5	0.505	1.01	ug/L	25	03/13/23 12:56	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	0.252	0.505	ug/L	25	03/13/23 12:56	EPA 8270E LVI	
Naphthalene	172	1.01	2.02	ug/L	25	03/13/23 12:56	EPA 8270E LVI	
Phenanthrene	67.3	1.01	2.02	ug/L	25	03/13/23 12:56	EPA 8270E LVI	
Pyrene	2.03	0.505	1.01	ug/L	25	03/13/23 12:56	EPA 8270E LVI	
Carbazole	192	0.505	1.01	ug/L	25	03/13/23 12:56	EPA 8270E LVI	
Dibenzofuran	17.6	0.505	1.01	ug/L	25	03/13/23 12:56	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		Recovery: 142 %		Limits: 78-134 %	25	03/13/23 12:56	EPA 8270E LVI	S-05
Benzo(a)pyrene-d12 (Surr)		76 %		80-132 %	25	03/13/23 12:56	EPA 8270E LVI	S-05
GS-030923-07 (A3C0365-02RE1)		Matrix: WG			Batch: 23C0445			
1-Methylnaphthalene	567	10.1	20.2	ug/L	250	03/13/23 14:02	EPA 8270E LVI	
2-Methylnaphthalene	597	10.1	20.2	ug/L	250	03/13/23 14:02	EPA 8270E LVI	
GS-030923-08 (A3C0365-03)		Matrix: WG			Batch: 23C0445			
Acenaphthene	145	9.66	19.3	ug/L	500	03/13/23 13:29	EPA 8270E LVI	
Acenaphthylene	ND	19.3	19.3	ug/L	500	03/13/23 13:29	EPA 8270E LVI	
Anthracene	ND	9.66	19.3	ug/L	500	03/13/23 13:29	EPA 8270E LVI	
Benz(a)anthracene	ND	4.83	9.66	ug/L	500	03/13/23 13:29	EPA 8270E LVI	
Benzo(a)pyrene	ND	4.83	9.66	ug/L	500	03/13/23 13:29	EPA 8270E LVI	
Benzo(b)fluoranthene	ND	4.83	9.66	ug/L	500	03/13/23 13:29	EPA 8270E LVI	
Benzo(k)fluoranthene	ND	4.83	9.66	ug/L	500	03/13/23 13:29	EPA 8270E LVI	
Benzo(g,h,i)perylene	ND	9.66	19.3	ug/L	500	03/13/23 13:29	EPA 8270E LVI	
Chrysene	ND	4.83	9.66	ug/L	500	03/13/23 13:29	EPA 8270E LVI	
Dibenz(a,h)anthracene	ND	4.83	9.66	ug/L	500	03/13/23 13:29	EPA 8270E LVI	
Fluoranthene	ND	9.66	19.3	ug/L	500	03/13/23 13:29	EPA 8270E LVI	
Fluorene	30.0	9.66	19.3	ug/L	500	03/13/23 13:29	EPA 8270E LVI	
Indeno(1,2,3-cd)pyrene	ND	4.83	9.66	ug/L	500	03/13/23 13:29	EPA 8270E LVI	
1-Methylnaphthalene	170	19.3	38.7	ug/L	500	03/13/23 13:29	EPA 8270E LVI	
2-Methylnaphthalene	232	19.3	38.7	ug/L	500	03/13/23 13:29	EPA 8270E LVI	
Naphthalene	2920	19.3	38.7	ug/L	500	03/13/23 13:29	EPA 8270E LVI	

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Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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-030923-08 (A3C0365-03)		Matrix: WG			Batch: 23C0445			
Phenanthrene	44.9	19.3	38.7	ug/L	500	03/13/23 13:29	EPA 8270E LVI	
Pyrene	ND	9.66	19.3	ug/L	500	03/13/23 13:29	EPA 8270E LVI	
Carbazole	44.2	9.66	19.3	ug/L	500	03/13/23 13:29	EPA 8270E LVI	
Dibenzofuran	ND	9.66	19.3	ug/L	500	03/13/23 13:29	EPA 8270E LVI	
Surrogate: Acenaphthylene-d8 (Surr)		Recovery: 1700 %		Limits: 78-134 %	500	03/13/23 13:29	EPA 8270E LVI	S-05
Benzo(a)pyrene-d12 (Surr)		100 %		80-132 %	500	03/13/23 13:29	EPA 8270E LVI	S-05

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Project Manager: John Renda

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ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-030923-06 (A3C0365-01RE2)		Matrix: WG						
Batch: 23C0886								
Aluminum	51.4	25.0	50.0	ug/L	1	03/22/23 22:55	EPA 6020B	
Antimony	ND	0.500	1.00	ug/L	1	03/22/23 22:55	EPA 6020B	
Arsenic	4.54	0.500	1.00	ug/L	1	03/22/23 22:55	EPA 6020B	
Barium	69.7	1.00	2.00	ug/L	1	03/22/23 22:55	EPA 6020B	
Beryllium	ND	0.100	0.200	ug/L	1	03/22/23 22:55	EPA 6020B	
Cadmium	ND	0.100	0.200	ug/L	1	03/22/23 22:55	EPA 6020B	
Chromium	10.4	1.00	2.00	ug/L	1	03/22/23 22:55	EPA 6020B	
Copper	ND	1.00	2.00	ug/L	1	03/22/23 22:55	EPA 6020B	
Iron	32400	25.0	50.0	ug/L	1	03/22/23 22:55	EPA 6020B	
Lead	0.500	0.110	0.200	ug/L	1	03/22/23 22:55	EPA 6020B	
Manganese	1870	0.500	1.00	ug/L	1	03/22/23 22:55	EPA 6020B	
Mercury	ND	0.0400	0.0800	ug/L	1	03/22/23 22:55	EPA 6020B	
Nickel	5.25	1.00	2.00	ug/L	1	03/22/23 22:55	EPA 6020B	
Selenium	ND	0.500	1.00	ug/L	1	03/22/23 22:55	EPA 6020B	
Silver	ND	0.100	0.200	ug/L	1	03/22/23 22:55	EPA 6020B	
Thallium	ND	0.100	0.200	ug/L	1	03/22/23 22:55	EPA 6020B	
Vanadium	1.43	1.00	2.00	ug/L	1	03/22/23 22:55	EPA 6020B	J
Zinc	2.62	2.00	4.00	ug/L	1	03/22/23 22:55	EPA 6020B	J
GS-030923-07 (A3C0365-02)		Matrix: WG						
Batch: 23C0809								
Aluminum	ND	25.0	50.0	ug/L	1	03/22/23 02:11	EPA 6020B	
Antimony	ND	0.500	1.00	ug/L	1	03/22/23 02:11	EPA 6020B	
Arsenic	5.41	0.500	1.00	ug/L	1	03/22/23 02:11	EPA 6020B	
Barium	35.0	1.00	2.00	ug/L	1	03/22/23 02:11	EPA 6020B	
Beryllium	ND	0.100	0.200	ug/L	1	03/22/23 02:11	EPA 6020B	
Cadmium	ND	0.100	0.200	ug/L	1	03/22/23 02:11	EPA 6020B	
Chromium	ND	1.00	2.00	ug/L	1	03/22/23 02:11	EPA 6020B	
Copper	ND	1.00	2.00	ug/L	1	03/22/23 02:11	EPA 6020B	
Lead	ND	0.110	0.200	ug/L	1	03/22/23 02:11	EPA 6020B	
Manganese	1710	0.500	1.00	ug/L	1	03/22/23 02:11	EPA 6020B	
Mercury	ND	0.0400	0.0800	ug/L	1	03/22/23 02:11	EPA 6020B	
Nickel	ND	1.00	2.00	ug/L	1	03/22/23 02:11	EPA 6020B	

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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-MGP Only Mon. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001E**Project Manager: **John Renda****Report ID:****A3C0365 - 05 19 23 0508**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-030923-07 (A3C0365-02) Matrix: WG								
Silver	ND	0.100	0.200	ug/L	1	03/22/23 02:11	EPA 6020B	
Thallium	ND	0.100	0.200	ug/L	1	03/22/23 02:11	EPA 6020B	
Vanadium	ND	1.00	2.00	ug/L	1	03/22/23 02:11	EPA 6020B	
Zinc	3.77	2.00	4.00	ug/L	1	03/22/23 02:11	EPA 6020B	J
GS-030923-07 (A3C0365-02RE1) Matrix: WG								
Batch: 23C0809								
Iron	40000	25.0	50.0	ug/L	1	03/22/23 17:35	EPA 6020B	
Selenium	ND	0.500	1.00	ug/L	1	03/22/23 17:35	EPA 6020B	
GS-030923-08 (A3C0365-03) Matrix: WG								
Batch: 23C0809								
Aluminum	44.3	25.0	50.0	ug/L	1	03/22/23 02:16	EPA 6020B	J
Antimony	ND	0.500	1.00	ug/L	1	03/22/23 02:16	EPA 6020B	
Arsenic	6.65	0.500	1.00	ug/L	1	03/22/23 02:16	EPA 6020B	
Barium	108	1.00	2.00	ug/L	1	03/22/23 02:16	EPA 6020B	
Beryllium	ND	0.100	0.200	ug/L	1	03/22/23 02:16	EPA 6020B	
Cadmium	ND	0.100	0.200	ug/L	1	03/22/23 02:16	EPA 6020B	
Chromium	ND	1.00	2.00	ug/L	1	03/22/23 02:16	EPA 6020B	
Copper	ND	1.00	2.00	ug/L	1	03/22/23 02:16	EPA 6020B	
Lead	ND	0.110	0.200	ug/L	1	03/22/23 02:16	EPA 6020B	
Mercury	ND	0.0400	0.0800	ug/L	1	03/22/23 02:16	EPA 6020B	
Nickel	ND	1.00	2.00	ug/L	1	03/22/23 02:16	EPA 6020B	
Silver	ND	0.100	0.200	ug/L	1	03/22/23 02:16	EPA 6020B	
Thallium	ND	0.100	0.200	ug/L	1	03/22/23 02:16	EPA 6020B	
Vanadium	1.14	1.00	2.00	ug/L	1	03/22/23 02:16	EPA 6020B	J
Zinc	ND	2.00	4.00	ug/L	1	03/22/23 02:16	EPA 6020B	
GS-030923-08 (A3C0365-03RE1) Matrix: WG								
Batch: 23C0809								
Iron	29300	250	500	ug/L	10	03/22/23 17:06	EPA 6020B	
Manganese	3860	5.00	10.0	ug/L	10	03/22/23 17:06	EPA 6020B	
GS-030923-08 (A3C0365-03RE2) Matrix: WG								
Batch: 23C0809								

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Project: Gasco-MGP Only Mon. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020B (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-030923-08 (A3C0365-03RE2)				Matrix: WG				
Selenium	ND	0.500	1.00	ug/L	1	03/22/23 17:40	EPA 6020B	

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

Project Manager: **John Renda**

Report ID:

A3C0365 - 05 19 23 0508

ANALYTICAL SAMPLE RESULTS

Total Cyanide by Flow Analysis (Aqueous)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-030923-06 (A3C0365-01RE2)				Matrix: WG		Batch: 23C0732		
Total Cyanide	0.148	0.00500	0.00500	mg/L	1	03/21/23 13:13	EPA 335.4	B-02
GS-030923-07 (A3C0365-02RE1)				Matrix: WG		Batch: 23C0510		
Total Cyanide	0.0412	0.00500	0.00500	mg/L	1	03/14/23 13:42	EPA 335.4	Q-42
GS-030923-08 (A3C0365-03)				Matrix: WG		Batch: 23C0460		
Total Cyanide	0.386	0.00500	0.00500	mg/L	1	03/13/23 17:12	EPA 335.4	B-02

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Portland, OR 97219Project: **Gasco-MGP Only Mon. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001E**Project Manager: **John Renda****Report ID:****A3C0365 - 05 19 23 0508****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-030923-06 (A3C0365-01)				Matrix: WG		Batch: 23C0622		
Available Cyanide	ND	0.00100	0.00200	mg/L	1	03/16/23 13:05	D6888-09	
GS-030923-07 (A3C0365-02)				Matrix: WG		Batch: 23C0622		
Available Cyanide	ND	0.00100	0.00200	mg/L	1	03/16/23 13:16	D6888-09	
GS-030923-08 (A3C0365-03)				Matrix: WG		Batch: 23C0622		
Available Cyanide	0.00177	0.00100	0.00200	mg/L	1	03/16/23 13:17	D6888-09	J

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ANALYTICAL SAMPLE RESULTS

Free Cyanide by Microdiffusion/Colorimetric Spectrophotometry

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
GS-030923-06 (A3C0365-01)				Matrix: WG		Batch: 23C0683		
Free Cyanide	ND	0.00250	0.00500	mg/L	1	03/17/23 18:28	D4282-02	
GS-030923-07 (A3C0365-02)				Matrix: WG		Batch: 23C0683		
Free Cyanide	ND	0.00250	0.00500	mg/L	1	03/17/23 18:36	D4282-02	
GS-030923-08 (A3C0365-03)				Matrix: WG		Batch: 23C0683		
Free Cyanide	ND	0.00250	0.00500	mg/L	1	03/17/23 18:42	D4282-02	

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Project: **Gasco-MGP Only Mon. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001E**Project Manager: **John Renda****Report ID:****A3C0365 - 05 19 23 0508****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 23C0453 - EPA 5030C						Water						
Blank (23C0453-BLK1)			Prepared: 03/13/23 08:00		Analyzed: 03/13/23 10:35							
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	---	---	---	---	---	---	

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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-MGP Only Mon. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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 23C0453 - EPA 5030C						Water						
Blank (23C0453-BLK1)						Prepared: 03/13/23 08:00 Analyzed: 03/13/23 10:35						
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: 98 % Limits: 80-120 % Dilution: 1x												

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Darwin Thomas, Business Development Director



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503-718-2323

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Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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 23C0453 - EPA 5030C						Water						
Blank (23C0453-BLK1)			Prepared: 03/13/23 08:00		Analyzed: 03/13/23 10:35							
Surr: Toluene-d8 (Surr)		Recovery: 107 %		Limits: 80-120 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		95 %		80-120 %		"						
LCS (23C0453-BS1)			Prepared: 03/13/23 08:00		Analyzed: 03/13/23 09:50							
EPA 8260D												
Acetone	44.3	10.0	20.0	ug/L	1	40.0	---	111	80-120%	---	---	
Acrylonitrile	22.1	1.00	2.00	ug/L	1	20.0	---	111	80-120%	---	---	
Benzene	19.7	0.100	0.200	ug/L	1	20.0	---	98	80-120%	---	---	
Bromobenzene	17.8	0.250	0.500	ug/L	1	20.0	---	89	80-120%	---	---	
Bromochloromethane	25.8	0.500	1.00	ug/L	1	20.0	---	129	80-120%	---	---	Q-56
Bromodichloromethane	19.5	0.500	1.00	ug/L	1	20.0	---	98	80-120%	---	---	
Bromoform	17.8	0.500	1.00	ug/L	1	20.0	---	89	80-120%	---	---	
Bromomethane	13.2	5.00	5.00	ug/L	1	20.0	---	66	80-120%	---	---	Q-55
2-Butanone (MEK)	47.5	5.00	10.0	ug/L	1	40.0	---	119	80-120%	---	---	
n-Butylbenzene	22.2	0.500	1.00	ug/L	1	20.0	---	111	80-120%	---	---	
sec-Butylbenzene	21.9	0.500	1.00	ug/L	1	20.0	---	110	80-120%	---	---	
tert-Butylbenzene	21.5	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
Carbon disulfide	20.7	5.00	10.0	ug/L	1	20.0	---	103	80-120%	---	---	
Carbon tetrachloride	18.2	0.500	1.00	ug/L	1	20.0	---	91	80-120%	---	---	
Chlorobenzene	18.5	0.250	0.500	ug/L	1	20.0	---	93	80-120%	---	---	
Chloroethane	15.1	5.00	5.00	ug/L	1	20.0	---	76	80-120%	---	---	Q-55
Chloroform	19.8	0.500	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
Chloromethane	20.5	2.50	5.00	ug/L	1	20.0	---	102	80-120%	---	---	
2-Chlorotoluene	18.8	0.500	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
4-Chlorotoluene	21.6	0.500	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
Dibromochloromethane	18.9	0.500	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
1,2-Dibromo-3-chloropropane	17.0	2.50	5.00	ug/L	1	20.0	---	85	80-120%	---	---	
1,2-Dibromoethane (EDB)	19.6	0.250	0.500	ug/L	1	20.0	---	98	80-120%	---	---	
Dibromomethane	19.0	0.500	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
1,2-Dichlorobenzene	18.9	0.250	0.500	ug/L	1	20.0	---	94	80-120%	---	---	
1,3-Dichlorobenzene	19.0	0.250	0.500	ug/L	1	20.0	---	95	80-120%	---	---	
1,4-Dichlorobenzene	18.4	0.250	0.500	ug/L	1	20.0	---	92	80-120%	---	---	
Dichlorodifluoromethane	17.5	0.500	1.00	ug/L	1	20.0	---	87	80-120%	---	---	
1,1-Dichloroethane	21.3	0.200	0.400	ug/L	1	20.0	---	106	80-120%	---	---	

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Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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 23C0453 - EPA 5030C						Water						
LCS (23C0453-BS1)			Prepared: 03/13/23 08:00		Analyzed: 03/13/23 09:50							
1,2-Dichloroethane (EDC)	20.7	0.200	0.400	ug/L	1	20.0	---	103	80-120%	---	---	
1,1-Dichloroethene	23.0	0.200	0.400	ug/L	1	20.0	---	115	80-120%	---	---	
cis-1,2-Dichloroethene	20.9	0.200	0.400	ug/L	1	20.0	---	104	80-120%	---	---	
trans-1,2-Dichloroethene	21.4	0.200	0.400	ug/L	1	20.0	---	107	80-120%	---	---	
1,2-Dichloropropane	20.9	0.250	0.500	ug/L	1	20.0	---	105	80-120%	---	---	
1,3-Dichloropropane	20.4	0.500	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
2,2-Dichloropropane	20.8	0.500	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
1,1-Dichloropropene	19.7	0.500	1.00	ug/L	1	20.0	---	98	80-120%	---	---	
cis-1,3-Dichloropropene	20.9	0.500	1.00	ug/L	1	20.0	---	105	80-120%	---	---	
trans-1,3-Dichloropropene	22.6	0.500	1.00	ug/L	1	20.0	---	113	80-120%	---	---	
Ethylbenzene	19.8	0.250	0.500	ug/L	1	20.0	---	99	80-120%	---	---	
Hexachlorobutadiene	17.4	2.50	5.00	ug/L	1	20.0	---	87	80-120%	---	---	
2-Hexanone	44.1	5.00	10.0	ug/L	1	40.0	---	110	80-120%	---	---	
Isopropylbenzene	19.1	0.500	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
4-Isopropyltoluene	20.8	0.500	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
Methylene chloride	19.7	5.00	10.0	ug/L	1	20.0	---	99	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	48.4	5.00	10.0	ug/L	1	40.0	---	121	80-120%	---	---	Q-56
Methyl tert-butyl ether (MTBE)	18.4	0.500	1.00	ug/L	1	20.0	---	92	80-120%	---	---	
Naphthalene	17.4	1.00	2.00	ug/L	1	20.0	---	87	80-120%	---	---	
n-Propylbenzene	21.8	0.250	0.500	ug/L	1	20.0	---	109	80-120%	---	---	
Styrene	19.1	0.500	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
1,1,1,2-Tetrachloroethane	17.9	0.200	0.400	ug/L	1	20.0	---	90	80-120%	---	---	
1,1,2,2-Tetrachloroethane	24.3	0.250	0.500	ug/L	1	20.0	---	121	80-120%	---	---	Q-56
Tetrachloroethene (PCE)	17.3	0.200	0.400	ug/L	1	20.0	---	87	80-120%	---	---	
Toluene	19.0	0.500	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
1,2,3-Trichlorobenzene	17.2	1.00	2.00	ug/L	1	20.0	---	86	80-120%	---	---	
1,2,4-Trichlorobenzene	16.9	1.00	2.00	ug/L	1	20.0	---	84	80-120%	---	---	
1,1,1-Trichloroethane	19.2	0.200	0.400	ug/L	1	20.0	---	96	80-120%	---	---	
1,1,2-Trichloroethane	19.5	0.250	0.500	ug/L	1	20.0	---	98	80-120%	---	---	
Trichloroethene (TCE)	16.3	0.200	0.400	ug/L	1	20.0	---	81	80-120%	---	---	
Trichlorofluoromethane	19.7	1.00	2.00	ug/L	1	20.0	---	99	80-120%	---	---	
1,2,3-Trichloropropane	21.7	0.500	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
1,2,4-Trimethylbenzene	21.4	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
1,3,5-Trimethylbenzene	20.8	0.500	1.00	ug/L	1	20.0	---	104	80-120%	---	---	

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A3C0365 - 05 19 23 0508

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 23C0453 - EPA 5030C						Water						
LCS (23C0453-BS1)			Prepared: 03/13/23 08:00		Analyzed: 03/13/23 09:50							
Vinyl chloride	16.7	0.200	0.400	ug/L	1	20.0	---	83	80-120%	---	---	
m,p-Xylene	40.9	0.500	1.00	ug/L	1	40.0	---	102	80-120%	---	---	
o-Xylene	19.0	0.250	0.500	ug/L	1	20.0	---	95	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 97 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		105 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		92 %		80-120 %		"						
Duplicate (23C0453-DUP1)			Prepared: 03/13/23 10:03		Analyzed: 03/13/23 18:01							
QC Source Sample: GS-030923-07 (A3C0365-02RE1)												
EPA 8260D												
Acetone	ND	50.0	100	ug/L	5	---	ND	---	---	---	30%	
Acrylonitrile	ND	5.00	10.0	ug/L	5	---	ND	---	---	---	30%	
Benzene	106	0.500	1.00	ug/L	5	---	108	---	---	1	30%	
Bromobenzene	ND	1.25	2.50	ug/L	5	---	ND	---	---	---	30%	
Bromochloromethane	ND	2.50	5.00	ug/L	5	---	ND	---	---	---	30%	
Bromodichloromethane	ND	2.50	5.00	ug/L	5	---	ND	---	---	---	30%	
Bromoform	ND	2.50	5.00	ug/L	5	---	ND	---	---	---	30%	
Bromomethane	ND	25.0	25.0	ug/L	5	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	25.0	50.0	ug/L	5	---	ND	---	---	---	30%	
n-Butylbenzene	4.65	2.50	5.00	ug/L	5	---	4.60	---	---	1	30%	J
sec-Butylbenzene	8.85	2.50	5.00	ug/L	5	---	8.60	---	---	3	30%	
tert-Butylbenzene	ND	10.0	10.0	ug/L	5	---	ND	---	---	---	30%	R-02
Carbon disulfide	ND	25.0	50.0	ug/L	5	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	2.50	5.00	ug/L	5	---	ND	---	---	---	30%	
Chlorobenzene	ND	1.25	2.50	ug/L	5	---	ND	---	---	---	30%	
Chloroethane	ND	25.0	25.0	ug/L	5	---	ND	---	---	---	30%	
Chloroform	ND	2.50	5.00	ug/L	5	---	ND	---	---	---	30%	
Chloromethane	ND	12.5	25.0	ug/L	5	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	2.50	5.00	ug/L	5	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	2.50	5.00	ug/L	5	---	ND	---	---	---	30%	
Dibromochloromethane	ND	2.50	5.00	ug/L	5	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	12.5	25.0	ug/L	5	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	1.25	2.50	ug/L	5	---	ND	---	---	---	30%	
Dibromomethane	ND	2.50	5.00	ug/L	5	---	ND	---	---	---	30%	

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Report ID:

A3C0365 - 05 19 23 0508

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 23C0453 - EPA 5030C						Water						
Duplicate (23C0453-DUP1)			Prepared: 03/13/23 10:03		Analyzed: 03/13/23 18:01							
QC Source Sample: GS-030923-07 (A3C0365-02RE1)												
1,2-Dichlorobenzene	ND	1.25	2.50	ug/L	5	---	ND	---	---	---	30%	M-02
1,3-Dichlorobenzene	ND	1.25	2.50	ug/L	5	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	1.25	2.50	ug/L	5	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	2.50	5.00	ug/L	5	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	1.00	2.00	ug/L	5	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	1.00	2.00	ug/L	5	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	1.00	2.00	ug/L	5	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	1.00	2.00	ug/L	5	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	1.00	2.00	ug/L	5	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	1.25	2.50	ug/L	5	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	2.50	5.00	ug/L	5	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	2.50	5.00	ug/L	5	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	2.50	5.00	ug/L	5	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	2.50	5.00	ug/L	5	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	2.50	5.00	ug/L	5	---	ND	---	---	---	30%	
Ethylbenzene	367	1.25	2.50	ug/L	5	---	381	---	---	4	30%	
Hexachlorobutadiene	ND	12.5	25.0	ug/L	5	---	ND	---	---	---	30%	
2-Hexanone	ND	25.0	50.0	ug/L	5	---	ND	---	---	---	30%	
Isopropylbenzene	79.8	2.50	5.00	ug/L	5	---	80.3	---	---	0.7	30%	
4-Isopropyltoluene	14.8	2.50	5.00	ug/L	5	---	14.5	---	---	2	30%	
Methylene chloride	ND	25.0	50.0	ug/L	5	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	25.0	50.0	ug/L	5	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	2.50	5.00	ug/L	5	---	ND	---	---	---	30%	
Naphthalene	256	5.00	10.0	ug/L	5	---	248	---	---	3	30%	
n-Propylbenzene	44.1	1.25	2.50	ug/L	5	---	42.2	---	---	4	30%	
Styrene	ND	2.50	5.00	ug/L	5	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	1.00	2.00	ug/L	5	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	1.25	2.50	ug/L	5	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	1.00	2.00	ug/L	5	---	ND	---	---	---	30%	
Toluene	ND	2.50	5.00	ug/L	5	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	5.00	10.0	ug/L	5	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	5.00	10.0	ug/L	5	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	1.00	2.00	ug/L	5	---	ND	---	---	---	30%	

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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-MGP Only Mon. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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 23C0453 - EPA 5030C						Water						
Duplicate (23C0453-DUP1)			Prepared: 03/13/23 10:03		Analyzed: 03/13/23 18:01							
QC Source Sample: GS-030923-07 (A3C0365-02RE1)												
1,1,2-Trichloroethane	ND	1.25	2.50	ug/L	5	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	1.00	2.00	ug/L	5	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	5.00	10.0	ug/L	5	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	2.50	5.00	ug/L	5	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	99.2	2.50	5.00	ug/L	5	---	97.8	---	---	1	30%	
1,3,5-Trimethylbenzene	16.8	2.50	5.00	ug/L	5	---	15.7	---	---	7	30%	
Vinyl chloride	ND	1.00	2.00	ug/L	5	---	ND	---	---	---	30%	
m,p-Xylene	39.2	2.50	5.00	ug/L	5	---	39.2	---	---	0.1	30%	
o-Xylene	112	1.25	2.50	ug/L	5	---	114	---	---	2	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 96 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		106 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		89 %		80-120 %		"						

Duplicate (23C0453-DUP2)

Prepared: 03/13/23 10:03 Analyzed: 03/13/23 18:46

QC Source Sample: GS-030923-08 (A3C0365-03RE1)

EPA 8260D

Acetone	ND	500	1000	ug/L	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	50.0	100	ug/L	50	---	ND	---	---	---	30%	
Benzene	10100	5.00	10.0	ug/L	50	---	10800	---	---	7	30%	E
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%	

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Darwin Thomas, Business Development Director



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Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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 23C0453 - EPA 5030C						Water						
Duplicate (23C0453-DUP2)			Prepared: 03/13/23 10:03 Analyzed: 03/13/23 18:46									
QC Source Sample: GS-030923-08 (A3C0365-03RE1)												
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%	
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	194	12.5	25.0	ug/L	50	---	208	---	---	7	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	3790	50.0	100	ug/L	50	---	4180	---	---	10	30%	
n-Propylbenzene	ND	12.5	25.0	ug/L	50	---	ND	---	---	---	30%	
Styrene	ND	25.0	50.0	ug/L	50	---	ND	---	---	---	30%	

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503-718-2323

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Anchor QEA, LLC

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Portland, OR 97219

Project: **Gasco-MGP Only Mon. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001E**Project Manager: **John Renda****Report ID:****A3C0365 - 05 19 23 0508**

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 23C0453 - EPA 5030C						Water						
Duplicate (23C0453-DUP2)			Prepared: 03/13/23 10:03 Analyzed: 03/13/23 18:46									
QC Source Sample: GS-030923-08 (A3C0365-03RE1)												
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	448	25.0	50.0	ug/L	50	---	478	---	---	6	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%	
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	54.0	25.0	50.0	ug/L	50	---	61.5	---	---	13	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	168	25.0	50.0	ug/L	50	---	180	---	---	6	30%	
o-Xylene	84.5	12.5	25.0	ug/L	50	---	87.5	---	---	3	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 97 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		108 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		94 %		80-120 %		"						

Matrix Spike (23C0453-MS1)

Prepared: 03/13/23 10:03 Analyzed: 03/13/23 19:53

QC Source Sample: GS-030923-06 (A3C0365-01RE1)**EPA 8260D**

Acetone	498	100	200	ug/L	10	400	ND	124	39-160%	---	---	
Acrylonitrile	265	10.0	20.0	ug/L	10	200	ND	132	63-135%	---	---	
Benzene	272	1.00	2.00	ug/L	10	200	34.3	119	79-120%	---	---	
Bromobenzene	196	2.50	5.00	ug/L	10	200	ND	98	80-120%	---	---	
Bromochloromethane	308	5.00	10.0	ug/L	10	200	ND	154	78-123%	---	---	Q-54b
Bromodichloromethane	216	5.00	10.0	ug/L	10	200	ND	108	79-125%	---	---	
Bromoform	182	5.00	10.0	ug/L	10	200	ND	91	66-130%	---	---	
Bromomethane	144	50.0	50.0	ug/L	10	200	ND	72	53-141%	---	---	Q-54c
2-Butanone (MEK)	564	50.0	100	ug/L	10	400	ND	141	56-143%	---	---	
n-Butylbenzene	269	5.00	10.0	ug/L	10	200	ND	135	75-128%	---	---	Q-01

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Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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 23C0453 - EPA 5030C						Water						
Matrix Spike (23C0453-MS1)			Prepared: 03/13/23 10:03		Analyzed: 03/13/23 19:53							
QC Source Sample: GS-030923-06 (A3C0365-01RE1)												
sec-Butylbenzene	258	5.00	10.0	ug/L	10	200	ND	129	77-126%	---	---	Q-01
tert-Butylbenzene	256	5.00	10.0	ug/L	10	200	ND	128	78-124%	---	---	Q-01
Carbon disulfide	243	50.0	100	ug/L	10	200	ND	121	64-133%	---	---	
Carbon tetrachloride	202	5.00	10.0	ug/L	10	200	ND	101	72-136%	---	---	
Chlorobenzene	204	2.50	5.00	ug/L	10	200	ND	102	80-120%	---	---	
Chloroethane	166	50.0	50.0	ug/L	10	200	ND	83	60-138%	---	---	Q-54d
Chloroform	223	5.00	10.0	ug/L	10	200	ND	112	79-124%	---	---	
Chloromethane	253	25.0	50.0	ug/L	10	200	ND	127	50-139%	---	---	
2-Chlorotoluene	217	5.00	10.0	ug/L	10	200	ND	109	79-122%	---	---	
4-Chlorotoluene	248	5.00	10.0	ug/L	10	200	ND	124	78-122%	---	---	Q-01
Dibromochloromethane	201	5.00	10.0	ug/L	10	200	ND	101	74-126%	---	---	
1,2-Dibromo-3-chloropropane	199	25.0	50.0	ug/L	10	200	ND	100	62-128%	---	---	
1,2-Dibromoethane (EDB)	213	2.50	5.00	ug/L	10	200	ND	107	77-121%	---	---	
Dibromomethane	211	5.00	10.0	ug/L	10	200	ND	105	79-123%	---	---	
1,2-Dichlorobenzene	209	2.50	5.00	ug/L	10	200	ND	105	80-120%	---	---	
1,3-Dichlorobenzene	210	2.50	5.00	ug/L	10	200	ND	105	80-120%	---	---	
1,4-Dichlorobenzene	202	2.50	5.00	ug/L	10	200	ND	101	79-120%	---	---	
Dichlorodifluoromethane	194	5.00	10.0	ug/L	10	200	ND	97	32-152%	---	---	
1,1-Dichloroethane	257	2.00	4.00	ug/L	10	200	ND	128	77-125%	---	---	Q-01
1,2-Dichloroethane (EDC)	227	2.00	4.00	ug/L	10	200	ND	114	73-128%	---	---	
1,1-Dichloroethene	280	2.00	4.00	ug/L	10	200	ND	140	71-131%	---	---	Q-01
cis-1,2-Dichloroethene	257	2.00	4.00	ug/L	10	200	ND	128	78-123%	---	---	Q-01
trans-1,2-Dichloroethene	263	2.00	4.00	ug/L	10	200	ND	132	75-124%	---	---	Q-01
1,2-Dichloropropane	255	2.50	5.00	ug/L	10	200	ND	128	78-122%	---	---	Q-01
1,3-Dichloropropane	238	5.00	10.0	ug/L	10	200	ND	119	80-120%	---	---	
2,2-Dichloropropane	215	5.00	10.0	ug/L	10	200	ND	108	60-139%	---	---	
1,1-Dichloropropene	238	5.00	10.0	ug/L	10	200	ND	119	79-125%	---	---	
cis-1,3-Dichloropropene	228	5.00	10.0	ug/L	10	200	ND	114	75-124%	---	---	
trans-1,3-Dichloropropene	249	5.00	10.0	ug/L	10	200	ND	124	73-127%	---	---	
Ethylbenzene	312	2.50	5.00	ug/L	10	200	75.9	118	79-121%	---	---	
Hexachlorobutadiene	197	25.0	50.0	ug/L	10	200	ND	99	66-134%	---	---	
2-Hexanone	534	50.0	100	ug/L	10	400	ND	134	57-139%	---	---	
Isopropylbenzene	249	5.00	10.0	ug/L	10	200	18.6	115	72-131%	---	---	

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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 23C0453 - EPA 5030C						Water						
Matrix Spike (23C0453-MS1)			Prepared: 03/13/23 10:03		Analyzed: 03/13/23 19:53							
QC Source Sample: GS-030923-06 (A3C0365-01RE1)												
4-Isopropyltoluene	244	5.00	10.0	ug/L	10	200	ND	122	77-127%	---	---	
Methylene chloride	220	50.0	100	ug/L	10	200	ND	110	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	573	50.0	100	ug/L	10	400	ND	143	67-130%	---	---	Q-54
Methyl tert-butyl ether (MTBE)	208	5.00	10.0	ug/L	10	200	ND	104	71-124%	---	---	
Naphthalene	2030	10.0	20.0	ug/L	10	200	1680	177	61-128%	---	---	E, Q-03
n-Propylbenzene	265	2.50	5.00	ug/L	10	200	8.50	128	76-126%	---	---	Q-01
Styrene	215	5.00	10.0	ug/L	10	200	ND	107	78-123%	---	---	
1,1,1,2-Tetrachloroethane	187	2.00	4.00	ug/L	10	200	ND	94	78-124%	---	---	
1,1,2,2-Tetrachloroethane	274	2.50	5.00	ug/L	10	200	ND	137	71-121%	---	---	Q-54
Tetrachloroethene (PCE)	188	2.00	4.00	ug/L	10	200	ND	94	74-129%	---	---	
Toluene	220	5.00	10.0	ug/L	10	200	ND	110	80-121%	---	---	
1,2,3-Trichlorobenzene	210	10.0	20.0	ug/L	10	200	ND	105	69-129%	---	---	
1,2,4-Trichlorobenzene	211	10.0	20.0	ug/L	10	200	ND	105	69-130%	---	---	
1,1,1-Trichloroethane	212	2.00	4.00	ug/L	10	200	ND	106	74-131%	---	---	
1,1,2-Trichloroethane	215	2.50	5.00	ug/L	10	200	ND	108	80-120%	---	---	
Trichloroethene (TCE)	182	2.00	4.00	ug/L	10	200	ND	91	79-123%	---	---	
Trichlorofluoromethane	220	10.0	20.0	ug/L	10	200	ND	110	65-141%	---	---	
1,2,3-Trichloropropane	235	5.00	10.0	ug/L	10	200	ND	117	73-122%	---	---	
1,2,4-Trimethylbenzene	274	5.00	10.0	ug/L	10	200	20.3	127	76-124%	---	---	Q-01
1,3,5-Trimethylbenzene	245	5.00	10.0	ug/L	10	200	ND	122	75-124%	---	---	
Vinyl chloride	206	2.00	4.00	ug/L	10	200	ND	103	58-137%	---	---	
m,p-Xylene	476	5.00	10.0	ug/L	10	400	8.50	117	80-121%	---	---	
o-Xylene	241	2.50	5.00	ug/L	10	200	14.8	113	78-122%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 97 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		106 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		92 %		80-120 %		"						

Matrix Spike Dup (23C0453-MSD1)

Prepared: 03/13/23 10:03 Analyzed: 03/13/23 20:15

QC Source Sample: GS-030923-06 (A3C0365-01RE1)

EPA 8260D

Acetone	486	100	200	ug/L	10	400	ND	121	39-160%	2	30%
Acrylonitrile	254	10.0	20.0	ug/L	10	200	ND	127	63-135%	4	30%
Benzene	271	1.00	2.00	ug/L	10	200	34.3	118	79-120%	0.4	30%

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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-MGP Only Mon. Wells 1Q 2023 Perf. Mon.**

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

Project Manager: **John Renda**

Report ID:

A3C0365 - 05 19 23 0508

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 23C0453 - EPA 5030C						Water						
Matrix Spike Dup (23C0453-MSD1)			Prepared: 03/13/23 10:03		Analyzed: 03/13/23 20:15							
QC Source Sample: GS-030923-06 (A3C0365-01RE1)												
Bromobenzene	199	2.50	5.00	ug/L	10	200	ND	100	80-120%	2	30%	
Bromochloromethane	302	5.00	10.0	ug/L	10	200	ND	151	78-123%	2	30%	Q-54b
Bromodichloromethane	213	5.00	10.0	ug/L	10	200	ND	107	79-125%	1	30%	
Bromoform	179	5.00	10.0	ug/L	10	200	ND	90	66-130%	2	30%	
Bromomethane	138	50.0	50.0	ug/L	10	200	ND	69	53-141%	5	30%	Q-54c
2-Butanone (MEK)	556	50.0	100	ug/L	10	400	ND	139	56-143%	1	30%	
n-Butylbenzene	271	5.00	10.0	ug/L	10	200	ND	136	75-128%	0.7	30%	Q-01
sec-Butylbenzene	259	5.00	10.0	ug/L	10	200	ND	130	77-126%	0.5	30%	Q-01
tert-Butylbenzene	256	5.00	10.0	ug/L	10	200	ND	128	78-124%	0.08	30%	Q-01
Carbon disulfide	244	50.0	100	ug/L	10	200	ND	122	64-133%	0.5	30%	
Carbon tetrachloride	198	5.00	10.0	ug/L	10	200	ND	99	72-136%	2	30%	
Chlorobenzene	202	2.50	5.00	ug/L	10	200	ND	101	80-120%	0.8	30%	
Chloroethane	159	50.0	50.0	ug/L	10	200	ND	80	60-138%	4	30%	Q-54d
Chloroform	220	5.00	10.0	ug/L	10	200	ND	110	79-124%	1	30%	
Chloromethane	252	25.0	50.0	ug/L	10	200	ND	126	50-139%	0.3	30%	
2-Chlorotoluene	216	5.00	10.0	ug/L	10	200	ND	108	79-122%	0.6	30%	
4-Chlorotoluene	250	5.00	10.0	ug/L	10	200	ND	125	78-122%	0.6	30%	Q-01
Dibromochloromethane	201	5.00	10.0	ug/L	10	200	ND	100	74-126%	0.05	30%	
1,2-Dibromo-3-chloropropane	197	25.0	50.0	ug/L	10	200	ND	99	62-128%	1	30%	
1,2-Dibromoethane (EDB)	215	2.50	5.00	ug/L	10	200	ND	107	77-121%	0.8	30%	
Dibromomethane	208	5.00	10.0	ug/L	10	200	ND	104	79-123%	1	30%	
1,2-Dichlorobenzene	210	2.50	5.00	ug/L	10	200	ND	105	80-120%	0.3	30%	
1,3-Dichlorobenzene	210	2.50	5.00	ug/L	10	200	ND	105	80-120%	0.3	30%	
1,4-Dichlorobenzene	202	2.50	5.00	ug/L	10	200	ND	101	79-120%	0.3	30%	
Dichlorodifluoromethane	193	5.00	10.0	ug/L	10	200	ND	97	32-152%	0.6	30%	
1,1-Dichloroethane	253	2.00	4.00	ug/L	10	200	ND	127	77-125%	1	30%	Q-01
1,2-Dichloroethane (EDC)	224	2.00	4.00	ug/L	10	200	ND	112	73-128%	1	30%	
1,1-Dichloroethene	278	2.00	4.00	ug/L	10	200	ND	139	71-131%	0.4	30%	Q-01
cis-1,2-Dichloroethene	255	2.00	4.00	ug/L	10	200	ND	128	78-123%	0.6	30%	Q-01
trans-1,2-Dichloroethene	260	2.00	4.00	ug/L	10	200	ND	130	75-124%	1	30%	Q-01
1,2-Dichloropropane	249	2.50	5.00	ug/L	10	200	ND	125	78-122%	2	30%	Q-01
1,3-Dichloropropane	238	5.00	10.0	ug/L	10	200	ND	119	80-120%	0.2	30%	
2,2-Dichloropropane	210	5.00	10.0	ug/L	10	200	ND	105	60-139%	2	30%	

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Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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 23C0453 - EPA 5030C						Water						
Matrix Spike Dup (23C0453-MSD1)			Prepared: 03/13/23 10:03		Analyzed: 03/13/23 20:15							
QC Source Sample: GS-030923-06 (A3C0365-01RE1)												
1,1-Dichloropropene	237	5.00	10.0	ug/L	10	200	ND	119	79-125%	0.4	30%	
cis-1,3-Dichloropropene	228	5.00	10.0	ug/L	10	200	ND	114	75-124%	0.3	30%	
trans-1,3-Dichloropropene	248	5.00	10.0	ug/L	10	200	ND	124	73-127%	0.6	30%	
Ethylbenzene	316	2.50	5.00	ug/L	10	200	75.9	120	79-121%	1	30%	
Hexachlorobutadiene	202	25.0	50.0	ug/L	10	200	ND	101	66-134%	3	30%	
2-Hexanone	528	50.0	100	ug/L	10	400	ND	132	57-139%	1	30%	
Isopropylbenzene	250	5.00	10.0	ug/L	10	200	18.6	116	72-131%	0.2	30%	
4-Isopropyltoluene	244	5.00	10.0	ug/L	10	200	ND	122	77-127%	0.1	30%	
Methylene chloride	220	50.0	100	ug/L	10	200	ND	110	74-124%	0.4	30%	
4-Methyl-2-pentanone (MiBK)	569	50.0	100	ug/L	10	400	ND	142	67-130%	0.6	30%	Q-54
Methyl tert-butyl ether (MTBE)	208	5.00	10.0	ug/L	10	200	ND	104	71-124%	0.3	30%	
Naphthalene	2020	10.0	20.0	ug/L	10	200	1680	169	61-128%	0.7	30%	E, Q-03
n-Propylbenzene	268	2.50	5.00	ug/L	10	200	8.50	130	76-126%	0.9	30%	Q-01
Styrene	214	5.00	10.0	ug/L	10	200	ND	107	78-123%	0.1	30%	
1,1,1,2-Tetrachloroethane	187	2.00	4.00	ug/L	10	200	ND	94	78-124%	0	30%	
1,1,2,2-Tetrachloroethane	269	2.50	5.00	ug/L	10	200	ND	135	71-121%	2	30%	Q-54
Tetrachloroethene (PCE)	188	2.00	4.00	ug/L	10	200	ND	94	74-129%	0.4	30%	
Toluene	220	5.00	10.0	ug/L	10	200	ND	110	80-121%	0.2	30%	
1,2,3-Trichlorobenzene	214	10.0	20.0	ug/L	10	200	ND	107	69-129%	2	30%	
1,2,4-Trichlorobenzene	214	10.0	20.0	ug/L	10	200	ND	107	69-130%	2	30%	
1,1,1-Trichloroethane	212	2.00	4.00	ug/L	10	200	ND	106	74-131%	0.1	30%	
1,1,2-Trichloroethane	216	2.50	5.00	ug/L	10	200	ND	108	80-120%	0.2	30%	
Trichloroethene (TCE)	183	2.00	4.00	ug/L	10	200	ND	92	79-123%	0.4	30%	
Trichlorofluoromethane	217	10.0	20.0	ug/L	10	200	ND	109	65-141%	1	30%	
1,2,3-Trichloropropane	230	5.00	10.0	ug/L	10	200	ND	115	73-122%	2	30%	
1,2,4-Trimethylbenzene	276	5.00	10.0	ug/L	10	200	20.3	128	76-124%	0.6	30%	Q-01
1,3,5-Trimethylbenzene	246	5.00	10.0	ug/L	10	200	ND	123	75-124%	0.2	30%	
Vinyl chloride	206	2.00	4.00	ug/L	10	200	ND	103	58-137%	0.1	30%	
m,p-Xylene	473	5.00	10.0	ug/L	10	400	8.50	116	80-121%	0.8	30%	
o-Xylene	240	2.50	5.00	ug/L	10	200	14.8	113	78-122%	0.1	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 96 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		106 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		93 %		80-120 %		"						

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ANALYTICAL REPORT

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Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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 23C0453 - EPA 5030C							Water					

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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 23C0498 - EPA 5030C						Water							
Blank (23C0498-BLK1)			Prepared: 03/14/23 09:00		Analyzed: 03/15/23 10:58								
EPA 8260D													
Benzene	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---		
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 112 %		Limits: 80-120 %		Dilution: 1x							
Toluene-d8 (Surr)		101 %		80-120 %		"							
4-Bromofluorobenzene (Surr)		106 %		80-120 %		"							
LCS (23C0498-BS1)			Prepared: 03/14/23 09:00		Analyzed: 03/15/23 10:04								
EPA 8260D													
Benzene	19.8	0.100	0.200	ug/L	1	20.0	---	99	80-120%	---	---		
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 103 %		Limits: 80-120 %		Dilution: 1x							
Toluene-d8 (Surr)		98 %		80-120 %		"							
4-Bromofluorobenzene (Surr)		89 %		80-120 %		"							
Duplicate (23C0498-DUP1)			Prepared: 03/14/23 10:44		Analyzed: 03/15/23 14:08								
QC Source Sample: Non-SDG (A3C0414-01)													
Benzene	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	30%		
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 107 %		Limits: 80-120 %		Dilution: 1x							
Toluene-d8 (Surr)		101 %		80-120 %		"							
4-Bromofluorobenzene (Surr)		94 %		80-120 %		"							
Duplicate (23C0498-DUP2)			Prepared: 03/14/23 10:44		Analyzed: 03/15/23 15:03								
QC Source Sample: Non-SDG (A3C0414-02)													
Benzene	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	30%		
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 106 %		Limits: 80-120 %		Dilution: 1x							
Toluene-d8 (Surr)		101 %		80-120 %		"							
4-Bromofluorobenzene (Surr)		95 %		80-120 %		"							
Matrix Spike (23C0498-MS1)			Prepared: 03/14/23 10:44		Analyzed: 03/15/23 16:51								CONT
QC Source Sample: Non-SDG (A3C0272-03)													
EPA 8260D													
Benzene	20.2	0.100	0.200	ug/L	1	20.0	ND	101	79-120%	---	---		
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 102 %		Limits: 80-120 %		Dilution: 1x							

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Project Manager: John Renda

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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 23C0498 - EPA 5030C							Water					
Matrix Spike (23C0498-MS1)			Prepared: 03/14/23 10:44 Analyzed: 03/15/23 16:51								CONT	
QC Source Sample: Non-SDG (A3C0272-03)												
Surr: Toluene-d8 (Surr)		Recovery: 95 %		Limits: 80-120 %		Dilution: 1x						
4-Bromofluorobenzene (Surr)		89 %		80-120 %		"						

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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 23C0807 - EPA 5030C						Water						
Blank (23C0807-BLK1)			Prepared: 03/21/23 09:00		Analyzed: 03/21/23 16:26							
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: 105 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		100 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		99 %		80-120 %		"						
LCS (23C0807-BS1)			Prepared: 03/21/23 09:00		Analyzed: 03/21/23 15:32							
EPA 8260D SIM												
1,1-Dichloroethene	0.242	0.0100	0.0200	ug/L	1	0.200	---	121	80-120%	---	---	Q-56
cis-1,2-Dichloroethene	0.233	0.0100	0.0200	ug/L	1	0.200	---	116	80-120%	---	---	
trans-1,2-Dichloroethene	0.235	0.0100	0.0200	ug/L	1	0.200	---	118	80-120%	---	---	
Trichloroethene (TCE)	0.213	0.0100	0.0200	ug/L	1	0.200	---	107	80-120%	---	---	
Vinyl chloride	0.262	0.0100	0.0200	ug/L	1	0.200	---	131	80-120%	---	---	Q-56
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 100 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		100 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		98 %		80-120 %		"						
Duplicate (23C0807-DUP1)			Prepared: 03/21/23 09:00		Analyzed: 03/21/23 17:20							
QC Source Sample: Non-SDG (A3C0314-01)												
1,1-Dichloroethene	ND	0.250	0.500	ug/L	25	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	0.250	0.500	ug/L	25	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	0.250	0.500	ug/L	25	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	0.250	0.500	ug/L	25	---	ND	---	---	---	30%	
Vinyl chloride	ND	0.250	0.500	ug/L	25	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 104 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		100 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		95 %		80-120 %		"						
Matrix Spike (23C0807-MS1)			Prepared: 03/21/23 09:00		Analyzed: 03/21/23 18:41							

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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-MGP Only Mon. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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 23C0807 - EPA 5030C						Water						
Matrix Spike (23C0807-MS1)			Prepared: 03/21/23 09:00 Analyzed: 03/21/23 18:41									
<u>QC Source Sample: GS-030923-06 (A3C0365-01)</u>												
<u>EPA 8260D SIM</u>												
1,1-Dichloroethene	6.40	0.250	0.500	ug/L	25	5.00	ND	128	71-131%	---	---	Q-54
cis-1,2-Dichloroethene	6.19	0.250	0.500	ug/L	25	5.00	ND	124	78-123%	---	---	Q-01
trans-1,2-Dichloroethene	6.30	0.250	0.500	ug/L	25	5.00	ND	126	75-124%	---	---	Q-01
Trichloroethene (TCE)	5.57	0.250	0.500	ug/L	25	5.00	ND	111	79-123%	---	---	
Vinyl chloride	6.93	0.250	0.500	ug/L	25	5.00	ND	139	58-137%	---	---	Q-54a
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 104 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		100 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		93 %		80-120 %		"						
Matrix Spike Dup (23C0807-MSD1)			Prepared: 03/21/23 09:00 Analyzed: 03/21/23 19:08									
<u>QC Source Sample: GS-030923-06 (A3C0365-01)</u>												
<u>EPA 8260D SIM</u>												
1,1-Dichloroethene	6.23	0.250	0.500	ug/L	25	5.00	ND	125	71-131%	3	30%	Q-54
cis-1,2-Dichloroethene	6.17	0.250	0.500	ug/L	25	5.00	ND	123	78-123%	0.4	30%	
trans-1,2-Dichloroethene	6.14	0.250	0.500	ug/L	25	5.00	ND	123	75-124%	3	30%	
Trichloroethene (TCE)	5.59	0.250	0.500	ug/L	25	5.00	ND	112	79-123%	0.4	30%	
Vinyl chloride	6.71	0.250	0.500	ug/L	25	5.00	ND	134	58-137%	3	30%	Q-54a
Surr: 1,4-Difluorobenzene (Surr)		Recovery: 105 %		Limits: 80-120 %		Dilution: 1x						
Toluene-d8 (Surr)		99 %		80-120 %		"						
4-Bromofluorobenzene (Surr)		93 %		80-120 %		"						

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Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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 23C0445 - EPA 3511 (Bottle Extraction)						Water						
Blank (23C0445-BLK1)			Prepared: 03/13/23 07:00		Analyzed: 03/13/23 10:12							
EPA 8270E LVI												
Acenaphthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	B
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	0.0196	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: 119 %		Limits: 78-134 %		Dilution: 1x						
Benzo(a)pyrene-d12 (Surr)		121 %		80-132 %		"						

LCS (23C0445-BS1)

Prepared: 03/13/23 07:00 Analyzed: 03/13/23 10:45

EPA 8270E LVI												
Acenaphthene	1.62	0.0160	0.0320	ug/L	1	1.60	---	101	80-120%	---	---	
Acenaphthylene	1.82	0.0160	0.0320	ug/L	1	1.60	---	114	80-124%	---	---	
Anthracene	1.73	0.0160	0.0320	ug/L	1	1.60	---	108	80-123%	---	---	
Benz(a)anthracene	1.76	0.00800	0.0160	ug/L	1	1.60	---	110	80-122%	---	---	
Benzo(a)pyrene	1.92	0.00800	0.0160	ug/L	1	1.60	---	120	80-129%	---	---	
Benzo(b)fluoranthene	1.88	0.00800	0.0160	ug/L	1	1.60	---	117	80-124%	---	---	
Benzo(k)fluoranthene	1.87	0.00800	0.0160	ug/L	1	1.60	---	117	80-125%	---	---	
Benzo(g,h,i)perylene	1.76	0.0160	0.0320	ug/L	1	1.60	---	110	80-120%	---	---	

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Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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 23C0445 - EPA 3511 (Bottle Extraction)						Water						
LCS (23C0445-BS1)						Prepared: 03/13/23 07:00 Analyzed: 03/13/23 10:45						
Chrysene	1.70	0.00800	0.0160	ug/L	1	1.60	---	106	80-120%	---	---	B
Dibenz(a,h)anthracene	1.60	0.00800	0.0160	ug/L	1	1.60	---	100	80-120%	---	---	
Fluoranthene	1.66	0.0160	0.0320	ug/L	1	1.60	---	104	80-126%	---	---	
Fluorene	1.68	0.0160	0.0320	ug/L	1	1.60	---	105	77-127%	---	---	
Indeno(1,2,3-cd)pyrene	1.60	0.00800	0.0160	ug/L	1	1.60	---	100	80-121%	---	---	
1-Methylnaphthalene	1.56	0.0320	0.0640	ug/L	1	1.60	---	98	53-148%	---	---	
2-Methylnaphthalene	1.54	0.0320	0.0640	ug/L	1	1.60	---	96	48-150%	---	---	
Naphthalene	1.64	0.0320	0.0640	ug/L	1	1.60	---	102	78-120%	---	---	
Phenanthrene	1.52	0.0320	0.0640	ug/L	1	1.60	---	95	80-120%	---	---	
Pyrene	1.66	0.0160	0.0320	ug/L	1	1.60	---	104	80-125%	---	---	
Carbazole	1.83	0.0160	0.0320	ug/L	1	1.60	---	114	65-141%	---	---	
Dibenzofuran	1.77	0.0160	0.0320	ug/L	1	1.60	---	111	76-121%	---	---	
Surr: Acenaphthylene-d8 (Surr)												
		Recovery: 119 %		Limits: 78-134 %		Dilution: 1x						
Benzo(a)pyrene-d12 (Surr)		120 %		80-132 %		"						

Matrix Spike (23C0445-MS1)

Prepared: 03/13/23 07:00 Analyzed: 03/13/23 11:51

QC Source Sample: GS-030923-06 (A3C0365-01)

EPA 8270E LVI

Acenaphthene	156	4.14	8.28	ug/L	200	2.07	160	-187	80-120%	---	---	Q-11
Acenaphthylene	13.6	12.9	12.9	ug/L	200	2.07	ND	655	80-124%	---	---	Q-11
Anthracene	7.87	4.14	8.28	ug/L	200	2.07	6.10	85	80-123%	---	---	Q-11, J
Benz(a)anthracene	ND	2.07	4.14	ug/L	200	2.07	ND		80-122%	---	---	Q-11
Benzo(a)pyrene	ND	2.07	4.14	ug/L	200	2.07	ND		80-129%	---	---	Q-11
Benzo(b)fluoranthene	ND	2.07	4.14	ug/L	200	2.07	ND		80-124%	---	---	Q-11
Benzo(k)fluoranthene	ND	2.07	4.14	ug/L	200	2.07	ND		80-125%	---	---	Q-11
Benzo(g,h,i)perylene	ND	4.14	8.28	ug/L	200	2.07	ND		80-120%	---	---	Q-11
Chrysene	2.17	2.07	4.14	ug/L	200	2.07	ND	105	80-120%	---	---	B, Q-11, J
Dibenz(a,h)anthracene	ND	2.07	4.14	ug/L	200	2.07	ND		80-120%	---	---	Q-11
Fluoranthene	ND	4.14	8.28	ug/L	200	2.07	ND		80-126%	---	---	Q-11
Fluorene	30.0	4.14	8.28	ug/L	200	2.07	30.2	-10	77-127%	---	---	Q-11
Indeno(1,2,3-cd)pyrene	2.07	2.07	4.14	ug/L	200	2.07	ND	100	80-121%	---	---	Q-11, J
1-Methylnaphthalene	216	8.28	16.6	ug/L	200	2.07	217	-58	53-148%	---	---	Q-11
2-Methylnaphthalene	37.9	8.28	16.6	ug/L	200	2.07	38.6	-33	48-150%	---	---	Q-11
Naphthalene	1070	8.28	16.6	ug/L	200	2.07	1070	-383	78-120%	---	---	Q-11

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Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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 23C0445 - EPA 3511 (Bottle Extraction)						Water							
Matrix Spike (23C0445-MS1)			Prepared: 03/13/23 07:00 Analyzed: 03/13/23 11:51										
QC Source Sample: GS-030923-06 (A3C0365-01)													
Phenanthrene	24.2	8.28	16.6	ug/L	200	2.07	22.2	99	80-120%	---	---	Q-11	
Pyrene	ND	4.14	8.28	ug/L	200	2.07	ND		80-125%	---	---	Q-11	
Carbazole	39.1	4.14	8.28	ug/L	200	2.07	46.3	-346	65-141%	---	---	Q-11	
Dibenzofuran	7.55	4.14	8.28	ug/L	200	2.07	7.12	21	76-121%	---	---	Q-11, J	
Surr: Acenaphthylene-d8 (Surr)		Recovery: 860 %		Limits: 78-134 %	Dilution: 200x							S-05	
Benzo(a)pyrene-d12 (Surr)		88 %		80-132 %		"							S-05

Matrix Spike Dup (23C0445-MSD1)

Prepared: 03/13/23 07:00 Analyzed: 03/13/23 12:24

QC Source Sample: GS-030923-06 (A3C0365-01)

EPA 8270E LVI

Acenaphthene	149	4.34	8.67	ug/L	200	2.17	160	-495	80-120%	5	30%	Q-11, J
Acenaphthylene	ND	13.6	13.6	ug/L	200	2.17	ND		80-124%	200	30%	Q-11, J
Anthracene	6.72	4.34	8.67	ug/L	200	2.17	6.10	29	80-123%	16	30%	Q-11, J
Benz(a)anthracene	ND	2.17	4.34	ug/L	200	2.17	ND		80-122%		30%	Q-11, J
Benzo(a)pyrene	ND	2.17	4.34	ug/L	200	2.17	ND		80-129%		30%	Q-11, J
Benzo(b)fluoranthene	ND	2.17	4.34	ug/L	200	2.17	ND		80-124%		30%	Q-11, J
Benzo(k)fluoranthene	ND	2.17	4.34	ug/L	200	2.17	ND		80-125%		30%	Q-11, J
Benzo(g,h,i)perylene	ND	4.34	8.67	ug/L	200	2.17	ND		80-120%		30%	Q-11, J
Chrysene	ND	2.17	4.34	ug/L	200	2.17	ND		80-120%	200	30%	B, Q-11, J
Dibenz(a,h)anthracene	ND	2.17	4.34	ug/L	200	2.17	ND		80-120%		30%	Q-11, J
Fluoranthene	ND	4.34	8.67	ug/L	200	2.17	ND		80-126%		30%	Q-11, J
Fluorene	30.7	4.34	8.67	ug/L	200	2.17	30.2	22	77-127%	2	30%	Q-11, J
Indeno(1,2,3-cd)pyrene	2.28	2.17	4.34	ug/L	200	2.17	ND	105	80-121%	10	30%	Q-11, J
1-Methylnaphthalene	211	8.67	17.3	ug/L	200	2.17	217	-279	53-148%	2	30%	Q-11, J
2-Methylnaphthalene	37.2	8.67	17.3	ug/L	200	2.17	38.6	-63	48-150%	2	30%	Q-11, J
Naphthalene	1040	8.67	17.3	ug/L	200	2.17	1070	-1410	78-120%	2	30%	Q-11, J
Phenanthrene	23.9	8.67	17.3	ug/L	200	2.17	22.2	77	80-120%	1	30%	Q-11, J
Pyrene	ND	4.34	8.67	ug/L	200	2.17	ND		80-125%		30%	Q-11, J
Carbazole	42.1	4.34	8.67	ug/L	200	2.17	46.3	-194	65-141%	7	30%	Q-11, J
Dibenzofuran	7.37	4.34	8.67	ug/L	200	2.17	7.12	12	76-121%	2	30%	Q-11, J
Surr: Acenaphthylene-d8 (Surr)		Recovery: 796 %		Limits: 78-134 %		Dilution: 200x		S-05				
Benzo(a)pyrene-d12 (Surr)		72 %		80-132 %		"		S-05				

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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 23C0809 - EPA 3015A						Water						
Blank (23C0809-BLK1)			Prepared: 03/21/23 12:08		Analyzed: 03/22/23 01:32							
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	---	---	---	---	---	---	
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	---	---	---	---	---	---	
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	---	---	---	---	---	---	
Selenium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Silver	0.118	0.100	0.200	ug/L	1	---	---	---	---	---	---	J, B-02
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 (23C0809-BS1)

Prepared: 03/21/23 12:08 Analyzed: 03/22/23 01:37

EPA 6020B												
Aluminum	2750	25.0	50.0	ug/L	1	2780	---	99	80-120%	---	---	
Antimony	26.2	0.500	1.00	ug/L	1	27.8	---	94	80-120%	---	---	
Arsenic	53.5	0.500	1.00	ug/L	1	55.6	---	96	80-120%	---	---	
Barium	56.0	1.00	2.00	ug/L	1	55.6	---	101	80-120%	---	---	
Beryllium	25.4	0.100	0.200	ug/L	1	27.8	---	92	80-120%	---	---	
Cadmium	53.2	0.100	0.200	ug/L	1	55.6	---	96	80-120%	---	---	
Chromium	53.4	1.00	2.00	ug/L	1	55.6	---	96	80-120%	---	---	
Copper	55.3	1.00	2.00	ug/L	1	55.6	---	99	80-120%	---	---	
Iron	2770	25.0	50.0	ug/L	1	2780	---	100	80-120%	---	---	
Lead	50.4	0.110	0.200	ug/L	1	55.6	---	91	80-120%	---	---	
Manganese	54.1	0.500	1.00	ug/L	1	55.6	---	97	80-120%	---	---	
Mercury	0.934	0.0400	0.0800	ug/L	1	1.11	---	84	80-120%	---	---	

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Project: Gasco-MGP Only Mon. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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 23C0809 - EPA 3015A						Water						
LCS (23C0809-BS1)			Prepared: 03/21/23 12:08 Analyzed: 03/22/23 01:37									
Nickel	56.1	1.00	2.00	ug/L	1	55.6	---	101	80-120%	---	---	B-02
Selenium	26.6	0.500	1.00	ug/L	1	27.8	---	96	80-120%	---	---	
Silver	25.7	0.100	0.200	ug/L	1	27.8	---	92	80-120%	---	---	
Thallium	26.3	0.100	0.200	ug/L	1	27.8	---	95	80-120%	---	---	
Vanadium	52.9	1.00	2.00	ug/L	1	55.6	---	95	80-120%	---	---	
Zinc	53.6	2.00	4.00	ug/L	1	55.6	---	96	80-120%	---	---	
Duplicate (23C0809-DUP1)			Prepared: 03/21/23 12:08 Analyzed: 03/22/23 02:01									
QC Source Sample: GS-030923-06 (A3C0365-01)												
EPA 6020B												
Aluminum	ND	25.0	50.0	ug/L	1	---	25.8	---	---	***	20%	
Antimony	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	20%	
Arsenic	4.40	0.500	1.00	ug/L	1	---	4.45	---	---	1	20%	
Barium	68.1	1.00	2.00	ug/L	1	---	68.5	---	---	0.5	20%	
Beryllium	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Cadmium	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Chromium	5.06	1.00	2.00	ug/L	1	---	5.35	---	---	6	20%	
Copper	ND	1.00	2.00	ug/L	1	---	ND	---	---	---	20%	
Lead	ND	0.110	0.200	ug/L	1	---	ND	---	---	---	20%	
Manganese	1880	0.500	1.00	ug/L	1	---	1890	---	---	0.3	20%	
Mercury	ND	0.0400	0.0800	ug/L	1	---	ND	---	---	---	20%	
Nickel	3.52	1.00	2.00	ug/L	1	---	3.52	---	---	0.07	20%	
Silver	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Thallium	ND	0.100	0.200	ug/L	1	---	ND	---	---	---	20%	
Vanadium	1.04	1.00	2.00	ug/L	1	---	1.09	---	---	4	20%	J
Zinc	ND	2.00	4.00	ug/L	1	---	ND	---	---	---	20%	
Duplicate (23C0809-DUP2)			Prepared: 03/21/23 12:08 Analyzed: 03/22/23 17:25									
QC Source Sample: GS-030923-06 (A3C0365-01RE1)												
EPA 6020B												
Iron	33200	25.0	50.0	ug/L	1	---	33600	---	---	1	20%	Q-16
Selenium	ND	0.500	1.00	ug/L	1	---	ND	---	---	---	20%	Q-16

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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-MGP Only Mon. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001E**Project Manager: **John Renda****Report ID:****A3C0365 - 05 19 23 0508****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 23C0809 - EPA 3015A						Water						
Matrix Spike (23C0809-MS1)			Prepared: 03/21/23 12:08		Analyzed: 03/22/23 02:06							
QC Source Sample: GS-030923-06 (A3C0365-01)												
EPA 6020B												
Aluminum	2740	25.0	50.0	ug/L	1	2780	25.8	98	75-125%	---	---	
Antimony	28.0	0.500	1.00	ug/L	1	27.8	ND	101	75-125%	---	---	
Arsenic	59.0	0.500	1.00	ug/L	1	55.6	4.45	98	75-125%	---	---	
Barium	127	1.00	2.00	ug/L	1	55.6	68.5	105	75-125%	---	---	
Beryllium	27.8	0.100	0.200	ug/L	1	27.8	ND	100	75-125%	---	---	
Cadmium	55.0	0.100	0.200	ug/L	1	55.6	ND	99	75-125%	---	---	
Chromium	58.1	1.00	2.00	ug/L	1	55.6	5.35	95	75-125%	---	---	
Copper	53.8	1.00	2.00	ug/L	1	55.6	ND	97	75-125%	---	---	
Lead	49.6	0.110	0.200	ug/L	1	55.6	ND	89	75-125%	---	---	
Manganese	1960	0.500	1.00	ug/L	1	55.6	1890	135	75-125%	---	---	Q-65
Mercury	0.924	0.0400	0.0800	ug/L	1	1.11	ND	83	75-125%	---	---	
Nickel	58.4	1.00	2.00	ug/L	1	55.6	3.52	99	75-125%	---	---	
Silver	25.3	0.100	0.200	ug/L	1	27.8	ND	91	75-125%	---	---	B-02
Thallium	25.0	0.100	0.200	ug/L	1	27.8	ND	90	75-125%	---	---	
Vanadium	55.9	1.00	2.00	ug/L	1	55.6	1.09	99	75-125%	---	---	
Zinc	55.1	2.00	4.00	ug/L	1	55.6	ND	99	75-125%	---	---	
Matrix Spike (23C0809-MS2)			Prepared: 03/21/23 12:08		Analyzed: 03/22/23 17:30							
QC Source Sample: GS-030923-06 (A3C0365-01RE1)												
EPA 6020B												
Iron	35200	25.0	50.0	ug/L	1	2780	33600	59	75-125%	---	---	Q-16, Q-65
Selenium	25.2	0.500	1.00	ug/L	1	27.8	ND	91	75-125%	---	---	Q-16

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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-MGP Only Mon. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001E**Project Manager: **John Renda****Report ID:****A3C0365 - 05 19 23 0508**

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 23C0886 - EPA 3015A						Water						
Blank (23C0886-BLK1)			Prepared: 03/22/23 16:26 Analyzed: 03/22/23 22:45									
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	---	---	---	---	---	---	
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	---	---	---	---	---	---	
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	---	---	---	---	---	---	
Selenium	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Silver	ND	0.100	0.200	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 (23C0886-BS1)

Prepared: 03/22/23 16:26 Analyzed: 03/22/23 22:50

EPA 6020B												
Aluminum	2710	25.0	50.0	ug/L	1	2780	---	98	80-120%	---	---	
Antimony	27.3	0.500	1.00	ug/L	1	27.8	---	98	80-120%	---	---	
Arsenic	51.8	0.500	1.00	ug/L	1	55.6	---	93	80-120%	---	---	
Barium	55.2	1.00	2.00	ug/L	1	55.6	---	99	80-120%	---	---	
Beryllium	25.1	0.100	0.200	ug/L	1	27.8	---	90	80-120%	---	---	
Cadmium	52.1	0.100	0.200	ug/L	1	55.6	---	94	80-120%	---	---	
Chromium	51.4	1.00	2.00	ug/L	1	55.6	---	93	80-120%	---	---	
Copper	52.4	1.00	2.00	ug/L	1	55.6	---	94	80-120%	---	---	
Iron	2770	25.0	50.0	ug/L	1	2780	---	100	80-120%	---	---	
Lead	53.0	0.110	0.200	ug/L	1	55.6	---	95	80-120%	---	---	
Manganese	53.3	0.500	1.00	ug/L	1	55.6	---	96	80-120%	---	---	
Mercury	0.975	0.0400	0.0800	ug/L	1	1.11	---	88	80-120%	---	---	

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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-MGP Only Mon. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001E**Project Manager: **John Renda****Report ID:****A3C0365 - 05 19 23 0508**

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 23C0886 - EPA 3015A						Water						
LCS (23C0886-BS1)						Prepared: 03/22/23 16:26 Analyzed: 03/22/23 22:50						
Nickel	54.6	1.00	2.00	ug/L	1	55.6	---	98	80-120%	---	---	
Selenium	26.9	0.500	1.00	ug/L	1	27.8	---	97	80-120%	---	---	
Silver	26.7	0.100	0.200	ug/L	1	27.8	---	96	80-120%	---	---	
Thallium	26.9	0.100	0.200	ug/L	1	27.8	---	97	80-120%	---	---	
Vanadium	51.0	1.00	2.00	ug/L	1	55.6	---	92	80-120%	---	---	
Zinc	54.3	2.00	4.00	ug/L	1	55.6	---	98	80-120%	---	---	

Matrix Spike (23C0886-MS1)

Prepared: 03/22/23 16:26 Analyzed: 03/23/23 17:53

QC Source Sample: GS-030923-06 (A3C0365-01RE2)**EPA 6020B**

Aluminum	2720	25.0	50.0	ug/L	1	2780	51.4	96	75-125%	---	---	
Antimony	29.2	0.500	1.00	ug/L	1	27.8	ND	105	75-125%	---	---	
Arsenic	58.6	0.500	1.00	ug/L	1	55.6	4.54	97	75-125%	---	---	
Barium	123	1.00	2.00	ug/L	1	55.6	69.7	96	75-125%	---	---	
Beryllium	26.0	0.100	0.200	ug/L	1	27.8	ND	94	75-125%	---	---	
Cadmium	55.8	0.100	0.200	ug/L	1	55.6	ND	100	75-125%	---	---	
Chromium	62.9	1.00	2.00	ug/L	1	55.6	10.4	94	75-125%	---	---	
Copper	51.6	1.00	2.00	ug/L	1	55.6	ND	93	75-125%	---	---	
Iron	35900	25.0	50.0	ug/L	1	2780	32400	127	75-125%	---	---	Q-65
Lead	52.7	0.110	0.200	ug/L	1	55.6	0.500	94	75-125%	---	---	
Manganese	1870	0.500	1.00	ug/L	1	55.6	1870	-13	75-125%	---	---	Q-65
Mercury	1.01	0.0400	0.0800	ug/L	1	1.11	ND	91	75-125%	---	---	
Nickel	57.8	1.00	2.00	ug/L	1	55.6	5.25	95	75-125%	---	---	
Selenium	26.8	0.500	1.00	ug/L	1	27.8	ND	96	75-125%	---	---	
Silver	26.5	0.100	0.200	ug/L	1	27.8	ND	96	75-125%	---	---	
Thallium	25.3	0.100	0.200	ug/L	1	27.8	ND	91	75-125%	---	---	
Vanadium	55.3	1.00	2.00	ug/L	1	55.6	1.43	97	75-125%	---	---	
Zinc	55.1	2.00	4.00	ug/L	1	55.6	2.62	95	75-125%	---	---	

Matrix Spike Dup (23C0886-MSD1)

Prepared: 03/22/23 16:26 Analyzed: 03/23/23 17:58

QC Source Sample: GS-030923-06 (A3C0365-01RE2)**EPA 6020B**

Aluminum	2650	25.0	50.0	ug/L	1	2780	51.4	94	75-125%	3	20%
Antimony	28.7	0.500	1.00	ug/L	1	27.8	ND	103	75-125%	2	20%

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Darwin Thomas, Business Development Director



ANALYTICAL REPORT

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503-718-2323

ORELAP ID: OR100062

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Portland, OR 97219

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Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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 23C0886 - EPA 3015A						Water						
Matrix Spike Dup (23C0886-MSD1)			Prepared: 03/22/23 16:26		Analyzed: 03/23/23 17:58							
QC Source Sample: GS-030923-06 (A3C0365-01RE2)												
Arsenic	57.7	0.500	1.00	ug/L	1	55.6	4.54	96	75-125%	2	20%	
Barium	126	1.00	2.00	ug/L	1	55.6	69.7	101	75-125%	2	20%	
Cadmium	54.4	0.100	0.200	ug/L	1	55.6	ND	98	75-125%	3	20%	
Chromium	61.3	1.00	2.00	ug/L	1	55.6	10.4	92	75-125%	2	20%	
Copper	51.0	1.00	2.00	ug/L	1	55.6	ND	92	75-125%	1	20%	
Iron	36000	25.0	50.0	ug/L	1	2780	32400	130	75-125%	0.3	20%	Q-65
Lead	49.6	0.110	0.200	ug/L	1	55.6	0.500	88	75-125%	6	20%	
Manganese	1880	0.500	1.00	ug/L	1	55.6	1870	16	75-125%	0.9	20%	Q-65
Mercury	0.978	0.0400	0.0800	ug/L	1	1.11	ND	88	75-125%	3	20%	
Nickel	56.2	1.00	2.00	ug/L	1	55.6	5.25	92	75-125%	3	20%	
Selenium	26.7	0.500	1.00	ug/L	1	27.8	ND	96	75-125%	0.3	20%	
Silver	25.9	0.100	0.200	ug/L	1	27.8	ND	93	75-125%	2	20%	
Thallium	25.1	0.100	0.200	ug/L	1	27.8	ND	90	75-125%	0.8	20%	
Vanadium	55.1	1.00	2.00	ug/L	1	55.6	1.43	97	75-125%	0.5	20%	
Zinc	53.4	2.00	4.00	ug/L	1	55.6	2.62	91	75-125%	3	20%	
Matrix Spike Dup (23C0886-MSD2)			Prepared: 03/22/23 16:26		Analyzed: 03/24/23 13:57							
QC Source Sample: GS-030923-06 (A3C0365-01RE2)												
EPA 6020B												
Beryllium	25.7	0.100	0.200	ug/L	1	27.8	ND	93	75-125%	1	20%	Q-16

Apex Laboratories

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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-MGP Only Mon. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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 23C0460 - Lachat Micro Dist - aqueous						Water						
Blank (23C0460-BLK1)			Prepared: 03/13/23 10:12 Analyzed: 03/13/23 16:28									
EPA 335.4												
Total Cyanide	ND	0.00500	0.00500	mg/L	1	---	---	---	---	---	---	B-02
LCS (23C0460-BS1)			Prepared: 03/13/23 10:12 Analyzed: 03/13/23 16:38									
EPA 335.4												
Total Cyanide	0.253	0.00500	0.00500	mg/L	1	0.250	---	101	90-110%	---	---	B-02
Duplicate (23C0460-DUP2)			Prepared: 03/13/23 10:12 Analyzed: 03/13/23 18:00									
QC Source Sample: GS-030923-06 (A3C0365-01RE1)												
EPA 335.4												
Total Cyanide	0.137	0.00500	0.00500	mg/L	1	---	0.137	---	---	0.07	10%	B-02, Q-16
Matrix Spike (23C0460-MS2)			Prepared: 03/13/23 10:12 Analyzed: 03/13/23 18:02									
QC Source Sample: GS-030923-06 (A3C0365-01RE1)												
EPA 335.4												
Total Cyanide	0.376	0.00500	0.00500	mg/L	1	0.250	0.137	95	90-110%	---	---	B-02, Q-16

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Darwin Thomas, Business Development Director

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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6720 SW Macadam Ave. Suite 125
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Project: Gasco-MGP Only Mon. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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 23C0510 - Lachat Micro Dist - aqueous						Water						
Blank (23C0510-BLK1)			Prepared: 03/14/23 09:39 Analyzed: 03/14/23 13:28									
EPA 335.4												
Total Cyanide	ND	0.00500	0.00500	mg/L	1	---	---	---	---	---	---	
LCS (23C0510-BS1)			Prepared: 03/14/23 09:39 Analyzed: 03/14/23 13:30									
EPA 335.4												
Total Cyanide	0.227	0.00500	0.00500	mg/L	1	0.250	---	91	90-110%	---	---	
Duplicate (23C0510-DUP1)			Prepared: 03/14/23 09:39 Analyzed: 03/14/23 13:44									
QC Source Sample: GS-030923-07 (A3C0365-02RE1)												
EPA 335.4												
Total Cyanide	0.0403	0.00500	0.00500	mg/L	1	---	0.0412	---	---	2	10%	
Matrix Spike (23C0510-MS1)			Prepared: 03/14/23 09:39 Analyzed: 03/14/23 13:46									
QC Source Sample: GS-030923-07 (A3C0365-02RE1)												
EPA 335.4												
Total Cyanide	0.108	0.00500	0.00500	mg/L	1	0.250	0.0412	27	90-110%	---	---	Q-01

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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-MGP Only Mon. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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 23C0732 - Lachat Micro Dist - aqueous						Water						
Blank (23C0732-BLK1)			Prepared: 03/20/23 09:32 Analyzed: 03/21/23 13:07									
EPA 335.4												
Total Cyanide	ND	0.00500	0.00500	mg/L	1	---	---	---	---	---	---	B-02
LCS (23C0732-BS1)			Prepared: 03/20/23 09:32 Analyzed: 03/21/23 13:09									
EPA 335.4												
Total Cyanide	0.245	0.00500	0.00500	mg/L	1	0.250	---	98	90-110%	---	---	B-02
Duplicate (23C0732-DUP2)			Prepared: 03/20/23 09:32 Analyzed: 03/21/23 13:57									
QC Source Sample: Non-SDG (A3C0634-01)												
Total Cyanide	ND	0.00500	0.00500	mg/L	1	---	0.00570	---	---	***	10%	B-02, Q-05
Matrix Spike (23C0732-MS1)			Prepared: 03/20/23 09:32 Analyzed: 03/21/23 13:15									
QC Source Sample: GS-030923-06 (A3C0365-01RE2)												
EPA 335.4												
Total Cyanide	0.415	0.00500	0.00500	mg/L	1	0.250	0.148	107	90-110%	---	---	B-02
Matrix Spike (23C0732-MS2)			Prepared: 03/20/23 09:32 Analyzed: 03/21/23 13:59									
QC Source Sample: Non-SDG (A3C0634-01)												
EPA 335.4												
Total Cyanide	0.250	0.00500	0.00500	mg/L	1	0.250	0.00570	98	90-110%	---	---	B-02
Matrix Spike Dup (23C0732-MSD1)			Prepared: 03/20/23 09:32 Analyzed: 03/21/23 13:17									
QC Source Sample: GS-030923-06 (A3C0365-01RE2)												
EPA 335.4												
Total Cyanide	0.417	0.00500	0.00500	mg/L	1	0.250	0.148	107	90-110%	0.5	10%	B-02

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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-MGP Only Mon. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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 23C0622 - Method Prep: Aq						Water						
Blank (23C0622-BLK1)			Prepared: 03/16/23 10:48 Analyzed: 03/16/23 12:52									
<u>D6888-09</u>												
Available Cyanide	ND	0.00100	0.00200	mg/L	1	---	---	---	---	---	---	
LCS (23C0622-BS1)			Prepared: 03/16/23 10:48 Analyzed: 03/16/23 12:53									
<u>D6888-09</u>												
Available Cyanide	0.0237	0.00100	0.00200	mg/L	1	0.0250	---	95	90-117%	---	---	
Matrix Spike (23C0622-MS1)			Prepared: 03/16/23 10:48 Analyzed: 03/16/23 13:07									
<u>QC Source Sample: GS-030923-06 (A3C0365-01)</u>												
<u>D6888-09</u>												
Available Cyanide	0.0250	0.00101	0.00201	mg/L	1	0.0251	ND	100	82-130%	---	---	
Matrix Spike (23C0622-MS2)			Prepared: 03/16/23 10:48 Analyzed: 03/16/23 13:22									
<u>QC Source Sample: Non-SDG (A3C0390-01)</u>												
<u>D6888-09</u>												
Available Cyanide	0.0263	0.00101	0.00201	mg/L	1	0.0251	ND	105	82-130%	---	---	
Matrix Spike Dup (23C0622-MSD1)			Prepared: 03/16/23 10:48 Analyzed: 03/16/23 13:08									
<u>QC Source Sample: GS-030923-06 (A3C0365-01)</u>												
<u>D6888-09</u>												
Available Cyanide	0.0263	0.00101	0.00201	mg/L	1	0.0251	ND	105	82-130%	5	11%	
Matrix Spike Dup (23C0622-MSD2)			Prepared: 03/16/23 10:48 Analyzed: 03/16/23 13:23									
<u>QC Source Sample: Non-SDG (A3C0390-01)</u>												
Available Cyanide	0.0265	0.00101	0.00201	mg/L	1	0.0251	ND	106	82-130%	1	11%	

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Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

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 23C0683 - Microdiffusion						Water						
Blank (23C0683-BLK1)			Prepared: 03/17/23 13:59 Analyzed: 03/17/23 18:20									
<u>D4282-02</u>												
Free Cyanide	ND	0.00250	0.00500	mg/L	1	---	---	---	---	---	---	
LCS (23C0683-BS1)			Prepared: 03/17/23 13:59 Analyzed: 03/17/23 18:27									
<u>D4282-02</u>												
Free Cyanide	0.0628	0.00250	0.00500	mg/L	1	0.0667	---	94	74-120%	---	---	
LCS Dup (23C0683-BSD1)			Prepared: 03/17/23 13:59 Analyzed: 03/17/23 18:28									
<u>D4282-02</u>												
Free Cyanide	0.0645	0.00250	0.00500	mg/L	1	0.0667	---	97	74-120%	3	20%	
Matrix Spike (23C0683-MS1)			Prepared: 03/17/23 13:59 Analyzed: 03/17/23 18:35									
<u>QC Source Sample: GS-030923-06 (A3C0365-01)</u>												
<u>D4282-02</u>												
Free Cyanide	0.0628	0.00250	0.00500	mg/L	1	0.0667	ND	94	74-120%	---	---	
Matrix Spike Dup (23C0683-MSD1)			Prepared: 03/17/23 13:59 Analyzed: 03/17/23 18:35									
<u>QC Source Sample: GS-030923-06 (A3C0365-01)</u>												
<u>D4282-02</u>												
Free Cyanide	0.0640	0.00250	0.00500	mg/L	1	0.0667	ND	96	74-120%	2	20%	

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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: 23C0453							
A3C0365-01RE1	WG	EPA 8260D	03/09/23 11:10	03/13/23 10:03	5mL/5mL	5mL/5mL	1.00
A3C0365-02RE1	WG	EPA 8260D	03/09/23 12:15	03/13/23 10:03	5mL/5mL	5mL/5mL	1.00
A3C0365-03RE1	WG	EPA 8260D	03/09/23 14:15	03/13/23 10:03	5mL/5mL	5mL/5mL	1.00
A3C0365-04	W	EPA 8260D	03/09/23 15:00	03/13/23 10:03	5mL/5mL	5mL/5mL	1.00
Batch: 23C0498							
A3C0365-03RE2	WG	EPA 8260D	03/09/23 14:15	03/14/23 14:00	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: 23C0807							
A3C0365-01	WG	EPA 8260D SIM	03/09/23 11:10	03/21/23 09:00	5mL/5mL	5mL/5mL	1.00
A3C0365-02	WG	EPA 8260D SIM	03/09/23 12:15	03/21/23 09:00	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: 23C0445							
A3C0365-01	WG	EPA 8270E LVI	03/09/23 11:10	03/13/23 07:00	98.3mL/5mL	125mL/5mL	1.27
A3C0365-02	WG	EPA 8270E LVI	03/09/23 12:15	03/13/23 07:00	99.07mL/5mL	125mL/5mL	1.26
A3C0365-02RE1	WG	EPA 8270E LVI	03/09/23 12:15	03/13/23 07:00	99.07mL/5mL	125mL/5mL	1.26
A3C0365-03	WG	EPA 8270E LVI	03/09/23 14:15	03/13/23 07:00	103.49mL/5mL	125mL/5mL	1.21

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: 23C0809							
A3C0365-02	WG	EPA 6020B	03/09/23 12:15	03/21/23 12:08	45mL/50mL	45mL/50mL	1.00
A3C0365-02RE1	WG	EPA 6020B	03/09/23 12:15	03/21/23 12:08	45mL/50mL	45mL/50mL	1.00
A3C0365-03	WG	EPA 6020B	03/09/23 14:15	03/21/23 12:08	45mL/50mL	45mL/50mL	1.00
A3C0365-03RE1	WG	EPA 6020B	03/09/23 14:15	03/21/23 12:08	45mL/50mL	45mL/50mL	1.00
A3C0365-03RE2	WG	EPA 6020B	03/09/23 14:15	03/21/23 12:08	45mL/50mL	45mL/50mL	1.00

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503-718-2323
ORELAP ID: OR100062**Anchor QEA, LLC**6720 SW Macadam Ave. Suite 125
Portland, OR 97219Project: **Gasco-MGP Only Mon. Wells 1Q 2023 Perf. Mon.**Project Number: **000029-02.84 T-01.001E**Project Manager: **John Renda****Report ID:****A3C0365 - 05 19 23 0508****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: 23C0886							
A3C0365-01RE2	WG	EPA 6020B	03/09/23 11:10	03/22/23 16:26	45mL/50mL	45mL/50mL	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
Batch: 23C0460							
A3C0365-03	WG	EPA 335.4	03/09/23 14:15	03/13/23 10:12	6mL/6mL	6mL/6mL	1.00
Batch: 23C0510							
A3C0365-02RE1	WG	EPA 335.4	03/09/23 12:15	03/14/23 09:39	6mL/6mL	6mL/6mL	1.00
Batch: 23C0732							
A3C0365-01RE2	WG	EPA 335.4	03/09/23 11:10	03/20/23 09:32	6mL/6mL	6mL/6mL	1.00

Available Cyanide by FIA, Ligand Exchange and Amperometric Detection**Prep: Method Prep: Aq**

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 23C0622							
A3C0365-01	WG	D6888-09	03/09/23 11:10	03/16/23 10:48	5mL/5mL	5mL/5mL	1.00
A3C0365-02	WG	D6888-09	03/09/23 12:15	03/16/23 10:48	5mL/5mL	5mL/5mL	1.00
A3C0365-03	WG	D6888-09	03/09/23 14:15	03/16/23 10:48	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
Batch: 23C0683							
A3C0365-01	WG	D4282-02	03/09/23 11:10	03/17/23 13:59	3mL/3mL	3mL/3mL	1.00
A3C0365-02	WG	D4282-02	03/09/23 12:15	03/17/23 13:59	3mL/3mL	3mL/3mL	1.00
A3C0365-03	WG	D4282-02	03/09/23 14:15	03/17/23 13:59	3mL/3mL	3mL/3mL	1.00

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6720 SW Macadam Ave. Suite 125
Portland, OR 97219

Project: **Gasco-MGP Only Mon. Wells 1Q 2023 Perf. Mon.**

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

Project Manager: **John Renda**

Report ID:

A3C0365 - 05 19 23 0508

QUALIFIER DEFINITIONS

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

Apex Laboratories

- B** Analyte detected in an associated blank at a level above the MRL. (See Notes and Conventions below.)
- B-02** Analyte detected in an associated blank at a level between one-half the MRL and the MRL. (See Notes and Conventions below.)
- CONT** The Sample Container provided for this analysis was not provided by Apex Laboratories, and has not been verified as part of the Quality System.
- 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.
- M-02** Due to matrix interference, this analyte cannot be accurately quantified. The reported result is estimated.
- Q-01** Spike recovery and/or RPD is outside acceptance limits.
- Q-03** Spike recovery and/or RPD is outside control limits due to the high concentration of analyte present in the sample.
- Q-05** Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
- Q-11** Spike recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.
- 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 +11%. 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 +9%. 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 -14%. 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 -4%. 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.
- S-05** Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.
- V-01** Sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

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A3C0365 - 05 19 23 0508

V-25 SIM Analysis was not performed due to the high analyte concentration in this sample.

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A handwritten signature in black ink, appearing to read "Darwin Thomas".

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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).

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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.

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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

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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-MGP Only Mon. Wells 1Q 2023 Perf. Mon.

Project Number: 000029-02.84 T-01.001E

Project Manager: John Renda

Report ID:

A3C0365 - 05 19 23 0508

APEX LABS		CHAIN OF CUSTODY		Lab # A3C0365COC 1 of 1	
Company: Anchor QEA		Project Mgr: John Renda		Project Name: Gasco-MGP Only Mon. Wells 1Q 2023 Perf. Mon.	
Address: 6720 S. Macadam Ave. #125 Portland, OR		Phone: 503-670-1108		Email: jrenda@anchorqea.com	
Sampled by: Day Luffman / Dan Scoll		Project #: 000029-02.84		T-01.001E	
Site Location: (OR) WA CA AK ID		ANALYSIS REQUEST		PO #	
SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID
GS-030923-06	3/6/23	1110	WG	30	
GS-030923-07	1/21/23	1215	WG	10	
GS-030923-08	1/4/23	1415	WG	10	
YB-030923	1/5/23	1500	W	1	
TCLP Metals (8)					
8081 PCBs					
8082 PCBs					
8270 Semi-Volat Full List					
8270 SIM PAHs					
8260 VOCs Full List					
8260 Halo VOCs					
8260 RBDM VOCs					
8260 BTEX					
NWTPH-GX					
NWTPH-DX					
NWTPH-HCID					
SPECIAL INSTRUCTIONS:					
Start hold time → Free Cu					
GS-030923-06 has extra volume for MS/MSD.					
TAT Requested (circle)					
1 Day 2 Day 3 Day					
5 Day Standard Other:					
SAMPLES ARE HELD FOR 30 DAYS					
RELINQUISHED BY:		RECEIVED BY:		RECEIVED BY:	
Signature: Day Luffman		Signature: John Renda		Signature: John Renda	
Date: 3/10/23		Date: 3/10/23		Date: 3/10/23	
Printed Name: Day Luffman		Printed Name: John Renda		Printed Name: John Renda	
Time: 0801		Time: 1510		Time: 1510	
Company: Anchor QEA		Company: Anchor QEA		Company: Anchor QEA	

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APEX LABS COOLER RECEIPT FORM

Client: Anchor QEA Element WO#: A3 C0365Project/Project #: Gasco-MGP Only Mon. Wells 1Q 2023 Perf. Mon.
000029-02.84 T-01.001E

Delivery Info:

Date/time received: 3/10/23 @ 801 By: JS
Delivered by: Apex ☒ Client ☐ ESS ☐ FedEx ☐ UPS ☐ Radio ☐ Morgan ☐ SDS ☐ Evergreen ☐ Other ☐Cooler Inspection Date/time inspected: 3/10/23 @ 840 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>3.9</u>						
Custody seals? (Y/N)	<u>N</u>						
Received on ice? (Y/N)	<u>y</u>						
Temp. blanks? (Y/N)	<u>y</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition (In/Out):	<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: 3/10/23 @ 1235 By: JSAll samples intact? Yes ☒ No ☐ Comments: _____Bottle labels/COCs agree? Yes ☒ No ☐ Comments: _____COC/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: Trip blank has HB.Water samples: pH checked: Yes ☒ No ☐ NA ☐ pH appropriate? Yes ☐ No ☒ NA ☐Comments: ph 9 on 125 ml NADH brown poly.Additional information: T.B. # Note with created trip blankNotstrong odor on all samplesLabeled by: JSWitness: JSCooler Inspected by: JS

Form Y-003 R-00

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