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Automated Report

Technical Report for

Kerr-McGee Oil & Gas Onshore LP

GWA_Schrute_Farms_9_1HZ

FID:752821 Reg:Vol. Freq.:IN

SGS Job Number: DA42136

Sampling Date: 02/17/22



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Total number of pages in report: 42



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

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Certifications: CO (CO00049), NE (NE-OS-06-04), ND (R-027), UT (NELAP CO00049)
LA (LA150028), TX (T104704511), WY (8TMS-L), HI (CO00049), NJ (CO011)

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Test results relate only to samples analyzed.

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Sample Summary

Kerr-McGee Oil & Gas Onshore LP

Job No: DA42136

GWA_Schrute_Farms_9_1HZ

Project No: FID:752821 Reg:Vol. Freq.:IN

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
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This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

DA42136-1	02/17/22	10:50	MH	02/18/22	AQ	Ground Water	BW_WARREN_50887 NWSW_21_1N_67W
DA42136-1A	02/17/22	10:50	MH	02/18/22	AQ	Ground Water	BW_WARREN_50887 NWSW_21_1N_67W
DA42136-1B	02/17/22	10:50	MH	02/18/22	AQ	Ground Water	BW_WARREN_50887 NWSW_21_1N_67W
DA42136-1F	02/17/22	10:50	MH	02/18/22	AQ	Groundwater Filtered	BW_WARREN_50887 NWSW_21_1N_67W

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Kerr-McGee Oil & Gas Onshore LP

Job No: DA42136

Site: GWA_Schrute_Farms_9_1HZ

Report Date 3/9/2022 3:39:20 PM

On 02/18/2022, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 4 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of DA42136 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Volatiles By Method SW846 8260B

Matrix: AQ **Batch ID:** V5V3209

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

GC Volatiles By Method RSK175 MOD

Matrix: AQ **Batch ID:** GFK217

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- DA42136-1A: The pH of the sample was >2 at time of analysis.

GC Volatiles By Method SW846 8015D

Matrix: AQ **Batch ID:** GGA2569

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- DA42136-1 for 1,2,4 Trichlorobenzene: CCV outside of control limits; results may be biased high.

GC/LC Semi-volatiles By Method SW846-8015D

Matrix: AQ **Batch ID:** OP21251

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) DA42164-1MS, DA42164-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Metals Analysis By Method EPA 200.8

Matrix: AQ **Batch ID:** MP34327

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA41922-1FMS, DA41922-1FMSD were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Calcium, Sodium, Strontium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
- MP34327-MB1 for Iron: All sample results >10x method blank concentration or <RL.
- MP34327-MB1 for Manganese: All sample results >10x method blank concentration or <RL.

General Chemistry By Method EPA 300.0

Matrix: AQ **Batch ID:** GP30781

- DA42136-1 for Nitrogen, Nitrate + Nitrite: Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

General Chemistry By Method EPA 365.1

Matrix: AQ **Batch ID:** GP30802

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA42127-6DUP, DA42138-1MS, DA42138-1MSD were used as the QC samples for the Phosphorus, Total analysis.

General Chemistry By Method EPA300.0

Matrix: AQ **Batch ID:** GP30781

- All samples were prepared within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA41999-1MS, DA41999-1MSD were used as the QC samples for the Chloride, Fluoride, Nitrogen, Nitrate, Sulfate, Chloride analysis.
- DA42136-1 for Nitrogen, Nitrate: Elevated detection limit due to matrix interference.
- DA42136-1 for Sulfate: Elevated detection limit due to matrix interference.
- DA42136-1 for Nitrogen, Nitrite: Elevated detection limit due to matrix interference.

General Chemistry By Method HACH IRB-BART

Matrix: AQ **Batch ID:** MB1518

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

General Chemistry By Method HACH SLYM-BART

Matrix: AQ **Batch ID:** MB1519

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

SGS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting SGS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by SGS indicated via signature on the report cover.

Summary of Hits

Job Number: DA42136
 Account: Kerr-McGee Oil & Gas Onshore LP
 Project: GWA_Schrute_Farms_9_1HZ
 Collected: 02/17/22



Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
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DA42136-1 BW_WARREN_50887 NWSW_21_1N_67W

Fluoride	2.2	0.20			mg/l	EPA300.0
Chloride	40.4	5.0			mg/l	EPA300.0
Bromide	0.42	0.10			mg/l	EPA300.0
Alkalinity, Bicarbonate as CaCO3	480	5.0			mg/l	SM 2320B-2011
Alkalinity, Carbonate	25.0	5.0			mg/l	SM 2320B-2011
Alkalinity, Total as CaCO3	505	5.0			mg/l	SM 2320B-2011
Cation Anion Balance	4.5				%	SM1030E-2011
Phosphorus, Total	0.098	0.010			mg/l	EPA 365.1
Solids, Total Dissolved	666	10			mg/l	SM 2540C-2011
Specific Conductivity	1010	1.0			umhos/cm	SM 2510B-2011
pH ^a	8.82				su	SM4500HB+ -2011/9040C
Specific Conductivity (Field)	1092.7	0.50			umhos/cm	FIELD
pH (Field)	8.56				su	FIELD
Temperature (Field)	12.83				Deg. C	FIELD
Oxygen, Dissolved (Field)	0.16				mg/l	FIELD
Turbidity	0.02				NTU	FIELD

DA42136-1A BW_WARREN_50887 NWSW_21_1N_67W

Methane ^b	2.57	0.0080	0.0070		mg/l	RSK175 MOD
Ethane ^b	0.0064	0.0016	0.0010		mg/l	RSK175 MOD

DA42136-1B BW_WARREN_50887 NWSW_21_1N_67W

Iron-Related Bacteria	2200	25			CFU/ml	HACH IRB-BART
Slime Forming Bacteria	67000	500			CFU/ml	HACH SLYM-BART
Sulfate Reducing Bacteria	1400	200			CFU/ml	HACH SRB-BART

DA42136-1F BW_WARREN_50887 NWSW_21_1N_67W

Barium	0.0390	0.0040			mg/l	EPA 200.8
Boron	0.398	0.080			mg/l	EPA 200.8
Calcium	1.50	0.80			mg/l	EPA 200.8
Iron	0.194	0.040			mg/l	EPA 200.8
Magnesium	0.399	0.20			mg/l	EPA 200.8
Manganese	0.0030	0.0020			mg/l	EPA 200.8
Potassium	1.11	0.40			mg/l	EPA 200.8
Sodium	236	5.0			mg/l	EPA 200.8
Strontium	0.0469	0.040			mg/l	EPA 200.8

(a) Analysis performed past recommended hold time.

(b) The pH of the sample was > 2 at time of analysis.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: BW_WARREN_50887 NWSW_21_1N_67W	Date Sampled: 02/17/22
Lab Sample ID: DA42136-1	Date Received: 02/18/22
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: GWA_Schrute_Farms_9_1HZ	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V64037.D	1	02/19/22 20:09	TL	n/a	n/a	V5V3209
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.60	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
1330-20-7	Xylene (total)	ND	1.0	1.0	ug/l	
	m,p-Xylene	ND	1.0	0.96	ug/l	
95-47-6	o-Xylene	ND	1.0	0.60	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	121%		70-130%
17060-07-0	1,2-Dichloroethane-D4	106%		70-130%
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	102%		70-130%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: BW_WARREN_50887 NWSW_21_1N_67W Lab Sample ID: DA42136-1 Matrix: AQ - Ground Water Method: SW846 8015D Project: GWA_Schrute_Farms_9_1HZ	Date Sampled: 02/17/22 Date Received: 02/18/22 Percent Solids: n/a
---	---

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA57173.D	1	02/18/22 21:10	MB	n/a	n/a	GGA2569
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.050	0.040	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	121% ^a		60-140%		

(a) CCV outside of control limits; results may be biased high.

ND = Not detected RL = Reporting Limit E = Indicates value exceeds calibration range	MDL = Method Detection Limit J = Indicates an estimated value B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound
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Report of Analysis

Client Sample ID: BW_WARREN_50887 NWSW_21_1N_67W	Date Sampled: 02/17/22
Lab Sample ID: DA42136-1	Date Received: 02/18/22
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846-8015D SW846 3510C	
Project: GWA_Schrute_Farms_9_1HZ	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LW001145.D	1	02/21/22 12:58	IV	02/21/22 06:30	OP21251	GLW28
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.10	0.052	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	79%		10-131%		

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.1
4

Report of Analysis

Client Sample ID:	BW_WARREN_50887 NWSW_21_1N_67W	Date Sampled:	02/17/22
Lab Sample ID:	DA42136-1	Date Received:	02/18/22
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	GWA_Schrute_Farms_9_1HZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
300.0							
Fluoride	2.2	0.20	mg/l	2	02/18/22 15:28	EA	EPA300.0
Chloride	40.4	5.0	mg/l	10	02/18/22 15:41	EA	EPA300.0
Nitrogen, Nitrite ^a	< 0.040	0.040	mg/l	10	02/18/22 15:41	EA	EPA300.0
Bromide	0.42	0.10	mg/l	2	02/18/22 15:28	EA	EPA300.0
Nitrogen, Nitrate ^a	< 0.020	0.020	mg/l	2	02/18/22 15:28	EA	EPA300.0
Sulfate ^a	< 1.0	1.0	mg/l	2	02/18/22 15:28	EA	EPA300.0
300.0 NO2 + NO3O							
Nitrogen, Nitrate + Nitrite ^b	< 0.060	0.060	mg/l	1	02/18/22 15:41	EA	EPA 300.0
Alkalinity, Bicarbonate as CaC	480	5.0	mg/l	1	02/21/22	DM	SM 2320B-2011
Alkalinity, Carbonate	25.0	5.0	mg/l	1	02/21/22	DM	SM 2320B-2011
Alkalinity, Total as CaCO3	505	5.0	mg/l	1	02/21/22	DM	SM 2320B-2011
Cation Anion Balance	4.5		%	1	02/25/22	JB	SM1030E-2011
Phosphorus, Total	0.098	0.010	mg/l	1	02/22/22 15:33	AK	EPA 365.1
Solids, Total Dissolved	666	10	mg/l	1	02/21/22	DM	SM 2540C-2011
Specific Conductivity	1010	1.0	umhos/cm	1	02/21/22	CP	SM 2510B-2011
pH ^c	8.82		su	1	02/21/22	CP	SM4500HB+ -2011/9040C

Field Parameters

Oxygen, Dissolved (Field)	0.16		mg/l	1	02/17/22 10:50	SUB	FIELD
Redox Potential Vs H2	-121.9		mv	1	02/17/22 10:50	SUB	FIELD
Specific Conductivity (Field)	1092.7	0.50	umhos/cm	1	02/17/22 10:50	SUB	FIELD
Temperature (Field)	12.83		Deg. C	1	02/17/22 10:50	SUB	FIELD
Turbidity	0.02		NTU	1	02/17/22 10:50	SUB	FIELD
pH (Field)	8.56		su	1	02/17/22 10:50	SUB	FIELD

(a) Elevated detection limit due to matrix interference.

(b) Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

(c) Analysis performed past recommended hold time.

RL = Reporting Limit

Report of Analysis

Client Sample ID: BW_WARREN_50887 NWSW_21_1N_67W	Date Sampled: 02/17/22
Lab Sample ID: DA42136-1A	Date Received: 02/18/22
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: RSK175 MOD	
Project: GWA_Schrute_Farms_9_1HZ	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	FK3028.D	1	02/24/22 14:29	MB	n/a	n/a	GFK217
Run #2 ^a	FK3029.D	10	02/24/22 14:34	MB	n/a	n/a	GFK217

Run #	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	39.0 ml	4.0 ml	500 ul	19.5 Deg. C
Run #2	39.0 ml	4.0 ml	500 ul	19.5 Deg. C

Methane, Ethane and Propane

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	2.57 ^b	0.0080	0.0070	mg/l	
74-84-0	Ethane	0.0064	0.0016	0.0010	mg/l	
74-98-6	Propane	ND	0.0022	0.0017	mg/l	

(a) The pH of the sample was > 2 at time of analysis.

(b) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.2
4

Report of Analysis

Client Sample ID: BW_WARREN_50887 NWSW_21_1N_67W	Date Sampled: 02/17/22
Lab Sample ID: DA42136-1B	Date Received: 02/18/22
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: GWA_Schrute_Farms_9_1HZ	

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Iron-Related Bacteria	2200	25	CFU/ml	1	03/04/22	EA	HACH IRB-BART
Slime Forming Bacteria	67000	500	CFU/ml	1	03/04/22	EA	HACH SLYM-BART
Sulfate Reducing Bacteria	1400	200	CFU/ml	1	03/04/22	EA	HACH SRB-BART

RL = Reporting Limit

4.3
4

Report of Analysis

Client Sample ID: BW_WARREN_50887 NWSW_21_1N_67W	Date Sampled: 02/17/22
Lab Sample ID: DA42136-1F	Date Received: 02/18/22
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: GWA_Schrute_Farms_9_1HZ	

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Barium	0.0390	0.0040	mg/l	2	02/21/22	02/24/22	CH EPA 200.8 ¹	EPA 200.8 ³
Boron	0.398	0.080	mg/l	2	02/21/22	02/24/22	CH EPA 200.8 ¹	EPA 200.8 ³
Calcium	1.50	0.80	mg/l	2	02/21/22	02/24/22	CH EPA 200.8 ¹	EPA 200.8 ³
Iron	0.194	0.040	mg/l	2	03/08/22	03/08/22	CH EPA 200.8 ²	EPA 200.8 ³
Magnesium	0.399	0.20	mg/l	2	02/21/22	02/24/22	CH EPA 200.8 ¹	EPA 200.8 ³
Manganese	0.0030	0.0020	mg/l	2	02/21/22	02/24/22	CH EPA 200.8 ¹	EPA 200.8 ³
Potassium	1.11	0.40	mg/l	2	02/21/22	02/24/22	CH EPA 200.8 ¹	EPA 200.8 ³
Selenium	< 0.00080	0.00080	mg/l	2	02/21/22	02/24/22	CH EPA 200.8 ¹	EPA 200.8 ³
Sodium	236	5.0	mg/l	10	02/21/22	02/24/22	CH EPA 200.8 ¹	EPA 200.8 ³
Strontium	0.0469	0.040	mg/l	2	02/21/22	02/24/22	CH EPA 200.8 ¹	EPA 200.8 ³

(1) Instrument QC Batch: MA14732

(2) Instrument QC Batch: MA14771

(3) Prep QC Batch: MP34327

RL = Reporting Limit

4.4
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Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



CHAIN OF CUSTODY

4036 Youngfield Street, Wheat Ridge, CO 80033
TEL: 303-425-6021 FAX: 303-425-6854
www.acctest.com

Bottle Order Control #
FED-EX Tracking #
SGS Quote #
SGS Job # DA42136

Client / Reporting Information
Project Information
Requested Analysis (see TEST CODE sheet)
Matrix Codes
Collection
Data Deliverable Information
Comments / Special Instructions
Sample Custody must be documented below each time samples change possession, including courier delivery.

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MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: DA42136
 Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP
 Project: GWA_Schrute_Farms_9_1HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V3209-MB	5V64029.D	1	02/19/22	TL	n/a	n/a	V5V3209

The QC reported here applies to the following samples:

Method: SW846 8260B

DA42136-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.60	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
	m,p-Xylene	ND	1.0	0.96	ug/l	
95-47-6	o-Xylene	ND	1.0	0.60	ug/l	
1330-20-7	Xylene (total)	ND	1.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	115% 70-130%
17060-07-0	1,2-Dichloroethane-D4	107% 70-130%
2037-26-5	Toluene-D8	102% 70-130%
460-00-4	4-Bromofluorobenzene	104% 70-130%

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Blank Spike/Blank Spike Duplicate Summary

Job Number: DA42136
 Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP
 Project: GWA_Schrute_Farms_9_1HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V3209-BS	5V64025.D	1	02/19/22	TL	n/a	n/a	V5V3209
V5V3209-BSD	5V64026.D	1	02/19/22	TL	n/a	n/a	V5V3209

The QC reported here applies to the following samples:

Method: SW846 8260B

DA42136-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	50	47.7	95	50.1	100	5	70-130/30
100-41-4	Ethylbenzene	50	50.1	100	52.4	105	4	70-130/30
108-88-3	Toluene	50	46.8	94	50.3	101	7	70-130/30
	m,p-Xylene	100	102	102	108	108	6	70-130/30
95-47-6	o-Xylene	50	50.4	101	52.8	106	5	70-130/30
1330-20-7	Xylene (total)	150	152	101	160	107	5	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	110%	107%	70-130%
17060-07-0	1,2-Dichloroethane-D4	103%	103%	70-130%
2037-26-5	Toluene-D8	100%	101%	70-130%
460-00-4	4-Bromofluorobenzene	100%	102%	70-130%

* = Outside of Control Limits.

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: DA42136
Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP
Project: GWA_Schrute_Farms_9_1HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGA2569-MB	GA57164.D	1	02/18/22	MB	n/a	n/a	GGA2569

The QC reported here applies to the following samples:

Method: SW846 8015D

DA42136-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	0.050	0.040	mg/l	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	118% 60-140%

7.1.1
7

Method Blank Summary

Job Number: DA42136
Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP
Project: GWA_Schrute_Farms_9_1HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFK217-MB	FK3025.D	1	02/24/22	MB	n/a	n/a	GFK217

The QC reported here applies to the following samples:

Method: RSK175 MOD

DA42136-1A

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.00080	0.00070	mg/l	
74-84-0	Ethane	ND	0.0016	0.0010	mg/l	
74-98-6	Propane	ND	0.0022	0.0017	mg/l	

Blank Spike/Blank Spike Duplicate Summary

Job Number: DA42136
 Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP
 Project: GWA_Schrute_Farms_9_1HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGA2569-BS	GA57161.D	1	02/18/22	MB	n/a	n/a	GGA2569
GGA2569-BSD	GA57162.D	1	02/18/22	MB	n/a	n/a	GGA2569

The QC reported here applies to the following samples:

Method: SW846 8015D

DA42136-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	2.2	2.32	105	2.32	105	0	49-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
120-82-1	1,2,4-Trichlorobenzene	114%	119%	60-140%

* = Outside of Control Limits.

7.2.1
7

Blank Spike/Blank Spike Duplicate Summary

Job Number: DA42136
 Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP
 Project: GWA_Schrute_Farms_9_1HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFK217-BS	FK3026.D	10	02/24/22	MB	n/a	n/a	GFK217
GFK217-BSD	FK3027.D	10	02/24/22	MB	n/a	n/a	GFK217

The QC reported here applies to the following samples:

Method: RSK175 MOD

DA42136-1A

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
74-82-8	Methane	0.512	0.614	120	0.636	124	4	70-130/30
74-84-0	Ethane	0.923	1.23	133	1.28	139	4	70-139/30
74-98-6	Propane	1.38	1.71	124	1.79	130	5	70-134/30

7.2.2
7

* = Outside of Control Limits.

GC/LC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: DA42136
Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP
Project: GWA_Schrute_Farms_9_1HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21251-MB	LW001134.D	1	02/21/22	IV	02/21/22	OP21251	GLW28

The QC reported here applies to the following samples:

Method: SW846-8015D

DA42136-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.10	0.052	mg/l	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	88% 10-131%

8.1.1
8

Blank Spike Summary

Job Number: DA42136
Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP
Project: GWA_Schrute_Farms_9_1HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21251-BS	LW001133.D	1	02/21/22	IV	02/21/22	OP21251	GLW28

The QC reported here applies to the following samples:

Method: SW846-8015D

DA42136-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	TPH-DRO (C10-C28)	5	3.85	77	20-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	83%	10-131%

8.2.1
8

* = Outside of Control Limits.

Blank Spike Summary

Job Number: DA42136
Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP
Project: GWA_Schrute_Farms_9_1HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21251-BS	LW001137.D	1	02/21/22	IV	02/21/22	OP21251	GLW28

The QC reported here applies to the following samples:

Method: SW846-8015D

DA42136-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
CAS No.	Surrogate Recoveries		BSP		Limits
84-15-1	o-Terphenyl	81%			10-131%

8.2.2
8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA42136
 Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP
 Project: GWA_Schrute_Farms_9_1HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21251-MS	LW001135.D	1	02/21/22	IV	02/21/22	OP21251	GLW28
OP21251-MSD	LW001136.D	1	02/21/22	IV	02/21/22	OP21251	GLW28
DA42164-1	LW001140.D	1	02/21/22	IV	02/21/22	OP21251	GLW28

The QC reported here applies to the following samples:

Method: SW846-8015D

DA42136-1

CAS No.	Compound	DA42164-1 mg/l	Spike Q mg/l	MS mg/l	MS %	Spike mg/l	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	ND	5	3.61	72	5	3.84	77	6	20-130/30

CAS No.	Surrogate Recoveries	MS	MSD	DA42164-1	Limits
84-15-1	o-Terphenyl	78%	84%	75%	10-131%

8.3.1
8

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA42136
 Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP
 Project: GWA_Schrute_Farms_9_1HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP21251-MS	LW001138.D	1	02/21/22	IV	02/21/22	OP21251	GLW28
OP21251-MSD	LW001139.D	1	02/21/22	IV	02/21/22	OP21251	GLW28
DA42164-1	LW001140.D	1	02/21/22	IV	02/21/22	OP21251	GLW28

The QC reported here applies to the following samples:

Method: SW846-8015D

DA42136-1

CAS No.	Compound	DA42164-1 mg/l	Spike Q	MS mg/l	MS %	Spike mg/l	MSD mg/l	MSD %	RPD	Limits Rec/RPD
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CAS No.	Surrogate Recoveries	MS	MSD	DA42164-1	Limits
84-15-1	o-Terphenyl	79%	90%	75%	10-131%

* = Outside of Control Limits.

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: DA42136
Account: ANADACOD - Kerr-McGee Oil & Gas Onshore LP
Project: GWA_Schrute_Farms_9_1HZ

QC Batch ID: MP34327
Matrix Type: AQUEOUS

Methods: EPA 200.8
Units: ug/l

Prep Date: 02/21/22

Metal	RL	IDL	MDL	MB raw	final
Aluminum	50	.52	13		
Antimony	0.40	.01	.3		
Arsenic	0.20	.05	.05		
Barium	2.0	.096	.25	0.025	<2.0
Beryllium	0.20	.077	.1		
Boron	40	18	20		
Cadmium	0.10	.03	.04		
Calcium	400	25	100	7.2	<400
Chromium	2.0	.087	.25		
Cobalt	0.20	.04	.05		
Copper	2.0	.05	.81		
Iron	20	1.6	10	36.6	* (a)
Lead	0.50	.094	.13		
Magnesium	100	10	25	5.0	<100
Manganese	1.0	.079	.51	0.50	* (a)
Molybdenum	1.0	.037	.27		
Nickel	2.0	.098	.35		
Phosphorus	60	7.6	25		
Potassium	200	2	50	-12	<200
Selenium	0.40	.05	.1	0.0066	<0.40
Silver	0.10	.0081	.025		
Sodium	500	10	130	24.1	<500
Strontium	20	.1	5	0.024	<20
Thallium	0.20	.032	.05		
Tin	10	.22	2.5		
Titanium	2.0	.05	.37		
Uranium	0.20	.015	.05		
Vanadium	1.0	.14	.2		
Zinc	10	.05	2.1		

Associated samples MP34327: DA42136-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) All sample results >10x method blank concentration or <RL.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA42136
 Account: ANADACOD - Kerr-McGee Oil & Gas Onshore LP
 Project: GWA_Schrute_Farms_9_LHZ

QC Batch ID: MP34327
 Matrix Type: AQUEOUS

Methods: EPA 200.8
 Units: ug/l

Prep Date: 02/21/22

Metal	DA41922-1F Original MS		SpikeLot ICPAL4	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	98.2	529	400	107.7	70-130
Beryllium					
Boron					
Cadmium	anr				
Calcium	218000	219000	5000	20.0 (a)	70-130
Chromium	anr				
Cobalt					
Copper	anr				
Iron	39.1	1060	1000	102.1	70-130
Lead	anr				
Magnesium	191000	195000	5000	80.0	70-130
Manganese	15.9	126	100	110.1	70-130
Molybdenum	anr				
Nickel	anr				
Phosphorus					
Potassium	9750	15100	5000	107.0	70-130
Selenium	110	316	200	103.0	70-130
Silver	anr				
Sodium	330000	340000	5000	200.0(a)	70-130
Strontium	5140	5320	100	180.0(a)	70-130
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	anr				

Associated samples MP34327: DA42136-1F

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA42136
 Account: ANADACOD - Kerr-McGee Oil & Gas Onshore LP
 Project: GWA_Schrute_Farms_9_1HZ

QC Batch ID: MP34327
 Matrix Type: AQUEOUS

Methods: EPA 200.8
 Units: ug/l

Prep Date: 02/21/22

Metal	DA41922-1F Original MSD		SpikeLot ICPAL4	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	anr					
Barium	98.2	508	400	102.5	4.1	20
Beryllium						
Boron						
Cadmium	anr					
Calcium	218000	218000	5000	0.0 (a)	0.5	20
Chromium	anr					
Cobalt						
Copper	anr					
Iron	39.1	1060	1000	102.1	0.0	20
Lead	anr					
Magnesium	191000	193000	5000	40.0 (a)	1.0	20
Manganese	15.9	127	100	111.1	0.8	20
Molybdenum	anr					
Nickel	anr					
Phosphorus						
Potassium	9750	15100	5000	107.0	0.0	20
Selenium	110	316	200	103.0	0.0	20
Silver	anr					
Sodium	330000	334000	5000	80.0	1.8	20
Strontium	5140	5330	100	190.0(a)	0.2	20
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	anr					

Associated samples MP34327: DA42136-1F

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: DA42136
 Account: ANADACOD - Kerr-McGee Oil & Gas Onshore LP
 Project: GWA_Schrute_Farms_9_LHZ

QC Batch ID: MP34327
 Matrix Type: AQUEOUS

Methods: EPA 200.8
 Units: ug/l

Prep Date: 02/21/22

Metal	BSP Result	Spikelot ICPALL4	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	418	400	104.5	85-115
Beryllium				
Boron				
Cadmium	anr			
Calcium	5040	5000	100.8	85-115
Chromium	anr			
Cobalt				
Copper	anr			
Iron	1070	1000	107.0	85-115
Lead	anr			
Magnesium	5330	5000	106.6	85-115
Manganese	113	100	113.0	85-115
Molybdenum	anr			
Nickel	anr			
Phosphorus				
Potassium	5360	5000	107.2	85-115
Selenium	209	200	104.5	85-115
Silver	anr			
Sodium	5220	5000	104.4	85-115
Strontium	106	100	106.0	85-115
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	anr			

Associated samples MP34327: DA42136-1F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

9.1.3
 9

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA42136
Account: ANADACOD - Kerr-McGee Oil & Gas Onshore LP
Project: GWA_Schrute_Farms_9_1HZ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Bicarbonate as CaC	GN55542	5.0	0.0	mg/l	xxxxxxxx	98.8	98.8	90-110%
Alkalinity, Carbonate	GN55543	5.0	0.0	mg/l	xxxxxxxx	98.8	98.8	90-110%
Alkalinity, Total as CaCO3	GN55541	5.0	0.0	mg/l	100	98.8	98.8	90-110%
Chloride	GP30781/GN55538	0.50	0.0	mg/l	5	5.11	102.2	90-110%
Fluoride	GP30781/GN55538	0.10	0.0	mg/l	1	0.983	98.3	90-110%
Iron-Related Bacteria	MB1518	25	0	CFU/ml				
Nitrogen, Nitrate	GP30781/GN55538	0.010	0.0	mg/l	0.1	0.0967	96.7	90-110%
Phosphorus, Total	GP30802/GN55567	0.010	0.0	mg/l	0.2	0.19	91.5	90-110%
Slime Forming Bacteria	MB1519	500	0	CFU/ml				
Solids, Total Dissolved	GN55557	10	0.0	mg/l				
Solids, Total Dissolved	GN55557	10	0.0	mg/l	400	265	106.0	90-110%
Solids, Total Dissolved	GN55557			mg/l	400	265	106.0	90-110%
Sulfate	GP30781/GN55538	0.50	0.0	mg/l	5	5.15	103.0	90-110%
Sulfate Reducing Bacteria	MB1520	200	0	CFU/ml				

Associated Samples:

Batch MB1518: DA42136-1B
Batch MB1519: DA42136-1B
Batch MB1520: DA42136-1B
Batch GN55541: DA42136-1
Batch GN55542: DA42136-1
Batch GN55543: DA42136-1
Batch GN55557: DA42136-1
Batch GP30781: DA42136-1
Batch GP30802: DA42136-1
(*) Outside of QC limits

10.1
10

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA42136
Account: ANADACOD - Kerr-McGee Oil & Gas Onshore LP
Project: GWA_Schrute_Farms_9_1HZ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO3	GN55541	DA42140-1	mg/l	547	548	0.2	0-20%
Phosphorus, Total	GP30802/GN55567	DA42127-6	mg/l	2.0	2.0	2.0	0-20%
Solids, Total Dissolved	GN55557	DA41949-1	mg/l	697	650	7.0*(a)	0-5.44%
Solids, Total Dissolved	GN55557	DA41949-1	mg/l	697	650	7.0*(a)	0-5.44%
Specific Conductivity	GP30786/GN55546	DA42138-1	umhos/cm	1260	1240	1.5	0-20%

Associated Samples:

Batch GN55541: DA42136-1

Batch GN55557: DA42136-1

Batch GP30786: DA42136-1

Batch GP30802: DA42136-1

(*) Outside of QC limits

(a) High RPD due to possible sample nonhomogeneity.

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA42136
Account: ANADACOD - Kerr-McGee Oil & Gas Onshore LP
Project: GWA_Schrute_Farms_9_1HZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Alkalinity, Total as CaCO3	GN55541	DA42117-1	mg/l	193	100	295	102.5	80-120%
Chloride	GP30781/GN55538	DA41999-1	mg/l	55.9	50	108	104.2	80-120%
Fluoride	GP30781/GN55538	DA41999-1	mg/l	0.50 U	10	10.7	107.0	80-120%
Nitrogen, Nitrate	GP30781/GN55538	DA41999-1	mg/l	0.39	1	1.5	111.0	80-120%
Phosphorus, Total	GP30802/GN55567	DA42138-1	mg/l	0.012	0.2	0.20	96.0	90-110%
Sulfate	GP30781/GN55538	DA41999-1	mg/l	91.1	50	142	101.8	80-120%

Associated Samples:

Batch GN55541: DA42136-1

Batch GP30781: DA42136-1

Batch GP30802: DA42136-1

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

10.3
10

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA42136
Account: ANADACOD - Kerr-McGee Oil & Gas Onshore LP
Project: GWA_Schrute_Farms_9_1HZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Alkalinity, Total as CaCO3	GN55541	DA42117-1	mg/l	193	100	294	0.4	20%
Chloride	GP30781/GN55538	DA41999-1	mg/l	55.9	50	108	0.0	20%
Fluoride	GP30781/GN55538	DA41999-1	mg/l	0.50 U	10	10.6	0.9	20%
Nitrogen, Nitrate	GP30781/GN55538	DA41999-1	mg/l	0.39	1	1.4	6.9	20%
Phosphorus, Total	GP30802/GN55567	DA42138-1	mg/l	0.012	0.2	0.21	1.0	20%
Sulfate	GP30781/GN55538	DA41999-1	mg/l	91.1	50	141	0.7	20%

Associated Samples:

Batch GN55541: DA42136-1

Batch GP30781: DA42136-1

Batch GP30802: DA42136-1

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

10.4
10