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Automated Report

Technical Report for

Kerr-McGee Oil & Gas Onshore LP

GWA_Beierle_26_1HZ

FID:757471 Reg:Vol. Freq.:IN

SGS Job Number: DA30582

Sampling Date: 11/16/20

Report to:

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Total number of pages in report: 19



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.



Jason Savoie
General Manager

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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)

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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: DA30582

GWA_Beierle_26_1HZ

Project No: FID:757471 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

DA30582-1 11/16/20 10:18 JB 11/17/20 AQ Trip Blank Water BW_KNODEL_68206_TRIP_BLANK

CASE NARRATIVE / CONFORMANCE SUMMARY

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Client: Kerr-McGee Oil & Gas Onshore LP

Job No: DA30582

Site: GWA_Beierle_26_1HZ

Report Date 11/23/2020 3:21:29 P

On 11/17/2020, 0 sample(s), 1 Trip Blank(s), and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 4.1 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of DA30582 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: V7V3493

- All samples were analyzed within the recommended method holding time.
- Sample(s) DA19461-9MS, DA19461-9MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

GC Volatiles By Method SW846 8015D

Matrix: AQ

Batch ID: GGD73

- All samples were analyzed within the recommended method holding time.
- Sample(s) DA19465-3MS, DA19465-3MSD were used as the QC samples indicated.
- 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.

Monday, November 23, 2020

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Summary of Hits

Job Number: DA30582
Account: Kerr-McGee Oil & Gas Onshore LP
Project: GWA_Beierle_26_1HZ
Collected: 11/16/20



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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DA30582-1 BW_KNODEL_68206_TRIP_BLANK

No hits reported in this sample.



Wheat Ridge, CO

Section 4

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Sample Results

Report of Analysis

Report of Analysis

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Client Sample ID:	BW_KNODEL_68206_TRIP_BLANK	Date Sampled:	11/16/20
Lab Sample ID:	DA30582-1	Date Received:	11/17/20
Matrix:	AQ - Trip Blank Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	GWA_Beierle_26_1HZ		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7V69669.D	1	11/18/20 15:40	MB	n/a	n/a	V7V3493
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	106%		70-130%
17060-07-0	1,2-Dichloroethane-D4	99%		70-130%
2037-26-5	Toluene-D8	98%		70-130%
460-00-4	4-Bromofluorobenzene	104%		70-130%

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

Report of Analysis

Page 1 of 1

Client Sample ID:	BW_KNODEL_68206_TRIP_BLANK					Date Sampled:	11/16/20
Lab Sample ID:	DA30582-1					Date Received:	11/17/20
Matrix:	AQ - Trip Blank Water					Percent Solids:	n/a
Method:	SW846 8015D						
Project:	GWA_Beierle_26_1HZ						

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GD01886.D	1	11/19/20 15:40	JB	n/a	n/a	GGD73
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	0.050	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	101%		60-140%		

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

Misc. Forms

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Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

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

Bottle Order Control #	FED-EX Tracking #
SGS Quote #	SGS Job # DA30582

[illegible]

DA30582: Chain of Custody

Page 1 of 2

SGS Sample Receipt Summary

Job Number: DA30582

Client: ABSAROKA SOLUTIONS

Project: GWA_BEIERLE_26_1HZ

Date / Time Received: 11/17/2020 2:00:00 PM

Delivery Method:

Airbill #'s: CO

Cooler Temps (Initial/Adjusted): #1: (4.1/4.1):

Cooler Security

Y or N

1. Custody Seals Present: ☒ ☐
2. Custody Seals Intact: ☒ ☐

3. COC Present:

Y or N

4. Smpl Dates/Time OK

☒ ☐

Cooler Temperature

Y or N

1. Temp criteria achieved: ☒ ☐
2. Cooler temp verification: IR Gun;
3. Cooler media: Ice (Bag)
4. No. Coolers: 1

Quality Control Preservation

Y or N

N/A

1. Trip Blank present / cooler: ☒ ☐ ☐
2. Trip Blank listed on COC: ☒ ☐ ☐
3. Samples preserved properly: ☒ ☐ ☐
4. VOCs headspace free: ☒ ☐ ☐

Comments

Sample Integrity - Documentation

Y or N

1. Sample labels present on bottles: ☒ ☐
2. Container labeling complete: ☒ ☐
3. Sample container label / COC agree: ☒ ☐

Sample Integrity - Condition

Y or N

1. Sample recvd within HT: ☒ ☐
2. All containers accounted for: ☒ ☐
3. Condition of sample: Intact

Sample Integrity - Instructions

Y or N N/A

1. Analysis requested is clear: ☒ ☐
2. Bottles received for unspecified tests: ☐ ☒
3. Sufficient volume recvd for analysis: ☒ ☐
4. Compositing instructions clear: ☐ ☐ ☒
5. Filtering instructions clear: ☐ ☐ ☒

DA30582: Chain of Custody

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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

Page 1 of 1

Job Number: DA30582

Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP

Project: GWA_Beierle_26_1HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7V3493-MB	7V69664.D	1	11/18/20	MB	n/a	n/a	V7V3493

The QC reported here applies to the following samples:

Method: SW846 8260B

DA30582-1

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	105% 70-130%
17060-07-0	1,2-Dichloroethane-D4	103% 70-130%
2037-26-5	Toluene-D8	98% 70-130%
460-00-4	4-Bromofluorobenzene	100% 70-130%

Blank Spike Summary

Page 1 of 1

Job Number: DA30582

Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP

Project: GWA_Beierle_26_1HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7V3493-BS	7V69662.D	1	11/18/20	MB	n/a	n/a	V7V3493

The QC reported here applies to the following samples:

Method: SW846 8260B

DA30582-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	53.8	108	70-130
100-41-4	Ethylbenzene	50	53.0	106	69-130
108-88-3	Toluene	50	52.9	106	70-130
	m,p-Xylene	100	111	111	70-130
95-47-6	o-Xylene	50	53.9	108	70-130
1330-20-7	Xylene (total)	150	165	110	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	70-130%
17060-07-0	1,2-Dichloroethane-D4	102%	70-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	98%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA30582
Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP
Project: GWA_Beierle_26_1HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
DA19461-9MS	7V69665.D	1	11/18/20	MB	n/a	n/a	V7V3493
DA19461-9MSD	7V69666.D	1	11/18/20	MB	n/a	n/a	V7V3493
DA19461-9	7V69668.D	1	11/18/20	MB	n/a	n/a	V7V3493

The QC reported here applies to the following samples: Method: SW846 8260B

DA30582-1

CAS No.	Compound	DA19461-9 ug/l	Spike Q	ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	50	48.7	97	50	50.1	100	3	67-130/30	
100-41-4	Ethylbenzene	ND	50	48.5	97	50	49.5	99	2	69-130/30	
108-88-3	Toluene	ND	50	48.0	96	50	49.2	98	2	70-130/30	
	m,p-Xylene	ND	100	101	101	100	103	103	2	70-130/30	
95-47-6	o-Xylene	ND	50	49.5	99	50	50.6	101	2	70-130/30	
1330-20-7	Xylene (total)	ND	150	150	100	150	154	103	3	67-130/30	

CAS No.	Surrogate Recoveries	MS	MSD	DA19461-9	Limits
1868-53-7	Dibromofluoromethane	103%	100%	105%	70-130%
17060-07-0	1,2-Dichloroethane-D4	101%	99%	102%	70-130%
2037-26-5	Toluene-D8	99%	99%	98%	70-130%
460-00-4	4-Bromofluorobenzene	95%	99%	102%	70-130%

* = Outside of Control Limits.

GC Volatiles**QC Data Summaries**

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Includes the following where applicable:

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

Method Blank Summary

Job Number: DA30582
Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP
Project: GWA_Beierle_26_1HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGD73-MB	GD01882.D	1	11/19/20	JB	n/a	n/a	GGD73

The QC reported here applies to the following samples: Method: SW846 8015D

DA30582-1

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

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	98% 60-140%

Blank Spike Summary

Job Number: DA30582
Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP
Project: GWA_Beierle_26_1HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGD73-BS	GD01881.D	1	11/19/20	JB	n/a	n/a	GGD73

The QC reported here applies to the following samples: Method: SW846 8015D

DA30582-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	TPH-GRO (C6-C10)	2.2	1.83	83	51-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	103%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA30582
Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP
Project: GWA_Beierle_26_1HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
DA19465-3MS	GD01884.D	1	11/19/20	JB	n/a	n/a	GGD73
DA19465-3MSD	GD01885.D	1	11/19/20	JB	n/a	n/a	GGD73
DA19465-3	GD01883.D	1	11/19/20	JB	n/a	n/a	GGD73

The QC reported here applies to the following samples: Method: SW846 8015D

DA30582-1

CAS No.	Compound	DA19465-3 mg/l	Spike Q mg/l	MS mg/l	MS %	Spike mg/l	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND	2.2	1.61	73	2.2	1.65	75	2	40-132/30

CAS No.	Surrogate Recoveries	MS	MSD	DA19465-3	Limits
120-82-1	1,2,4-Trichlorobenzene	103%	101%	102%	60-140%

* = Outside of Control Limits.