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## Technical Report for

**Kerr-McGee Oil & Gas Onshore LP**

**GWA\_Land\_Fed\_10\_29HZ**

**FID:708165 Reg:Vol. Freq.:IN**

**SGS Job Number: DA57140**

**Sampling Date: 07/20/23**

### Report to:

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**Total number of pages in report: 43**



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 unless noted in the narrative, comments or footnotes.

**Eric Hoffman**

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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), NV (CO00049)

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Test results relate only to samples analyzed.

# Table of Contents

-1-

<b>Section 1: Sample Summary</b> .....	<b>3</b>
<b>Section 2: Case Narrative/Conformance Summary</b> .....	<b>4</b>
<b>Section 3: Summary of Hits</b> .....	<b>7</b>
<b>Section 4: Sample Results</b> .....	<b>8</b>
<b>4.1:</b> DA57140-1: BW_GILDEA_264754 SESE_8_2N_66W .....	9
<b>4.2:</b> DA57140-1A: BW_GILDEA_264754 SESE_8_2N_66W .....	13
<b>4.3:</b> DA57140-1B: BW_GILDEA_264754 SESE_8_2N_66W .....	14
<b>4.4:</b> DA57140-1F: BW_GILDEA_264754 SESE_8_2N_66W .....	15
<b>Section 5: Misc. Forms</b> .....	<b>16</b>
<b>5.1:</b> Chain of Custody .....	17
<b>Section 6: MS Volatiles - QC Data Summaries</b> .....	<b>20</b>
<b>6.1:</b> Method Blank Summary .....	21
<b>6.2:</b> Blank Spike/Blank Spike Duplicate Summary .....	22
<b>Section 7: GC Volatiles - QC Data Summaries</b> .....	<b>23</b>
<b>7.1:</b> Method Blank Summary .....	24
<b>7.2:</b> Blank Spike/Blank Spike Duplicate Summary .....	26
<b>Section 8: GC/LC Semi-volatiles - QC Data Summaries</b> .....	<b>28</b>
<b>8.1:</b> Method Blank Summary .....	29
<b>8.2:</b> Blank Spike Summary .....	30
<b>8.3:</b> Matrix Spike/Matrix Spike Duplicate Summary .....	32
<b>Section 9: Metals Analysis - QC Data Summaries</b> .....	<b>34</b>
<b>9.1:</b> Prep QC MP37785: Ba,B,Ca,Fe,Mg,Mn,K,Se,Na,Sr .....	35
<b>Section 10: General Chemistry - QC Data Summaries</b> .....	<b>39</b>
<b>10.1:</b> Method Blank and Spike Results Summary .....	40
<b>10.2:</b> Duplicate Results Summary .....	41
<b>10.3:</b> Matrix Spike Results Summary .....	42
<b>10.4:</b> Matrix Spike Duplicate Results Summary .....	43

1

2

3

4

5

6

7

8

9

10



## Sample Summary

**Kerr-McGee Oil & Gas Onshore LP**

**Job No: DA57140**

**GWA\_Land\_Fed\_10\_29HZ**

**Project No: FID:708165 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**

DA57140-1	07/20/23	09:59 PP	07/21/23	AQ	Ground Water	BW_GILDEA_264754 SESE_8_2N_66W
DA57140-1A	07/20/23	09:59 PP	07/21/23	AQ	Ground Water	BW_GILDEA_264754 SESE_8_2N_66W
DA57140-1B	07/20/23	09:59 PP	07/21/23	AQ	Ground Water	BW_GILDEA_264754 SESE_8_2N_66W
DA57140-1F	07/20/23	09:59 PP	07/21/23	AQ	Groundwater Filtered	BW_GILDEA_264754 SESE_8_2N_66W

## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** Kerr-McGee Oil & Gas Onshore LP

**Job No:** DA57140

**Site:** GWA\_Land\_Fed\_10\_29HZ

**Report Date** 8/11/2023 2:36:27 AM

On 07/21/2023, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 2.9 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of DA57140 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

<b>Matrix:</b> AQ	<b>Batch ID:</b> V5V3744
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- 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

<b>Matrix:</b> AQ	<b>Batch ID:</b> GFK294
-------------------	-------------------------

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

### GC Volatiles By Method SW846 8015D

<b>Matrix:</b> AQ	<b>Batch ID:</b> GGA2757
-------------------	--------------------------

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

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

<b>Matrix:</b> AQ	<b>Batch ID:</b> OP24024
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- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) DA56895-22MS, DA56895-22MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

### Metals Analysis By Method EPA 200.8

<b>Matrix:</b> AQ	<b>Batch ID:</b> MP37785
-------------------	--------------------------

- 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) DA57139-1FMS, DA57139-1FMSD were used as the QC samples for the metals analysis.

## General Chemistry By Method EPA 300.0

**Matrix:** AQ                      **Batch ID:** GP34716

- 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) DA57112-6MS, DA57112-6MSD were used as the QC samples for the Chloride, Nitrogen, Nitrate, Nitrogen, Nitrite, Sulfate, Chloride analysis.
- The blank spike (BS) recovery(s) of Nitrogen, Nitrite are outside control limits.
- DA57140-1 for Nitrogen, Nitrate: Elevated detection limit due to matrix interference.
- DA57140-1 for Nitrogen, Nitrite: Elevated detection limit due to matrix interference.
- DA57140-1 for Sulfate: Elevated detection limit due to matrix interference.

**Matrix:** AQ                      **Batch ID:** R61277

- The data for EPA 300.0 meets quality control requirements.
- DA57140-1 for Nitrogen, Nitrate + Nitrite: Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

## General Chemistry By Method EPA 365.1

**Matrix:** AQ                      **Batch ID:** GP34740

- 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) DA57104-2DUP, DA57104-2MS, DA57104-2MSD were used as the QC samples for the Phosphorus, Total analysis.

## General Chemistry By Method HACH IRB-BART

**Matrix:** AQ                      **Batch ID:** MB1678

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA57141-1BDUP were used as the QC samples for the Iron-Related Bacteria analysis.

## General Chemistry By Method HACH SLYM-BART

**Matrix:** AQ                      **Batch ID:** MB1679

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA57141-1BDUP were used as the QC samples for the Slime Forming Bacteria analysis.

## General Chemistry By Method HACH SRB-BART

**Matrix:** AQ                      **Batch ID:** MB1680

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA57141-1BDUP were used as the QC samples for the Sulfate Reducing Bacteria analysis.

### General Chemistry By Method SM 2320B-2011

**Matrix:** AQ                      **Batch ID:** GN60810

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA57140-1DUP, DA57140-1MS, DA57140-1MSD were used as the QC samples for the Alkalinity, Total as CaCO<sub>3</sub> analysis.

**Matrix:** AQ                      **Batch ID:** GN60811

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

**Matrix:** AQ                      **Batch ID:** GN60812

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

### General Chemistry By Method SM 2510B-2011

**Matrix:** AQ                      **Batch ID:** GP34719

- Sample(s) DA57141-1DUP were used as the QC samples for the Specific Conductivity analysis.

### General Chemistry By Method SM 2540C-2011

**Matrix:** AQ                      **Batch ID:** GN60806

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA57141-1DUP were used as the QC samples for the Solids, Total Dissolved analysis.

### General Chemistry By Method SM1030E-2011

**Matrix:** AQ                      **Batch ID:** GN60859

- The data for SM1030E-2011 meets quality control requirements.

### General Chemistry By Method SM4500HB+-2011/9040C

**Matrix:** AQ                      **Batch ID:** GN60794

- The data for SM4500HB+-2011/9040C meets quality control requirements.
- The following samples were run outside of holding time for method SM4500HB+-2011/9040C: DA57140-1 Analysis performed past recommended hold time.

### Field Data By Method FIELD

**Matrix:** AQ                      **Batch ID:** R61290

- The data for FIELD meets quality control requirements.

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:** DA57140  
**Account:** Kerr-McGee Oil & Gas Onshore LP  
**Project:** GWA\_Land\_Fed\_10\_29HZ  
**Collected:** 07/20/23



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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DA57140-1 BW\_GILDEA\_264754 SESE\_8\_2N\_66W

Fluoride		2.2	0.50		mg/l	EPA 300.0
Chloride		89.9	2.5		mg/l	EPA 300.0
Bromide		0.93	0.25		mg/l	EPA 300.0
Alkalinity, Bicarbonate as CaCO3		520	5.0		mg/l	SM 2320B-2011
Alkalinity, Carbonate		30.0	5.0		mg/l	SM 2320B-2011
Alkalinity, Total as CaCO3		550	5.0		mg/l	SM 2320B-2011
Cation Anion Balance		1.6			%	SM1030E-2011
Phosphorus, Total		0.042	0.010		mg/l	EPA 365.1
Solids, Total Dissolved		739	10		mg/l	SM 2540C-2011
Specific Conductivity		1320	1.0		umhos/cm	SM 2510B-2011
pH <sup>a</sup>		8.66			su	SM4500HB+ -2011/9040C
Oxygen, Dissolved (Field)		0.05			mg/l	FIELD
Temperature (Field)		17.88			Deg. C	FIELD
pH (Field)		8.57			su	FIELD
Specific Conductivity (Field)		1280.9	0.50		umhos/cm	FIELD
Turbidity		0.02			NTU	FIELD

DA57140-1A BW\_GILDEA\_264754 SESE\_8\_2N\_66W

Methane		9.72	0.040	0.035	mg/l	RSK175 MOD
Ethane		0.0257	0.0016	0.0010	mg/l	RSK175 MOD

DA57140-1B BW\_GILDEA\_264754 SESE\_8\_2N\_66W

Iron-Related Bacteria		150	25		CFU/ml	HACH IRB-BART
Slime Forming Bacteria		500	500		CFU/ml	HACH SLYM-BART
Sulfate Reducing Bacteria		< 200	200		CFU/ml	HACH SRB-BART

DA57140-1F BW\_GILDEA\_264754 SESE\_8\_2N\_66W

Barium		0.0598	0.0020		mg/l	EPA 200.8
Boron		0.293	0.040		mg/l	EPA 200.8
Calcium		2.10	0.40		mg/l	EPA 200.8
Iron		0.0206	0.020		mg/l	EPA 200.8
Magnesium		0.506	0.10		mg/l	EPA 200.8
Manganese		0.0065	0.0010		mg/l	EPA 200.8
Potassium		1.32	0.20		mg/l	EPA 200.8
Sodium		300	5.0		mg/l	EPA 200.8
Strontium		0.0860	0.020		mg/l	EPA 200.8

(a) Analysis performed past recommended hold time.

**Sample Results**

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**Report of Analysis**

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## Report of Analysis

<b>Client Sample ID:</b> BW_GILDEA_264754 SESE_8_2N_66W	<b>Date Sampled:</b> 07/20/23
<b>Lab Sample ID:</b> DA57140-1	<b>Date Received:</b> 07/21/23
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8260B	
<b>Project:</b> GWA_Land_Fed_10_29HZ	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V75953.D	1	07/27/23 14:22	MB	n/a	n/a	V5V3744
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	105%		70-130%
17060-07-0	1,2-Dichloroethane-D4	101%		70-130%
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	112%		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

4.1  
4

## Report of Analysis

<b>Client Sample ID:</b> BW_GILDEA_264754 SESE_8_2N_66W	<b>Date Sampled:</b> 07/20/23
<b>Lab Sample ID:</b> DA57140-1	<b>Date Received:</b> 07/21/23
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846 8015D	
<b>Project:</b> GWA_Land_Fed_10_29HZ	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA61826.D	1	07/25/23 06:26	MB	n/a	n/a	GGA2757
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	101%		60-140%		

---

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

<b>Client Sample ID:</b> BW_GILDEA_264754 SESE_8_2N_66W	<b>Date Sampled:</b> 07/20/23
<b>Lab Sample ID:</b> DA57140-1	<b>Date Received:</b> 07/21/23
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> SW846-8015D SW846 3510C	
<b>Project:</b> GWA_Land_Fed_10_29HZ	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	LW13636.D	1	07/22/23 23:12	JB	07/22/23 08:00	OP24024	GLW492
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1050 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.19	0.18	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	86%		10-131%		

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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

<b>Client Sample ID:</b> BW_GILDEA_264754 SESE_8_2N_66W	<b>Date Sampled:</b> 07/20/23
<b>Lab Sample ID:</b> DA57140-1	<b>Date Received:</b> 07/21/23
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> GWA_Land_Fed_10_29HZ	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
<b>300.0</b>							
Fluoride	2.2	0.50	mg/l	5	07/21/23 12:58	MB	EPA 300.0
Chloride	89.9	2.5	mg/l	5	07/21/23 12:58	MB	EPA 300.0
Nitrogen, Nitrite <sup>a</sup>	< 0.020	0.020	mg/l	5	07/21/23 12:58	MB	EPA 300.0
Bromide	0.93	0.25	mg/l	5	07/21/23 12:58	MB	EPA 300.0
Nitrogen, Nitrate <sup>a</sup>	< 0.050	0.050	mg/l	5	07/21/23 12:58	MB	EPA 300.0
Sulfate <sup>a</sup>	< 2.5	2.5	mg/l	5	07/21/23 12:58	MB	EPA 300.0
<b>300.0 NO2 + NO3O</b>							
Nitrogen, Nitrate + Nitrite <sup>b</sup>	< 0.070	0.070	mg/l	1	07/21/23 12:58	MB	EPA 300.0
Alkalinity, Bicarbonate as CaC	520	5.0	mg/l	1	07/25/23 12:00	JW	SM 2320B-2011
Alkalinity, Carbonate	30.0	5.0	mg/l	1	07/25/23 12:00	JW	SM 2320B-2011
Alkalinity, Total as CaCO3	550	5.0	mg/l	1	07/25/23 12:00	JW	SM 2320B-2011
Cation Anion Balance	1.6		%	1	07/31/23	MB	SM1030E-2011
Phosphorus, Total	0.042	0.010	mg/l	1	07/25/23 13:03	MB	EPA 365.1
Solids, Total Dissolved	739	10	mg/l	1	07/24/23 08:00	JW	SM 2540C-2011
Specific Conductivity	1320	1.0	umhos/cm	1	07/24/23 12:00	JW	SM 2510B-2011
pH <sup>c</sup>	8.66		su	1	07/24/23 12:00	JW	SM4500HB+ -2011/9040C

### Field Parameters

Oxygen, Dissolved (Field)	0.05		mg/l	1	07/20/23 09:59	SUB	FIELD
Redox Potential Vs H2	-185		mv	1	07/20/23 09:59	SUB	FIELD
Specific Conductivity (Field)	1280.9	0.50	umhos/cm	1	07/20/23 09:59	SUB	FIELD
Temperature (Field)	17.88		Deg. C	1	07/20/23 09:59	SUB	FIELD
Turbidity	0.02		NTU	1	07/20/23 09:59	SUB	FIELD
pH (Field)	8.57		su	1	07/20/23 09:59	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

4.1  
4

## Report of Analysis

<b>Client Sample ID:</b> BW_GILDEA_264754 SESE_8_2N_66W	<b>Date Sampled:</b> 07/20/23
<b>Lab Sample ID:</b> DA57140-1A	<b>Date Received:</b> 07/21/23
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Method:</b> RSK175 MOD	
<b>Project:</b> GWA_Land_Fed_10_29HZ	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FK4068.D	1	07/26/23 13:56	MB	n/a	n/a	GFK294
Run #2	FK4069.D	50	07/26/23 14:08	MB	n/a	n/a	GFK294

Run #	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	39.0 ml	4.0 ml	500 ul	21.1 Deg. C
Run #2	39.0 ml	4.0 ml	500 ul	21.1 Deg. C

**Methane, Ethane and Propane**

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	9.72 <sup>a</sup>	0.040	0.035	mg/l	
74-84-0	Ethane	0.0257	0.0016	0.0010	mg/l	
74-98-6	Propane	ND	0.0022	0.0017	mg/l	

(a) Result is from Run# 2

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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

4.2  
4

## Report of Analysis

<b>Client Sample ID:</b> BW_GILDEA_264754 SESE_8_2N_66W	<b>Date Sampled:</b> 07/20/23
<b>Lab Sample ID:</b> DA57140-1B	<b>Date Received:</b> 07/21/23
<b>Matrix:</b> AQ - Ground Water	<b>Percent Solids:</b> n/a
<b>Project:</b> GWA_Land_Fed_10_29HZ	

### General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Iron-Related Bacteria	150	25	CFU/ml	1	08/02/23 08:00	CS	HACH IRB-BART
Slime Forming Bacteria	500	500	CFU/ml	1	08/02/23 08:00	CS	HACH SLYM-BART
Sulfate Reducing Bacteria	< 200	200	CFU/ml	1	08/02/23 08:00	CS	HACH SRB-BART

RL = Reporting Limit

4.3  
4

## Report of Analysis

<b>Client Sample ID:</b> BW_GILDEA_264754 SESE_8_2N_66W <b>Lab Sample ID:</b> DA57140-1F <b>Matrix:</b> AQ - Groundwater Filtered <b>Project:</b> GWA_Land_Fed_10_29HZ	<b>Date Sampled:</b> 07/20/23 <b>Date Received:</b> 07/21/23 <b>Percent Solids:</b> n/a
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### Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Barium	0.0598	0.0020	mg/l	1	07/25/23	07/28/23 DU	EPA 200.8 <sup>1</sup>	EPA 200.8 <sup>2</sup>
Boron	0.293	0.040	mg/l	1	07/25/23	07/28/23 DU	EPA 200.8 <sup>1</sup>	EPA 200.8 <sup>2</sup>
Calcium	2.10	0.40	mg/l	1	07/25/23	07/28/23 DU	EPA 200.8 <sup>1</sup>	EPA 200.8 <sup>2</sup>
Iron	0.0206	0.020	mg/l	1	07/25/23	07/28/23 DU	EPA 200.8 <sup>1</sup>	EPA 200.8 <sup>2</sup>
Magnesium	0.506	0.10	mg/l	1	07/25/23	07/28/23 DU	EPA 200.8 <sup>1</sup>	EPA 200.8 <sup>2</sup>
Manganese	0.0065	0.0010	mg/l	1	07/25/23	07/28/23 DU	EPA 200.8 <sup>1</sup>	EPA 200.8 <sup>2</sup>
Potassium	1.32	0.20	mg/l	1	07/25/23	07/28/23 DU	EPA 200.8 <sup>1</sup>	EPA 200.8 <sup>2</sup>
Selenium	< 0.00040	0.00040	mg/l	1	07/25/23	07/28/23 DU	EPA 200.8 <sup>1</sup>	EPA 200.8 <sup>2</sup>
Sodium	300	5.0	mg/l	10	07/25/23	07/28/23 DU	EPA 200.8 <sup>1</sup>	EPA 200.8 <sup>2</sup>
Strontium	0.0860	0.020	mg/l	1	07/25/23	07/28/23 DU	EPA 200.8 <sup>1</sup>	EPA 200.8 <sup>2</sup>

(1) Instrument QC Batch: MA16854

(2) Prep QC Batch: MP37785

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RL = Reporting Limit

4.4  
4

**Misc. Forms**

**Custody Documents and Other Forms**

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**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.accuratest.com

Form containing client/reporting information, project information, requested analysis (see TEST CODE sheet), matrix codes, and sample custody tracking details.

Table with columns for Field ID / Point of Collection, Date, Time, Matrix, # of bottles, and various chemical analysis parameters (e.g., pH, Conductivity, Turbidity).

Turnaround Time (Business days) and Data Deliverable Information section with checkboxes for reporting options and delivery preferences.

Sample Custody tracking table with columns for Relinquished by, Date/Time, Received By, and Date/Time for multiple samples.

5.1
5



## SGS Sample Receipt Summary

Job Number: DA57140

Client: ABSAROKA

Project: GWA

Date / Time Received: 7/21/2023 10:45:00 AM

Delivery Method: CO

Airbill #s: \_\_\_\_\_

Cooler Temps (Initial/Adjusted): #1: (2.9/2.9):

**Cooler Security**

Y or N

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

- Y or N
3. COC Present:
4. Smpl Dates/Time OK:

**Cooler Temperature**

Y or N

1. Temp criteria achieved:
2. Thermometer ID: 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:

5.1  
5

DA57140: Chain of Custody

Page 2 of 3

## Problem Resolution

Page 2 of 2

Job Number: DA57140

CSR: \_\_\_\_\_

Response Date: \_\_\_\_\_

Response:

5.1  
5

DA57140: Chain of Custody  
Page 3 of 3

## MS Volatiles

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## QC Data Summaries

---

**Includes the following where applicable:**

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

# Method Blank Summary

Job Number: DA57140  
 Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP  
 Project: GWA\_Land\_Fed\_10\_29HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V3744-MB	5V75946.D	1	07/27/23	MB	n/a	n/a	V5V3744

The QC reported here applies to the following samples:

Method: SW846 8260B

DA57140-1

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	106% 70-130%
17060-07-0	1,2-Dichloroethane-D4	103% 70-130%
2037-26-5	Toluene-D8	102% 70-130%
460-00-4	4-Bromofluorobenzene	108% 70-130%

6.1.1  
6

# Blank Spike/Blank Spike Duplicate Summary

Job Number: DA57140  
 Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP  
 Project: GWA\_Land\_Fed\_10\_29HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V3744-BS	5V75943.D	1	07/27/23	MB	n/a	n/a	V5V3744
V5V3744-BSD	5V75944.D	1	07/27/23	MB	n/a	n/a	V5V3744

The QC reported here applies to the following samples:

Method: SW846 8260B

DA57140-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	50	55.2	110	55.1	110	0	70-130/30
100-41-4	Ethylbenzene	50	54.1	108	54.5	109	1	70-130/30
108-88-3	Toluene	50	53.8	108	53.9	108	0	70-130/30
	m,p-Xylene	100	109	109	110	110	1	70-130/30
95-47-6	o-Xylene	50	54.3	109	53.6	107	1	70-130/30
1330-20-7	Xylene (total)	150	164	109	164	109	0	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	104%	99%	70-130%
17060-07-0	1,2-Dichloroethane-D4	101%	99%	70-130%
2037-26-5	Toluene-D8	99%	98%	70-130%
460-00-4	4-Bromofluorobenzene	101%	100%	70-130%

\* = Outside of Control Limits.

## GC Volatiles

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## 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:** DA57140  
**Account:** ANADACOD Kerr-McGee Oil & Gas Onshore LP  
**Project:** GWA\_Land\_Fed\_10\_29HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGA2757-MB	GA61815.D	1	07/24/23	MB	n/a	n/a	GGA2757

The QC reported here applies to the following samples:

Method: SW846 8015D

DA57140-1

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	103% 60-140%

7.1.1  
7

# Method Blank Summary

Job Number: DA57140  
Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP  
Project: GWA\_Land\_Fed\_10\_29HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFK294-MB	FK4062.D	1	07/26/23	MB	n/a	n/a	GFK294

The QC reported here applies to the following samples:

Method: RSK175 MOD

DA57140-1A

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	

7.1.2

7

# Blank Spike/Blank Spike Duplicate Summary

Job Number: DA57140  
 Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP  
 Project: GWA\_Land\_Fed\_10\_29HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGA2757-BS	GA61812.D	1	07/24/23	MB	n/a	n/a	GGA2757
GGA2757-BSD	GA61813.D	1	07/24/23	MB	n/a	n/a	GGA2757

The QC reported here applies to the following samples:

Method: SW846 8015D

DA57140-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	2.2	1.48	67	1.46	66	1	64-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
120-82-1	1,2,4-Trichlorobenzene	109%	109%	60-140%

\* = Outside of Control Limits.

7.2.1  
7

# Blank Spike/Blank Spike Duplicate Summary

Job Number: DA57140  
 Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP  
 Project: GWA\_Land\_Fed\_10\_29HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFK294-BS	FK4063.D	10	07/26/23	MB	n/a	n/a	GFK294
GFK294-BSD	FK4064.D	10	07/26/23	MB	n/a	n/a	GFK294

The QC reported here applies to the following samples:

Method: RSK175 MOD

DA57140-1A

CAS No.	Compound	Spike	BSP	BSP	BSD	BSD	RPD	Limits
		mg/l	mg/l	%	mg/l	%		Rec/RPD
74-82-8	Methane	0.512	0.609	119	0.609	119	0	70-135/30
74-84-0	Ethane	0.923	1.20	130	1.20	130	0	70-147/30
74-98-6	Propane	1.38	1.71	124	1.72	125	1	70-140/30

7.2.2  
7

\* = Outside of Control Limits.

## GC/LC Semi-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:** DA57140  
**Account:** ANADACOD Kerr-McGee Oil & Gas Onshore LP  
**Project:** GWA\_Land\_Fed\_10\_29HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24024-MB	LW13842.D	1	07/26/23	JB	07/22/23	OP24024	GLW497

The QC reported here applies to the following samples:

Method: SW846-8015D

DA57140-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.20	0.19	mg/l	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	107% 10-131%

8.1.1  
8

# Blank Spike Summary

Job Number: DA57140  
 Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP  
 Project: GWA\_Land\_Fed\_10\_29HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24024-BS	LW13845.D	1	07/26/23	JB	07/22/23	OP24024	GLW497

The QC reported here applies to the following samples:

Method: SW846-8015D

DA57140-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	TPH-DRO (C10-C28)	5	4.32	86	20-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	113%	10-131%

8.2.1

8

\* = Outside of Control Limits.

# Blank Spike Summary

Job Number: DA57140  
 Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP  
 Project: GWA\_Land\_Fed\_10\_29HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24024-BS	LW13848.D	1	07/26/23	JB	07/22/23	OP24024	GLW497

The QC reported here applies to the following samples:

Method: SW846-8015D

DA57140-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
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CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	117%	10-131%

8.2.2  
8

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA57140  
 Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP  
 Project: GWA\_Land\_Fed\_10\_29HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24024-MS	LW13846.D	1	07/26/23	JB	07/22/23	OP24024	GLW497
OP24024-MSD	LW13847.D	1	07/26/23	JB	07/22/23	OP24024	GLW497
DA56895-22	LW13851.D	1	07/26/23	JB	07/22/23	OP24024	GLW497

The QC reported here applies to the following samples:

Method: SW846-8015D

DA57140-1

CAS No.	Compound	DA56895-22 Spike mg/l	Q	Spike mg/l	MS mg/l	MS %	Spike mg/l	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	ND	5	5.22	104	5	4.18	84	22	20-130/30	

CAS No.	Surrogate Recoveries	MS	MSD	DA56895-22 Limits
84-15-1	o-Terphenyl	143%*	106%	108% 10-131%

8.3.1  
8

\* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA57140  
 Account: ANADACOD Kerr-McGee Oil & Gas Onshore LP  
 Project: GWA\_Land\_Fed\_10\_29HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP24024-MS	LW13849.D	1	07/26/23	JB	07/22/23	OP24024	GLW497
OP24024-MSD	LW13850.D	1	07/26/23	JB	07/22/23	OP24024	GLW497
DA56895-22	LW13851.D	1	07/26/23	JB	07/22/23	OP24024	GLW497

The QC reported here applies to the following samples:

Method: SW846-8015D

DA57140-1

CAS No.	Compound	DA56895-22 Spike mg/l	MS 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	DA56895-22 Limits
84-15-1	o-Terphenyl	101%	121%	108% 10-131%

8.3.2  
8

\* = Outside of Control Limits.

## Metals Analysis

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### QC Data Summaries

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**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: DA57140  
Account: ANADACOD - Kerr-McGee Oil & Gas Onshore LP  
Project: GWA\_Land\_Fed\_10\_29HZ

QC Batch ID: MP37785  
Matrix Type: AQUEOUS

Methods: EPA 200.8  
Units: ug/l

Prep Date: 07/25/23

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	0.018	<2.0
Beryllium	0.20	.077	.1		
Boron	40	18	20	2.5	<40
Cadmium	0.10	.03	.04		
Calcium	400	25	100	3.1	<400
Chromium	2.0	.087	.25		
Cobalt	0.20	.04	.05		
Copper	2.0	.05	.81		
Iron	20	1.6	10	1.6	<20
Lead	0.50	.094	.13		
Magnesium	100	10	25	6.8	<100
Manganese	1.0	.079	.51	0.11	<1.0
Molybdenum	1.0	.037	.27		
Nickel	2.0	.098	.35		
Phosphorus	60	7.6	25		
Potassium	200	2	50	-16	<200
Selenium	0.40	.05	.1	0.0080	<0.40
Silver	0.10	.0081	.025		
Sodium	500	10	130	35.9	<500
Strontium	20	.1	5	0.030	<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 MP37785: DA57140-1F

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

9.1.1  
9

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA57140  
 Account: ANADACOD - Kerr-McGee Oil & Gas Onshore LP  
 Project: GWA\_Land\_Fed\_10\_29HZ

QC Batch ID: MP37785  
 Matrix Type: AQUEOUS

Methods: EPA 200.8  
 Units: ug/l

Prep Date: 07/25/23

Metal	DA57139-1F Original MS		SpikeLot ICPMS5	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	48.5	428	400	94.9	70-130
Beryllium					
Boron	182	604	400	105.5	70-130
Cadmium	anr				
Calcium	53200	58000	5000	96.0	70-130
Chromium	anr				
Cobalt					
Copper	anr				
Iron	36.6	1040	1000	100.3	70-130
Lead	anr				
Magnesium	10400	14900	5000	90.0	70-130
Manganese	147	337	200	95.0	70-130
Molybdenum	anr				
Nickel	anr				
Phosphorus					
Potassium	11300	15000	5000	74.0	70-130
Selenium	0.36	206	200	102.8	70-130
Silver	anr				
Sodium	43400	46900	5000	70.0	70-130
Strontium	364	474	100	110.0	70-130
Thallium					
Tin					
Titanium					
Uranium	anr				
Vanadium					
Zinc	anr				

Associated samples MP37785: DA57140-1F

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

9.1.2  
 9

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA57140  
 Account: ANADACOD - Kerr-McGee Oil & Gas Onshore LP  
 Project: GWA\_Land\_Fed\_10\_29HZ

QC Batch ID: MP37785  
 Matrix Type: AQUEOUS

Methods: EPA 200.8  
 Units: ug/l

Prep Date: 07/25/23

Metal	DA57139-1F Original MSD		SpikeLot ICPMS5	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	anr					
Barium	48.5	433	400	96.1	1.2	20
Beryllium						
Boron	182	605	400	105.8	0.2	20
Cadmium	anr					
Calcium	53200	55500	5000	46.0 (a)	2.0	20
Chromium	anr					
Cobalt						
Copper	anr					
Iron	36.6	1050	1000	101.3	1.0	20
Lead	anr					
Magnesium	10400	14700	5000	86.0	1.4	20
Manganese	147	342	200	97.5	1.5	20
Molybdenum	anr					
Nickel	anr					
Phosphorus						
Potassium	11300	14800	5000	70.0	1.3	20
Selenium	0.36	207	200	103.3	0.5	20
Silver	anr					
Sodium	43400	46900	5000	70.0	0.4	20
Strontium	364	460	100	96.0	3.0	20
Thallium						
Tin						
Titanium						
Uranium	anr					
Vanadium						
Zinc	anr					

Associated samples MP37785: DA57140-1F

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: DA57140  
 Account: ANADACOD - Kerr-McGee Oil & Gas Onshore LP  
 Project: GWA\_Land\_Fed\_10\_29HZ

QC Batch ID: MP37785  
 Matrix Type: AQUEOUS

Methods: EPA 200.8  
 Units: ug/l

Prep Date: 07/25/23

Metal	BSP Result	SpikeLot ICPMS5	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	392	400	98.0	85-115
Beryllium				
Boron	425	400	106.3	85-115
Cadmium	anr			
Calcium	4840	5000	96.8	85-115
Chromium	anr			
Cobalt				
Copper	anr			
Iron	989	1000	98.9	85-115
Lead	anr			
Magnesium	5300	5000	106.0	85-115
Manganese	202	200	101.0	85-115
Molybdenum	anr			
Nickel	anr			
Phosphorus				
Potassium	4730	5000	94.6	85-115
Selenium	204	200	102.0	85-115
Silver	anr			
Sodium	5080	5000	101.6	85-115
Strontium	104	100	104.0	85-115
Thallium				
Tin				
Titanium				
Uranium	anr			
Vanadium				
Zinc	anr			

Associated samples MP37785: DA57140-1F

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

9.1.3  
 9

## General Chemistry

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### QC Data Summaries

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**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: DA57140  
Account: ANADACOD - Kerr-McGee Oil & Gas Onshore LP  
Project: GWA\_Land\_Fed\_10\_29HZ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Bicarbonate as CaC	GN60811	5.0	0.0	mg/l	100	103	102.5	90-110%
Alkalinity, Carbonate	GN60812	5.0	0.0	mg/l	100	103	102.5	90-110%
Alkalinity, Total as CaCO3	GN60810	5.0	0.0	mg/l	100	103	102.5	90-110%
Chloride	GP34716/GN60790	0.50	0.0	mg/l	5	5.24	104.8	90-110%
Iron-Related Bacteria	MB1678	25	<25	CFU/ml				
Nitrogen, Nitrate	GP34716/GN60790	0.010	0.0	mg/l	0.1	0.109	109.0	90-110%
Nitrogen, Nitrite	GP34716/GN60790	0.0040	0.0	mg/l	0.05	0.0626	125.2*(a)	90-110%
Phosphorus, Total	GP34740/GN60822	0.010	0.0	mg/l	0.2	0.202	101.0	90-110%
Slime Forming Bacteria	MB1679	500	<500	CFU/ml				
Solids, Total Dissolved	GN60806	10	0.0	mg/l	250	239	95.6	90-110%
Specific Conductivity	GP34719/GN60793			umhos/cm	10000	1040	103.8	90-110%
Sulfate	GP34716/GN60790	0.50	0.0	mg/l	5	5.37	107.4	90-110%
Sulfate Reducing Bacteria	MB1680	200	<200	CFU/ml				

Associated Samples:

Batch MB1678: DA57140-1B  
Batch MB1679: DA57140-1B  
Batch MB1680: DA57140-1B  
Batch GN60806: DA57140-1  
Batch GN60810: DA57140-1  
Batch GN60811: DA57140-1  
Batch GN60812: DA57140-1  
Batch GP34716: DA57140-1  
Batch GP34719: DA57140-1  
Batch GP34740: DA57140-1

(\*) Outside of QC limits

(a) All samples reported with this BS are nondetect for Nitrite

10.1  
10

DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: DA57140  
Account: ANADACOD - Kerr-McGee Oil & Gas Onshore LP  
Project: GWA\_Land\_Fed\_10\_29HZ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO3	GN60810	DA57140-1	mg/l	550	555	0.9	0-20%
Iron-Related Bacteria	MB1678	DA57141-1B	CFU/ml	35000	35000	0.0	0-%
Phosphorus, Total	GP34740/GN60822	DA57104-2	mg/l	0.24	0.24	0.0	0-20%
Slime Forming Bacteria	MB1679	DA57141-1B	CFU/ml	<500	500	0.0	0-%
Solids, Total Dissolved	GN60806	DA57141-1	mg/l	763	771	1.0	0-5.44%
Specific Conductivity	GP34719/GN60793	DA57141-1	umhos/cm	1370	1370	0.4	0-20%
Sulfate Reducing Bacteria	MB1680	DA57141-1B	CFU/ml	<200	<200	0.0	0-%

Associated Samples:

Batch MB1678: DA57140-1B  
Batch MB1679: DA57140-1B  
Batch MB1680: DA57140-1B  
Batch GN60806: DA57140-1  
Batch GN60810: DA57140-1  
Batch GP34719: DA57140-1  
Batch GP34740: DA57140-1  
(\* ) Outside of QC limits

10.2  
10

MATRIX SPIKE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: DA57140  
Account: ANADACOD - Kerr-McGee Oil & Gas Onshore LP  
Project: GWA\_Land\_Fed\_10\_29HZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Alkalinity, Total as CaCO3	GN60810	DA57140-1	mg/l	550	100	655	105.0	80-120%
Chloride	GP34716/GN60790	DA57112-6	mg/l	115	125	260	116.0	80-120%
Nitrogen, Nitrate	GP34716/GN60790	DA57112-6	mg/l	3.8	2.5	6.5	108.0	80-120%
Nitrogen, Nitrite	GP34716/GN60790	DA57112-6	mg/l	0.20	1.25	1.6	112.0	80-120%
Phosphorus, Total	GP34740/GN60822	DA57104-2	mg/l	0.24	0.2	0.43	95.0	90-110%
Sulfate	GP34716/GN60790	DA57112-6	mg/l	139	125	276	109.6	80-120%

Associated Samples:

Batch GN60810: DA57140-1

Batch GP34716: DA57140-1

Batch GP34740: DA57140-1

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

10.3  
10

MATRIX SPIKE DUPLICATE RESULTS SUMMARY  
GENERAL CHEMISTRY

Login Number: DA57140  
Account: ANADACOD - Kerr-McGee Oil & Gas Onshore LP  
Project: GWA\_Land\_Fed\_10\_29HZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Alkalinity, Total as CaCO3	GN60810	DA57140-1	mg/l	550	100	660	0.8	20%
Chloride	GP34716/GN60790	DA57112-6	mg/l	115	125	256	1.6	20%
Nitrogen, Nitrate	GP34716/GN60790	DA57112-6	mg/l	3.8	2.5	6.5	0.0	20%
Nitrogen, Nitrite	GP34716/GN60790	DA57112-6	mg/l	0.20	1.25	1.5	6.5	20%
Phosphorus, Total	GP34740/GN60822	DA57104-2	mg/l	0.24	0.2	0.44	2.3	20%
Sulfate	GP34716/GN60790	DA57112-6	mg/l	139	125	272	1.5	20%

Associated Samples:

Batch GN60810: DA57140-1

Batch GP34716: DA57140-1

Batch GP34740: DA57140-1

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

10.4  
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