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Automated Report

Technical Report for

Occidental Petroleum Corporation

Kerr-McGee: GWA_Rademacher_14_30HZ

FID:761579 Reg:Vol. Freq.:IN

SGS Job Number: DA63362

Sampling Date: 04/01/24

Report to:

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Total number of pages in report: 47

NELAP ACCREDITED TNI LABORATORY

Eric Hoffman

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.

Client Service contact: Parna Payandeh 303-425-6021
Certifications: CO (CO00049), ND (R-027), UT (NELAP CO00049), LA (LA150028), TX (T104704511), WY (8TMS-L) HI (CO00049), NJ (CO011), NV (CO00049), AK (CO00049), CA (3076), and NC (08701)

Sections: 1 2 3 4 5 6 7 8 9 10 11

Table of Contents

Sample Summary

Occidental Petroleum Corporation

Job No: DA63362

Kerr-McGee: GWA_Rademacher_14_30HZ
Project No: FID:761579 Reg:Vol. Freq.:IN

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
This report contains results reported as ND = Not detected. The following applies: Organics ND = Not detected above the MDL							
DA63362-1	04/01/24	11:00	EF	04/02/24	AQ	Ground Water	BW_DOBINSKY_107099 NWSE_18_2N_67W
DA63362-1A	04/01/24	11:00	EF	04/02/24	AQ	Ground Water	BW_DOBINSKY_107099 NWSE_18_2N_67W
DA63362-1B	04/01/24	11:00	EF	04/02/24	AQ	Ground Water	BW_DOBINSKY_107099 NWSE_18_2N_67W
DA63362-1F	04/01/24	11:00	EF	04/02/24	AQ	Groundwater Filtered	BW_DOBINSKY_107099 NWSE_18_2N_67W

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: Occidental Petroleum Corporation **Job No:** DA63362

Site: Kerr-McGee: GWA_Rademacher_14_30HZ **Report Date** 4/16/2024 2:31:04 AM

On 04/02/2024, 1 sample(s), 0 Trip Blank(s), 0 Equip. Blanks and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 2.5 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of DA63362 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:** V6V2382

- All samples were analyzed within the recommended method holding time.
- Sample(s) DA62756-31MS, DA62756-31MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

GC Volatiles By Method RSK175 MOD

Matrix: AQ **Batch ID:** GFK346

- All samples were analyzed within the recommended method holding time.
- Sample(s) DA63362-1AMS, DA63362-1AMSD 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:** GGA2859

- All samples were analyzed within the recommended method holding time.
- Sample(s) DA62756-32MS, DA62756-32MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

GC/LC Semi-volatiles By Method SW846 8015D

Matrix: AQ **Batch ID:** N:OP53612

- The data for SW846 8015D meets quality control requirements.
- DA63362-1: Analysis performed at SGS Dayton, NJ.

Metals Analysis By Method EPA 200.8

Matrix: AQ **Batch ID:** MP39138

- 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) DA63303-1FMS, DA63303-1FMSD were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Sodium, Strontium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

General Chemistry By Method EPA 300.0

Matrix:	AQ	Batch ID:	GP36296

- 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) DA63324-1MS, DA63324-1MSD were used as the QC samples for the Bromide, Chloride, Fluoride, Nitrogen, Nitrate, Nitrogen, Nitrite, Sulfate, Bromide analysis.
- DA63362-1 for Nitrogen, Nitrite: Elevated detection limit due to matrix interference.
- DA63362-1 for Nitrogen, Nitrate: Elevated detection limit due to matrix interference.

Matrix:	AQ	Batch ID:	R63049

- The data for EPA 300.0 meets quality control requirements.
- DA63362-1 for Nitrogen, Nitrate + Nitrite: Calculated as: (Nitrogen, Nitrate) + (Nitrogen, Nitrite)

General Chemistry By Method EPA 365.1

Matrix:	AQ	Batch ID:	GP36339

- 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) DA63482-2DUP, DA63482-2MS, DA63482-2MSD were used as the QC samples for the Phosphorus, Total analysis.

General Chemistry By Method HACH IRB-BART-NOCERT

Matrix:	AQ	Batch ID:	MB1746

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA62884-1BDUP were used as the QC samples for the Iron-Related Bacteria analysis.
- DA63362-1B for Iron-Related Bacteria: Certification for this test is not offered.

General Chemistry By Method HC SLYM-BART-NO CERT

Matrix:	AQ	Batch ID:	MB1745

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA62884-1BDUP were used as the QC samples for the Slime Forming Bacteria analysis.
- DA63362-1B for Slime Forming Bacteria: Certification for this test is not offered.

General Chemistry By Method HC SRB-BART-NO CERT

Matrix:	AQ	Batch ID:	MB1747

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA62884-1BDUP were used as the QC samples for the Sulfate Reducing Bacteria analysis.
- DA63362-1B for Sulfate Reducing Bacteria: Certification for this test is not offered.

General Chemistry By Method SM 2320B-2011

Matrix:	AQ	Batch ID:	GN63044

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA63290-1DUP, DA63290-1MS, DA63290-1MSD were used as the QC samples for the Alkalinity, Total as CaCO3 analysis.

Matrix:	AQ	Batch ID:	GN63045

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

Matrix:	AQ	Batch ID:	GN63046

- 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:	GP36303

- Sample(s) DA63363-1DUP were used as the QC samples for the Specific Conductivity analysis.

General Chemistry By Method SM 2540C-2011

Matrix:	AQ	Batch ID:	GN63018

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) DA63429-2DUP were used as the QC samples for the Solids, Total Dissolved analysis.

General Chemistry By Method SM1030E-2011

Matrix:	AQ	Batch ID:	GN63110

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

General Chemistry By Method SM4500HB+-2011/9040C

Matrix:	AQ	Batch ID:	GN63067

- The data for SM4500HB+-2011/9040C meets quality control requirements.
- The following samples were run outside of holding time for method SM4500HB+-2011/9040C: DA63362-1 Analysis performed past recommended hold time.

Field Data By Method FIELD

Matrix:	AQ	Batch ID:	R62980

- 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.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	SGS Wheat Ridge, CO	**Job No:**	DA63362
Site:	ANADACOD: Kerr-McGee: GWA_Rademacher_14_30HZ	**Report Date**	4/8/2024 10:34:09 AM

On 04/02/2024, 1 sample(s), 0 Trip Blank(s), 0 Equip. Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 2.4 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of DA63362 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.

GC/LC Semi-volatiles By Method SW846 8015D

Matrix: AQ **Batch ID:** OP53612

- All samples were extracted 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) DA63362-1MS, DA63362-1MSD were used as the QC samples indicated.

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: DA63362
Account: Occidental Petroleum Corporation
Project: Kerr-McGee: GWA_Rademacher_14_30HZ
Collected: 04/01/24

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
DA63362-1	**BW_DOBINSKY_107099 NWSE_18_2N_67W**					
Fluoride		1.5	0.20		mg/l	EPA 300.0
Chloride		21.9	1.0		mg/l	EPA 300.0
Bromide		0.12	0.10		mg/l	EPA 300.0
Sulfate		404	13		mg/l	EPA 300.0
Alkalinity, Bicarbonate as CaCO3		410	5.0		mg/l	SM 2320B-2011
Alkalinity, Total as CaCO3		410	5.0		mg/l	SM 2320B-2011
Cation Anion Balance		11.9			%	SM1030E-2011
Phosphorus, Total		0.098	0.010		mg/l	EPA 365.1
Solids, Total Dissolved		769	10		mg/l	SM 2540C-2011
Specific Conductivity		1320	1.0		umhos/cm	SM 2510B-2011
pH [a]		6.85			su	SM4500HB + -2011/9040C
Specific Conductivity (Field)		1170.5	0.50		umhos/cm	FIELD
pH (Field)		6.5			su	FIELD
Temperature (Field)		10.39			Deg. C	FIELD
Oxygen, Dissolved (Field)		0.25			mg/l	FIELD
Redox Potential Vs H2		55.5			mv	FIELD
Turbidity		31.2			NTU	FIELD
DA63362-1A	**BW_DOBINSKY_107099 NWSE_18_2N_67W**					
Methane		0.0104	0.00080	0.00070	mg/l	RSK175 MOD
DA63362-1B	**BW_DOBINSKY_107099 NWSE_18_2N_67W**					
Iron-Related Bacteria [b]		35000	25		CFU/ml	HACH IRB-BART-NOCERT
Slime Forming Bacteria [b]		67000	500		CFU/ml	HC SLYM-BART-NO CERT
Sulfate Reducing Bacteria [b]		27000	200		CFU/ml	HC SRB-BART-NO CERT
DA63362-1F	**BW_DOBINSKY_107099 NWSE_18_2N_67W**					
Barium		0.0111	0.0020		mg/l	EPA 200.8
Boron		0.270	0.040		mg/l	EPA 200.8
Calcium		46.9	0.80		mg/l	EPA 200.8
Magnesium		44.2	0.10		mg/l	EPA 200.8
Manganese		0.284	0.0010		mg/l	EPA 200.8
Potassium		3.12	0.20		mg/l	EPA 200.8
Sodium		174	2.5		mg/l	EPA 200.8
Strontium		0.725	0.020		mg/l	EPA 200.8

(a) Analysis performed past recommended hold time.
(b) Certification for this test is not offered.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	BW_DOBINSKY_107099 NWSE_18_2N_67W		
Lab Sample ID:	DA63362-1	**Date Sampled:**	04/01/24
Matrix:	AQ - Ground Water	**Date Received:**	04/02/24
Method:	SW846 8260B	**Percent Solids:**	n/a
Project:	Kerr-McGee: GWA_Rademacher_14_30HZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6V47251.D	1	04/03/24 16:40	MB	n/a	n/a	V6V2382
Run #2							

	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	103%		70-130%
17060-07-0	1,2-Dichloroethane-D4	105%		70-130%
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	100%		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

Client Sample ID:	BW_DOBINSKY_107099 NWSE_18_2N_67W		
Lab Sample ID:	DA63362-1	**Date Sampled:**	04/01/24
Matrix:	AQ - Ground Water	**Date Received:**	04/02/24
Method:	SW846 8015D	**Percent Solids:**	n/a
Project:	Kerr-McGee: GWA_Rademacher_14_30HZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GA64664.D	1	04/03/24 20:52	JC	n/a	n/a	GGA2859
Run #2							

	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	111%		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

Report of Analysis

Client Sample ID:	BW_DOBINSKY_107099 NWSE_18_2N_67W		
Lab Sample ID:	DA63362-1	**Date Sampled:**	04/01/24
Matrix:	AQ - Ground Water	**Date Received:**	04/02/24
Method:	SW846 8015D SW846 3511	**Percent Solids:**	n/a
Project:	Kerr-McGee: GWA_Rademacher_14_30HZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	0Z10198.D	1	04/07/24 18:29	ANJ	04/07/24 11:00	N:OP53612	N:G0Z283
Run #2							

	Initial Volume	Final Volume
Run #1	50.1 ml	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.080	0.038	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	89%		70-130%
438-22-2	5a-Androstane	83%		70-130%

(a) Analysis performed at SGS Dayton, NJ.

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

Client Sample ID:	BW_DOBINSKY_107099 NWSE_18_2N_67W		
Lab Sample ID:	DA63362-1	**Date Sampled:**	04/01/24
Matrix:	AQ - Ground Water	**Date Received:**	04/02/24
		Percent Solids:	n/a
Project:	Kerr-McGee: GWA_Rademacher_14_30HZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
300.0							
Fluoride	1.5	0.20	mg/l	2	04/02/24 16:06	CS	EPA 300.0
Chloride	21.9	1.0	mg/l	2	04/02/24 16:06	CS	EPA 300.0
Nitrogen, Nitrite [a]	< 0.0080	0.0080	mg/l	2	04/02/24 16:06	CS	EPA 300.0
Bromide	0.12	0.10	mg/l	2	04/02/24 16:06	CS	EPA 300.0
Nitrogen, Nitrate [a]	< 0.020	0.020	mg/l	2	04/02/24 16:06	CS	EPA 300.0
Sulfate	404	13	mg/l	25	04/02/24 20:55	CS	EPA 300.0
300.0 NO2 + NO3O							
Nitrogen, Nitrate + Nitrite [b]	< 0.028	0.028	mg/l	1	04/02/24 16:06	CS	EPA 300.0
Alkalinity, Bicarbonate as CaC	410	5.0	mg/l	1	04/05/24 10:00	JW	SM 2320B-2011
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	04/05/24 10:00	JW	SM 2320B-2011
Alkalinity, Total as CaCO3	410	5.0	mg/l	1	04/05/24 10:00	JW	SM 2320B-2011
Cation Anion Balance	11.9		%	1	04/12/24	MB	SM1030E-2011
Phosphorus, Total	0.098	0.010	mg/l	1	04/05/24 16:53	KH	EPA 365.1
Solids, Total Dissolved	769	10	mg/l	1	04/04/24 07:00	JW	SM 2540C-2011
Specific Conductivity	1320	1.0	umhos/cm	1	04/03/24 12:00	JW	SM 2510B-2011
pH [c]	6.85		su	1	04/09/24 10:00	JW	SM4500HB+-2011/9040C
Field Parameters							
Oxygen, Dissolved (Field)	0.25		mg/l	1	04/01/24 11:00	SUB	FIELD
Redox Potential Vs H2	55.5		mv	1	04/01/24 11:00	SUB	FIELD
Specific Conductivity (Field)	1170.5	0.50	umhos/cm	1	04/01/24 11:00	SUB	FIELD
Temperature (Field)	10.39		Deg. C	1	04/01/24 11:00	SUB	FIELD
Turbidity	31.2		NTU	1	04/01/24 11:00	SUB	FIELD
pH (Field)	6.5		su	1	04/01/24 11:00	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_DOBINSKY_107099 NWSE_18_2N_67W		
Lab Sample ID:	DA63362-1A	**Date Sampled:**	04/01/24
Matrix:	AQ - Ground Water	**Date Received:**	04/02/24
Method:	RSK175 MOD	**Percent Solids:**	n/a
Project:	Kerr-McGee: GWA_Rademacher_14_30HZ		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FK4725.D	1	04/05/24 14:02	JC	n/a	n/a	GFK346
Run #2							

	Initial Volume	Headspace Volume	Volume Injected	Temperature
Run #1	39.0 ml	4.0 ml	500 ul	22.7 Deg. C
Run #2				

Methane, Ethane and Propane

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.0104	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	

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

Client Sample ID:	BW_DOBINSKY_107099 NWSE_18_2N_67W		
Lab Sample ID:	DA63362-1B	**Date Sampled:**	04/01/24
Matrix:	AQ - Ground Water	**Date Received:**	04/02/24
		Percent Solids:	n/a
Project:	Kerr-McGee: GWA_Rademacher_14_30HZ		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Not certifiable							
Iron-Related Bacteria [a]	35000	25	CFU/ml	1	04/03/24 08:00	CS	HACH IRB-BART-NOCERT
Slime Forming Bacteria [a]	67000	500	CFU/ml	1	04/03/24 08:00	CS	HC SLYM-BART-NO CERT
Sulfate Reducing Bacteria [a]	27000	200	CFU/ml	1	04/03/24 08:00	CS	HC SRB-BART-NO CERT

(a) Certification for this test is not offered.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	BW_DOBINSKY_107099 NWSE_18_2N_67W		
Lab Sample ID:	DA63362-1F	**Date Sampled:**	04/01/24
Matrix:	AQ - Groundwater Filtered	**Date Received:**	04/02/24
		Percent Solids:	n/a
Project:	Kerr-McGee: GWA_Rademacher_14_30HZ		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Barium	0.0111	0.0020	mg/l	1	04/04/24	04/09/24	DU	EPA 200.8 [1]	EPA 200.8 [3]
Boron	0.270	0.040	mg/l	1	04/04/24	04/09/24	DU	EPA 200.8 [1]	EPA 200.8 [3]
Calcium	46.9	0.80	mg/l	2	04/04/24	04/10/24	DU	EPA 200.8 [2]	EPA 200.8 [3]
Iron	< 0.020	0.020	mg/l	1	04/04/24	04/10/24	DU	EPA 200.8 [2]	EPA 200.8 [3]
Magnesium	44.2	0.10	mg/l	1	04/04/24	04/09/24	DU	EPA 200.8 [1]	EPA 200.8 [3]
Manganese	0.284	0.0010	mg/l	1	04/04/24	04/09/24	DU	EPA 200.8 [1]	EPA 200.8 [3]
Potassium	3.12	0.20	mg/l	1	04/04/24	04/09/24	DU	EPA 200.8 [1]	EPA 200.8 [3]
Selenium	< 0.00040	0.00040	mg/l	1	04/04/24	04/09/24	DU	EPA 200.8 [1]	EPA 200.8 [3]
Sodium	174	2.5	mg/l	5	04/04/24	04/10/24	DU	EPA 200.8 [2]	EPA 200.8 [3]
Strontium	0.725	0.020	mg/l	1	04/04/24	04/09/24	DU	EPA 200.8 [1]	EPA 200.8 [3]

(1) Instrument QC Batch: MA17815
(2) Instrument QC Batch: MA17819
(3) Prep QC Batch: MP39138

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

SGS

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

Bottle Order Control #:
FED-EX Tracking #:
SGS Quote #:
SGS Job #: DA63362

Client / Reporting Information

Company: Kerr-McGee Oil and Gas Onshore LP
Street: 1099 18th Street
City, State: Denver, CO 80202
Project Contact: Joel Mason
Phone: 307-262-8975
Email: Joel.Mason@Absarokasolutions.com
Sampler(s) Name(s): Emily Fitzjohn

Project Information

Project Name: GWA_Rademacher_14_30HZ
Frequency: IN
Regulation: Voluntary
Facility ID: 761579
EQuIS Facility Code: 0089019-AN-GWABWQ
Client Purchase Order #: 4501903856
Project Manager: Joel Mason

Billing Information (if different from Report to)

Company: Occidental Petroleum Corporation (OXY)
Street Address: 1201 Lake Robbins Drive
City, State ZIP: The Woodlands, TX 77380
Attention: Erik Mickelson User ID: fvv451

Requested Analysis (see TEST CODE sheet)

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Field ID / Point of Collection	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: NONE	HCl	NaOH	HNO3	H2SO4	DI Water	MEOH	ENCORE	Na2S2O4	Other	PH, SCON, TDS	XCARBICALK	BRO, CHL, F, NO2, XNO3O, NO32, SO4	TPO4	Dissolved Metals - Lab Filtered*	VRSK175DGMEP	V8260BTX	B8015DRO	V8015GRO	IRBAC, SFBAC, SO4RBAC	CABAL	LAB USE ONLY
BW_Dobinsky_107099	4/1/2024	11:00	EF	GW	17	9	6			1					1	X	X	X	X	X	X	X	X	X	X	X	01
NWSE_18_2N_67W																											
Temperature, field	10.39	°C																									
pH, field	6.50	s.u.																									
Specific Conductivity, field	1170.5	uS/cm																									
Oxidation Reduction Potential, field	55.5	mV																									
Dissolved Oxygen, field	0.25	mg/L																									
Turbidity, field	31.2	NTU																									

Turnaround Time (Business days)

- [ ] Std. 10 Business Days
- [x] 5 Day RUSH
- [ ] 3 Day Emergency
- [ ] 2 Day Emergency
- [ ] 1 Day Emergency

Special Reporting Instructions
- [ ] Report in PPB
- [ ] Report in PPM
- [ ] Report MDLs

Emergency & Rush T/A data available VIA LabLink. RUSH TAT approval needed.

Data Deliverable Information

- [ ] Commercial "A" (Level 1, Results Only)
- [ ] Commercial "B" (Level 2, Results + QC Summary)
- [ ] COMMBN (Results/QC/Narrative)
- [ ] COMMBN+ (Results/QC/Narrative (+ chromatograms))
- [ ] REDT2
- [ ] FULT1
- [x] EDD Format: COGCC Compatible

Comments / Special Instructions

*Dissolved Metals (200.7/200.8): BaMS, B, Ca, Fe,Mg, Mn, K, SeMS, Na, Sr

Please also send reports to Jordan.Fleming@absarokasolutions.com and Michelle.Henry@Absarokasolutions.com

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date/Time:	Received By:	Relinquished By:	Date/Time:	Received By:
1	4/1/24 15:00	1	2		2
3		3	4		4

Custody Seal # Intact [x] Not Intact [ ] Absent [ ]
Preserved where applicable [x] Cooler Temp. °C: 2.1 Therm. ID: IR7 On Ice [x]
Form MSQA 064-01, RV 6/19/17

SGS Sample Receipt Summary

Job Number: da63362 **Client:** ABSAROKA **Project:** GWA

Date / Time Received: 4/2/2024 12:00:00 PM **Delivery Method:** co **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (2.5);

Cooler Temps (Corrected) °C: Cooler 1: (2.5);

Cooler Information	Y	or	N
1. Custody Seals Present:	☑		☐
2. Custody Seals Intact:	☑		☐
3. Temp criteria achieved:	☑		☐
4. Cooler temp verification:	IR Gun		
5. Cooler media:	Ice (Bag)		

Trip Blank Information	Y	or	N	N/A
1. Trip Blank present / cooler:	☑		☐	☐
2. Trip Blank listed on COC:	☑		☐	☐

	W	or	S	N/A
3. Type of TB Received	☑		☐	☐

Sample Information	Y	or	N	N/A
1. Sample labels present on bottles:	☑		☐	
2. Samples presented properly	☑		☐	
3. Suffiient volume/containers recv'd for analysis	☑		☐	
4. Condition of sample:	Intact			
5. Sample recv'd within HT	☑		☐	
6. Dates/Times/IDs on COC match sample label	☐		☐	
7. VOCs have headspace	☑		☐	☐
8. Bottles received for unspecified tests	☐		☑	
9. Compositing instructions clear	☐		☐	☑
10. Voa Soil Kits/Jars received past 48hrs?	☐		☐	☐
11. % Solids Jar Received?	☐		☐	☐
12. Residual Chlorine Present?	☐		☐	☐

Misc Information

Number of Encores: 25 Gram 5 Gram Number of Lab Filtered Metals:

Test Strip Lot #s: pH 0-3: pH 10-12: Other: (Specify)

Residual Chlorine Test Strip Lot #

Comments

SM001
Rev. Date 05/04/17

Technician: JEREMYD Date: 4/2/2024 12:15:13 PM Reviewer: Date:

MS Volatiles

6

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: DA63362
Account: ANADACOD Occidental Petroleum Corporation
Project: Kerr-McGee: GWA_Rademacher_14_30HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6V2382-MB	6V47245.D	1	04/03/24	MB	n/a	n/a	V6V2382

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

DA63362-1

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

Blank Spike Summary

Job Number: DA63362
Account: ANADACOD Occidental Petroleum Corporation
Project: Kerr-McGee: GWA_Rademacher_14_30HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6V2382-BS	6V47243.D	1	04/03/24	MB	n/a	n/a	V6V2382

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

DA63362-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	48.2	96	70-130
100-41-4	Ethylbenzene	50	51.9	104	70-130
108-88-3	Toluene	50	46.4	93	70-130
	m,p-Xylene	100	100	100	70-130
95-47-6	o-Xylene	50	51.8	104	70-130
1330-20-7	Xylene (total)	150	152	101	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	98%	70-130%
17060-07-0	1,2-Dichloroethane-D4	102%	70-130%
2037-26-5	Toluene-D8	102%	70-130%
460-00-4	4-Bromofluorobenzene	100%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA63362
Account: ANADACOD Occidental Petroleum Corporation
Project: Kerr-McGee: GWA_Rademacher_14_30HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
DA62756-31MS	6V47246.D	1	04/03/24	MB	n/a	n/a	V6V2382
DA62756-31MSD	6V47247.D	1	04/03/24	MB	n/a	n/a	V6V2382
DA62756-31	6V47248.D	1	04/03/24	MB	n/a	n/a	V6V2382

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

DA63362-1

CAS No.	Compound	DA62756-31 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		50	48.3	97	50	48.2	96	0	70-130/30
100-41-4	Ethylbenzene	ND		50	51.4	103	50	51.8	104	1	70-130/30
108-88-3	Toluene	ND		50	45.9	92	50	46.0	92	0	70-130/30
	m,p-Xylene	ND		100	100	100	100	101	101	1	70-130/30
95-47-6	o-Xylene	ND		50	51.5	103	50	52.0	104	1	70-130/30
1330-20-7	Xylene (total)	ND		150	152	101	150	153	102	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	DA62756-31	Limits
1868-53-7	Dibromofluoromethane	99%	97%	100%	70-130%
17060-07-0	1,2-Dichloroethane-D4	100%	102%	101%	70-130%
2037-26-5	Toluene-D8	101%	102%	103%	70-130%
460-00-4	4-Bromofluorobenzene	99%	101%	101%	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: DA63362
Account: ANADACOD Occidental Petroleum Corporation
Project: Kerr-McGee: GWA_Rademacher_14_30HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGA2859-MB	GA64656.D	1	04/03/24	JC	n/a	n/a	GGA2859

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

DA63362-1

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	117%	60-140%

Method Blank Summary

Job Number: DA63362
Account: ANADACOD Occidental Petroleum Corporation
Project: Kerr-McGee: GWA_Rademacher_14_30HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFK346-MB	FK4722.D	1	04/05/24	JC	n/a	n/a	GFK346

The QC reported here applies to the following samples: **Method:** RSK175 MOD

DA63362-1A

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 Summary

Job Number: DA63362
Account: ANADACOD Occidental Petroleum Corporation
Project: Kerr-McGee: GWA_Rademacher_14_30HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGA2859-BS	GA64654.D	1	04/03/24	JC	n/a	n/a	GGA2859

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

DA63362-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	TPH-GRO (C6-C10)	2.2	2.13	97	64-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	117%	60-140%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: DA63362
Account: ANADACOD Occidental Petroleum Corporation
Project: Kerr-McGee: GWA_Rademacher_14_30HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFK346-BS	FK4723.D	10	04/05/24	JC	n/a	n/a	GFK346
GFK346-BSD	FK4724.D	10	04/05/24	JC	n/a	n/a	GFK346

The QC reported here applies to the following samples: **Method:** RSK175 MOD

DA63362-1A

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
74-82-8	Methane	0.512	0.549	107	0.556	109	1	70-135/30
74-84-0	Ethane	0.923	1.10	119	1.11	120	1	70-147/30
74-98-6	Propane	1.38	1.55	112	1.56	113	1	70-140/30

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA63362
Account: ANADACOD Occidental Petroleum Corporation
Project: Kerr-McGee: GWA_Rademacher_14_30HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
DA62756-32MS	GA64657.D	1	04/03/24	JC	n/a	n/a	GGA2859
DA62756-32MSD	GA64658.D	1	04/03/24	JC	n/a	n/a	GGA2859
DA62756-32	GA64659.D	1	04/03/24	JC	n/a	n/a	GGA2859

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

DA63362-1

CAS No.	Compound	DA62756-32 mg/l	Q	Spike mg/l	MS mg/l	MS %	Spike mg/l	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		2.2	2.04	93	2.2	2.06	94	1	49-130/30

CAS No.	Surrogate Recoveries	MS	MSD	DA62756-32	Limits
120-82-1	1,2,4-Trichlorobenzene	118%	118%	113%	60-140%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA63362
Account: ANADACOD Occidental Petroleum Corporation
Project: Kerr-McGee: GWA_Rademacher_14_30HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
DA63362-1AMS	FK4726.D	10	04/05/24	JC	n/a	n/a	GFK346
DA63362-1AMSD	FK4727.D	10	04/05/24	JC	n/a	n/a	GFK346
DA63362-1A	FK4725.D	1	04/05/24	JC	n/a	n/a	GFK346

The QC reported here applies to the following samples: **Method:** RSK175 MOD

DA63362-1A

CAS No.	Compound	DA63362-1A mg/l	Q	Spike mg/l	MS mg/l	MS %	Spike mg/l	MSD mg/l	MSD %	RPD	Limits Rec/RPD
74-82-8	Methane	0.0104		0.512	0.492	94	0.512	0.456	87	8	15-200/30
74-84-0	Ethane	ND		0.923	0.951	103	0.923	0.881	95	8	64-147/30
74-98-6	Propane	ND		1.38	1.36	99	1.38	1.26	91	8	63-140/30

* = 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: DA63362
Account: ANADACOD - Occidental Petroleum Corporation
Project: Kerr-McGee: GWA_Rademacher_14_30HZ

QC Batch ID: MP39138
Matrix Type: AQUEOUS

Methods: EPA 200.8
Units: ug/l

Prep Date: 04/04/24

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	0.12	<2.0
Beryllium	0.20	.077	.1		
Boron	40	18	20	1.4	<40
Cadmium	0.10	.03	.04		
Calcium	400	25	100	15.0	<400
Chromium	2.0	.087	.25		
Cobalt	0.20	.04	.05		
Copper	2.0	.05	.81		
Iron	20	1.6	10	2.7	<20
Lead	0.50	.094	.13		
Magnesium	100	10	25	4.4	<100
Manganese	1.0	.079	.51	0.21	<1.0
Molybdenum	1.0	.037	.27		
Nickel	2.0	.098	.35		
Phosphorus	60	7.6	25		
Potassium	200	2	50	-0.61	<200
Selenium	0.40	.05	.1	0.011	<0.40
Silver	0.10	.0081	.025		
Sodium	500	10	130	-4.0	<500
Strontium	20	.1	5	0.053	<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 MP39138: DA63362-1F

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

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: DA63362
Account: ANADACOD - Occidental Petroleum Corporation
Project: Kerr-McGee: GWA_Rademacher_14_30HZ

QC Batch ID: MP39138
Matrix Type: AQUEOUS

Methods: EPA 200.8
Units: ug/l

Prep Date: 04/04/24

Metal	DA63303-1F Original	MS	Spikelot ICPMS5	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	129	514	400	97.8	70-130
Beryllium					
Boron	267	693	400	109.3	70-130
Cadmium	anr				
Calcium	133000	145000	5000	80.0	70-130
Chromium	anr				
Cobalt					
Copper	anr				
Iron	21.6	1010	1000	98.5	70-130
Lead	anr				
Magnesium	21300	25200	5000	102.0	70-130
Manganese	29.1	225	200	98.6	70-130
Molybdenum	anr				
Nickel	anr				
Phosphorus					
Potassium	5450	10000	5000	91.0	70-130
Selenium	3.2	204	200	100.4	70-130
Silver	anr				
Sodium	145000	159000	5000	280.0(a)	70-130
Strontium	1520	1790	100	160.0(a)	70-130
Thallium	anr				
Tin					
Titanium					
Uranium	anr				
Vanadium					
Zinc	anr				

Associated samples MP39138: DA63362-1F

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: DA63362
Account: ANADACOD - Occidental Petroleum Corporation
Project: Kerr-McGee: GWA_Rademacher_14_30HZ

QC Batch ID: MP39138 Methods: EPA 200.8
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 04/04/24

Metal	DA63303-1F Original	MSD	Spikelot ICPMS5	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	anr					
Barium	129	520	400	99.3	1.2	20
Beryllium						
Boron	267	700	400	111.0	1.0	20
Cadmium	anr					
Calcium	133000	151000	5000	200.0(a)	4.1	20
Chromium	anr					
Cobalt						
Copper	anr					
Iron	21.6	1020	1000	99.5	3.8	20
Lead	anr					
Magnesium	21300	25400	5000	106.0	0.8	20
Manganese	29.1	218	200	95.1	3.2	20
Molybdenum	anr					
Nickel	anr					
Phosphorus						
Potassium	5450	9910	5000	89.2	0.9	20
Selenium	3.2	204	200	100.4	0.0	20
Silver	anr					
Sodium	145000	158000	5000	260.0(a)	0.6	20
Strontium	1520	1730	100	100.0	6.6	20
Thallium	anr					
Tin						
Titanium						
Uranium	anr					
Vanadium						
Zinc	anr					

Associated samples MP39138: DA63362-1F

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: DA63362
Account: ANADACOD - Occidental Petroleum Corporation
Project: Kerr-McGee: GWA_Rademacher_14_30HZ

QC Batch ID: MP39138 Methods: EPA 200.8
Matrix Type: AQUEOUS Units: ug/l

Prep Date: 04/04/24

Metal	BSP Result	Spikelot ICPMS5	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	400	400	100.0	85-115
Beryllium				
Boron	441	400	110.3	85-115
Cadmium	anr			
Calcium	5240	5000	104.8	85-115
Chromium	anr			
Cobalt				
Copper	anr			
Iron	1070	1000	107.0	85-115
Lead	anr			
Magnesium	4980	5000	99.6	85-115
Manganese	201	200	100.5	85-115
Molybdenum	anr			
Nickel	anr			
Phosphorus				
Potassium	5170	5000	103.4	85-115
Selenium	208	200	104.0	85-115
Silver	anr			
Sodium	5300	5000	106.0	85-115
Strontium	105	100	105.0	85-115
Thallium	anr			
Tin				
Titanium				
Uranium	anr			
Vanadium				
Zinc	anr			

Associated samples MP39138: DA63362-1F

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

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: DA63362
Account: ANADACOD - Occidental Petroleum Corporation
Project: Kerr-McGee: GWA_Rademacher_14_30HZ

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Bicarbonate as CaC	GN63045	5.0	0.0	mg/l	100	101	101.3	90-110%
Alkalinity, Carbonate	GN63046	5.0	0.0	mg/l	100	101	101.3	90-110%
Alkalinity, Total as CaCO3	GN63044	5.0	0.0	mg/l	100	101	101.3	90-110%
Bromide	GP36296/GN63006	0.050	0.0	mg/l	0.5	0.493	98.6	90-110%
Chloride	GP36296/GN63006	0.50	0.0	mg/l	5	4.92	98.4	90-110%
Fluoride	GP36296/GN63006	0.10	0.0	mg/l	1	1.00	100.0	90-110%
Iron-Related Bacteria	MB1746	25	0	CFU/ml				
Nitrogen, Nitrate	GP36296/GN63006	0.010	0.0	mg/l	0.1	0.100	100.0	90-110%
Nitrogen, Nitrite	GP36296/GN63006	0.0040	0.0	mg/l	0.05	0.0537	107.4	90-110%
Phosphorus, Total	GP36339/GN63065	0.010	0.0	mg/l	0.2	0.203	101.5	90-110%
Slime Forming Bacteria	MB1745	500	0	CFU/ml				
Solids, Total Dissolved	GN63018	10	0.0	mg/l	250	231	92.4	90-110%
Specific Conductivity	GP36303/GN63016			umhos/cm	10000	1430	101.8	90-110%
Sulfate	GP36296/GN63006	0.50	0.0	mg/l	5	4.96	99.2	90-110%
Sulfate Reducing Bacteria	MB1747	200	0	CFU/ml				

Associated Samples:
Batch MB1745: DA63362-1B
Batch MB1746: DA63362-1B
Batch MB1747: DA63362-1B
Batch GN63018: DA63362-1
Batch GN63044: DA63362-1
Batch GN63045: DA63362-1
Batch GN63046: DA63362-1
Batch GP36296: DA63362-1
Batch GP36303: DA63362-1
Batch GP36339: DA63362-1
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA63362
Account: ANADACOD - Occidental Petroleum Corporation
Project: Kerr-McGee: GWA_Rademacher_14_30HZ

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO3	GN63044	DA63290-1	mg/l	85.0	82.5	3.0	0-20%
Iron-Related Bacteria	MB1746	DA62884-1B	CFU/ml	140000	140000	0.0	0-%
Phosphorus, Total	GP36339/GN63065	DA63482-2	mg/l	0.016	0.016	0.0	0-20%
Slime Forming Bacteria	MB1745	DA62884-1B	CFU/ml	13000	13000	0.0	0-%
Solids, Total Dissolved	GN63018	DA63429-2	mg/l	306	310	1.3	0-5.44%
Specific Conductivity	GP36303/GN63016	DA63363-1	umhos/cm	1230	1230	0.2	0-20%
Sulfate Reducing Bacteria	MB1747	DA62884-1B	CFU/ml	325	325	0.0	0-%

Associated Samples:
Batch MB1745: DA63362-1B
Batch MB1746: DA63362-1B
Batch MB1747: DA63362-1B
Batch GN63018: DA63362-1
Batch GN63044: DA63362-1
Batch GP36303: DA63362-1
Batch GP36339: DA63362-1
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA63362
Account: ANADACOD - Occidental Petroleum Corporation
Project: Kerr-McGee: GWA_Rademacher_14_30HZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Alkalinity, Total as CaCO3	GN63044	DA63290-1	mg/l	85.0	100	178	92.5	80-120%
Bromide	GP36296/GN63006	DA63324-1	mg/l	3.2	50	51.9	97.4	80-120%
Bromide	GP36296/GN63006	DA63324-1	mg/l	3.1	50	51.9	97.4	80-120%
Chloride	GP36296/GN63006	DA63324-1	mg/l	1030	500	1510	96.0	80-120%
Chloride	GP36296/GN63006	DA63324-1	mg/l	580	500	1510	96.0	80-120%
Fluoride	GP36296/GN63006	DA63324-1	mg/l	0.0	100	98.5	98.5	80-120%
Fluoride	GP36296/GN63006	DA63324-1	mg/l	0.0	100	98.5	98.5	80-120%
Nitrogen, Nitrate	GP36296/GN63006	DA63324-1	mg/l	0.0	10	9.9	99.0	80-120%
Nitrogen, Nitrite	GP36296/GN63006	DA63324-1	mg/l	0.0	5	5.2	104.0	80-120%
Phosphorus, Total	GP36339/GN63065	DA63482-2	mg/l	0.016	0.2	0.21	97.0	90-110%
Sulfate	GP36296/GN63006	DA63324-1	mg/l	1480	500	1970	98.0	80-120%

Associated Samples:
Batch GN63044: DA63362-1
Batch GP36296: DA63362-1
Batch GP36339: DA63362-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: DA63362
Account: ANADACOD - Occidental Petroleum Corporation
Project: Kerr-McGee: GWA_Rademacher_14_30HZ

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Alkalinity, Total as CaCO3	GN63044	DA63290-1	mg/l	85.0	100	175	1.4	20%
Bromide	GP36296/GN63006	DA63324-1	mg/l	3.2	50	51.5	0.8	20%
Bromide	GP36296/GN63006	DA63324-1	mg/l	3.1	50	51.5	0.8	20%
Chloride	GP36296/GN63006	DA63324-1	mg/l	1030	500	1510	0.0	20%
Chloride	GP36296/GN63006	DA63324-1	mg/l	580	500	1510	0.0	20%
Fluoride	GP36296/GN63006	DA63324-1	mg/l	0.0	100	97.7	0.8	20%
Fluoride	GP36296/GN63006	DA63324-1	mg/l	0.0	100	97.7	0.8	20%
Nitrogen, Nitrate	GP36296/GN63006	DA63324-1	mg/l	0.0	10	9.8	1.0	20%
Nitrogen, Nitrite	GP36296/GN63006	DA63324-1	mg/l	0.0	5	5.1	1.9	20%
Phosphorus, Total	GP36339/GN63065	DA63482-2	mg/l	0.016	0.2	0.21	0.0	20%
Sulfate	GP36296/GN63006	DA63324-1	mg/l	1480	500	1970	0.0	20%

Associated Samples:
Batch GN63044: DA63362-1
Batch GP36296: DA63362-1
Batch GP36339: DA63362-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Misc. Forms

Custody Documents and Other Forms

(SGS Dayton, NJ)

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

SGS North America Inc. - Wheat Ridge
4036 Youngfield Street, Wheat Ridge, CO 80033
TEL: 303-425-6021 FAX: 303-425-6854
www.sgs.com/ehsusa

FED-EX Tracking# 642648985581 | Bottle Order Control #
SGS Quote # | SGS Job # DA63362

Client / Reporting Information

Company Name: SGS North America Inc.
Street Address: 4036 Youngfield Street
City State Zip: Wheat Ridge, CO 80033
Project Contact E-mail: parna.eskandaripayandeh@sgs.com
Phone # 303-425-6021 Fax #
Sampler(s) Name(s) Phone: EF

Project Information

Project Name: Kerr-McGee: GWA_Rademacher_14_30HZ
Street
City State
Project # | Client Purchase Order # | Project Manager

Billing Information (If different from Report to)

Company Name
Street Address
City State Zip
Attention:

Requested Analysis (see TEST CODE sheet)

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	B8015DRO	LAB USE ONLY
1	BW_DOBINSKY_107099 NWSE_18_2		4/1/24	11:00:00 AM	EF	AQ										X	

Turnaround Time (Business days)

Approved By (SGS PM): / Date:

- [ ] Standard 10 Day (business)
- [ ] 5 Business Days RUSH
- [ ] 3 Business Days RUSH
- [ ] 2 Business Days RUSH
- [ ] 1 Business Day EMERGENCY
- [X] other Due 4/9/2024

Emergency & Rush T/A data available via Lablink Approval needed for RUSH/Emergency TAT

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] REDT1 (Level 3)
- [ ] FULT1 (Level 4)
- [ ] Commercial "C"
- [ ] State Forms
- [ ] EDD Format
- [ ] Other
- [X] CC

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

R.L.0.19 mg/l required

Initial Assessment MB4

Label Verification

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		4/3/11	FEDEX	FEDEX 4/4/24 10:00		
2						
3	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
4						
5	Relinquished by:	Date Time:	Received By:	Custody Seal # ☐ Intact ☐ Not intact	Preserved where applicable ☐ Therm. ID:	On Ice ☐ Cooler Temp 2.0 1420

10.1 10

DA63362: Chain of Custody
Page 1 of 2
SGS Dayton, NJ

SGS Sample Receipt Summary

Job Number: DA63362 **Client:** SGS NORTH AMERICA INC **Project:** KERR-MCGEE:_RADEMACHER_14_30HZ

Date / Time Received: 4/4/2024 10:00:00 AM **Delivery Method:** FEDEX **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (2.0);

Cooler Temps (Corrected) °C: Cooler 1: (2.4);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR-50		
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:	☐		☐	☑

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:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

10.1 10

DA63362: Chain of Custody
Page 2 of 2

GC/LC Semi-volatiles

QC Data Summaries

(SGS Dayton, NJ)

Includes the following where applicable:

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

Method Blank Summary

Job Number: DA63362
Account: ALMS SGS Wheat Ridge, CO
Project: ANADACOD: Kerr-McGee: GWA_Rademacher_14_30HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53612-MB1	0Z10196.D	1	04/07/24	TL	04/07/24	OP53612	G0Z283

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

DA63362-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	0.079	0.038	mg/l	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	90%	70-130%
438-22-2	5a-Androstane	91%	70-130%

Blank Spike Summary

Job Number: DA63362
Account: ALMS SGS Wheat Ridge, CO
Project: ANADACOD: Kerr-McGee: GWA_Rademacher_14_30HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53612-BS1	0Z10197.D	1	04/07/24	TL	04/07/24	OP53612	G0Z283

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

DA63362-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	TPH-DRO (C10-C28)	1.97	1.58	80	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	97%	70-130%
438-22-2	5a-Androstane	94%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: DA63362
Account: ALMS SGS Wheat Ridge, CO
Project: ANADACOD: Kerr-McGee: GWA_Rademacher_14_30HZ

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53612-MS	0Z10199.D	1	04/07/24	TL	04/07/24	OP53612	G0Z283
OP53612-MSD	0Z10200.D	1	04/07/24	TL	04/07/24	OP53612	G0Z283
DA63362-1	0Z10198.D	1	04/07/24	TL	04/07/24	OP53612	G0Z283

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

DA63362-1

CAS No.	Compound	DA63362-1 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		1.98	1.80	91	1.99	1.82	92	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	DA63362-1	Limits
84-15-1	o-Terphenyl	93%	94%	89%	70-130%
438-22-2	5a-Androstane	88%	89%	83%	70-130%

* = Outside of Control Limits.