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April 01, 2024

Jessica Johannsen
PDC Energy
1775 Sherman Street
Suite 3000
Denver, CO 80203

Work Order: **HS24031320**

Laboratory Results for: **Segal 2-4-24**

Dear Jessica Johannsen,

ALS Environmental received 1 sample(s) on Mar 22, 2024 for the analysis presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Generated By: JUMOKE.LAWAL
Tyler Monroe

Client: PDC Energy
Project: Segal 2-4-24
Work Order: HS24031320

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS24031320-01	Segal 2-4-24	Water		19-Mar-2024 12:00	22-Mar-2024 09:30	<input type="checkbox"/>

Client: PDC Energy
Project: Segal 2-4-24
Work Order: HS24031320

CASE NARRATIVE

GC Semivolatiles by Method RSK-175**Batch ID: R462316**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GC Semivolatiles by Method SW8015M**Batch ID: 209385**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

GC Volatiles by Method SW8015**Batch ID: R462711****Sample ID: Segal 2-4-24 (HS24031320-01)**

- Lowest possible dilution due to sample matrix.

GCMS Volatiles by Method SW8260**Batch ID: R462067****Sample ID: Segal 2-4-24 (HS24031320-01)**

- Lowest possible dilution due to sample matrix.

Sample ID: VLCSW-240324

- Insufficient sample received to perform MS/MSD. An LCS/LCSD was performed as batch quality control.

Metals by Method E200.8**Batch ID: 209445****Sample ID: HS24031366-01MS**

- MS and MSD are for an unrelated sample

WetChemistry by Method E300**Batch ID: R462368****Sample ID: HS24031315-01MS**

- MS and MSD are for an unrelated sample (Chloride)

WetChemistry by Method M2540C**Batch ID: R462273**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

WetChemistry by Method SM2320B**Batch ID: R462259**

- The test results meet requirements of the current NELAP standards, state requirements or programs where applicable.

Client: PDC Energy
 Project: Segal 2-4-24
 Sample ID: Segal 2-4-24
 Collection Date: 19-Mar-2024 12:00

ANALYTICAL REPORT

WorkOrder:HS24031320
 Lab ID:HS24031320-01
 Matrix:Water

ANALYSES	RESULT	QUAL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		Method:SW8260		Analyst: TS		
Benzene	ND		500	ug/L	500	25-Mar-2024 06:05
Ethylbenzene	ND		500	ug/L	500	25-Mar-2024 06:05
m,p-Xylene	ND		1000	ug/L	500	25-Mar-2024 06:05
o-Xylene	ND		500	ug/L	500	25-Mar-2024 06:05
Toluene	ND		500	ug/L	500	25-Mar-2024 06:05
Xylenes, Total	ND		1500	ug/L	500	25-Mar-2024 06:05
Surr: 1,2-Dichloroethane-d4	86.4		70-126	%REC	500	25-Mar-2024 06:05
Surr: 4-Bromofluorobenzene	86.1		77-113	%REC	500	25-Mar-2024 06:05
Surr: Dibromofluoromethane	83.0		77-123	%REC	500	25-Mar-2024 06:05
Surr: Toluene-d8	87.0		82-127	%REC	500	25-Mar-2024 06:05
GASOLINE RANGE ORGANICS BY SW8015C		Method:SW8015		Analyst: TS		
Gasoline Range Organics	ND		25.0	mg/L	500	29-Mar-2024 21:27
Surr: 4-Bromofluorobenzene	106		70-123	%REC	500	29-Mar-2024 21:27
DISSOLVED GASES BY RSK-175		Method:RSK-175		Analyst: E.H.		
Ethane	2,030		200	ug/L	200	26-Mar-2024 16:30
Methane	6,210		100	ug/L	200	26-Mar-2024 16:30
Propane	739		200	ug/L	200	26-Mar-2024 16:30
TPH DRO/ORO BY SW8015C		Method:SW8015M		Prep:SW3511 / 25-Mar-2024 Analyst: SAM		
TPH (Diesel Range)	0.24		0.053	mg/L	1	26-Mar-2024 22:48
Surr: 2-Fluorobiphenyl	107		60-135	%REC	1	26-Mar-2024 22:48
TOTAL METALS BY E200.8, REV 5.4, 1994		Method:E200.8		Prep:E200.8 / 26-Mar-2024 Analyst: JC		
Calcium	21.5		2.50	mg/L	5	28-Mar-2024 13:16
Magnesium	4.55		2.50	mg/L	5	28-Mar-2024 13:16
Potassium	2.92		2.50	mg/L	5	28-Mar-2024 13:16
Sodium	414		1.00	mg/L	5	28-Mar-2024 15:20
ANIONS BY E300.0, REV 2.1, 1993		Method:E300		Analyst: TH		
Chloride	377		5.00	mg/L	10	27-Mar-2024 13:52
Sulfate	0.592		0.500	mg/L	1	27-Mar-2024 13:46
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		Method:M2540C		Analyst: HB		
Total Dissolved Solids (Residue, Filterable)	1,940		10.0	mg/L	1	25-Mar-2024 08:46
ALKALINITY BY -2011		Method:SM2320B		Analyst: JAC		
Alkalinity, Bicarbonate (As CaCO3)	231		5.00	mg/L	1	26-Mar-2024 14:39
Alkalinity, Carbonate (As CaCO3)	110		5.00	mg/L	1	26-Mar-2024 14:39
Alkalinity, Total (As CaCO3)	341		5.00	mg/L	1	26-Mar-2024 14:39

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Weight / Prep Log

Client: PDC Energy
Project: Segal 2-4-24
WorkOrder: HS24031320

Batch ID: 209385	Start Date: 25 Mar 2024 10:00	End Date: 25 Mar 2024 10:00
Method: SW3511	Prep Code: 3511_DRO	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24031320-01		31.1 (mL)	2 (mL)	0.06431	40 mL Amber

Batch ID: 209445	Start Date: 26 Mar 2024 14:30	End Date: 26 Mar 2024 14:30
Method: TOTAL METALS PREP BY E200.8, REV 5.4, 1994	Prep Code: 200.8PR	

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS24031320-01		10 (mL)	10 (mL)	1	250 mL plastic, HNO3 to pH <2

Client: PDC Energy
Project: Segal 2-4-24
WorkOrder: HS24031320

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 209385 (0)		Test Name : TPH DRO/ORO BY SW8015C			Matrix: Water	
HS24031320-01	Segal 2-4-24	19 Mar 2024 12:00		25 Mar 2024 10:00	26 Mar 2024 22:48	1
Batch ID: 209445 (0)		Test Name : TOTAL METALS BY E200.8, REV 5.4, 1994			Matrix: Water	
HS24031320-01	Segal 2-4-24	19 Mar 2024 12:00		26 Mar 2024 14:30	28 Mar 2024 15:20	5
HS24031320-01	Segal 2-4-24	19 Mar 2024 12:00		26 Mar 2024 14:30	28 Mar 2024 13:16	5
Batch ID: R462067 (0)		Test Name : LOW LEVEL VOLATILES BY SW8260C			Matrix: Water	
HS24031320-01	Segal 2-4-24	19 Mar 2024 12:00			25 Mar 2024 06:05	500
Batch ID: R462259 (0)		Test Name : ALKALINITY BY -2011			Matrix: Water	
HS24031320-01	Segal 2-4-24	19 Mar 2024 12:00			26 Mar 2024 14:39	1
Batch ID: R462273 (0)		Test Name : TOTAL DISSOLVED SOLIDS BY SM2540C-2011			Matrix: Water	
HS24031320-01	Segal 2-4-24	19 Mar 2024 12:00			25 Mar 2024 08:46	1
Batch ID: R462316 (0)		Test Name : DISSOLVED GASES BY RSK-175			Matrix: Water	
HS24031320-01	Segal 2-4-24	19 Mar 2024 12:00			26 Mar 2024 16:30	200
Batch ID: R462368 (0)		Test Name : ANIONS BY E300.0, REV 2.1, 1993			Matrix: Water	
HS24031320-01	Segal 2-4-24	19 Mar 2024 12:00			27 Mar 2024 13:52	10
HS24031320-01	Segal 2-4-24	19 Mar 2024 12:00			27 Mar 2024 13:46	1
Batch ID: R462711 (0)		Test Name : GASOLINE RANGE ORGANICS BY SW8015C			Matrix: Water	
HS24031320-01	Segal 2-4-24	19 Mar 2024 12:00			29 Mar 2024 21:27	500

Client: PDC Energy
Project: Segal 2-4-24
WorkOrder: HS24031320

QC BATCH REPORT

Batch ID: 209385 (0)		Instrument: FID-16		Method: TPH DRO/ORO BY SW8015C					
MBLK	Sample ID: MBLK-209385	Units: mg/L		Analysis Date: 25-Mar-2024 16:07					
Client ID:	Run ID: FID-16_462436		SeqNo: 7913130		PrepDate: 25-Mar-2024		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

TPH (Diesel Range) ND 0.050

Surr: 2-Fluorobiphenyl 0.06257 0.0050 0.06 0 104 60 - 135

LCS	Sample ID: LCS-209385	Units: mg/L		Analysis Date: 25-Mar-2024 16:37					
Client ID:	Run ID: FID-16_462436		SeqNo: 7913131		PrepDate: 25-Mar-2024		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

TPH (Diesel Range) 0.6593 0.050 0.6 0 110 70 - 130

Surr: 2-Fluorobiphenyl 0.05341 0.0050 0.06 0 89.0 60 - 135

MS	Sample ID: HS24031062-01MS	Units: mg/L		Analysis Date: 25-Mar-2024 17:36					
Client ID:	Run ID: FID-16_462436		SeqNo: 7913133		PrepDate: 25-Mar-2024		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

TPH (Diesel Range) 0.7258 0.051 0.6143 0.04228 111 70 - 130

Surr: 2-Fluorobiphenyl 0.04574 0.0051 0.06143 0 74.5 60 - 135

MSD	Sample ID: HS24031062-01MSD	Units: mg/L		Analysis Date: 25-Mar-2024 18:06					
Client ID:	Run ID: FID-16_462436		SeqNo: 7913134		PrepDate: 25-Mar-2024		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual

TPH (Diesel Range) 0.7449 0.052 0.6199 0.04228 113 70 - 130 0.7258 2.6 20

Surr: 2-Fluorobiphenyl 0.05125 0.0052 0.06199 0 82.7 60 - 135 0.04574 11.4 20

The following samples were analyzed in this batch: HS24031320-01

Client: PDC Energy
 Project: Segal 2-4-24
 WorkOrder: HS24031320

QC BATCH REPORT

Batch ID: R462316 (0)		Instrument: FID-4		Method: DISSOLVED GASES BY RSK-175					
MBLK	Sample ID: MBLK-240326	Units: ug/L		Analysis Date: 26-Mar-2024 09:21					
Client ID:	Run ID: FID-4_462316	SeqNo: 7910469		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Ethane	ND	1.00							
Methane	ND	0.500							
Propane	ND	1.50							

LCS	Sample ID: LCS-240326	Units: ug/L		Analysis Date: 26-Mar-2024 09:36					
Client ID:	Run ID: FID-4_462316	SeqNo: 7910470		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Ethane	16.34	1.00	18.04	0	90.5	75 - 125			
Methane	9.08	0.500	9.647	0	94.1	75 - 125			
Propane	24.31	1.50	26.46	0	91.9	75 - 125			

LCSD	Sample ID: LCSD-240326	Units: ug/L		Analysis Date: 26-Mar-2024 10:07					
Client ID:	Run ID: FID-4_462316	SeqNo: 7910471		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Ethane	17.38	1.00	18.04	0	96.3	75 - 125	16.34	6.2	30
Methane	9.486	0.500	9.647	0	98.3	75 - 125	9.08	4.37	30
Propane	25.27	1.50	26.46	0	95.5	75 - 125	24.31	3.88	30

The following samples were analyzed in this batch: HS24031320-01

Client: PDC Energy
Project: Segal 2-4-24
WorkOrder: HS24031320

QC BATCH REPORT

Batch ID: R462711 (0)		Instrument: FID-20		Method: GASOLINE RANGE ORGANICS BY SW8015C						
MBLK	Sample ID: MBLK-240329	Units: mg/L		Analysis Date: 29-Mar-2024 17:18						
Client ID:	Run ID: FID-20_462711		SeqNo: 7918971		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	ND	0.0500								
Surr: 4-Bromofluorobenzene	0.1029	0.00500	0.1	0	103	70 - 121				
LCS	Sample ID: LCS-240329	Units: mg/L		Analysis Date: 29-Mar-2024 16:50						
Client ID:	Run ID: FID-20_462711		SeqNo: 7918969		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.023	0.0500	1	0	102	76 - 124				
Surr: 4-Bromofluorobenzene	0.09525	0.00500	0.1	0	95.2	52 - 138				
LCSD	Sample ID: LCSD-240329	Units: mg/L		Analysis Date: 29-Mar-2024 17:04						
Client ID:	Run ID: FID-20_462711		SeqNo: 7918970		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	1.046	0.0500	1	0	105	76 - 124	1.023	2.23	20	
Surr: 4-Bromofluorobenzene	0.09468	0.00500	0.1	0	94.7	52 - 138	0.09525	0.598	20	
The following samples were analyzed in this batch: HS24031320-01										

Client: PDC Energy
Project: Segal 2-4-24
WorkOrder: HS24031320

QC BATCH REPORT

Batch ID: 209445 (0)		Instrument: ICPMS06		Method: TOTAL METALS BY E200.8, REV 5.4, 1994					
MBLK	Sample ID: MBLK-209445	Units: ug/L		Analysis Date: 28-Mar-2024 12:31					
Client ID:	Run ID: ICPMS06_462409	SeqNo: 7913466		PrepDate: 26-Mar-2024		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Calcium	ND	500							
Magnesium	ND	500							
Potassium	ND	500							
Sodium	ND	200							

LCS	Sample ID: LCS-209445	Units: ug/L		Analysis Date: 28-Mar-2024 12:33					
Client ID:	Run ID: ICPMS06_462409	SeqNo: 7913467		PrepDate: 26-Mar-2024		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Calcium	5021	500	5000	0	100	85 - 115			
Magnesium	5263	500	5000	0	105	85 - 115			
Potassium	5076	500	5000	0	102	85 - 115			
Sodium	5301	200	5000	0	106	85 - 115			

MS	Sample ID: HS24031368-01MS	Units: ug/L		Analysis Date: 28-Mar-2024 12:42					
Client ID:	Run ID: ICPMS06_462409	SeqNo: 7913472		PrepDate: 26-Mar-2024		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Calcium	8462	500	5000	3877	91.7	70 - 130			
Magnesium	5242	500	5000	149.3	102	70 - 130			
Potassium	5079	500	5000	157.1	98.4	70 - 130			
Sodium	5519	200	5000	718.9	96.0	70 - 130			

MS	Sample ID: HS24031366-01MS	Units: ug/L		Analysis Date: 28-Mar-2024 12:36					
Client ID:	Run ID: ICPMS06_462409	SeqNo: 7913469		PrepDate: 26-Mar-2024		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Calcium	79240	500	5000	74010	105	70 - 130			O
Magnesium	31740	500	5000	26050	114	70 - 130			O
Potassium	13300	500	5000	8469	96.7	70 - 130			
Sodium	245700	200	5000	240900	96.1	70 - 130			EO

Client:

Project:

WorkOrder:

PDC Energy

Segal 2-4-24

HS24031320

QC BATCH REPORT

Batch ID: 209445 (0)		Instrument: ICPMS06		Method: TOTAL METALS BY E200.8, REV 5.4, 1994					
MSD	Sample ID: HS24031368-01MSD	Units: ug/L		Analysis Date: 28-Mar-2024 12:44					
Client ID:	Run ID: ICPMS06_462409		SeqNo: 7913473		PrepDate: 26-Mar-2024		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Calcium	8542	500	5000	3877	93.3	70 - 130	8462	0.948	20
Magnesium	5204	500	5000	149.3	101	70 - 130	5242	0.715	20
Potassium	5068	500	5000	157.1	98.2	70 - 130	5079	0.22	20
Sodium	5516	200	5000	718.9	95.9	70 - 130	5519	0.0645	20

MSD	Sample ID: HS24031366-01MSD	Units: ug/L		Analysis Date: 28-Mar-2024 12:38					
Client ID:	Run ID: ICPMS06_462409		SeqNo: 7913470		PrepDate: 26-Mar-2024		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Calcium	78570	500	5000	74010	91.2	70 - 130	79240	0.85	20 O
Magnesium	31410	500	5000	26050	107	70 - 130	31740	1.06	20 O
Potassium	13480	500	5000	8469	100	70 - 130	13300	1.28	20
Sodium	244400	200	5000	240900	70.3	70 - 130	245700	0.527	20 EO

The following samples were analyzed in this batch: HS24031320-01

Client: PDC Energy
Project: Segal 2-4-24
WorkOrder: HS24031320

QC BATCH REPORT

Batch ID: R462067 (0)		Instrument: VOA9		Method: LOW LEVEL VOLATILES BY SW8260C					
MBLK	Sample ID: VBLKW-240324	Units: ug/L		Analysis Date: 25-Mar-2024 00:26					
Client ID:	Run ID: VOA9_462067	SeqNo: 7904783		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	ND	1.0							
Ethylbenzene	ND	1.0							
m,p-Xylene	ND	2.0							
o-Xylene	ND	1.0							
Toluene	ND	1.0							
Xylenes, Total	ND	3.0							
Surr: 1,2-Dichloroethane-d4	40.83	1.0	50	0	81.7	70 - 123			
Surr: 4-Bromofluorobenzene	42.57	1.0	50	0	85.1	77 - 113			
Surr: Dibromofluoromethane	40.82	1.0	50	0	81.6	73 - 126			
Surr: Toluene-d8	43.44	1.0	50	0	86.9	81 - 120			

LCS	Sample ID: VLCSW-240324	Units: ug/L		Analysis Date: 24-Mar-2024 23:19					
Client ID:	Run ID: VOA9_462067	SeqNo: 7904781		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Benzene	17.44	1.0	20	0	87.2	74 - 120			
Ethylbenzene	17.64	1.0	20	0	88.2	77 - 117			
m,p-Xylene	35.45	2.0	40	0	88.6	77 - 122			
o-Xylene	17.77	1.0	20	0	88.9	75 - 119			
Toluene	17.08	1.0	20	0	85.4	77 - 118			
Xylenes, Total	53.22	3.0	60	0	88.7	75 - 122			
Surr: 1,2-Dichloroethane-d4	40.74	1.0	50	0	81.5	70 - 123			
Surr: 4-Bromofluorobenzene	45.25	1.0	50	0	90.5	77 - 113			
Surr: Dibromofluoromethane	43.1	1.0	50	0	86.2	73 - 126			
Surr: Toluene-d8	43.8	1.0	50	0	87.6	81 - 120			

Client: PDC Energy
Project: Segal 2-4-24
WorkOrder: HS24031320

QC BATCH REPORT

Batch ID: R462067 (0)		Instrument: VOA9		Method: LOW LEVEL VOLATILES BY SW8260C						
LCSD		Sample ID: VLCSDW-240324		Units: ug/L		Analysis Date: 24-Mar-2024 23:41				
Client ID:		Run ID: VOA9_462067		SeqNo: 7904782		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	16.69	1.0	20	0	83.5	74 - 120	17.44	4.38	20	
Ethylbenzene	16.41	1.0	20	0	82.1	77 - 117	17.64	7.25	20	
m,p-Xylene	33.09	2.0	40	0	82.7	77 - 122	35.45	6.87	20	
o-Xylene	15.98	1.0	20	0	79.9	75 - 119	17.77	10.7	20	
Toluene	15.71	1.0	20	0	78.5	77 - 118	17.08	8.39	20	
Xylenes, Total	49.07	3.0	60	0	81.8	75 - 122	53.22	8.12	20	
Surr: 1,2-Dichloroethane-d4	40.1	1.0	50	0	80.2	70 - 123	40.74	1.57	20	
Surr: 4-Bromofluorobenzene	44.91	1.0	50	0	89.8	77 - 113	45.25	0.756	20	
Surr: Dibromofluoromethane	41.14	1.0	50	0	82.3	73 - 126	43.1	4.65	20	
Surr: Toluene-d8	43.73	1.0	50	0	87.5	81 - 120	43.8	0.144	20	
The following samples were analyzed in this batch: HS24031320-01										

Client: PDC Energy
Project: Segal 2-4-24
WorkOrder: HS24031320

QC BATCH REPORT

Batch ID: R462259 (0)		Instrument: Skalar 03		Method: ALKALINITY BY -2011					
MBLK	Sample ID: MBLK	Units: mg/L		Analysis Date: 26-Mar-2024 12:29					
Client ID:	Run ID: Skalar 03_462259	SeqNo: 7908965		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Alkalinity, Bicarbonate (As CaCO3)	ND	5.00							
Alkalinity, Carbonate (As CaCO3)	ND	5.00							
Alkalinity, Total (As CaCO3)	ND	5.00							

LCS	Sample ID: LCS 03262024	Units: mg/L		Analysis Date: 26-Mar-2024 12:35					
Client ID:	Run ID: Skalar 03_462259	SeqNo: 7908966		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Alkalinity, Carbonate (As CaCO3)	924	5.00	1000	0	92.4	85 - 115			
Alkalinity, Total (As CaCO3)	929	5.00	1000	0	92.9	85 - 115			

LCSD	Sample ID: LCSD 03262024	Units: mg/L		Analysis Date: 26-Mar-2024 12:41					
Client ID:	Run ID: Skalar 03_462259	SeqNo: 7908967		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Alkalinity, Carbonate (As CaCO3)	917.4	5.00	1000	0	91.7	85 - 115	924	0.717	20
Alkalinity, Total (As CaCO3)	925.4	5.00	1000	0	92.5	85 - 115	929	0.388	20

DUP	Sample ID: HS24031345-01 DUP	Units: mg/L		Analysis Date: 26-Mar-2024 13:12					
Client ID:	Run ID: Skalar 03_462259	SeqNo: 7908957		PrepDate:		DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit Qual
Alkalinity, Bicarbonate (As CaCO3)	293.5	5.00					297.8	1.45	20
Alkalinity, Carbonate (As CaCO3)	ND	5.00					0	0	20
Alkalinity, Total (As CaCO3)	293.5	5.00					297.8	1.45	20

The following samples were analyzed in this batch: HS24031320-01

Client: PDC Energy
Project: Segal 2-4-24
WorkOrder: HS24031320

QC BATCH REPORT

Batch ID: R462273 (0)		Instrument: Balance1		Method: TOTAL DISSOLVED SOLIDS BY SM2540C-2011						
MBLK	Sample ID: WMBLK-03252024	Units: mg/L		Analysis Date: 25-Mar-2024 08:46						
Client ID:	Run ID: Balance1_462273	SeqNo: 7909606		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filterable)		ND	10.0							

LCS	Sample ID: WLCS-03252024	Units: mg/L		Analysis Date: 25-Mar-2024 08:46						
Client ID:	Run ID: Balance1_462273	SeqNo: 7909605		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filterable)		962	10.0	1000	0	96.2	85 - 115			

DUP	Sample ID: HS24031320-01DUP	Units: mg/L		Analysis Date: 25-Mar-2024 08:46						
Client ID: Segal 2-4-24	Run ID: Balance1_462273	SeqNo: 7909596		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filterable)		1946	10.0				1938	0.412	20	

DUP	Sample ID: HS24031317-01DUP	Units: mg/L		Analysis Date: 25-Mar-2024 08:46						
Client ID:	Run ID: Balance1_462273	SeqNo: 7909593		PrepDate:		DF: 1				
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Filterable)		818	10.0				792	3.23	20	

The following samples were analyzed in this batch: HS24031320-01

Client: PDC Energy
Project: Segal 2-4-24
WorkOrder: HS24031320

QC BATCH REPORT

Batch ID: R462368 (0)		Instrument: ICS-Integrion		Method: ANIONS BY E300.0, REV 2.1, 1993					
MBLK	Sample ID: MBLK	Units: mg/L		Analysis Date: 27-Mar-2024 11:36					
Client ID:	Run ID: ICS-Integrion_462368		SeqNo: 7911965		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Chloride	ND	0.500							
Sulfate	ND	0.500							
LCS	Sample ID: LCS	Units: mg/L		Analysis Date: 27-Mar-2024 11:42					
Client ID:	Run ID: ICS-Integrion_462368		SeqNo: 7911966		PrepDate:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Chloride	20.94	0.500	20	0	105	90 - 110			
Sulfate	21.36	0.500	20	0	107	90 - 110			
MS	Sample ID: HS24031559-01MS	Units: mg/L		Analysis Date: 27-Mar-2024 12:00					
Client ID:	Run ID: ICS-Integrion_462368		SeqNo: 7911969		PrepDate:		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Chloride	176.8	2.50	50	130.8	92.1	80 - 120			
Sulfate	97.64	2.50	50	48.58	98.1	80 - 120			
MS	Sample ID: HS24031315-01MS	Units: mg/L		Analysis Date: 27-Mar-2024 13:11					
Client ID:	Run ID: ICS-Integrion_462368		SeqNo: 7911978		PrepDate:		DF: 10		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Chloride	643.4	5.00	100	588.3	55.1	80 - 120			SO
Sulfate	101.4	5.00	100	0	101	80 - 120			
MSD	Sample ID: HS24031559-01MSD	Units: mg/L		Analysis Date: 27-Mar-2024 12:06					
Client ID:	Run ID: ICS-Integrion_462368		SeqNo: 7911970		PrepDate:		DF: 5		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	RPD %RPD	RPD Limit Qual
Chloride	176	2.50	50	130.8	90.4	80 - 120	176.8	0.476	20
Sulfate	97.15	2.50	50	48.58	97.1	80 - 120	97.64	0.496	20

Client:

Project:

WorkOrder:

PDC Energy

Segal 2-4-24

HS24031320

QC BATCH REPORT

Batch ID: R462368 (0)		Instrument: ICS-Integrion		Method: ANIONS BY E300.0, REV 2.1, 1993						
MSD	Sample ID: HS24031315-01MSD	Units: mg/L		Analysis Date: 27-Mar-2024 13:17						
Client ID:	Run ID: ICS-Integrion_462368		SeqNo: 7911979		PrepDate:		DF: 10			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	635.1	5.00	100	588.3	46.8	80 - 120	643.4	1.3	20	SO
Sulfate	101.8	5.00	100	0	102	80 - 120	101.4	0.448	20	
The following samples were analyzed in this batch: HS24031320-01										

Client: PDC Energy
Project: Segal 2-4-24
WorkOrder: HS24031320

**QUALIFIERS,
ACRONYMS, UNITS**

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL/SDL

Acronym	Description
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
California	2919; 2024	30-Apr-2024
Florida	E87611-38	30-Jun-2024
Illinois	2000322023-11	30-Jun-2024
Kansas	E-10352 2023-2024	31-Jul-2024
Louisiana	03087 2023-2024	30-Jun-2024
Maryland	343; 2023-2024	30-Jun-2024
North Carolina	624 - 2024	31-Dec-2024
North Dakota	R-193 2023-2024	30-Apr-2024
Oklahoma	2023-140	31-Aug-2024
Texas	T104704231-23-32	30-Apr-2024
Utah	TX026932023-14	31-Jul-2024

Sample Receipt Checklist

Work Order ID: HS24031320

Date/Time Received: **22-Mar-2024 09:30**

Client Name: PDC Energy 80203

Received by: **Paresh M. Giga**Completed By: /S/ Paresh M. Giga

23-Mar-2024 09:00

Reviewed by: /S/ Tyler Monroe

25-Mar-2024 16:14

eSignature

Date/Time

eSignature

Date/Time

Matrices: **Water**Carrier name: **FedEx Priority Overnight**

Shipping container/cooler in good condition?

Yes ☒No ☐Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐No ☐Not Present ☒

Custody seals intact on sample bottles?

Yes ☐No ☐Not Present ☒

VOA/TX1005/TX1006 Solids in hermetically sealed vials?

Yes ☐No ☐Not Present ☒

Chain of custody present?

Yes ☒No ☐

1 Page(s)

Chain of custody signed when relinquished and received?

Yes ☒No ☐

COC IDs:none

Samplers name present on COC?

Yes ☒No ☐

Chain of custody agrees with sample labels?

Yes ☒No ☐

Samples in proper container/bottle?

Yes ☒No ☐

Sample containers intact?

Yes ☒No ☐

Sufficient sample volume for indicated test?

Yes ☒No ☐

All samples received within holding time?

Yes ☒No ☐

Container/Temp Blank temperature in compliance?

Yes ☒No ☐

Temperature(s)/Thermometer(s):

1.5C/1.4C U/C

IR31

Cooler(s)/Kit(s):

Blue

Date/Time sample(s) sent to storage:

3/23/24 09:30

Water - VOA vials have zero headspace?

Yes ☒No ☐No VOA vials submitted ☐

Water - pH acceptable upon receipt?

Yes ☒No ☐N/A ☐

pH adjusted?

Yes ☐No ☒N/A ☐

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

Corrective Action:

**ALS Environmental**965 E 11th St
Loveland, CO 80537
PH: 970-305-1648**Chain-of-Custody**

WORKORDER #

		SAMPLER		Jeff Braden		DATE		3/19/24		PAGE		1 of 1				
PROJECT NAME		Segal 2-4-24		FACILITY ID		123-25584		TURNAROUND		Standard		DISPOSAL By Lab or Return to Client				
PROJECT No.		09F2073088		EDD FORMAT		COGCC EDD, LTE		Dissoived Methane, Ethane, Propane								
COMPANY NAME		PDC Energy		PURCHASE ORDER		N/A		BTEX & TPH GRO								
SEND REPORT TO		Jenifer Hakkarinen		BILL TO COMPANY		PDC Energy		TPH DRO								
ADDRESS		1775 Sherman ST, Suite 3000		INVOICE ATTN TO		Christopher Schelich		Alkalinity, Carbonate, Bicarbonate, Total								
CITY / STATE / ZIP		Denver, CO 80203		ADDRESS		1775 Sherman Street, Suite 3000		Total Cations - see comments								
PHONE		303-860-5815		CITY / STATE / ZIP		Denver, Colorado		Total Anions - see comments								
FAX				PHONE		970-415-1881		Total Dissolved Solids								
E-MAIL		jenifer.hakkarinen@pdce.com jessica.johannsen@pdce.com jbraden@ensolum.com		E-MAIL		Christopher.Schelich@pdce.com										
Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	RSK 175	SW8260_25	SW8015M	SM2320B	EPA200.7/208	EPA 300.0	SM2540C		
	Segal 2-4-24	W	3/19/24	1200	11	1,2	II	X	X	X	X	X	X	X		
*Time Zone: MST		Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter														
For metals or anions, please detail analytes below.																
Comments:	Cations/Anions:	QC PACKAGE (check below)														
Calcium, Chloride, Magnesium, Potassium, Sodium, Sulfate* Samples analyzed per COGCC Bradenhead Sampling Program If bubbles are present in voas, please proceed with analysis B10- 1.50 431- 0.10 C12- 0.10		<input checked="" type="checkbox"/>	LEVEL II (Standard QC)													
		<input type="checkbox"/>	LEVEL III (Std QC + forms)													
		<input type="checkbox"/>	LEVEL IV (Std QC + forms + raw data)													
		<input type="checkbox"/>														
Preservative Key:		1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035														
RELINQUISHED BY		SIGNATURE		PRINTED NAME		DATE		TIME								
				Jeff Braden		3/21/24		1255								
RECEIVED BY				Karen Craven		3-21-24		1255								
RELINQUISHED BY				Karen Craven		3-21-24		1255								
RECEIVED BY				P. Craven		3/21/24		09:30								
RELINQUISHED BY																
RECEIVED BY																

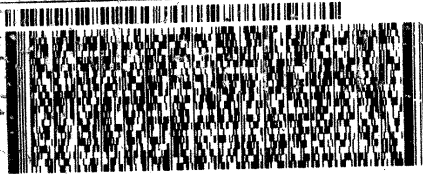
HS24031320
PDC Energy
Segal 2-4-24

ORIGIN ID:GXVA (281) 530-5656
SAMPLE RECEIVING
ALS
10450 STANCLIFF RD
SUITE 210
HOUSTON, TX 77099
UNITED STATES US

SHIP DATE: 21MAR24
ACTWGT: 46.70 LB
CAD: 0780439/CAFE3709
DIMS: 24x14x13 IN
BILL THIRD PARTY

TO **SAMPLE RECEIVING**
ALS HOUSTON
10450 STANCLIFF RD
SUITE 210
HOUSTON TX 77099

(281) 530-5656
PO: 967554812



FedEx
Express



TRK# 7122 9261 8523
0201

FRI - 22 MAR 10:30A
PRIORITY OVERNIGHT

NA SGRA

77099
TX-US IAH



Received 3/22/24 09:30.
Blue uc
1.5
+31 cfm 019