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December 19, 2022

Max Trehus
PDC Energy
4000 Burlington Ave.
Evans, CO 80620

Work Order: **HS22120212**

Laboratory Results for: **Bost 16C-8-L**

Dear Max Trehus ,

ALS Environmental received 2 sample(s) on Dec 03, 2022 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: DAYNA.FISHER
Tyler Monroe

Client: PDC Energy
Project: Bost 16C-8-L
Work Order: HS22120212

SAMPLE SUMMARY

Lab Samp ID	Client Sample ID	Matrix	TagNo	Collection Date	Date Received	Hold
HS22120212-01	16C-8-LA	Water		01-Dec-2022 09:43	03-Dec-2022 09:05	☐
HS22120212-02	16C-8-LB	Water		01-Dec-2022 09:43	03-Dec-2022 09:05	☐

Client: PDC Energy **CASE NARRATIVE**
Project: Bost 16C-8-L
Work Order: HS22120212

GC Semivolatiles by Method RSK-175

Batch ID: R423567

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

GC Semivolatiles by Method SW8015M

Batch ID: 186935

Sample ID: 16C-8-LA (HS22120212-01)

• The surrogate recoveries could not be determined due to dilution below the calibration range.

GC Volatiles by Method SW8015

Batch ID: R423243

Sample ID: 16C-8-LA (HS22120212-01)

• Surrogate failed outside control limits high due to matrix interference. This was confirmed by reanalysis.

GCMS Volatiles by Method SW8260

Batch ID: R423874

Sample ID: 16C-8-LA (HS22120212-01)

• Dilution required due to high concentrations of non target analytes.

Sample ID: HS22120619-03MS

• MS and MSD are for an unrelated sample

Metals by Method E200.8

Batch ID: 187498

Sample ID: 16C-8-LB (HS22120212-02)

• Sample ran at 5x due to high concentration of Calcium.

Sample ID: HS22120313-01MSD

• MS and MSD are for an unrelated sample

Sample ID: HS22120366-01MS

• MS and MSD are for an unrelated sample

Batch ID: 187478

Sample ID: 16C-8-LA (HS22120212-01)

• Sample ran at a 5X dilution due to sample matrix.

Sample ID: HS22120366-05MS

• MS and MSD are for an unrelated sample

Client: PDC Energy **CASE NARRATIVE**
Project: Bost 16C-8-L
Work Order: HS22120212

WetChemistry by Method SM2320B

Batch ID: R424086

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

WetChemistry by Method E300

Batch ID: R423808

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

WetChemistry by Method M2540C

Batch ID: R423644

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

Client: PDC Energy
Project: Bost 16C-8-L
Sample ID: 16C-8-LA
Collection Date: 01-Dec-2022 09:43

ANALYTICAL REPORT
WorkOrder:HS22120212
Lab ID:HS22120212-01
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
LOW LEVEL VOLATILES BY SW8260C		**Method:SW8260**					Analyst: FT
Benzene	U		200	1000	ug/L	1000	13-Dec-2022 15:48
Ethylbenzene	U		300	1000	ug/L	1000	13-Dec-2022 15:48
m,p-Xylene	**1,400**	J	**500**	**2000**	**ug/L**	1000	13-Dec-2022 15:48
o-Xylene	**510**	J	**300**	**1000**	**ug/L**	1000	13-Dec-2022 15:48
Toluene	**730**	J	**200**	**1000**	**ug/L**	1000	13-Dec-2022 15:48
Xylenes, Total	**1,900**		**300**	**1000**	**ug/L**	1000	13-Dec-2022 15:48
Surr: 1,2-Dichloroethane-d4	*112*			*70-126*	*%REC*	*1000*	*13-Dec-2022 15:48*
Surr: 4-Bromofluorobenzene	*104*			*77-113*	*%REC*	*1000*	*13-Dec-2022 15:48*
Surr: Dibromofluoromethane	*105*			*77-123*	*%REC*	*1000*	*13-Dec-2022 15:48*
Surr: Toluene-d8	*99.4*			*82-127*	*%REC*	*1000*	*13-Dec-2022 15:48*
GASOLINE RANGE ORGANICS BY SW8015C		**Method:SW8015**					Analyst: FT
Gasoline Range Organics	**589**		**0.500**	**2.50**	**mg/L**	50	05-Dec-2022 17:46
Surr: 4-Bromofluorobenzene	*4500*	*S*		*70-123*	*%REC*	*50*	*05-Dec-2022 17:46*
DISSOLVED GASES BY RSK-175		**Method:RSK-175**					Analyst: SAM
Ethane	**374**		**1.44**	**10.0**	**ug/L**	10	06-Dec-2022 11:43
Methane	**706**		**5.35**	**25.0**	**ug/L**	50	06-Dec-2022 12:04
Propane	**255**		**10.0**	**10.0**	**ug/L**	10	06-Dec-2022 11:43
TPH DRO/ORO BY SW8015C		**Method:SW8015M**			Prep:SW3511 / 05-Dec-2022		Analyst: PPM
DRO (>C10 - C28)	**4,300**		**21**	**51**	**mg/L**	1000	08-Dec-2022 14:34
Surr: 2-Fluorobiphenyl	*0*	*JS*		*60-135*	*%REC*	*1000*	*08-Dec-2022 14:34*
TOTAL METALS BY E200.8, REV 5.4, 1994		**Method:E200.8**			Prep:E200.8 / 16-Dec-2022		Analyst: JC
Calcium	**1,800**		**0.360**	**10.0**	**mg/L**	20	19-Dec-2022 12:46
Magnesium	**0.695**	J	**0.0390**	**2.50**	**mg/L**	5	19-Dec-2022 12:44
Potassium	**110**		**0.330**	**5.00**	**mg/L**	10	16-Dec-2022 20:25
Sodium	**290**		**0.210**	**2.00**	**mg/L**	10	16-Dec-2022 20:25
ANIONS BY E300.0, REV 2.1, 1993		**Method:E300**					Analyst: TH
Chloride	**2,470**		**20.0**	**50.0**	**mg/L**	100	12-Dec-2022 20:33
Sulfate	**516**		**2.00**	**5.00**	**mg/L**	10	12-Dec-2022 20:28
TOTAL DISSOLVED SOLIDS BY SM2540C -2011		**Method:M2540C**					Analyst: CWG
Total Dissolved Solids (Residue, Filterable)	**45,000**		**5.00**	**10.0**	**mg/L**	1	08-Dec-2022 16:52
ALKALINITY BY SM 2320B-2011		**Method:SM2320B**					Analyst: JAC
Alkalinity, Bicarbonate (As CaCO3)	**337**		**5.00**	**5.00**	**mg/L**	1	15-Dec-2022 03:23
Alkalinity, Carbonate (As CaCO3)	**136**		**5.00**	**5.00**	**mg/L**	1	15-Dec-2022 03:23
Alkalinity, Total (As CaCO3)	**473**		**5.00**	**5.00**	**mg/L**	1	15-Dec-2022 03:23

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

Client: PDC Energy
Project: Bost 16C-8-L
Sample ID: 16C-8-LB
Collection Date: 01-Dec-2022 09:43

ANALYTICAL REPORT
WorkOrder:HS22120212
Lab ID:HS22120212-02
Matrix:Water

ANALYSES	RESULT	QUAL	MDL	REPORT LIMIT	UNITS	DILUTION FACTOR	DATE ANALYZED
DISSOLVED METALS BY E200.8, REV 5.4, 1994	**Method:E200.8 (dissolved)**				Prep:E200.8 / 16-Dec-2022		Analyst: JHD
Calcium	**1,930**		**1.80**	**50.0**	**mg/L**	100	19-Dec-2022 13:01
Magnesium	**0.298**	J	**0.0390**	**2.50**	**mg/L**	5	19-Dec-2022 13:06
Potassium	**112**		**0.330**	**5.00**	**mg/L**	10	16-Dec-2022 22:12
Sodium	**298**		**0.210**	**2.00**	**mg/L**	10	16-Dec-2022 22:12

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

Weight / Prep Log

Client: PDC Energy
Project: Bost 16C-8-L
WorkOrder: HS22120212

Batch ID: 186935 **Start Date:** 05 Dec 2022 08:30 **End Date:** 05 Dec 2022 12:00
Method: SW3511 **Prep Code:** 3511_DRO

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS22120212-01		32.04 (mL)	2 (mL)	0.06242	40 mL Amber

Batch ID: 186964 **Start Date:** 05 Dec 2022 18:30 **End Date:** 05 Dec 2022 19:00
Method: SAMPLE FILTRATION - 0.45 MICRON FILTER **Prep Code:** FILTRATION

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS22120212-02		100 (mL)	100 (mL)	1	120 ml Plastic, Neat

Batch ID: 187478 **Start Date:** 16 Dec 2022 09:00 **End Date:** 16 Dec 2022 13:00
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	
HS22120212-01		10 (mL)	10 (mL)	1	250 mL plastic, HNO3 to pH <2

Batch ID: 187498 **Start Date:** 16 Dec 2022 10:00 **End Date:** 16 Dec 2022 14:00
Method: DISSOLVED METALS DIGESTION BY E200.8,REV 5.4,1994 **Prep Code:** 200.8_DISSPR

Sample ID	Container	Sample Wt/Vol	Final Volume	Prep Factor	
HS22120212-02		10 (mL)	10 (mL)	1	120 ml Plastic, Neat

Client: PDC Energy
Project: Bost 16C-8-L
WorkOrder: HS22120212

DATES REPORT

Sample ID	Client Samp ID	Collection Date	Leachate Date	Prep Date	Analysis Date	DF
Batch ID: 186935 (0)	**Test Name :** TPH DRO/ORO BY SW8015C				**Matrix:** Water	
HS22120212-01	16C-8-LA	01 Dec 2022 09:43		05 Dec 2022 08:30	08 Dec 2022 14:34	1000
Batch ID: 187478 (0)	**Test Name :** TOTAL METALS BY E200.8, REV 5.4, 1994				**Matrix:** Water	
HS22120212-01	16C-8-LA	01 Dec 2022 09:43		16 Dec 2022 09:00	19 Dec 2022 12:46	20
HS22120212-01	16C-8-LA	01 Dec 2022 09:43		16 Dec 2022 09:00	19 Dec 2022 12:44	5
HS22120212-01	16C-8-LA	01 Dec 2022 09:43		16 Dec 2022 09:00	16 Dec 2022 20:25	10
Batch ID: 187498 (0)	**Test Name :** DISSOLVED METALS BY E200.8, REV 5.4, 1994				**Matrix:** Water	
HS22120212-02	16C-8-LB	01 Dec 2022 09:43		16 Dec 2022 10:00	19 Dec 2022 13:06	5
HS22120212-02	16C-8-LB	01 Dec 2022 09:43		16 Dec 2022 10:00	19 Dec 2022 13:01	100
HS22120212-02	16C-8-LB	01 Dec 2022 09:43		16 Dec 2022 10:00	16 Dec 2022 22:12	10
Batch ID: R423243 (0)	**Test Name :** GASOLINE RANGE ORGANICS BY SW8015C				**Matrix:** Water	
HS22120212-01	16C-8-LA	01 Dec 2022 09:43			05 Dec 2022 17:46	50
Batch ID: R423567 (0)	**Test Name :** DISSOLVED GASES BY RSK-175				**Matrix:** Water	
HS22120212-01	16C-8-LA	01 Dec 2022 09:43			06 Dec 2022 12:04	50
HS22120212-01	16C-8-LA	01 Dec 2022 09:43			06 Dec 2022 11:43	10
Batch ID: R423644 (0)	**Test Name :** TOTAL DISSOLVED SOLIDS BY SM2540C-2011				**Matrix:** Water	
HS22120212-01	16C-8-LA	01 Dec 2022 09:43			08 Dec 2022 16:52	1
Batch ID: R423808 (0)	**Test Name :** ANIONS BY E300.0, REV 2.1, 1993				**Matrix:** Water	
HS22120212-01	16C-8-LA	01 Dec 2022 09:43			12 Dec 2022 20:33	100
HS22120212-01	16C-8-LA	01 Dec 2022 09:43			12 Dec 2022 20:28	10
Batch ID: R423874 (0)	**Test Name :** LOW LEVEL VOLATILES BY SW8260C				**Matrix:** Water	
HS22120212-01	16C-8-LA	01 Dec 2022 09:43			13 Dec 2022 15:48	1000
Batch ID: R424086 (0)	**Test Name :** ALKALINITY BY SM 2320B-2011				**Matrix:** Water	
HS22120212-01	16C-8-LA	01 Dec 2022 09:43			15 Dec 2022 03:23	1

Client: PDC Energy
Project: Bost 16C-8-L
WorkOrder: HS22120212

QC BATCH REPORT

Batch ID: 186935 (0) **Instrument: FID-16** **Method: TPH DRO/ORO BY SW8015C**

MBLK Sample ID: **MBLK-186935** Units: **mg/L** Analysis Date: **08-Dec-2022 11:38**
Client ID: Run ID: **FID-16_423739** SeqNo: **7026790** PrepDate: **05-Dec-2022** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (>C10 - C28)	U	0.050								
Surr: 2-Fluorobiphenyl	*0.04747*	*0.0050*	*0.06*	*0*	*79.1*	*60 - 135*				

LCS Sample ID: **LCS-186935** Units: **mg/L** Analysis Date: **08-Dec-2022 12:07**
Client ID: Run ID: **FID-16_423739** SeqNo: **7026791** PrepDate: **05-Dec-2022** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (>C10 - C28)	0.6381	0.050	0.6	0	106	70 - 130				
Surr: 2-Fluorobiphenyl	*0.06839*	*0.0050*	*0.06*	*0*	*114*	*60 - 135*				

LCSD Sample ID: **LCSD-186935** Units: **mg/L** Analysis Date: **08-Dec-2022 12:36**
Client ID: Run ID: **FID-16_423739** SeqNo: **7026792** PrepDate: **05-Dec-2022** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
DRO (>C10 - C28)	0.5372	0.050	0.6	0	89.5	70 - 130	0.6381	17.2	20	
Surr: 2-Fluorobiphenyl	*0.06142*	*0.0050*	*0.06*	*0*	*102*	*60 - 135*	*0.06839*	*10.7*	*20*	

The following samples were analyzed in this batch: HS22120212-01

Client: PDC Energy
Project: Bost 16C-8-L
WorkOrder: HS22120212

QC BATCH REPORT

Batch ID: R423567 (0) **Instrument:** FID-4 **Method:** DISSOLVED GASES BY RSK-175

MBLK Sample ID: **MBLK-221206** Units: **ug/L** Analysis Date: **06-Dec-2022 07:13**
Client ID: Run ID: **FID-4_423567** SeqNo: **7022582** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	U	1.00								
Methane	U	0.500								
Propane	U	1.00								

LCS Sample ID: **LCS-221206** Units: **ug/L** Analysis Date: **06-Dec-2022 07:35**
Client ID: Run ID: **FID-4_423567** SeqNo: **7022583** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	20.2	1.00	18.04	0	112	75 - 125				
Methane	9.46	0.500	9.647	0	98.1	75 - 125				
Propane	30.53	1.00	26.46	0	115	75 - 125				

LCSD Sample ID: **LCSD-221206** Units: **ug/L** Analysis Date: **06-Dec-2022 07:51**
Client ID: Run ID: **FID-4_423567** SeqNo: **7022584** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ethane	19.74	1.00	18.04	0	109	75 - 125	20.2	2.3	30	
Methane	8.209	0.500	9.647	0	85.1	75 - 125	9.46	14.2	30	
Propane	29.85	1.00	26.46	0	113	75 - 125	30.53	2.25	30	

The following samples were analyzed in this batch: HS22120212-01

Client: PDC Energy
Project: Bost 16C-8-L
WorkOrder: HS22120212

QC BATCH REPORT

Batch ID: R423243 (0) **Instrument:** FID-20 **Method:** GASOLINE RANGE ORGANICS BY SW8015C

MBLK Sample ID: **MBLK-221205** Units: **mg/L** Analysis Date: **05-Dec-2022 15:42**
Client ID: Run ID: **FID-20_423243** SeqNo: **7015421** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	U	0.0500								
Surr: 4-Bromofluorobenzene	*0.1173*	*0.00500*	*0.1*	*0*	*117*	*70 - 121*				

LCS Sample ID: **LCS-221205** Units: **mg/L** Analysis Date: **05-Dec-2022 15:15**
Client ID: Run ID: **FID-20_423243** SeqNo: **7015419** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8695	0.0500	1	0	86.9	76 - 124				
Surr: 4-Bromofluorobenzene	*0.08642*	*0.00500*	*0.1*	*0*	*86.4*	*52 - 138*				

LCSD Sample ID: **LCSD-221205** Units: **mg/L** Analysis Date: **05-Dec-2022 15:29**
Client ID: Run ID: **FID-20_423243** SeqNo: **7015420** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Gasoline Range Organics	0.8672	0.0500	1	0	86.7	76 - 124	0.8695	0.262	20	
Surr: 4-Bromofluorobenzene	*0.09026*	*0.00500*	*0.1*	*0*	*90.3*	*52 - 138*	*0.08642*	*4.34*	*20*	

The following samples were analyzed in this batch: HS22120212-01

Client: PDC Energy
Project: Bost 16C-8-L
WorkOrder: HS22120212

QC BATCH REPORT

Batch ID: 187478 (0) **Instrument: ICPMS06** **Method: TOTAL METALS BY E200.8, REV 5.4, 1994**

MBLK Sample ID: **MBLK-187478** Units: **ug/L** Analysis Date: **16-Dec-2022 20:05**
Client ID: Run ID: **ICPMS06_424172** SeqNo: **7038406** PrepDate: **16-Dec-2022** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	U	500								
Magnesium	15.65	500								J
Potassium	U	500								
Sodium	U	200								

LCS Sample ID: **LCS-187478** Units: **ug/L** Analysis Date: **16-Dec-2022 20:07**
Client ID: Run ID: **ICPMS06_424172** SeqNo: **7038407** PrepDate: **16-Dec-2022** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	5425	500	5000	0	109	85 - 115				
Magnesium	5330	500	5000	0	107	85 - 115				
Potassium	5317	500	5000	0	106	85 - 115				
Sodium	5263	200	5000	0	105	85 - 115				

MS Sample ID: **HS22120366-06MS** Units: **ug/L** Analysis Date: **16-Dec-2022 20:17**
Client ID: Run ID: **ICPMS06_424172** SeqNo: **7038412** PrepDate: **16-Dec-2022** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	17840	500	5000	12470	107	70 - 130				
Magnesium	6545	500	5000	1361	104	70 - 130				
Potassium	5586	500	5000	271.2	106	70 - 130				
Sodium	15980	200	5000	10770	104	70 - 130				

MS Sample ID: **HS22120366-05MS** Units: **ug/L** Analysis Date: **16-Dec-2022 20:11**
Client ID: Run ID: **ICPMS06_424172** SeqNo: **7038409** PrepDate: **16-Dec-2022** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	304100	500	5000	280700	468	70 - 130				SEO
Magnesium	89780	500	5000	79670	202	70 - 130				SO
Potassium	6672	500	5000	1247	108	70 - 130				
Sodium	321000	200	5000	301200	396	70 - 130				SEO

Client: PDC Energy
Project: Bost 16C-8-L
WorkOrder: HS22120212

QC BATCH REPORT

Batch ID: 187478 (0) **Instrument: ICPMS06** **Method: TOTAL METALS BY E200.8, REV 5.4, 1994**

MSD Sample ID: **HS22120366-06MSD** Units: **ug/L** Analysis Date: **16-Dec-2022 20:19**
Client ID: Run ID: **ICPMS06_424172** SeqNo: **7038413** PrepDate: **16-Dec-2022** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	18480	500	5000	12470	120	70 - 130	17840	3.5	20	
Magnesium	6784	500	5000	1361	108	70 - 130	6545	3.59	20	
Potassium	5614	500	5000	271.2	107	70 - 130	5586	0.5	20	
Sodium	16600	200	5000	10770	117	70 - 130	15980	3.82	20	

MSD Sample ID: **HS22120366-05MSD** Units: **ug/L** Analysis Date: **16-Dec-2022 20:13**
Client ID: Run ID: **ICPMS06_424172** SeqNo: **7038410** PrepDate: **16-Dec-2022** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	301000	500	5000	280700	407	70 - 130	304100	1.01	20	SEO
Magnesium	89780	500	5000	79670	202	70 - 130	89780	0	20	SO
Potassium	7200	500	5000	1247	119	70 - 130	6672	7.62	20	
Sodium	319200	200	5000	301200	360	70 - 130	321000	0.553	20	SEO

The following samples were analyzed in this batch: HS22120212-01

Client: PDC Energy
Project: Bost 16C-8-L
WorkOrder: HS22120212

QC BATCH REPORT

Batch ID: 187498 (0) **Instrument: ICPMS07** **Method: DISSOLVED METALS BY E200.8, REV 5.4, 1994 (DISSOLVED)**

MBLK Sample ID: **MBLKF2-187498** Units: **ug/L** Analysis Date: **16-Dec-2022 21:48**
Client ID: Run ID: **ICPMS07_424168** SeqNo: **7037410** PrepDate: **16-Dec-2022** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	U	500								
Magnesium	10.81	500								J
Potassium	U	500								
Sodium	U	200								

MBLK Sample ID: **MBLKF3-187498** Units: **ug/L** Analysis Date: **16-Dec-2022 21:49**
Client ID: Run ID: **ICPMS07_424168** SeqNo: **7037411** PrepDate: **16-Dec-2022** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	36.83	500								J
Magnesium	18.42	500								J
Potassium	U	500								
Sodium	U	200								

MBLK Sample ID: **MBLKF1-187498** Units: **ug/L** Analysis Date: **16-Dec-2022 21:46**
Client ID: Run ID: **ICPMS07_424168** SeqNo: **7037409** PrepDate: **16-Dec-2022** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	U	500								
Magnesium	12.8	500								J
Potassium	U	500								
Sodium	U	200								

MBLK Sample ID: **MBLK-187498** Units: **ug/L** Analysis Date: **16-Dec-2022 21:44**
Client ID: Run ID: **ICPMS07_424168** SeqNo: **7037408** PrepDate: **16-Dec-2022** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	U	500								
Magnesium	U	500								
Potassium	U	500								
Sodium	U	200								

Client: PDC Energy
Project: Bost 16C-8-L
WorkOrder: HS22120212

QC BATCH REPORT

Batch ID: 187498 (0) **Instrument: ICPMS07** **Method: DISSOLVED METALS BY E200.8, REV 5.4, 1994 (DISSOLVED)**

LCS Sample ID: **LCS-187498** Units: **ug/L** Analysis Date: **16-Dec-2022 21:51**
Client ID: Run ID: **ICPMS07_424168** SeqNo: **7037412** PrepDate: **16-Dec-2022** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	4840	500	5000	0	96.8	85 - 115				
Magnesium	4960	500	5000	0	99.2	85 - 115				
Potassium	4902	500	5000	0	98.0	85 - 115				
Sodium	4774	200	5000	0	95.5	85 - 115				

MS Sample ID: **HS22120366-01MS** Units: **ug/L** Analysis Date: **16-Dec-2022 22:04**
Client ID: Run ID: **ICPMS07_424168** SeqNo: **7037416** PrepDate: **16-Dec-2022** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	88260	500	5000	76730	231	85 - 115				SO
Magnesium	38390	500	5000	31130	145	85 - 115				SO
Potassium	7559	500	5000	2434	102	85 - 115				
Sodium	408000	200	5000	373300	693	85 - 115				SEO

MS Sample ID: **HS22120313-01MS** Units: **ug/L** Analysis Date: **16-Dec-2022 21:59**
Client ID: Run ID: **ICPMS07_424168** SeqNo: **7037438** PrepDate: **16-Dec-2022** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	72440	500	5000	68660	75.6	85 - 115				SO
Magnesium	13950	500	5000	9225	94.4	85 - 115				
Potassium	9549	500	5000	4816	94.7	85 - 115				
Sodium	85600	200	5000	80870	94.7	85 - 115				O

MSD Sample ID: **HS22120366-01MSD** Units: **ug/L** Analysis Date: **16-Dec-2022 22:06**
Client ID: Run ID: **ICPMS07_424168** SeqNo: **7037417** PrepDate: **16-Dec-2022** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	83870	500	5000	76730	143	85 - 115	88260	5.1	20	SO
Magnesium	36450	500	5000	31130	106	85 - 115	38390	5.2	20	O
Potassium	7245	500	5000	2434	96.2	85 - 115	7559	4.24	20	
Sodium	391700	200	5000	373300	366	85 - 115	408000	4.09	20	SEO

Client: PDC Energy
Project: Bost 16C-8-L
WorkOrder: HS22120212

QC BATCH REPORT

Batch ID: 187498 (0) **Instrument: ICPMS07** **Method: DISSOLVED METALS BY E200.8, REV 5.4, 1994 (DISSOLVED)**

MSD Sample ID: **HS22120313-01MSD** Units: **ug/L** Analysis Date: **16-Dec-2022 22:01**
Client ID: Run ID: **ICPMS07_424168** SeqNo: **7037439** PrepDate: **16-Dec-2022** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Calcium	70870	500	5000	68660	44.1	85 - 115	72440	2.2	20	SO
Magnesium	13620	500	5000	9225	87.9	85 - 115	13950	2.37	20	
Potassium	9349	500	5000	4816	90.6	85 - 115	9549	2.12	20	
Sodium	82120	200	5000	80870	25.0	85 - 115	85600	4.16	20	SO

The following samples were analyzed in this batch: HS22120212-02

Client: PDC Energy
Project: Bost 16C-8-L
WorkOrder: HS22120212

QC BATCH REPORT

Batch ID: R423874 (0) **Instrument: VOA11** **Method: LOW LEVEL VOLATILES BY SW8260C**

MBLK Sample ID: **VBLKW-221213** Units: **ug/L** Analysis Date: **13-Dec-2022 10:06**
Client ID: Run ID: **VOA11_423874** SeqNo: **7029833** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	1.0								
Ethylbenzene	U	1.0								
m,p-Xylene	U	2.0								
o-Xylene	U	1.0								
Toluene	U	1.0								
Xylenes, Total	U	1.0								
Surr: 1,2-Dichloroethane-d4	*54.77*	*1.0*	*50*	*0*	*110*	*70 - 123*				
Surr: 4-Bromofluorobenzene	*51.09*	*1.0*	*50*	*0*	*102*	*77 - 113*				
Surr: Dibromofluoromethane	*50.6*	*1.0*	*50*	*0*	*101*	*73 - 126*				
Surr: Toluene-d8	*50.82*	*1.0*	*50*	*0*	*102*	*81 - 120*				

LCS Sample ID: **VLCSW-221213** Units: **ug/L** Analysis Date: **13-Dec-2022 09:21**
Client ID: Run ID: **VOA11_423874** SeqNo: **7029832** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	17	1.0	20	0	85.0	74 - 120				
Ethylbenzene	16.91	1.0	20	0	84.5	77 - 117				
m,p-Xylene	33.76	2.0	40	0	84.4	77 - 122				
o-Xylene	16.94	1.0	20	0	84.7	75 - 119				
Toluene	17.15	1.0	20	0	85.8	77 - 118				
Xylenes, Total	50.7	1.0	60	0	84.5	75 - 122				
Surr: 1,2-Dichloroethane-d4	*52.53*	*1.0*	*50*	*0*	*105*	*70 - 123*				
Surr: 4-Bromofluorobenzene	*50*	*1.0*	*50*	*0*	*100*	*77 - 113*				
Surr: Dibromofluoromethane	*50.02*	*1.0*	*50*	*0*	*100*	*73 - 126*				
Surr: Toluene-d8	*51.09*	*1.0*	*50*	*0*	*102*	*81 - 120*				

Client: PDC Energy
Project: Bost 16C-8-L
WorkOrder: HS22120212

QC BATCH REPORT

Batch ID: R423874 (0) **Instrument: VOA11** **Method: LOW LEVEL VOLATILES BY SW8260C**

MS Sample ID: **HS22120619-03MS** Units: **ug/L** Analysis Date: **13-Dec-2022 13:08**
Client ID: Run ID: **VOA11_423874** SeqNo: **7029835** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	45.95	1.0	20	19.62	132	70 - 127				S
Ethylbenzene	26.33	1.0	20	0.3599	130	70 - 124				S
m,p-Xylene	53.14	2.0	40	0	133	70 - 130				S
o-Xylene	26.81	1.0	20	0	134	70 - 124				S
Toluene	26.63	1.0	20	0.4269	131	70 - 123				S
Xylenes, Total	79.95	1.0	60	0	133	70 - 130				S
Surr: 1,2-Dichloroethane-d4	*51.99*	*1.0*	*50*	*0*	*104*	*70 - 126*				
Surr: 4-Bromofluorobenzene	*52.39*	*1.0*	*50*	*0*	*105*	*77 - 113*				
Surr: Dibromofluoromethane	*49.52*	*1.0*	*50*	*0*	*99.0*	*77 - 123*				
Surr: Toluene-d8	*51.63*	*1.0*	*50*	*0*	*103*	*82 - 127*				

MSD Sample ID: **HS22120619-03MSD** Units: **ug/L** Analysis Date: **13-Dec-2022 13:30**
Client ID: Run ID: **VOA11_423874** SeqNo: **7029836** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	43.89	1.0	20	19.62	121	70 - 127	45.95	4.59	20	
Ethylbenzene	24.58	1.0	20	0.3599	121	70 - 124	26.33	6.89	20	
m,p-Xylene	48.39	2.0	40	0	121	70 - 130	53.14	9.37	20	
o-Xylene	25	1.0	20	0	125	70 - 124	26.81	6.96	20	S
Toluene	24.92	1.0	20	0.4269	122	70 - 123	26.63	6.66	20	
Xylenes, Total	73.39	1.0	60	0	122	70 - 130	79.95	8.55	20	
Surr: 1,2-Dichloroethane-d4	*53.49*	*1.0*	*50*	*0*	*107*	*70 - 126*	*51.99*	*2.85*	*20*	
Surr: 4-Bromofluorobenzene	*50.48*	*1.0*	*50*	*0*	*101*	*77 - 113*	*52.39*	*3.71*	*20*	
Surr: Dibromofluoromethane	*50.18*	*1.0*	*50*	*0*	*100*	*77 - 123*	*49.52*	*1.33*	*20*	
Surr: Toluene-d8	*50.8*	*1.0*	*50*	*0*	*102*	*82 - 127*	*51.63*	*1.62*	*20*	

The following samples were analyzed in this batch: HS22120212-01

Client: PDC Energy
Project: Bost 16C-8-L
WorkOrder: HS22120212

QC BATCH REPORT

Batch ID: R423644 (0) **Instrument:** Balance1 **Method:** TOTAL DISSOLVED SOLIDS BY SM2540C-2011

MBLK Sample ID: **WBLK-120822** Units: **mg/L** Analysis Date: **08-Dec-2022 16:52**
Client ID: Run ID: **Balance1_423644** SeqNo: **7024416** 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)	U	10.0								

LCS Sample ID: **WLCS-120822** Units: **mg/L** Analysis Date: **08-Dec-2022 16:52**
Client ID: Run ID: **Balance1_423644** SeqNo: **7024417** 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)	1066	10.0	1000	0	107	85 - 115				

DUP Sample ID: **HS22120414-29DUP** Units: **mg/L** Analysis Date: **08-Dec-2022 16:52**
Client ID: Run ID: **Balance1_423644** SeqNo: **7024415** 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)	210	10.0					210	0	5	

DUP Sample ID: **HS22120044-01DUP** Units: **mg/L** Analysis Date: **08-Dec-2022 16:52**
Client ID: Run ID: **Balance1_423644** SeqNo: **7024395** 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)	328	10.0					332	1.21	5	

The following samples were analyzed in this batch: HS22120212-01

Client: PDC Energy
Project: Bost 16C-8-L
WorkOrder: HS22120212

QC BATCH REPORT

Batch ID: R423808 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY E300.0, REV 2.1, 1993**

MBLK Sample ID: **MBLK** Units: **mg/L** Analysis Date: **12-Dec-2022 11:29**
Client ID: Run ID: **ICS-Integrion_423808** SeqNo: **7028476** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	U	0.500								
Sulfate	U	0.500								

LCS Sample ID: **LCS** Units: **mg/L** Analysis Date: **12-Dec-2022 11:34**
Client ID: Run ID: **ICS-Integrion_423808** SeqNo: **7028477** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	20.05	0.500	20	0	100	90 - 110				
Sulfate	21.94	0.500	20	0	110	90 - 110				

MS Sample ID: **HS22120674-01MS** Units: **mg/L** Analysis Date: **12-Dec-2022 21:41**
Client ID: Run ID: **ICS-Integrion_423808** SeqNo: **7028514** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	25.39	0.500	10	15.86	95.2	80 - 120				
Sulfate	24.87	0.500	10	14.54	103	80 - 120				

MS Sample ID: **HS22120521-01MS** Units: **mg/L** Analysis Date: **12-Dec-2022 11:44**
Client ID: Run ID: **ICS-Integrion_423808** SeqNo: **7028479** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	34.46	0.500	10	25.05	94.1	80 - 120				
Sulfate	23.11	0.500	10	13.25	98.6	80 - 120				

MSD Sample ID: **HS22120674-01MSD** Units: **mg/L** Analysis Date: **12-Dec-2022 21:47**
Client ID: Run ID: **ICS-Integrion_423808** SeqNo: **7028515** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	25.15	0.500	10	15.86	92.8	80 - 120	25.39	0.958	20	
Sulfate	24.65	0.500	10	14.54	101	80 - 120	24.87	0.868	20	

Client: PDC Energy
Project: Bost 16C-8-L
WorkOrder: HS22120212

QC BATCH REPORT

Batch ID: R423808 (0) **Instrument: ICS-Integrion** **Method: ANIONS BY E300.0, REV 2.1, 1993**

MSD Sample ID: **HS22120521-01MSD** Units: **mg/L** Analysis Date: **12-Dec-2022 12:08**
Client ID: Run ID: **ICS-Integrion_423808** SeqNo: **7028480** PrepDate: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	34.85	0.500	10	25.05	98.0	80 - 120	34.46	1.13	20	
Sulfate	23.29	0.500	10	13.25	100	80 - 120	23.11	0.771	20	

The following samples were analyzed in this batch: HS22120212-01

Client: PDC Energy
Project: Bost 16C-8-L
WorkOrder: HS22120212

QC BATCH REPORT

Batch ID: R424086 (0) **Instrument: ManTech01** **Method: ALKALINITY BY SM 2320B-2011**

MBLK Sample ID: **WBLKW2-121422** Units: **mg/L** Analysis Date: **15-Dec-2022 01:31**
Client ID: Run ID: **ManTech01_424086** SeqNo: **7034282** 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)	U	5.00								
Alkalinity, Carbonate (As CaCO3)	U	5.00								
Alkalinity, Total (As CaCO3)	U	5.00								

LCS Sample ID: **LCS2-121422** Units: **mg/L** Analysis Date: **15-Dec-2022 01:01**
Client ID: Run ID: **ManTech01_424086** SeqNo: **7034278** 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)	1054	5.00	1000	0	105	85 - 115				
Alkalinity, Total (As CaCO3)	1057	5.00	1000	0	106	85 - 115				

LCSD Sample ID: **LCSD2-121422** Units: **mg/L** Analysis Date: **15-Dec-2022 01:10**
Client ID: Run ID: **ManTech01_424086** SeqNo: **7034279** 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)	998.8	5.00	1000	0	99.9	85 - 115	1054	5.39	20	
Alkalinity, Total (As CaCO3)	1038	5.00	1000	0	104	85 - 115	1057	1.88	20	

DUP Sample ID: **HS22120526-04DUP** Units: **mg/L** Analysis Date: **15-Dec-2022 01:45**
Client ID: Run ID: **ManTech01_424086** SeqNo: **7034284** 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)	335.5	5.00					356.2	5.98	20	
Alkalinity, Carbonate (As CaCO3)	U	5.00					0	0	20	
Alkalinity, Total (As CaCO3)	335.5	5.00					356.2	5.98	20	

The following samples were analyzed in this batch: HS22120212-01

Client: PDC Energy
Project: Bost 16C-8-L
WorkOrder: **HS22120212**

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 Quantitaion Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

Unit Reported	Description
Date	
mg/L	Milligrams per Liter

CERTIFICATIONS,ACCREDITATIONS & LICENSES

Agency	Number	Expire Date
Arkansas	22-041-0	27-Mar-2023
California	2919 2022-2023	30-Apr-2023
Dept of Defense	L21-682	31-Dec-2023
Florida	E87611-36	30-Jun-2023
Illinois	2000322022-9	09-May-2023
Kansas	E-10352; 2022-2023	31-Jul-2023
Kentucky	123043, 2022-2023	30-Apr-2023
Louisiana	03087, 2022-2023	30-Jun-2023
Maryland	343, 2022-2023	30-Jun-2023
North Carolina	624-2022	31-Dec-2022
North Dakota	R-193 2022-2023	30-Apr-2023
Oklahoma	2022-141	31-Aug-2023
Texas	T104704231-22-29	30-Apr-2023
Utah	TX026932022-13	31-Jul-2023

Sample Receipt Checklist

Work Order ID: HS22120212 **Date/Time Received:** **03-Dec-2022 09:05**

Client Name: PDC Energy 80620 **Received by:** **Paresh M. Giga**

Completed By:	/S/ Nilesh D. Ranchod	05-Dec-2022 10:09	**Reviewed by:**	/S/ Tyler Monroe	06-Dec-2022 11:31
	eSignature	Date/Time		eSignature	Date/Time

Matrices: **W** Carrier name: **FedEx**

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 ☐	
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):	1.9uc/1.4c	IR31
Cooler(s)/Kit(s):	Blue	
Date/Time sample(s) sent to storage:	12/03/2022 13:00	

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: 1L Amb Rec No ID/Date/ Time Logged per Chain

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action:

ALS Environmental

Chain of Custody Form

Page ____ of ____

HS22120212

PDC Energy

Bost 16C-8-L

ALS Project Manager:

Customer Information		Project Information			
Purchase Order		Project Name	Bost 16C-8-L	A	Dissolved Gases (Methane, Ethane, Propane)
Work Order		Project Number		B	BTEX 8260
Company Name	PDC Energy	Bill To Company	PDC Energy	C	DRO 8015
Send Report To	Max Trehus	Invoice Attn.	Max Trehus	D	GRO 8015
Address	4000 Burlington Ave	Address	1775 Sherman St #3000	E	Anions (Cl,SO4), Alk (T, CO3, HCO3), TDS
				F	Dissolved Ca, Mg, K, Na - need to lab filter
City/State/Zip	Evans, CO 80620	City/State/Zip	Denver, CO 80203	G	Total Ca, Mg, K, Na
Phone	720-762-3569	Phone	303-860-5800	H	
Fax		Fax		I	
e-Mail Address	max.trehus@pdce.com Jenifer.Hakkarinen@pdce.com jessica.johannsen@pdce.com	e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	[redacted] 16C-8-L A	12/1/22	9:43	W	8	3	X										
2	16C-8-L A			W	1	3		X									
3	16C-8-L A			W	1	3			X								
4	16C-8-L A			W	1	3				X							
5	16C-8-L A			W	8	1					X						
6	16C-8-L B			W	8	1						X					
7	16C-8-L A	↓	↓	W	2	1							X				
8																	
9																	
10																	

Sampler(s): Please Print & Sign: Max Trehus

Shipment Method:

Required Turnaround Time: ☑ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other ____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
	12/1	16:28	
Relinquished by:	Date:	Time:	Received by (Laboratory):
	12/2/22	1630	12/3/22 0905
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):
			BWE

Notes: **Facility ID:** 478978

Cooler Temp. 3.6 / 1.9°

QC Package: (Check Box Below)

X	Level II: Standard QC		TRRP-Checklist
	Level III: Std QC + Raw Data		TRRP Level IV
	Level IV: SW846 CLP-Like		
	Other: ____		

Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035 #31

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.

C/I-05

Bruce DEC 03 2022

ORIGIN ID:GXYA (970) 305-1648
AMY KEPHART
ALS
965 E 11TH ST

LOVELAND, CO 80537
UNITED STATES US

SHIP DATE: 02DEC22
ACTWGT: 40.70 LB
CAD: 0407862/CAFE3618
DIMS: 24x14x12 IN

BILL SENDER

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

Bruce

INV:
PO: REF:
DEPT:

FedEx Express

TRK# 0201 **6182 5243 3883**

SATURDAY 12:00P
PRIORITY OVERNIGHT

NO SGRA

77099
TX-US **IAH**