



PDC Energy, Inc.
First Quarter 2022 Groundwater Monitoring Summary

March 17, 2022

Former Latham 2-31 & Latham Reservoir 1 Tank Battery
SESW SEC 2 T4N R65W
Remediation # 16260

This groundwater monitoring summary has been prepared by Tasman, Inc. for the former Latham 2-31 & Latham Reservoir 1 Tank Battery.

Site History and Background

On September 2, 2020, pre-reclamation site investigation activities were initiated at the former Latham 2-31 & Latham Reservoir 1 tank battery location. Seven boreholes (BH01 – BH07) were advanced to a depth of 10 feet below ground surface (bgs) using direct push methods. Groundwater was encountered within the boreholes at approximately 5 feet bgs. Monitoring wells were installed in each borehole and groundwater monitoring commenced on September 14, 2020. Based on the analytical results received from groundwater monitoring activities, a historic hydrocarbon release was reported on September 23, 2020. Two additional monitoring wells (BH08 and BH09) were installed on October 13, 2020, to assess and delineate dissolved phase hydrocarbon impacts.

Groundwater Monitoring Activities

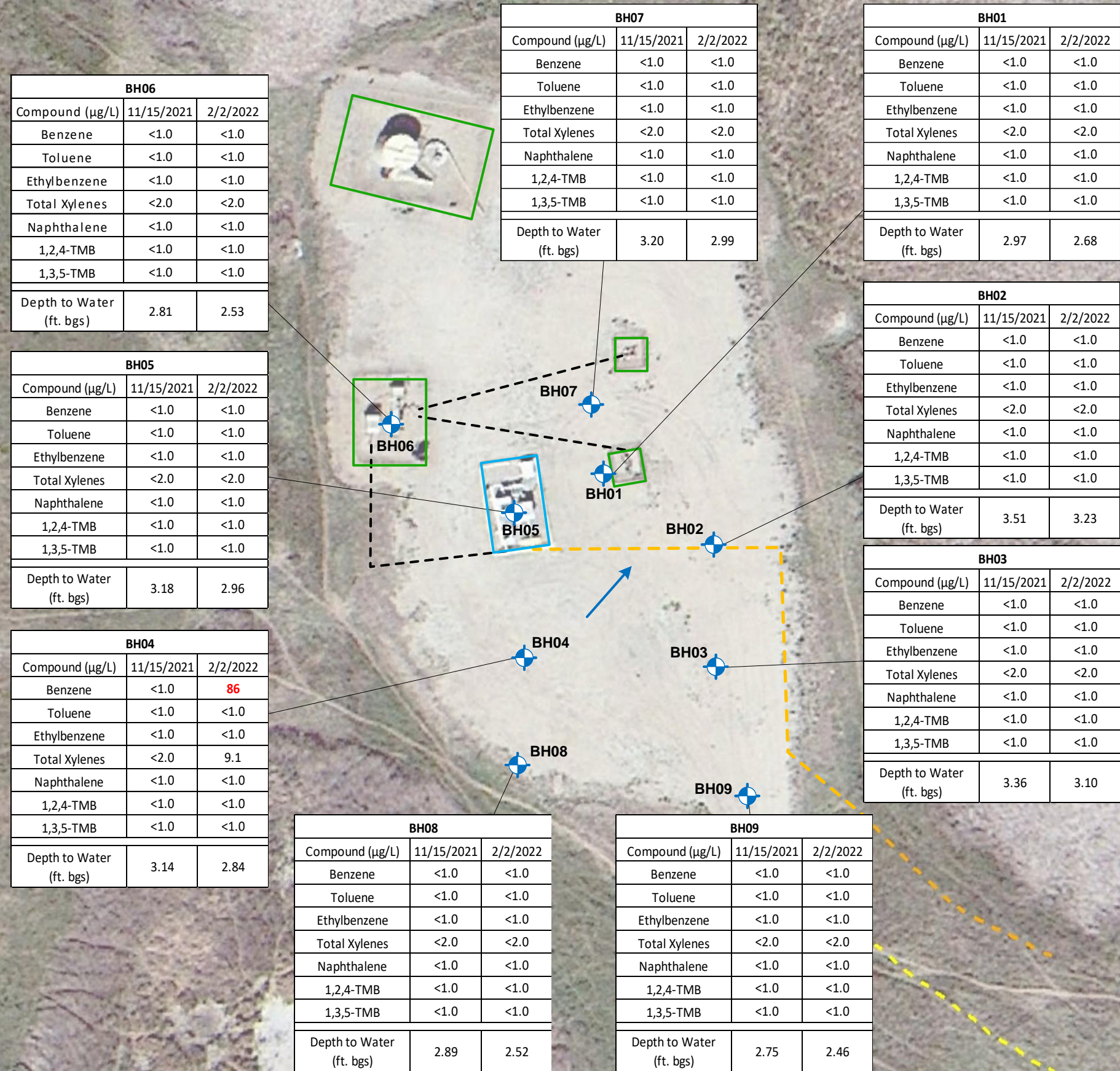
On February 2, 2022, groundwater monitoring was conducted at all 9 monitoring wells (BH01 – BH09). Nine groundwater samples were submitted to Summit Scientific Laboratories (Summit) for analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, 1,2,4-Trimethylbenzene (TMB), and 1,3,5-TMB by EPA Method 8260B.

First quarter 2022 analytical results indicated that the benzene concentration was in exceedance of the applicable COGCC Table 915-1 groundwater standard in monitoring well BH04. Organic compound concentrations were below applicable regulatory standards in the remaining eight monitoring well locations. Sample locations and corresponding analytical results are illustrated on Figure 1. Groundwater elevation data is illustrated on Figure 2. Groundwater analytical results are summarized in Table 1. The laboratory analytical report is included as Attachment A.

Current Remediation Strategy and Path Forward

Monitored natural attenuation (MNA) was selected as the remediation strategy for this site during third quarter 2020 and will remain the selected remediation strategy through the second quarter 2022.

Second quarter 2022 groundwater sampling will be conducted in May 2022.



DATE: February 23, 2022

DESIGNED BY: C. Hamlin

DRAWN BY: M. Wright



TASMAN

Tasman, Inc.
6855 West 119th Ave
Broomfield, CO 80020

PDC Energy, Inc. – DJ Basin
Former Latham 2-31 & Latham Reservoir 1 Tank Battery
SESW, Section 2, Township 4 North, Range 65 West
Weld County, Colorado

**GROUNDWATER
ANALYTICAL RESULTS
MAP**

**FIGURE
1**

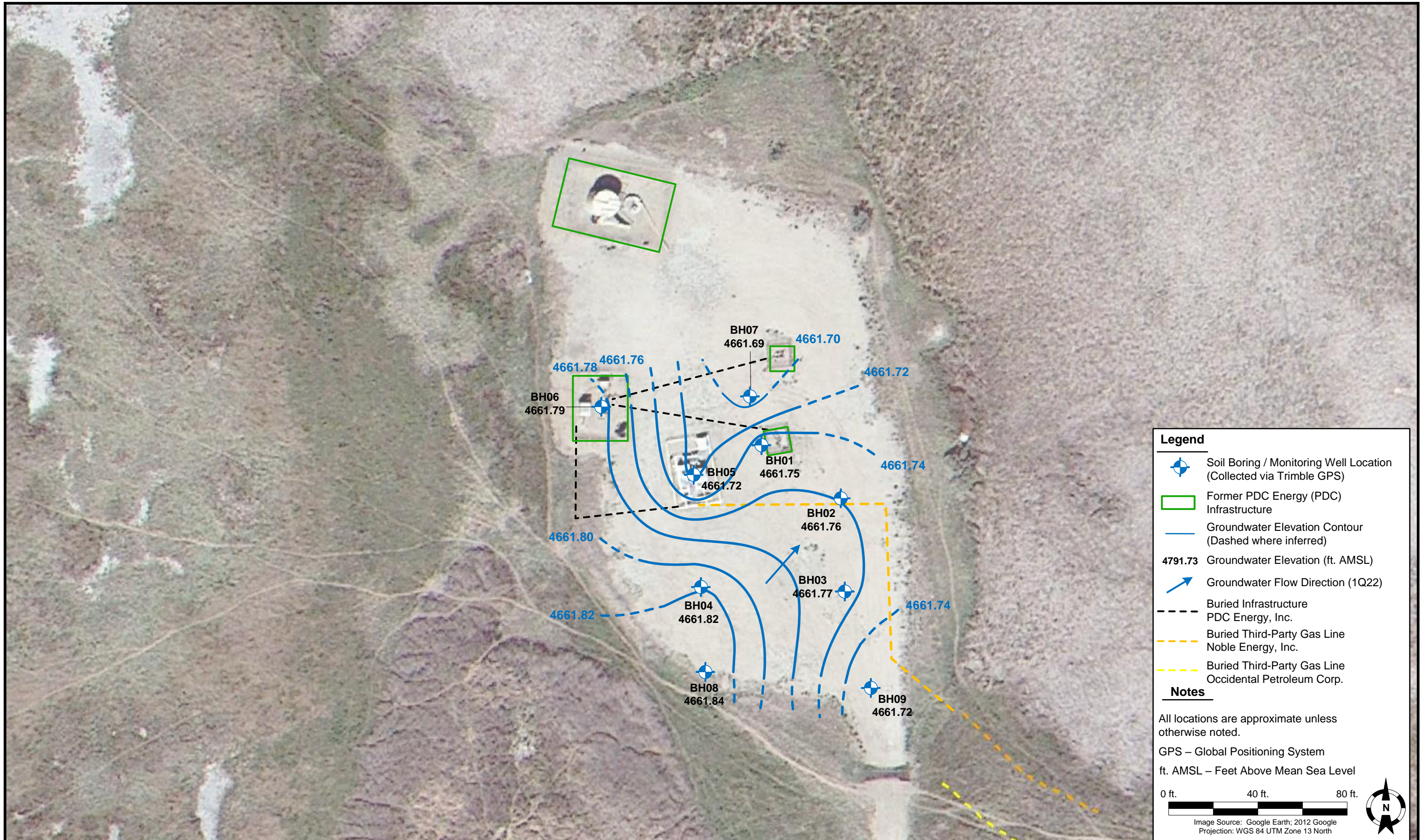


TABLE 1
FORMER LATHAM 2-31; LATHAM RESERVOIR 1 TANK BATTERY
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4-TMB (µg/L)	1,3,5-TMB (µg/L)	Depth to Water ⁽²⁾ (ft.)	Groundwater Elevation (ft. AMSL)
COGCC Table 915-1 Groundwater Standard (µg/L) ⁽¹⁾		5	560	700	1,400	140	67	67	-	-
BH01	9/14/2020	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	5.20	4659.23
BH01	2/19/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.72	4661.71
BH01	5/19/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.74	4661.69
BH01	8/23/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.74	4659.69
BH01	11/15/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.97	4661.46
BH01	2/2/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.68	4661.75
BH02	9/14/2020	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	5.75	4659.24
BH02	2/19/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.25	4661.74
BH02	5/19/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.20	4661.79
BH02	8/23/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	5.36	4659.63
BH02	11/15/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.51	4661.48
BH02	2/2/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.23	4661.76
BH03	9/14/2020	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	5.60	4659.27
BH03	2/19/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.14	4661.73
BH03	5/19/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.17	4661.70
BH03	8/23/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.93	4659.63
BH03	11/15/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.36	4661.51
BH03	2/2/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.10	4661.77
BH04	9/14/2020	55	<1.0	6.5	94	NA	NA	NA	5.39	4659.27
BH04	9/22/2020	990	<1.0	110	630	NA	NA	NA	NM	NM
BH04	2/19/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	20	2.89	4661.77
BH04	5/19/2021	530	<1.0	<1.0	480	4.9	70	76	2.93	4661.73
BH04	8/23/2021	250	<1.0	26	110	<1.0	18	12	5.08	4659.58
BH04	11/15/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.14	4661.52
BH04	2/2/2022	86	<1.0	<1.0	9.1	<1.0	<1.0	<1.0	2.84	4661.82
BH05	9/14/2020	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	5.44	4659.24
BH05	2/19/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.98	4661.70
BH05	5/19/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.00	4661.68
BH05	8/23/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	5.14	4659.54
BH05	11/15/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.18	4661.50
BH05	2/2/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.96	4661.72
BH06	9/14/2020	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	5.10	4659.22
BH06	2/19/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.54	4661.78
BH06	5/19/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.65	4661.67
BH06	8/23/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.83	4659.49
BH06	11/15/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.81	4661.51
BH06	2/2/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.53	4661.79
BH07	9/14/2020	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	5.45	4659.23
BH07	2/19/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.02	4661.66
BH07	5/19/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.02	4661.66
BH07	8/23/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	5.12	4659.56
BH07	11/15/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	3.20	4661.48
BH07	2/2/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.99	4661.69
BH08	10/22/2020	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	4.60	4659.76
BH08	2/19/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.62	4661.74
BH08	5/19/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.63	4661.73
BH08	8/23/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.73	4659.63
BH08	11/15/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.89	4661.47
BH08	2/2/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.52	4661.84
BH09	10/22/2020	<1.0	<1.0	<1.0	<2.0	NA	NA	NA	4.44	4659.74
BH09	2/19/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.52	4661.66
BH09	5/19/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.53	4661.65
BH09	8/23/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	4.62	4659.56
BH09	11/15/2021	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.75	4661.43

TABLE 1
FORMER LATHAM 2-31; LATHAM RESERVOIR 1 TANK BATTERY
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE

Sample ID	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4-TMB (µg/L)	1,3,5-TMB (µg/L)	Depth to Water ⁽²⁾ (ft.)	Groundwater Elevation (ft. AMSL)
COGCC Table 915-1 Groundwater Standard (µg/L) ⁽¹⁾		5	560	700	1,400	140	67	67	-	-
BH09	2/2/2022	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<1.0	2.46	4661.72

Notes:

1. Groundwater standards referenced from 2 CCR 404-1, Table 915-1, January 15, 2021.
2. Depth to water measurements were measured from ground surface for excavation samples. Monitoring well measurements were collected from top of casing and adjusted using survey data to reflect depth of water from ground surface.
- TMB = Trimethylbenzene
- COGCC = Colorado Oil and Gas Conservation Commission
- µg/L = Micrograms per liter
- (<) = Analytical result is less than the indicated laboratory reporting limit.
- ft. = Feet
- NA = Constituent not analyzed
- NM = Not measured
- AMSL = Above Mean Sea Level
- BOLD** = Analytical result is in exceedance of applicable standard.

Attachment A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

February 15, 2022

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

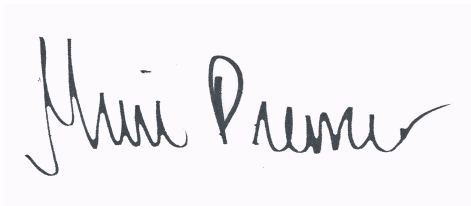
Denver, CO 80203

RE: Latham 2-31, Latham Reservoir 1

Work Order #2202034

Enclosed are the results of analyses for samples received by Summit Scientific on 02/03/22 14:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Muri Premier", is displayed on a light purple rectangular background.

Muri Premier For Paul Shrewsbury
President



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Latham 2-31, Latham Reservoir 1

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/15/22 10:27

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2202034-01	Water	02/02/22 10:25	02/03/22 14:00
BH02	2202034-02	Water	02/02/22 10:49	02/03/22 14:00
BH03	2202034-03	Water	02/02/22 10:38	02/03/22 14:00
BH04	2202034-04	Water	02/02/22 10:45	02/03/22 14:00
BH05	2202034-05	Water	02/02/22 10:39	02/03/22 14:00
BH06	2202034-06	Water	02/02/22 10:28	02/03/22 14:00
BH07	2202034-07	Water	02/02/22 10:49	02/03/22 14:00
BH08	2202034-08	Water	02/02/22 10:35	02/03/22 14:00
BH09	2202034-09	Water	02/02/22 10:18	02/03/22 14:00

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

2202034

Summit Scientific

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310 ♦ 303-374-5933 (f)

Page 1 of 1

Client: PDC /Tasman Geosciences

Project Manager: Mark Longhurst

Address: 6855 W. 119th St.

E-Mail: mark.longhurst@pdc.com

City/State/Zip: Broomfield CO 80020

Phone: 303-487-1228

Project Name: Latham 2-31, Latham Reservoir 1

Sampler Name: Aaron Okiller

Project Number: N/A

					Preservative				Matrix				Analysis Requested						Special Instructions		
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	8260 BTEX	Napthalene	1,2,4 TMB	1,3,5 TMB	TDS	Chloride	Sulphate		
1	BH01	2/2/22	1025	3	3				X				X	X	X	X		.			
2	BH02		1049																		
3	BH03		1038																		
4	BH04		1045																		
5	BH05		1039																		
6	BH06		1028																		
7	BH07		1049																		
8	BH08		1035																		
9	BH09		1018																		
10																					

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time	(Check)	Notes:
Aaron Okiller	2/2/22 1516	Tasman Lockbox	2/3/22 0800	Same Day	72 hours	
				24 hours	Standard	
				48 hours		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:		
			2322 1400			
Relinquished by:	Date/Time:	Received by:	Date/Time:	Temperature Upon Receipt: 43		
				Samples Intact: Yes No		

S₂

Sample Receipt Checklist

S2 Work Order#

220203y

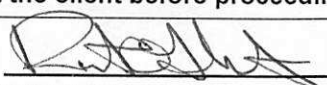
Client: Poc TasmanClient Project ID: Latham 231, Latham ReservoirShipped Via: ☐ H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: _____Matrix (check all that apply): ☐ Air ☐ Soil/Solid ☒ Water ☐ Other: _____
(Describe)

Temp (°C)	4.3
-----------	-----

Thermometer ID: G86A9201901378

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ice
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HCl
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

 Custodian Printed Name or Initials
2322
Date/Time



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Latham 2-31, Latham Reservoir 1
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/15/22 10:27

BH01
2202034-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/02/22 10:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BFB0065	02/08/22	02/09/22	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	ND	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **02/02/22 10:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		97.9 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		100 %		21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Latham 2-31, Latham Reservoir 1
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/15/22 10:27

BH02
2202034-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/02/22 10:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFB0065	02/08/22	02/09/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/02/22 10:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Latham 2-31, Latham Reservoir 1
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/15/22 10:27

BH03
2202034-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/02/22 10:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFB0065	02/08/22	02/09/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/02/22 10:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Latham 2-31, Latham Reservoir 1
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/15/22 10:27

BH04
2202034-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/02/22 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	86	1.0		ug/l	1	BFB0065	02/08/22	02/09/22	EPA 8260B	
Toluene	ND	1.0		"	"	"	"	"	"	
Ethylbenzene	ND	1.0		"	"	"	"	"	"	
Xylenes (total)	9.1	2.0		"	"	"	"	"	"	
Naphthalene	ND	1.0		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0		"	"	"	"	"	"	

Date Sampled: **02/02/22 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		97.1 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %		21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Latham 2-31, Latham Reservoir 1
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/15/22 10:27

BH05
2202034-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/02/22 10:39**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFB0065	02/08/22	02/09/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/02/22 10:39**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		118 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Latham 2-31, Latham Reservoir 1
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/15/22 10:27

BH06
2202034-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/02/22 10:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFB0065	02/08/22	02/09/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/02/22 10:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		116 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Latham 2-31, Latham Reservoir 1
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/15/22 10:27

BH07
2202034-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/02/22 10:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFB0065	02/08/22	02/09/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/02/22 10:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Latham 2-31, Latham Reservoir 1
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/15/22 10:27

BH08
2202034-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/02/22 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFB0065	02/08/22	02/09/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/02/22 10:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		109 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Latham 2-31, Latham Reservoir 1
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/15/22 10:27

BH09
2202034-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/02/22 10:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BFB0065	02/08/22	02/09/22	EPA 8260B	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
Xylenes (total)	ND	2.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	

Date Sampled: **02/02/22 10:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		106 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		102 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	21-167		"	"	"	"	

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Latham 2-31, Latham Reservoir 1

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/15/22 10:27

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BFB0065 - EPA 5030 Water MS

Blank (BFB0065-BLK1)

Prepared: 02/08/22 Analyzed: 02/09/22

Benzene	ND	1.0	ug/l							
Toluene	ND	1.0	"							
Ethylbenzene	ND	1.0	"							
Xylenes (total)	ND	2.0	"							
Naphthalene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
Surrogate: 1,2-Dichloroethane-d4	13.0		"	13.3		97.7	23-173			
Surrogate: Toluene-d8	13.5		"	13.3		101	20-170			
Surrogate: 4-Bromofluorobenzene	13.4		"	13.3		101	21-167			

LCS (BFB0065-BS1)

Prepared: 02/08/22 Analyzed: 02/09/22

Benzene	49.9	1.0	ug/l	50.0		99.9	51-132			
Toluene	50.4	1.0	"	50.0		101	51-138			
Ethylbenzene	51.5	1.0	"	50.0		103	58-146			
m,p-Xylene	99.6	2.0	"	100		99.6	57-144			
o-Xylene	49.4	1.0	"	50.0		98.8	53-146			
Naphthalene	35.9	1.0	"	50.0		71.9	70-130			
1,2,4-Trimethylbenzene	51.6	1.0	"	50.0		103	70-130			
1,3,5-Trimethylbenzene	52.0	1.0	"	50.0		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	11.8		"	13.3		88.3	23-173			
Surrogate: Toluene-d8	13.4		"	13.3		101	20-170			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.7	21-167			

Matrix Spike (BFB0065-MS1)

Source: 2202034-01

Prepared: 02/08/22 Analyzed: 02/09/22

Benzene	53.8	1.0	ug/l	50.0	ND	108	34-141			
Toluene	53.8	1.0	"	50.0	ND	108	27-151			
Ethylbenzene	54.2	1.0	"	50.0	ND	108	29-160			
m,p-Xylene	105	2.0	"	100	ND	105	20-166			
o-Xylene	52.6	1.0	"	50.0	ND	105	33-159			
Naphthalene	41.9	1.0	"	50.0	ND	83.9	70-130			
1,2,4-Trimethylbenzene	53.4	1.0	"	50.0	ND	107	70-130			
1,3,5-Trimethylbenzene	53.2	1.0	"	50.0	ND	106	70-130			
Surrogate: 1,2-Dichloroethane-d4	12.1		"	13.3		90.9	23-173			
Surrogate: Toluene-d8	13.4		"	13.3		101	20-170			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		99.4	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Page 13 of 15



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Latham 2-31, Latham Reservoir 1
Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/15/22 10:27

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BFB0065 - EPA 5030 Water MS

Matrix Spike Dup (BFB0065-MSD1)		Source: 2202034-01			Prepared: 02/08/22 Analyzed: 02/09/22					
Benzene	56.6	1.0	ug/l	50.0	ND	113	34-141	5.09	30	
Toluene	56.3	1.0	"	50.0	ND	113	27-151	4.47	30	
Ethylbenzene	56.8	1.0	"	50.0	ND	114	29-160	4.77	30	
m,p-Xylene	111	2.0	"	100	ND	111	20-166	5.27	30	
o-Xylene	55.4	1.0	"	50.0	ND	111	33-159	5.26	30	
Naphthalene	44.4	1.0	"	50.0	ND	88.8	70-130	5.68	30	
1,2,4-Trimethylbenzene	56.2	1.0	"	50.0	ND	112	70-130	4.98	30	
1,3,5-Trimethylbenzene	55.9	1.0	"	50.0	ND	112	70-130	5.08	30	
<hr/>										
Surrogate: 1,2-Dichloroethane-d4	12.3		"	13.3		92.3	23-173			
Surrogate: Toluene-d8	13.6		"	13.3		102	20-170			
Surrogate: 4-Bromofluorobenzene	13.2		"	13.3		99.4	21-167			

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Latham 2-31, Latham Reservoir 1

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
02/15/22 10:27

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference