



PDC Energy, Inc.
Fourth Quarter 2021 Groundwater Monitoring Summary

November 30, 2021

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

This groundwater monitoring summary has been prepared by Tasma, Inc. for the former Latham 2-31 & Latham Reservoir 1 tank battery. On November 15, 2021, 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, chloride and sulfate anions by EPA Method 300.0, and total dissolved solids (TDS) by Method SM 2540C.

Fourth quarter 2021 analytical results indicated that organic compound concentrations were below the applicable COGCC Table 915-1 groundwater standards in all monitoring well locations. In addition, inorganic parameter concentrations were below the applicable regulatory standards or within 1.25x the background concentration of the cross-gradient monitoring well (BH08) in all monitoring well locations. Sample locations and corresponding analytical results are illustrated on Figures 1 and 2. Groundwater elevation data is illustrated on Figure 3. Groundwater analytical results are summarized in Tables 1 and 2. The laboratory analytical report is included as Attachment A.

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 first quarter 2022.

First quarter 2022 groundwater sampling will be conducted in February 2022.

BH06		
Compound (µg/L)	8/23/2021	11/15/2021
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Naphthalene	<1.0	<1.0
1,2,4-TMB	<1.0	<1.0
1,3,5-TMB	<1.0	<1.0
Depth to Water (ft. bgs)	4.83	2.81

BH05		
Compound (µg/L)	8/23/2021	11/15/2021
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Naphthalene	<1.0	<1.0
1,2,4-TMB	<1.0	<1.0
1,3,5-TMB	<1.0	<1.0
Depth to Water (ft. bgs)	5.14	3.18

BH04		
Compound (µg/L)	8/23/2021	11/15/2021
Benzene	250	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	26	<1.0
Total Xylenes	110	<2.0
Naphthalene	<1.0	<1.0
1,2,4-TMB	18	<1.0
1,3,5-TMB	12	<1.0
Depth to Water (ft. bgs)	5.08	3.14

BH08		
Compound (µg/L)	8/23/2021	11/15/2021
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Naphthalene	<1.0	<1.0
1,2,4-TMB	<1.0	<1.0
1,3,5-TMB	<1.0	<1.0
Depth to Water (ft. bgs)	4.73	2.89

BH09		
Compound (µg/L)	8/23/2021	11/15/2021
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Naphthalene	<1.0	<1.0
1,2,4-TMB	<1.0	<1.0
1,3,5-TMB	<1.0	<1.0
Depth to Water (ft. bgs)	4.62	2.75

BH07		
Compound (µg/L)	8/23/2021	11/15/2021
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Naphthalene	<1.0	<1.0
1,2,4-TMB	<1.0	<1.0
1,3,5-TMB	<1.0	<1.0
Depth to Water (ft. bgs)	5.12	3.20

BH01		
Compound (µg/L)	8/23/2021	11/15/2021
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Naphthalene	<1.0	<1.0
1,2,4-TMB	<1.0	<1.0
1,3,5-TMB	<1.0	<1.0
Depth to Water (ft. bgs)	4.74	2.97

BH02		
Compound (µg/L)	8/23/2021	11/15/2021
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Naphthalene	<1.0	<1.0
1,2,4-TMB	<1.0	<1.0
1,3,5-TMB	<1.0	<1.0
Depth to Water (ft. bgs)	5.36	3.51

BH03		
Compound (µg/L)	8/23/2021	11/15/2021
Benzene	<1.0	<1.0
Toluene	<1.0	<1.0
Ethylbenzene	<1.0	<1.0
Total Xylenes	<2.0	<2.0
Naphthalene	<1.0	<1.0
1,2,4-TMB	<1.0	<1.0
1,3,5-TMB	<1.0	<1.0
Depth to Water (ft. bgs)	5.24	3.36

Legend

- Monitoring Well Location (Collected via Trimble GPS)
- Former PDC Energy (PDC) Infrastructure
- Former Occidental Petroleum (OXY) Infrastructure
- Groundwater Flow Direction (4Q21)
- Buried Infrastructure PDC Energy, Inc.
- Buried Third-Party Gas Line Noble Energy, Inc.
- Buried Third-Party Gas Line Occidental Petroleum Corp.

Notes

All locations are approximate unless otherwise noted.
 GPS – Global Positioning System
 µg/L – Micrograms per liter
 ft. bgs – Feet below ground surface
 Red text denotes an exceedance of COGCC standards
 COGCC – Colorado Oil and Gas Conservation Commission

0 ft. 40 ft. 80 ft.

Image Source: Google Earth; 2012 Google
 Projection: WGS 84 UTM Zone 13 North

DATE: November 30, 2021

DESIGNED BY: C. Hamlin

DRAWN BY: S.Anderson

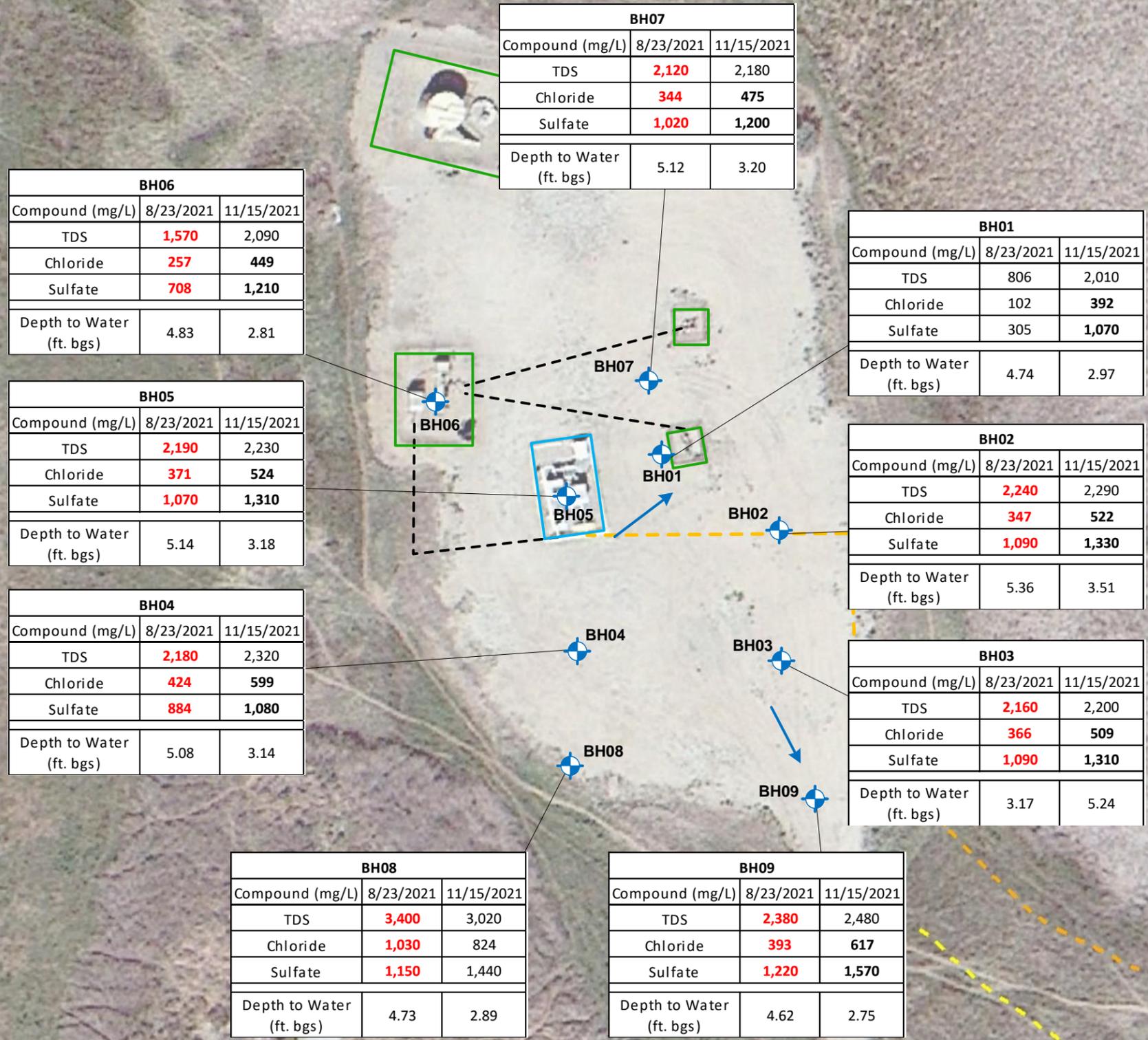


Tasman, Inc.
 6855 West 119th Ave
 Broomfield, CO 80020

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



Legend

- Monitoring Well Location (Collected via Trimble GPS)
- Former PDC Energy (PDC) Infrastructure
- Former Occidental Petroleum (OXY) Infrastructure
- Groundwater Flow Direction (4Q21)
- Buried Infrastructure PDC Energy, Inc.
- Buried Third-Party Gas Line Noble Energy, Inc.
- Buried Third-Party Gas Line Occidental Petroleum Corp.

Notes

All locations are approximate unless otherwise noted.
 GPS – Global Positioning System
 mg/L – Milligrams per liter
 TDS – Total dissolved solids
 Red text – exceedances of COGCC Table 915-1 standards.
 Bold text – exceedances of COGCC Table 915-1 standards but within 1.25x background concentration
 COGCC – Colorado Oil and Gas Conservation Commission

0 ft. 40 ft. 80 ft.

Image Source: Google Earth; 2012 Google
 Projection: WGS 84 UTM Zone 13 North

DATE: September 1, 2021

DESIGNED BY: C. Hamlin

DRAWN BY: C. Ambler

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 (INORGANIC PARAMETERS)

FIGURE 2



Legend

- Soil Boring / Monitoring Well Location (Collected via Trimble GPS)
- Former PDC Energy (PDC) Infrastructure
- Former Occidental Petroleum (OXY) Infrastructure
- Groundwater Elevation Contour (Dashed where inferred)
- 4791.73** Groundwater Elevation (ft. AMSL)
- Groundwater Flow Direction (4Q21)
- Buried Infrastructure PDC Energy, Inc.
- Buried Third-Party Gas Line Noble Energy, Inc.
- Buried Third-Party Gas Line Occidental Petroleum Corp.

Notes

All locations are approximate unless otherwise noted.

GPS – Global Positioning System

ft. AMSL – Feet Above Mean Sea Level

0 ft. 40 ft. 80 ft.

Image Source: Google Earth; 2012 Google
Projection: WGS 84 UTM Zone 13 North

DATE: November 16, 2021

DESIGNED BY: C. Hamlin

DRAWN BY: C. Ambler



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
ELEVATION CONTOUR
MAP (11/15/2021)**

**FIGURE
3**

**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
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
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
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
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
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
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
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
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	-	-

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.

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

Sample ID	Date Sampled	TDS (unit)	Chloride Ion (mg/L)	Sulfate Ion (mg/L)	Depth to Water ⁽²⁾ (ft.)	Groundwater Elevation (ft. AMSL)
COGCC Table 915-1 Groundwater Standard (mg/L) (1)		<1.25 x BCKG	250 or <1.25 x BCKG	250 or <1.25 x BCKG	-	-
BH01	8/23/2021	806	102	305	4.74	4659.69
BH01	11/15/2021	2,010	392	1,070	2.97	4661.46
BH02	8/23/2021	2,240	347	1,090	5.36	4659.63
BH02	11/15/2021	2,290	522	1,330	3.51	4661.48
BH03	8/23/2021	2,160	366	1,090	3.17	4659.63
BH03	11/15/2021	2,200	509	1,310	5.24	4661.51
BH04	8/23/2021	2,180	424	884	5.08	4659.58
BH04	11/15/2021	2,320	599	1,080	3.14	4661.52
BH05	5/19/2021	3,810	618	1,680	3.00	4661.68
BH05	8/23/2021	2,190	371	1,070	5.14	4659.54
BH05	11/15/2021	2,230	524	1,310	3.18	4661.50
BH06	5/19/2021	2,260	370	1,170	2.65	4661.67
BH06	8/23/2021	1,570	257	708	4.83	4659.49
BH06	11/15/2021	2,090	449	1,210	2.81	4661.51
BH07	8/23/2021	2,120	344	1,020	5.12	4659.56
BH07	11/15/2021	2,180	475	1,200	3.20	4661.48
BH08	8/23/2021	3,400	1,030	1,150	4.73	4659.63
BH08	11/15/2021	3,020	824	1,440	2.89	4661.47
BH09	5/19/2021	3,730	438	1,540	2.53	4661.65
BH09	8/23/2021	2,380	393	1,220	4.62	4659.56
BH09	11/15/2021	2,480	617	1,570	2.75	4661.43

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

Sample ID	Date Sampled	TDS (unit)	Chloride Ion (mg/L)	Sulfate Ion (mg/L)	Depth to Water ⁽²⁾ (ft.)	Groundwater Elevation (ft. AMSL)
COGCC Table 915-1 Groundwater Standard (mg/L) (1)		<1.25 x BCKG	250 or <1.25 x BCKG	250 or <1.25 x BCKG	-	-

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.

TDS = Total dissolved solids

COGCC = Colorado Oil and Gas Conservation Commission

BCKG = Background

mg/L = Milligrams per liter

(<) = Analytical result is less than the indicated laboratory reporting limit.

AMSL = Above Mean Sea Level

ft. = Feet

 = Up- / Cross-gradient well location used for background concentration.

BOLD = Analytical result is in exceedance of applicable standard.

BOLD = Analytical result is in exceedance of applicable standard but within 1.25x background concentration.

Attachment A

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 23, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Latham 2-31; Latham Reservoir 1

Work Order #2111270

Enclosed are the results of analyses for samples received by Summit Scientific on 11/15/21 15:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Muri Premer". The signature is written in a cursive style with a large initial "M" and a long, sweeping underline.

Muri Premer 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:
11/23/21 16:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2111270-01	Water	11/15/21 11:33	11/15/21 15:20
BH02	2111270-02	Water	11/15/21 11:25	11/15/21 15:20
BH03	2111270-03	Water	11/15/21 11:17	11/15/21 15:20
BH04	2111270-04	Water	11/15/21 12:11	11/15/21 15:20
BH05	2111270-05	Water	11/15/21 11:47	11/15/21 15:20
BH06	2111270-06	Water	11/15/21 11:55	11/15/21 15:20
BH07	2111270-07	Water	11/15/21 11:39	11/15/21 15:20
BH08	2111270-08	Water	11/15/21 12:03	11/15/21 15:20
BH09	2111270-09	Water	11/15/21 11:07	11/15/21 15:20

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.

Summit Scientific

2111270

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

Page 1 of 1

Client: PDL / Tasman Geosciences Project Manager: Mark Longhurst
 Address: 6855 W. 119th Ave. E-Mail: marklonghurst@pdlc.com
 City/State/Zip: Broomfield / CO/ 80020
 Phone: 303-487-1228 Project Name: Latham 2-31, Latham Reservoir
 Sampler Name: Ben Wagner Project Number: _____

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested				Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	915-Organics	915-Inorganics			
1	BH01	11/15/21	1133	4			5		X				X	X			
2	BH02		1125														
3	BH03		1117														
4	BH04		1211														
5	BH05		1147														
6	BH06		1155														
7	BH07		1139														
8	BH08		1203														
9	BH09		1107														
10																	

Relinquished by: 	Date/Time: 11/15/21 1520	Received by: Tasman's Lock Box	Date/Time: 11/15/21 1520	Turn Around Time (Check) <input type="checkbox"/> Same Day 72 hours <input checked="" type="checkbox"/> 24 hours Standard <input type="checkbox"/> 48 hours Sample Integrity: Temperature Upon Receipt: 3.8 Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	Notes:
Relinquished by: Tasman's Lock Box	Date/Time:	Received by: 	Date/Time: 11/15/21 1520		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

2111270

Sample Receipt Checklist

S2 Work Order _____

Client: POC/Tasman

Client Project ID: Latham 2-31, Latham - 1 Reserve

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other _____ Airbill #: _____

Matrix (check all that apply): Air Soil/Solid Water Other: _____ (Describe)

Temp (°C)	<u>3.8</u>
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Thermometer ID: 61857155-K

	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 provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>on ICE</u>
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, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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

[Signature]
Signature of Custodian

11-15-21
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:
11/23/21 16:59

BH01
2111270-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/15/21 11:33**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEK0402	11/17/21	11/19/21	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: **11/15/21 11:33**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		99.4 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		100 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.0 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/15/21 11:33**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	392	12.0		mg/L	200	BEK0413	11/18/21	11/19/21	EPA 300.0	
Sulfate	1070	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/15/21 11:33**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2010	10.0		mg/L	1	BEK0435	11/19/21	11/19/21	SM2540C	

Summit Scientific

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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:
11/23/21 16:59

BH02
2111270-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/15/21 11:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEK0402	11/17/21	11/19/21	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: **11/15/21 11:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		101 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		98.8 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.1 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/15/21 11:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	522	12.0		mg/L	200	BEK0413	11/18/21	11/19/21	EPA 300.0	
Sulfate	1330	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/15/21 11:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2290	10.0		mg/L	1	BEK0435	11/19/21	11/19/21	SM2540C	

Summit Scientific

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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:
11/23/21 16:59

BH03
2111270-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/15/21 11:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEK0402	11/17/21	11/19/21	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: **11/15/21 11:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		99.2 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		97.6 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.8 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/15/21 11:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	509	12.0		mg/L	200	BEK0413	11/18/21	11/19/21	EPA 300.0	
Sulfate	1310	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/15/21 11:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2200	10.0		mg/L	1	BEK0435	11/19/21	11/19/21	SM2540C	

Summit Scientific

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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:
11/23/21 16:59

BH04
2111270-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/15/21 12:11**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEK0402	11/17/21	11/19/21	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: **11/15/21 12:11**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		104 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		99.7 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/15/21 12:11**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	599	12.0		mg/L	200	BEK0413	11/18/21	11/19/21	EPA 300.0	
Sulfate	1080	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/15/21 12:11**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2320	10.0		mg/L	1	BEK0435	11/19/21	11/19/21	SM2540C	

Summit Scientific

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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:
11/23/21 16:59

BH05
2111270-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/15/21 11:47**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEK0402	11/17/21	11/19/21	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: **11/15/21 11:47**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		98.9 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		98.6 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/15/21 11:47**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	524	12.0		mg/L	200	BEK0413	11/18/21	11/19/21	EPA 300.0	
Sulfate	1310	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/15/21 11:47**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2230	10.0		mg/L	1	BEK0435	11/19/21	11/19/21	SM2540C	

Summit Scientific

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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:
11/23/21 16:59

BH06
2111270-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/15/21 11:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEK0402	11/17/21	11/19/21	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: **11/15/21 11:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		100 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		97.7 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.9 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/15/21 11:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	449	12.0		mg/L	200	BEK0413	11/18/21	11/19/21	EPA 300.0	
Sulfate	1210	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/15/21 11:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2090	10.0		mg/L	1	BEK0435	11/19/21	11/19/21	SM2540C	

Summit Scientific

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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:
11/23/21 16:59

BH07
2111270-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/15/21 11:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEK0402	11/17/21	11/19/21	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: **11/15/21 11:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		101 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		98.9 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/15/21 11:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	475	12.0		mg/L	200	BEK0413	11/18/21	11/19/21	EPA 300.0	
Sulfate	1200	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/15/21 11:39**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2180	10.0		mg/L	1	BEK0435	11/19/21	11/19/21	SM2540C	

Summit Scientific

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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:
11/23/21 16:59

BH08
2111270-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/15/21 12:03**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEK0402	11/17/21	11/19/21	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: **11/15/21 12:03**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		99.1 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		98.2 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.9 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/15/21 12:03**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	824	12.0		mg/L	200	BEK0413	11/18/21	11/19/21	EPA 300.0	
Sulfate	1440	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/15/21 12:03**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	3020	10.0		mg/L	1	BEK0435	11/19/21	11/19/21	SM2540C	

Summit Scientific

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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:
11/23/21 16:59

BH09
2111270-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **11/15/21 11:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEK0402	11/17/21	11/19/21	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: **11/15/21 11:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		100 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		98.6 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %		21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **11/15/21 11:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chloride	617	12.0		mg/L	200	BEK0413	11/18/21	11/19/21	EPA 300.0	
Sulfate	1570	60.0		"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **11/15/21 11:07**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Total Dissolved Solids	2480	10.0		mg/L	1	BEK0435	11/19/21	11/19/21	SM2540C	

Summit Scientific

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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:
11/23/21 16:59

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BEK0402 - EPA 5030 Water MS

Blank (BEK0402-BLK1)

Prepared: 11/17/21 Analyzed: 11/19/21

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	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	13.6		"	13.3		102		23-173			
<i>Surrogate: Toluene-d8</i>	13.3		"	13.3		100		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	13.5		"	13.3		101		21-167			

LCS (BEK0402-BS1)

Prepared: 11/17/21 Analyzed: 11/19/21

Benzene	32.4	1.0	ug/l	33.3		97.3		51-132			
Toluene	34.3	1.0	"	33.3		103		51-138			
Ethylbenzene	40.4	1.0	"	33.3		121		58-146			
m,p-Xylene	78.6	2.0	"	66.7		118		57-144			
o-Xylene	38.0	1.0	"	33.3		114		53-146			
Naphthalene	31.7	1.0	"	33.3		95.0		70-130			
1,2,4-Trimethylbenzene	34.9	1.0	"	33.3		105		70-130			
1,3,5-Trimethylbenzene	35.1	1.0	"	33.3		105		70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	14.0		"	13.3		105		23-173			
<i>Surrogate: Toluene-d8</i>	13.0		"	13.3		97.6		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	13.7		"	13.3		103		21-167			

Matrix Spike (BEK0402-MS1)

Source: 2111314-03

Prepared: 11/17/21 Analyzed: 11/19/21

Benzene	31.9	1.0	ug/l	33.3	ND	95.8		34-141			
Toluene	34.0	1.0	"	33.3	ND	102		27-151			
Ethylbenzene	40.5	1.0	"	33.3	ND	121		29-160			
m,p-Xylene	78.0	2.0	"	66.7	ND	117		20-166			
o-Xylene	38.1	1.0	"	33.3	ND	114		33-159			
Naphthalene	36.4	1.0	"	33.3	ND	109		70-130			
1,2,4-Trimethylbenzene	34.6	1.0	"	33.3	ND	104		70-130			
1,3,5-Trimethylbenzene	35.0	1.0	"	33.3	ND	105		70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	13.4		"	13.3		100		23-173			
<i>Surrogate: Toluene-d8</i>	13.2		"	13.3		99.2		20-170			
<i>Surrogate: 4-Bromofluorobenzene</i>	13.5		"	13.3		102		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:
11/23/21 16:59

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BEK0402 - EPA 5030 Water MS

Matrix Spike Dup (BEK0402-MSD1)	Source: 2111314-03			Prepared: 11/17/21 Analyzed: 11/19/21						
Benzene	32.6	1.0	ug/l	33.3	ND	97.8	34-141	2.08	30	
Toluene	34.5	1.0	"	33.3	ND	103	27-151	1.31	30	
Ethylbenzene	41.2	1.0	"	33.3	ND	124	29-160	1.79	30	
m,p-Xylene	79.3	2.0	"	66.7	ND	119	20-166	1.64	30	
o-Xylene	39.0	1.0	"	33.3	ND	117	33-159	2.10	30	
Naphthalene	38.5	1.0	"	33.3	ND	116	70-130	5.74	30	
1,2,4-Trimethylbenzene	35.6	1.0	"	33.3	ND	107	70-130	2.62	30	
1,3,5-Trimethylbenzene	33.2	1.0	"	33.3	ND	99.7	70-130	5.13	30	
Surrogate: 1,2-Dichloroethane-d4	13.6		"	13.3		102	23-173			
Surrogate: Toluene-d8	13.1		"	13.3		98.6	20-170			
Surrogate: 4-Bromofluorobenzene	13.5		"	13.3		101	21-167			

Summit Scientific

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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:
 11/23/21 16:59

Anions by EPA Method 300.0 - Quality Control
Summit Scientific

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

Batch BEK0413 - General Preparation

Blank (BEK0413-BLK1)

Prepared: 11/18/21 Analyzed: 11/19/21

Chloride	ND	0.0600	mg/L							
Sulfate	ND	0.300	"							

LCS (BEK0413-BS1)

Prepared: 11/18/21 Analyzed: 11/19/21

Chloride	3.24	0.0600	mg/L	3.00	108	90-110				
Sulfate	15.3	0.300	"	15.0	102	90-110				

Duplicate (BEK0413-DUP1)

Source: 2111270-01

Prepared: 11/18/21 Analyzed: 11/19/21

Chloride	381	12.0	mg/L		392			3.05	20	
Sulfate	1050	60.0	"		1070			2.04	20	

Matrix Spike (BEK0413-MS1)

Source: 2111270-01

Prepared: 11/18/21 Analyzed: 11/19/21

Chloride	1010	12.0	mg/L	600	392	104	80-120			
Sulfate	4250	60.0	"	3000	1070	106	80-120			

Summit Scientific

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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:
 11/23/21 16:59

Total Dissolved Solids by SM2540C - Quality Control
Summit Scientific

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

Batch BEK0435 - General Preparation

Blank (BEK0435-BLK1)

Prepared & Analyzed: 11/19/21

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BEK0435-DUP1)

Source: 2111245-01

Prepared & Analyzed: 11/19/21

Total Dissolved Solids 695 10.0 mg/L 694 0.173 20

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:
11/23/21 16:59

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