

PDC Energy, Inc.
First Quarter 2021 Groundwater Monitoring Summary

March 16, 2021

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

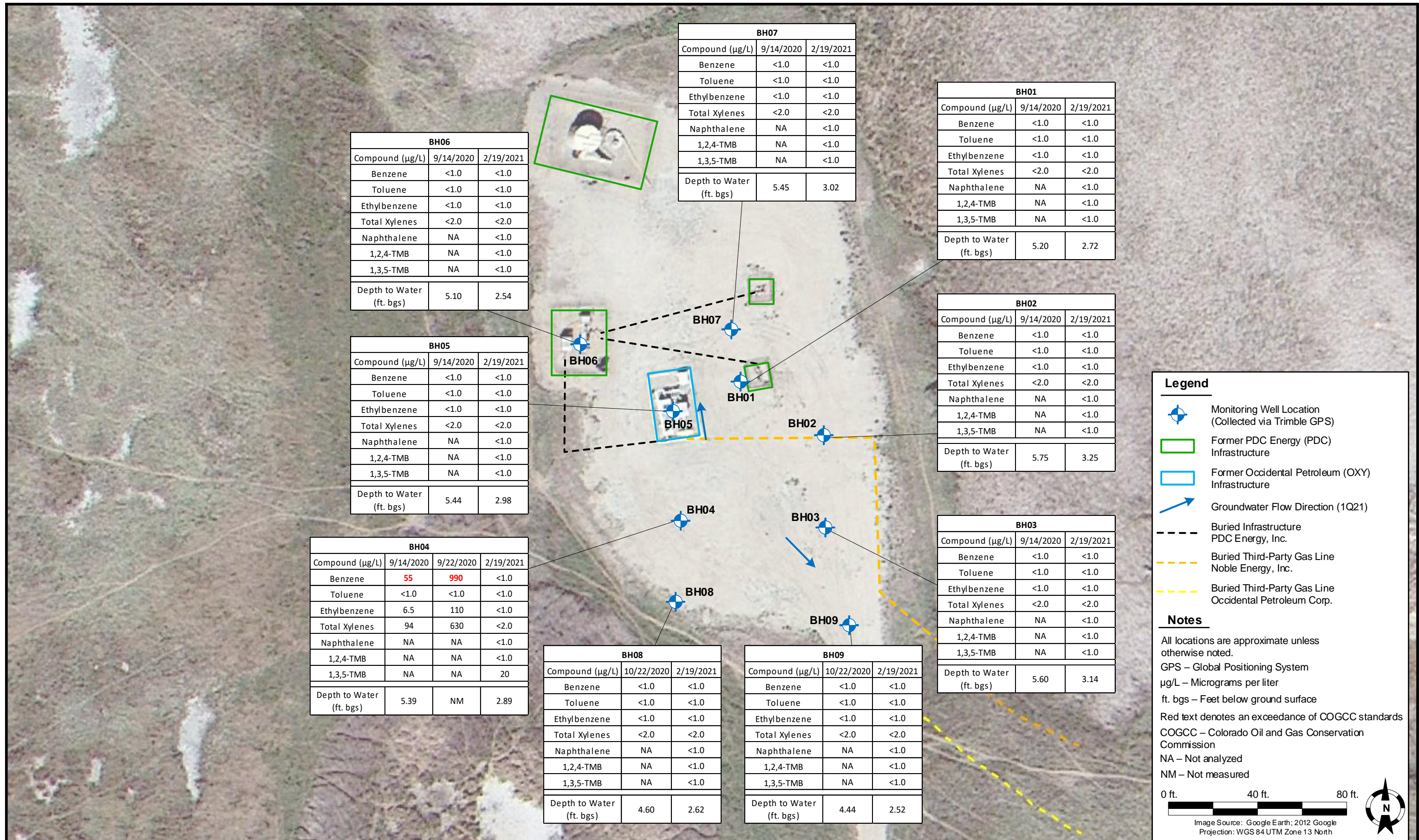
This groundwater monitoring summary has been prepared by Tasman Geosciences, Inc. for the former Latham 2-31 & Latham Reservoir 1 tank battery.

On February 19, 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.

First quarter 2021 analytical results indicated that constituent concentrations were below the applicable COGCC Table 915-1 groundwater standards in all 9 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 in 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 second quarter 2021.

Second quarter 2021 groundwater sampling will be conducted in May 2021.



DATE: March 16, 2021

DESIGNED BY: C. Hamlin

DRAWN BY: J. Marcus



Tasman Geosciences, 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**

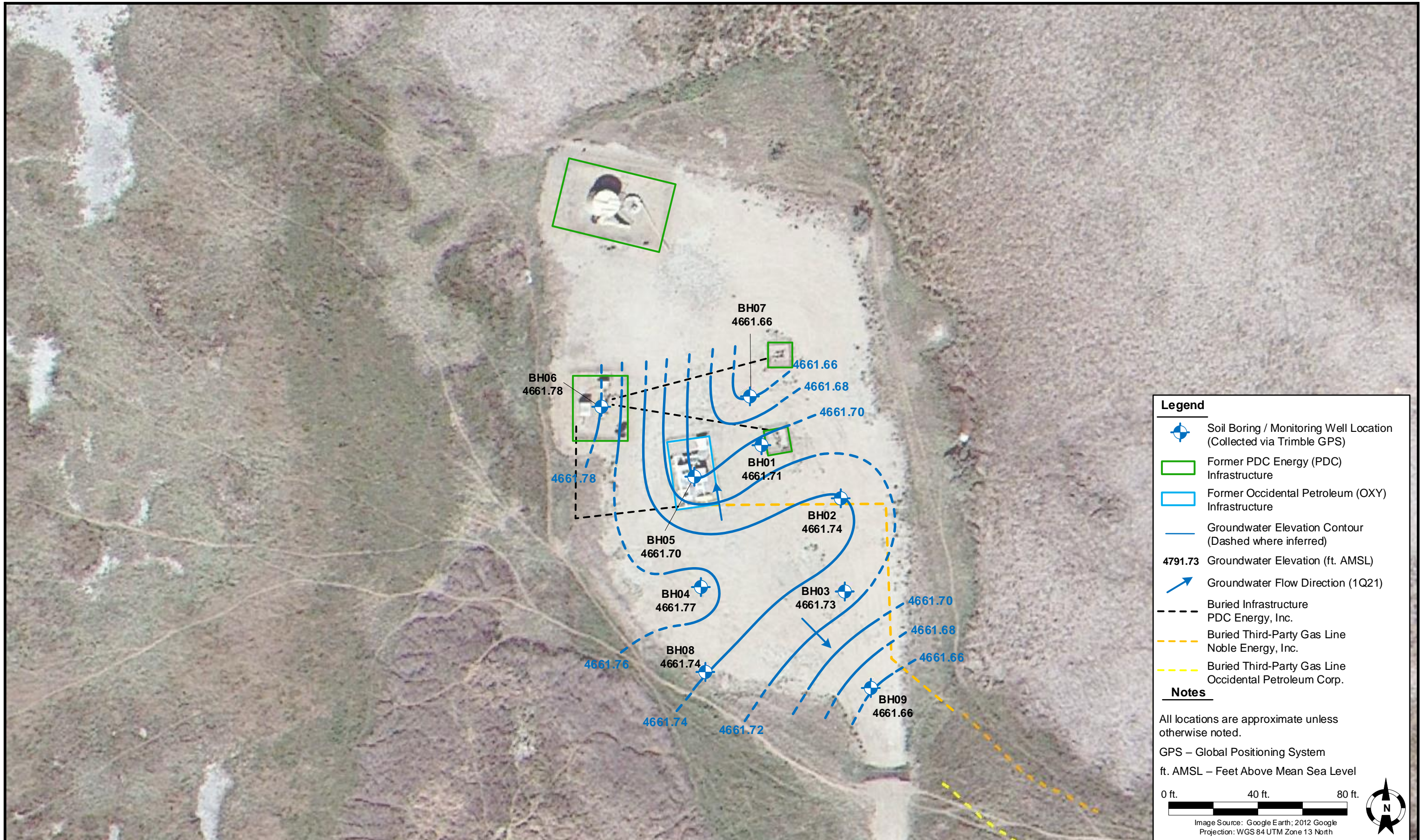


TABLE 1
FORMER LATHAM 2-31; LATHAM RESERVOIR 1 TANK BATTERY
GROUNDWATER ANALYTICAL RESULTS SUMMARY TABLE

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
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
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
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
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
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
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
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
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

Notes:

- Groundwater standards referenced from 2 CCR 404-1, Table 915-1, January 15, 2021.
 - 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
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

March 01, 2021

Mark Longhurst

PDC Energy

1775 Sherman St. STE. 3000

Denver, CO 80203

RE: Latham 2-31; Latham Reservoir 1

Work Order #2102254

Enclosed are the results of analyses for samples received by Summit Scientific on 02/19/21 17:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

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:
03/01/21 11:18

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2102254-01	Water	02/19/21 10:22	02/19/21 17:30
BH02	2102254-02	Water	02/19/21 10:38	02/19/21 17:30
BH03	2102254-03	Water	02/19/21 10:23	02/19/21 17:30
BH04	2102254-04	Water	02/19/21 10:45	02/19/21 17:30
BH05	2102254-05	Water	02/19/21 10:31	02/19/21 17:30
BH06	2102254-06	Water	02/19/21 10:41	02/19/21 17:30
BH07	2102254-07	Water	02/19/21 10:14	02/19/21 17:30
BH08	2102254-08	Water	02/19/21 10:31	02/19/21 17:30
BH09	2102254-09	Water	02/19/21 10:12	02/19/21 17:30

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.

2102254

Summit Scientific

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310 ♦ 303-374-5933 (f)

Page 1 of 1

Client: PDC / Tasman

Project Manager: Mark Longhurst

Address: 6855 W 119th Ave.

E-Mail: mark.longhurst@pdce.com

City/State/Zip: Broomfield, CO 80020



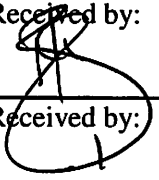
Phone: 303-487-1228

Project Name: Latham 2-31, Latham Reservoir 1

Sampler Name: Yianni Tsambis

Project Number: n/a

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions			
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEX	Naphthalene	1,2,4 TMB	1,3,5 TMB								
1	BH01	2/19/2021	1022	3			X		X					X	X	X	X							915 Standards
2	BH02	2/19/2021	1038	3			X		X					X	X	X	X							
3	BH03	2/19/2021	1023	3			X		X					X	X	X	X							
4	BH04	2/19/2021	1045	3			X		X					X	X	X	X							
5	BH05	2/19/2021	1031	3			X		X					X	X	X	X							
6	BH06	2/19/2021	1041	3			X		X					X	X	X	X							
7	BH07	2/19/2021	1014	3			X		X					X	X	X	X							
8	BH08	2/19/2021	1031	3			X		X					X	X	X	X							
9	BH09	2/19/2021	1012	3			X		X					X	X	X	X							
10																								

Relinquished by: 	Date/Time: 2/19/21 1410	Received by: Tasman's Lock Box	Date/Time: 2/19/21 1410	Turn Around Time (Check) Same Day _____ 72 hours _____ 24 hours _____ Standard <u>X</u> 48 hours _____	Notes:
Relinquished by: 	Date/Time: 02/19/2021 1730	Received by: 	Date/Time: 02/19/2021 1730	Sample Integrity: Temperature Upon Receipt: <u>4.1</u> Samples Intact: <u>Yes</u> No	
Relinquished by:	Date/Time:	Received by:	Date/Time:		

Sample Receipt Checklist

S2 Work Order 2102254

Client: POC/TASMAN Client Project ID: LATHAM 2-31, LATHAM
RESERVOIR

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other _____ Airbill #: _____
☐ ☒ ☐ ☐ ☐
 Matrix (check all that apply): ☐ Air ☐ Soil/Solid ☒ Water ☐ Other: _____
 (Describe)

Temp (°C) 4.1

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"/>			
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
If custody seals are present, are they intact ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.		<input checked="" 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 checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ?			<input checked="" type="checkbox"/>	
Record the pH in Comments.			<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?			<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 of Custodian

Date/Time

01/19/2001



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:
03/01/21 11:18

BH01
2102254-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/19/21 10:22**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	1.0		ug/l	1	BEB0310	02/22/21	02/22/21	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: **02/19/21 10:22**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		138 %		23-173		"	"	"	"	
Surrogate: Toluene-d8		92.6 %		20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %		21-167		"	"	"	"	

Summit Scientific

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1775 Sherman St. STE. 3000
Denver CO, 80203

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

Reported:
03/01/21 11:18

BH02
2102254-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/19/21 10:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BEB0310	02/22/21	02/23/21	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: **02/19/21 10:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		41.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.3 %	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:
03/01/21 11:18

BH03
2102254-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/19/21 10:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BEB0310	02/22/21	02/23/21	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: **02/19/21 10:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		43.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		94.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.2 %	21-167		"	"	"	"	

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1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Latham 2-31; Latham Reservoir 1

Project Number: [none]
Project Manager: Mark Longhurst

Reported:
03/01/21 11:18

BH04
2102254-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/19/21 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BEB0310	02/22/21	02/23/21	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	20	1.0	"	"	"	"	"	"	

Date Sampled: **02/19/21 10:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		42.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		84.5 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.1 %	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:
03/01/21 11:18

BH05
2102254-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/19/21 10:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BEB0310	02/22/21	02/23/21	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: **02/19/21 10:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		48.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		91.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.1 %	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:
03/01/21 11:18

BH06
2102254-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/19/21 10:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BEB0310	02/22/21	02/23/21	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: **02/19/21 10:41**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		52.4 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		88.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.4 %	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:
03/01/21 11:18

BH07
2102254-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/19/21 10:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BEB0310	02/22/21	02/23/21	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: **02/19/21 10:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		49.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		93.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.3 %	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:
03/01/21 11:18

BH08
2102254-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/19/21 10:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BEB0310	02/22/21	02/23/21	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: **02/19/21 10:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		49.3 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		91.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.7 %	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:
03/01/21 11:18

BH09
2102254-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **02/19/21 10:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BEB0310	02/22/21	02/23/21	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: **02/19/21 10:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		50.1 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		89.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.1 %	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:
03/01/21 11:18

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 BEB0310 - EPA 5030 Water MS

Blank (BEB0310-BLK1)

Prepared & Analyzed: 02/22/21

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	"							
Surrogate: 1,2-Dichloroethane-d4	17.9		"	13.3		134	23-173			
Surrogate: Toluene-d8	12.4		"	13.3		93.2	20-170			
Surrogate: 4-Bromofluorobenzene	13.3		"	13.3		99.9	21-167			

LCS (BEB0310-BS1)

Prepared & Analyzed: 02/22/21

Benzene	40.8	1.0	ug/l	33.3		122	51-132			
Toluene	36.8	1.0	"	33.3		110	51-138			
Ethylbenzene	38.9	1.0	"	33.3		117	58-146			
m,p-Xylene	73.5	2.0	"	66.7		110	57-144			
o-Xylene	38.9	1.0	"	33.3		117	53-146			
Naphthalene	40.6	1.0	"	33.3		122	70-130			
1,2,4-Trimethylbenzene	31.4	1.0	"	33.3		94.2	70-130			
1,3,5-Trimethylbenzene	37.7	1.0	"	33.3		113	70-130			
Surrogate: 1,2-Dichloroethane-d4	17.3		"	13.3		130	23-173			
Surrogate: Toluene-d8	12.5		"	13.3		93.5	20-170			
Surrogate: 4-Bromofluorobenzene	13.8		"	13.3		104	21-167			

Matrix Spike (BEB0310-MS1)

Source: 2102254-01

Prepared & Analyzed: 02/22/21

Benzene	41.4	1.0	ug/l	33.3	ND	124	34-141			
Toluene	37.1	1.0	"	33.3	ND	111	27-151			
Ethylbenzene	38.9	1.0	"	33.3	ND	117	29-160			
m,p-Xylene	73.6	2.0	"	66.7	ND	110	20-166			
o-Xylene	38.2	1.0	"	33.3	ND	115	33-159			
Naphthalene	34.3	1.0	"	33.3	ND	103	70-130			
1,2,4-Trimethylbenzene	31.2	1.0	"	33.3	ND	93.7	70-130			
1,3,5-Trimethylbenzene	37.8	1.0	"	33.3	ND	113	70-130			
Surrogate: 1,2-Dichloroethane-d4	17.4		"	13.3		130	23-173			
Surrogate: Toluene-d8	12.4		"	13.3		93.4	20-170			
Surrogate: 4-Bromofluorobenzene	13.8		"	13.3		104	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:
03/01/21 11:18

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 BEB0310 - EPA 5030 Water MS

Matrix Spike Dup (BEB0310-MSD1)	Source: 2102254-01			Prepared & Analyzed: 02/22/21						
Benzene	40.7	1.0	ug/l	33.3	ND	122	34-141	1.58	30	
Toluene	36.9	1.0	"	33.3	ND	111	27-151	0.460	30	
Ethylbenzene	39.0	1.0	"	33.3	ND	117	29-160	0.282	30	
m,p-Xylene	73.9	2.0	"	66.7	ND	111	20-166	0.312	30	
o-Xylene	39.1	1.0	"	33.3	ND	117	33-159	2.35	30	
Naphthalene	37.0	1.0	"	33.3	ND	111	70-130	7.59	30	
1,2,4-Trimethylbenzene	31.4	1.0	"	33.3	ND	94.2	70-130	0.543	30	
1,3,5-Trimethylbenzene	37.9	1.0	"	33.3	ND	114	70-130	0.290	30	
Surrogate: 1,2-Dichloroethane-d4	17.4		"	13.3		131	23-173			
Surrogate: Toluene-d8	12.5		"	13.3		93.5	20-170			
Surrogate: 4-Bromofluorobenzene	13.9		"	13.3		104	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:
03/01/21 11:18

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