

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

November 07, 2024

Bryce Goldade

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: PDC - Ikenouye F29-22, 23 Tank Battery

Work Order #2410511

Enclosed are the results of analyses for samples received by Summit Scientific on 10/28/24 17:56. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is fluid and cursive, with the first name being more prominent.

Natalie Tessier For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Bryce Goldade

Reported:
11/07/24 11:12

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BH01	2410511-01	Water	10/28/24 10:59	10/28/24 17:56
BH02	2410511-02	Water	10/28/24 11:23	10/28/24 17:56
BH03	2410511-03	Water	10/28/24 11:03	10/28/24 17:56
BH04	2410511-04	Water	10/28/24 10:47	10/28/24 17:56
BH05	2410511-05	Water	10/28/24 11:00	10/28/24 17:56
BH06	2410511-06	Water	10/28/24 11:30	10/28/24 17:56
BH07	2410511-07	Water	10/28/24 11:13	10/28/24 17:56
BH08	2410511-08	Water	10/28/24 11:31	10/28/24 17:56
BH09	2410511-09	Water	10/28/24 11:15	10/28/24 17:56
BH10	2410511-10	Water	10/28/24 10:54	10/28/24 17:56
BH11	2410511-11	Water	10/28/24 10:56	10/28/24 17:56

Summit Scientific

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Client: PDC / Tasman		Send Data To: Project Manager: <u>Bruce Goldade</u>		Send Invoice To: Company: PDC Energy	
Address: 6855 W 119th Ave		E-Mail: tas-chevron-4@tasman-geo.com		Project Name/Location:	
City/State/Zip: Broomfield / CO / 80020				AFE#:	
Phone: 303-487-1228		Project Name: <u>Module F29-22, 23 Tanv</u>		PO/Billing Codes:	
Sampler Name: <u>Shannon Waius</u>		Project Number: <u>battary</u>		Contact: Karen Olson	

				Preservative				Matrix				Analysis Requested								Special Instructions	
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other _____	Water	Soil	Air-Canister #	Other _____	Metals - 915	VOC - 915	TPH - 915	PAH - 915	SAR, EC, pH	Boron - HWS	HOLD	*	
1	BH01	10/28/24	10:59	4	3		1		X											X	
2	BH02		11:23																		
3	BH03		11:03																		
4	BH04		10:47																		
5	BH05		11:00																		
6	BH06		11:30																		
7	BH07		11:13																		
8	BH08		11:31																		
9	BH09		11:15																		
10	BH10		10:54																		
11	BH11		10:56																		
12																					
13																					
14																					
15																					

Relinquished by: <u>Shannon Waius</u>	Date/Time: <u>10/28/24 1515</u>	Received by: <u>Tasman 10/28/24</u>	Date/Time: <u>1515</u>	TAT Business Days	Field DO	Notes: *BTEXN, TUB, C1, SO4, TDs
Relinquished by: <u>Tasman/Box</u>	Date/Time: <u>10/28/24 1750</u>	Received by: <u>[Signature]</u>	Date/Time: <u>10/28/24 1750</u>	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: <u>12.7</u>	Corrected Temperature: <u>8</u>	IR gun #: <u>1</u>	HNO3 lot #: _____			

S₂

Sample Receipt Checklist

S2 Work Order# 2410511Client: Porter Client Project ID: Ikenouye F29-22,23 Tank BatteryShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐

<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	-------------------------------------	--------------------------	--------------------------	--------------------------

Matrix (Check all that apply) Air ☐ Soil/Solid ☐ Water ☒ Other ☐Temp (°C) 12.7Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°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"/>	<u>22.1E</u>
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<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"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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"/>	
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"/>	
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"/>	<u>HCl</u>
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.				

AS
Custodian Printed Name

10/28/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery
Project Number: [none]
Project Manager: Bryce Goldade

Reported:
11/07/24 11:12

BH01
2410511-01 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/28/24 10:59**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	1.0	ug/l	1	BHJ1301	10/29/24	11/02/24	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: **10/28/24 10:59**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	13.7	103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.1	98.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.2	99.2 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/28/24 10:59**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chloride	131	0.0600	mg/L	50	BHK0135	11/04/24	11/05/24	EPA 300.0	
Sulfate	276	0.300	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **10/28/24 10:59**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Total Dissolved Solids	826	10.0	mg/L	1	BHJ1316	10/30/24	10/31/24	SM2540C	

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Project: PDC - Ikenouye F29-22, 23 Tank Battery
Project Number: [none]
Project Manager: Bryce Goldade

Reported:
11/07/24 11:12

BH02
2410511-02 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/28/24 11:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BHJ1301	10/29/24	11/02/24	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: **10/28/24 11:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	14.0	105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.2	98.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.0	97.9 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/28/24 11:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	132	0.0600	mg/L	50	BHK0135	11/04/24	11/05/24	EPA 300.0	
Sulfate	279	0.300	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **10/28/24 11:23**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	815	10.0	mg/L	1	BHJ1316	10/30/24	10/31/24	SM2540C	

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Bryce Goldade

Reported:
11/07/24 11:12

BH03
2410511-03 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/28/24 11:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BHJ1301	10/29/24	11/02/24	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: **10/28/24 11:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	13.7	103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.0	97.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.0	97.5 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/28/24 11:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	129	0.0600	mg/L	50	BHK0135	11/04/24	11/05/24	EPA 300.0	
Sulfate	275	0.300	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **10/28/24 11:03**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	827	10.0	mg/L	1	BHJ1316	10/30/24	10/31/24	SM2540C	

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Project: PDC - Ikenouye F29-22, 23 Tank Battery
Project Number: [none]
Project Manager: Bryce Goldade

Reported:
11/07/24 11:12

BH04
2410511-04 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/28/24 10:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BHJ1301	10/29/24	11/02/24	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: **10/28/24 10:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	14.0	105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.1	98.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.0	97.4 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/28/24 10:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	150	0.0600	mg/L	50	BHK0135	11/04/24	11/05/24	EPA 300.0	
Sulfate	313	0.300	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **10/28/24 10:47**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	947	10.0	mg/L	1	BHJ1316	10/30/24	10/31/24	SM2540C	

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Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Bryce Goldade

Reported:
11/07/24 11:12

BH05
2410511-05 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/28/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BHJ1301	10/29/24	11/02/24	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: **10/28/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	9.50	71.3 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.1	98.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	12.0	90.4 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/28/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	146	0.0600	mg/L	50	BHK0135	11/04/24	11/05/24	EPA 300.0	
Sulfate	305	0.300	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **10/28/24 11:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	935	10.0	mg/L	1	BHJ1316	10/30/24	10/31/24	SM2540C	

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Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Bryce Goldade

Reported:
11/07/24 11:12

BH06
2410511-06 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/28/24 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BHJ1301	10/29/24	11/02/24	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: **10/28/24 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	13.4	101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.2	98.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	12.8	95.7 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/28/24 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	148	0.0600	mg/L	50	BHK0135	11/04/24	11/05/24	EPA 300.0	
Sulfate	313	0.300	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **10/28/24 11:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	923	10.0	mg/L	1	BHJ1316	10/30/24	10/31/24	SM2540C	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Bryce Goldade

Reported:
11/07/24 11:12

BH07
2410511-07 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/28/24 11:13**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BHJ1301	10/29/24	11/03/24	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: **10/28/24 11:13**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	13.9	104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.1	98.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.1	98.3 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/28/24 11:13**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	129	0.0600	mg/L	50	BHK0135	11/04/24	11/05/24	EPA 300.0	
Sulfate	279	0.300	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **10/28/24 11:13**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	771	10.0	mg/L	1	BHJ1316	10/30/24	10/31/24	SM2540C	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery
Project Number: [none]
Project Manager: Bryce Goldade

Reported:
11/07/24 11:12

BH08
2410511-08 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/28/24 11:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BHJ1301	10/29/24	11/03/24	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: **10/28/24 11:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	13.7	103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.0	97.9 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.0	97.4 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/28/24 11:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	121	0.0600	mg/L	50	BHK0135	11/04/24	11/05/24	EPA 300.0	
Sulfate	263	0.300	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **10/28/24 11:31**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	819	10.0	mg/L	1	BHJ1316	10/30/24	10/31/24	SM2540C	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Bryce Goldade

Reported:
11/07/24 11:12

BH09
2410511-09 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/28/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BHJ1301	10/29/24	11/03/24	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: **10/28/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	13.6	102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.1	98.6 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	13.0	97.4 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/28/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	120	0.0600	mg/L	50	BHK0135	11/04/24	11/05/24	EPA 300.0	
Sulfate	260	0.300	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **10/28/24 11:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	827	10.0	mg/L	1	BHJ1316	10/30/24	10/31/24	SM2540C	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery
Project Number: [none]
Project Manager: Bryce Goldade

Reported:
11/07/24 11:12

BH10
2410511-10 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/28/24 10:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BHJ1301	10/29/24	11/03/24	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: **10/28/24 10:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	13.7	103 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.1	98.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	12.8	95.8 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/28/24 10:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	122	0.0600	mg/L	50	BHK0135	11/04/24	11/05/24	EPA 300.0	
Sulfate	263	0.300	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **10/28/24 10:54**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	808	10.0	mg/L	1	BHJ1316	10/30/24	10/31/24	SM2540C	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Bryce Goldade

Reported:
11/07/24 11:12

BH11
2410511-11 (Water)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **10/28/24 10:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	1.0	ug/l	1	BHJ1301	10/29/24	11/03/24	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: **10/28/24 10:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	13.9	104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8	13.2	99.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	12.9	96.8 %	21-167		"	"	"	"	

Anions by EPA Method 300.0

Date Sampled: **10/28/24 10:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Chloride	124	0.0600	mg/L	50	BHK0135	11/04/24	11/05/24	EPA 300.0	
Sulfate	267	0.300	"	"	"	"	"	"	

Total Dissolved Solids by SM2540C

Date Sampled: **10/28/24 10:56**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Total Dissolved Solids	796	10.0	mg/L	1	BHJ1316	10/30/24	10/31/24	SM2540C	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Bryce Goldade

Reported:
11/07/24 11:12

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 BHJ1301 - EPA 5030 Water MS

Blank (BHJ1301-BLK1)

Prepared: 10/29/24 Analyzed: 11/02/24

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	14.0		"	13.3		105	23-173			
Surrogate: Toluene-d8	13.1		"	13.3		98.6	20-170			
Surrogate: 4-Bromofluorobenzene	13.0		"	13.3		97.2	21-167			

LCS (BHJ1301-BS1)

Prepared: 10/29/24 Analyzed: 11/02/24

Benzene	32.3	1.0	ug/l	33.3		96.9	51-132			
Toluene	31.9	1.0	"	33.3		95.7	51-138			
Ethylbenzene	35.2	1.0	"	33.3		106	58-146			
m,p-Xylene	67.0	2.0	"	66.7		100	57-144			
o-Xylene	32.8	1.0	"	33.3		98.5	53-146			
Naphthalene	30.2	1.0	"	33.3		90.6	70-130			
1,2,4-Trimethylbenzene	32.9	1.0	"	33.3		98.6	70-130			
1,3,5-Trimethylbenzene	32.8	1.0	"	33.3		98.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	13.7		"	13.3		102	23-173			
Surrogate: Toluene-d8	13.2		"	13.3		99.2	20-170			
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3		98.2	21-167			

LCS Dup (BHJ1301-BSD1)

Prepared: 10/29/24 Analyzed: 11/02/24

Benzene	33.1	1.0	ug/l	33.3		99.4	51-132	2.54	20	
Toluene	32.9	1.0	"	33.3		98.7	51-138	3.02	20	
Ethylbenzene	35.9	1.0	"	33.3		108	58-146	1.97	20	
m,p-Xylene	67.9	2.0	"	66.7		102	57-144	1.42	20	
o-Xylene	33.3	1.0	"	33.3		100	53-146	1.48	20	
Naphthalene	31.0	1.0	"	33.3		93.1	70-130	2.74	20	
1,2,4-Trimethylbenzene	33.3	1.0	"	33.3		99.9	70-130	1.24	20	
1,3,5-Trimethylbenzene	33.2	1.0	"	33.3		99.5	70-130	1.06	20	
Surrogate: 1,2-Dichloroethane-d4	13.7		"	13.3		103	23-173			
Surrogate: Toluene-d8	13.3		"	13.3		99.8	20-170			
Surrogate: 4-Bromofluorobenzene	13.1		"	13.3		98.0	21-167			

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Bryce Goldade

Reported:
11/07/24 11:12

Anions by EPA Method 300.0 - Quality Control

Summit Scientific

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

Batch BHK0135 - General Preparation

Blank (BHK0135-BLK1)

Prepared: 11/04/24 Analyzed: 11/05/24

Chloride	ND	0.0600	mg/L
Sulfate	ND	0.300	"

LCS (BHK0135-BS1)

Prepared: 11/04/24 Analyzed: 11/05/24

Chloride	3.11	0.0600	mg/L	3.00	104	90-110
Sulfate	15.3	0.300	"	15.0	102	90-110

Duplicate (BHK0135-DUP1)

Source: 2410497-01

Prepared: 11/04/24 Analyzed: 11/05/24

Chloride	147	0.0600	mg/L	143	2.90	20
Sulfate	192	0.300	"	186	2.95	20

Matrix Spike (BHK0135-MS1)

Source: 2410497-01

Prepared: 11/04/24 Analyzed: 11/05/24

Chloride	290	0.0600	mg/L	150	143	97.8	80-120
Sulfate	918	0.300	"	750	186	97.5	80-120

Summit Scientific

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Tasman Geosciences
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Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Bryce Goldade

Reported:
11/07/24 11:12

Total Dissolved Solids by SM2540C - Quality Control
Summit Scientific

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

Batch BHJ1316 - General Preparation

Blank (BHJ1316-BLK1)

Prepared: 10/30/24 Analyzed: 10/31/24

Total Dissolved Solids ND 10.0 mg/L

Duplicate (BHJ1316-DUP1)

Source: 2410498-01

Prepared: 10/30/24 Analyzed: 10/31/24

Total Dissolved Solids 11300 10.0 mg/L 11100 1.79 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: PDC - Ikenouye F29-22, 23 Tank Battery

Project Number: [none]
Project Manager: Bryce Goldade

Reported:
11/07/24 11:12

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