

QB Energy

Sample Delivery Group: L1794999
Samples Received: 11/02/2024
Project Number: J17E
Description: J17E Dumpline
Site: J17E
Report To: Jake J. / Brett M. / Blair R. / Andy V.
143 Diamond Avenue
Parachute, CO 81635

Entire Report Reviewed By:



Chris Ward
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National

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¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc

SAMPLE SUMMARY

20241101-J17E-(SS-EFF) L1794999-01 Air

Collected by
Logan Permenter

Collected date/time
11/01/24 10:25

Received date/time
11/02/24 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2394245	800	11/02/24 23:52	11/02/24 23:52	MNP	Mt. Juliet, TN

¹Cp ${}^2\text{Tc}$ 3S_S ${}^4\text{Cn}$ ${}^5\text{Sr}$ ${}^6\text{Qc}$ ${}^7\text{Gf}$ ${}^8\text{Al}$ ${}^9\text{Sc}$

20241101-J17E-(PS-EFF) L1794999-02 Air

Collected by
Logan Permenter

Collected date/time
11/01/24 11:30

Received date/time
11/02/24 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (MS) by Method TO-15	WG2394245	800	11/03/24 00:29	11/03/24 00:29	MNP	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris Ward
Project Manager

Sample Delivery Group (SDG) Narrative

Sample received in tedlar bag.

Lab Sample ID	Project Sample ID	Method
L1794999-01	20241101-J17E-(SS-EFF)	TO-15
L1794999-02	20241101-J17E-(PS-EFF)	TO-15



Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	160	511	3870	12400		800	WG2394245
Ethylbenzene	100-41-4	106	160	694	326	1410		800	WG2394245
Toluene	108-88-3	92.10	400	1510	20500	77200		800	WG2394245
Xylenes, Total	1330-20-7	106.16	480	2080	16800	72900		800	WG2394245
m&p-Xylene	179601-23-1	106	320	1390	14500	62900		800	WG2394245
o-Xylene	95-47-6	106	160	694	2280	9880		800	WG2394245
TPH (GC/MS) Low Fraction	8006-61-9	101	160000	661000	1350000	5580000		800	WG2394245
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		106				WG2394245

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	160	511	5060	16200		800	WG2394245
Ethylbenzene	100-41-4	106	160	694	283	1230		800	WG2394245
Toluene	108-88-3	92.10	400	1510	21200	79900		800	WG2394245
Xylenes, Total	1330-20-7	106.16	480	2080	12300	53400		800	WG2394245
m&p-Xylene	179601-23-1	106	320	1390	10700	46400		800	WG2394245
o-Xylene	95-47-6	106	160	694	1640	7110		800	WG2394245
TPH (GC/MS) Low Fraction	8006-61-9	101	160000	661000	1530000	6320000		800	WG2394245
(S) 1,4-Bromofluorobenzene	460-00-4	175	60.0-140		103				WG2394245

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R4141705-2 11/02/24 08:38

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ppbv		ppbv	ppbv
Benzene	U		0.110	0.200
Ethylbenzene	U		0.0778	0.200
Toluene	U		0.130	0.500
Xylenes, Total	U		0.0887	0.600
m&p-Xylene	U		0.174	0.400
o-Xylene	U		0.0887	0.200
TPH (GC/MS) Low Fraction	U		68.3	200
(S) 1,4-Bromofluorobenzene	97.6			60.0-140

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R4141705-1 11/02/24 08:00 • (LCSD) R4141705-3 11/02/24 10:12

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ppbv	ppbv	ppbv	%	%	%			%	%
Benzene	3.75	4.33	4.32	115	115	70.0-130			0.231	25
Ethylbenzene	3.75	4.42	4.44	118	118	70.0-130			0.451	25
Toluene	3.75	4.22	4.25	113	113	70.0-130			0.708	25
Xylenes, Total	11.3	13.4	13.4	119	119	70.0-130			0.000	25
m&p-Xylene	7.50	8.95	8.96	119	119	70.0-130			0.112	25
o-Xylene	3.75	4.40	4.40	117	117	70.0-130			0.000	25
TPH (GC/MS) Low Fraction	188	212	212	113	113	70.0-130			0.000	25
(S) 1,4-Bromofluorobenzene				97.6	98.5	60.0-140				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

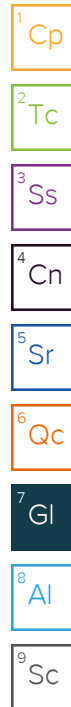
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



QB Energy LLC 143 Diamond Avenue Parachute, CO 81635 970-285-9606				Billing Information: Same as above				Pres Chk		Analysis / Container / Preservative										Chain of Custody		Page 1 of 1											
Report to: bmiddleton@qb-energy.com				Email To: bmiddleton@qb-energy.com																Pace Analytical® National Center for Testing & Innovation													
Project Description: J17E Dumpline				City/State Collected: Mamm Creek, CO																12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859		QR Code											
Phone: Fax:				Client Project # J17E				Lab Project # J17E														L # C041											
Collected by (print): Logan Permenter				Site/Facility ID # J17E				P.O. # J17E														Acctnum:											
Collected by (signature): 				Rush? (Lab MUST Be Notified) Same Day Five Day Next Day 5 Day (Rad Only) Two Day 10 Day (Rad Only) Three Day				Quote #														Template:											
Immediately Packed on Ice N Y X				Date Results Needed Standard TAT				No. of Cntrs														Prelogin:											
Sample ID				Comp/Grab		Matrix *		Depth		Date		Time				TVPH		BTEx												TSR:			
20241101-J17E-(SS-EFF)				Grab		Air				11/1/2024		1025		2		X		X												PB:			
20241101-J17E-(PS-EFF)				Grab		Air				11/1/2024		1130		2		X		X												Shipped Via:			
																														Remarks		Sample # (lab only)	
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