

Test Report



July 17, 2019

Client: Peterson Energy Operating

Project: Church Injection Samples

Lab ID: 1123

Date Samples Received: 6/13/2019

Sample Condition: Samples arrived intact and in appropriate sample containers. Samples were received within the temperature range specified in the test method(s) and/or with thermal preservation in process.

Comments: At the request of Ryan Dornbos on 7/17/19, the Church 41-25 Flowline sample results have been removed from this report. Mercury, Arsenic, and Selenium analysis performed by ALS Environmental in Fort Collins, Colorado.

Thank you for allowing eAnalytics Laboratory to provide laboratory services for you.

A handwritten signature in black ink, appearing to read "Chris Dieken".

Chris Dieken
QA Manager

A handwritten signature in black ink, appearing to read "Todd Rhea".

Todd Rhea
Lab Manager

eAnalytics Laboratory

4130 Clydesdale Parkway Loveland CO 80538

eANALYTICS
LABORATORY

Chain of Custody Form

eANALYTICS LABORATORY

4130 Clydesdale Parkway Loveland CO 80538

(970) 667-6975

www.eAnalyticsLab.com

Client Information (New Clients please fill out completely)

Company: PETE

Project: CHURCH INJECTION SAMPLES

Send Report & Invoice To: ANDY @ PETERSON ENERGY OPERATIONS LLC

Sampler: ZYAN BORNDOS

Phone/Email: 970 669 7411

Address: 2154 W EISENHOWER BLVD
LOVELAND, CO 80537

Analysis Information (Select analysis by checking box on corresponding sample line)

Lab ID	Sample Name	Sampling Date	Number of Containers	Matrix (S) Soil (W) Water (V) Vapor (A) Air	BTEX / MTBE / TVPH (EPA8260)	BTEX / TVPH (EPA8260)	TEPH (EPA8015)	Volatiles - Full List (EPA8260)	PAHs (EPA8270)	Dissolved RCRA-8 Metals (EPA610/7470/7471)	Total RCRA-8 Metals (EPA610/7470/7471)	TCLP RCRA-8 Metals (EPA1311/6010/7470/7471)	Vapor - Soil Vapor BTEX (EPATO-15)	Vapor - Emissions BTEX/TVPH (EPATO-15)	Air (Summa) - BTEX (EPATO-15 SIM)	pH/TSS/TDS	DATE REC'D	TOTAL CuNi	Chloride + Sulfate	HPC-Aerobic Plate Count	HPC-Anaerobic Plate Count
1	CHURCH HLZS FLOWLINE	6/13/19	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2	CHURCH PW @ GREATER	6/13/19	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Comments:

BTEX, TDS, ARSENIC, CHLORIDES, SULFATES, TVPH, TEPH, COPPER, LEAD,
MERCURY, NICKEL, BARIVUM Flowline sample removed per RYAN 7/17 MLR

Turnaround Time (Business Days)

☒ Standard (5-10 Days)

☐ 3 Day (1.5X)

If possible please inform
eAnalytics Lab in advance
for rush analysis

☐ 1-2 Day (2X)

☐ Same Day (3X)

Record of Custody

Relinquished by: ZYAN BORNDOS

Date: 6/13/19

Company: PETERSON ENERGY

Time: 2:35 PM

Received by:

Date:

Company:

Time:

AM / PM

For eAnalytics Use

Sample Conditions
Upon Arrival

Intact?

Yes / No

*On Ice?

Yes / No

*Or with thermal preservation in process

Relinquished by:

Date:

Company:

Time:

AM / PM

Received by:

Date: 6/13/19

Company:

eAnalytics Laboratory

Time:

2:45 AM / PM

Lab ID # 1123

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The logo for eANALYTICS LABORATORY. The word "eANALYTICS" is in a large, green, sans-serif font, with the "e" being a stylized lowercase letter. Below it, the word "LABORATORY" is in a smaller, green, sans-serif font, with all letters being uppercase.

Client: Peterson Energy Operating Lab ID: 1123

Project: Church Injection Samples

Analysis: Volatile Organics - BTEX/TVPH Method: EPA8260

Sample Name	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	TPH- TVPH	Date Sampled	Date Analyzed	Lab ID
	mg/L	mg/L	mg/L	mg/L	mg/L			
Church PW @ Treater	<0.005	0.074	0.049	<0.005	20.9	06/13/19	06/17/19	1123 2



Client:	Peterson Energy Operating	Lab ID:	1123
Project:	Church Injection Samples		
Analysis:	TPH-TEPH	Method:	EPA8015

Sample Name	TPH-TEPH mg/L	Date		
		Sampled	Analyzed	Lab ID
Church PW @ Treater	13.7	06/13/19	06/19/19	1123 2

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Client: Peterson Energy Operating Lab ID: 1123

Project: Church Injection Samples

Analysis: Total RCRA8 Metals Method: EPA6010/7470/7471
Total Metals EPA6010

Sample Name	Ag - Silver	Ba - Barium	Cd - Cadmium	Cr - Chromium	Pb - Lead	Cu - Copper	Ni - Nickel	Date Sampled	Date Analyzed	Lab ID
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L			
Church PW @ Treater	<0.05	0.135	<0.005	<0.05	<0.05	<0.10	<0.10	06/13/19	06/19/19	1123 2



Client:	Peterson Energy Operating	Lab ID:	1123
Project:	Church Injection Samples		
Analysis:	Total Dissolved Solids (TDS)	Method:	EPA160.1

Sample Name	TDS mg/L	Date Sampled	Date Analyzed	Lab ID
Church PW @ Treater	1480	06/13/19	06/17/19	1123 2

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Client: Peterson Energy Operating Lab ID: 1123

Project: Church Injection Samples

Analysis: Anion-Chloride Method: EPA300.0
Anion-Sulfate EPA300.0

Sample Name	Chloride	Sulfate	Date	Date	Lab ID
	mg/L	mg/L	Sampled	Analyzed	
Church PW @ Treater	239	234	06/13/19	06/20/19	1123 2

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Client: Peterson Energy Operating

Lab ID: 1123

Project: Church Injection Samples

Method: EPA8260

Sample Name	Dibromo- fluoromethane	1,2 Dichloro- ethane-D4	Toluene-D8	4-Bromo- fluorobenzene	Date Sampled	Date Analyzed	Lab ID	
	% Recovery	% Recovery	% Recovery	% Recovery				
Church PW @ Treater	103	108	106	114	06/13/19	06/17/19	1123	2

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Water		Benzene	Toluene	Ethyl-Benzene	Total Xylenes	TPH-TVPH	QC Start Date
Method Blank		<0.001	<0.001	<0.001	<0.001	<0.50	
		mg/L	mg/L	mg/L	mg/L	mg/L	
Lab Control Sample	70%-130%	105	104	108	107	111	06/17/19

Water		TPH-TEPH	QC Start Date
Method Blank		<5.0	
		mg/L	
Lab Control Sample	70%-130%	116	06/19/19