42-045-00070

Monroe Energy, LLC
4101 Post Road
Trainer, PA 19061
(610) 364-8000

July 24, 2019

FedEx: 7757 7609 3292

JUL 25 2019

12-213

Mr. James Rebarchak
Air Quality Program
Commonwealth of Pennsylvania
Department of Environmental Protection
2 East Main Street
Norristown, PA 19401

Re: Monroe Energy, LLC – Trainer Refinery
40 CFR 60, Subpart J and Ja Semiannual Compliance Report
Reporting Period: January 1, 2019 – June 30, 2019
Title V Operating Permit No. 23-00003

Mr. Rebarchak:

In accordance with 40 CFR 60, Subparts J and Ja, Monroe Energy, LLC's Trainer Refinery hereby submits this semi-annual compliance report for the reporting period of January 1, 2019 – June 30, 2019.

Should you have any questions or comments regarding this report, please contact me at (610) 364-8399.

Thank you,

Matthew Torell, P.E.
Environmental Leader

Attachment 1: Responsible Official Certification
Attachment 2: Facility Applicability
Attachment 3: Excess Emission and Monitoring System Performance Summary Report
Attachment 4: Excess Emissions and Emission Limit Exceedances
Attachment 5: CEMS Certification/ Audit Details
Attachment 6: Reportable Discharges per 60.108a(c)(6)
Attachment 7: Daily Drift Test Results for the FCCU SO2 Analyzer
Attachment 8: Detailed CEMS Downtime

cc: Office of Air Enforcement & Compliance Assistance (3AP20)
U.S. EPA, Region III
1650 Arch Street
Philadelphia, Pa 19103-2029
Fedex: 7757 7615 1987

Bcc: \\TRN-FS01\shared\HSE\!ENVIRONMENTAL\10 AIR\03 REPORTS\3.12 Semi-Annual NSPS Ja
Report\2019\1H2019

Monroe Energy, LLC
4101 Post Road
Trainer, PA 19061
(610) 364-8000

Attachment 1: Responsible Official Certification

Responsible Official Certification

Based upon information and belief formed after a reasonable inquiry, I, as a responsible official of the above-mentioned facility, certify the information contained in this report is accurate and true to the best of my knowledge.

Michael Capone,
Refinery Leader

24 July 2019
Date

Attachment 2: Facility Applicability

NSPS Subpart J

Fluid Catalytic Cracking Unit (FCCU)

The FCCU (Source ID 101) is subject to NSPS Subpart J. The FCC control devices include a CO Boiler, an Enhanced Selective Non-Catalytic Reduction Unit (ENSCR), an electrostatic precipitator, and a wet gas scrubber (WGS). In accordance with Subpart J, the WGS is equipped with a CEMS to measure CO and SO_2.

On November 22, 2005, the facility received approval from U.S. EPA for an Alternative Monitoring Plan (AMP) for Opacity in lieu of the requirement to install and operate a Continuous Opacity Monitoring (COM) System on the FCCU WGS stack. The AMP requires the refinery to monitor WGS liquid-to-gas (L-to-G) ratio (must be above 0.08) to continuously demonstrate compliance with the limits established during performance testing conducted in 2006 and 2007.

- **CMS Data:**

See Attachment 3 for a summary of the CMS downtime and excess emissions data in accordance with 40 CFR 60.7 (c)-(d) for this reporting period. As required by 40 CFR 104(c)(4)(vi), the results of the daily drift tests are included in Attachment 7 for the SO_2 analyzer.

- **Excess Emissions Reporting:**

There were no reportable discharges that occurred during this reporting period.

NSPS Subpart Ja

Main Flare

Monroe Energy operates a Main Flare (Source ID 103) that became subject to NSPS Ja on November 11, 2015. This flare is equipped with a flare gas recovery unit (FGRU) and maintains continuous monitoring equipment (i.e. flow, total reduced sulfur (TRS, H_2S) in accordance with the regulation.

- **CMS Data:**

See Attachment 3 for a summary of the H_2S and TRS CMS downtime and excess emissions data in accordance with 40 CFR 60.7 (c)-(d) for this reporting period. There were three exceedances of the 162 ppm H_2S on a 3-Hr average limit, however, one exceedance is not considered a violation of the standard due to the NSPS Ja emergency malfunction exemption.

- **Reportable Discharges per 60.108a(c)(6):**

There were no reportable discharges that occurred during this reporting period.

Sulfur Recovery Unit (SRU)

Monroe Energy operates two Claus sulfur recovery units. These units are permitted together as Source 102 (Claus Sulfur Recovery Plant) in the facility's Title V Permit. The SRU became subject to NSPS Ja on November 11, 2015 when the vent from the Sour Water Storage Tank was routed from the Sour Gas flare (which was subsequently shut down) to the SRU incinerator. The SRU is equipped with a CEMS to measure SO_2 and O_2. Pursuant to the PADEP certified CEMS, there were 28 hours in which deviations from the 12-hr SO_2 corrected ppm limit occurred during the reporting period.

- **CMS Data:**

See Attachment 3 for a summary of the CMS downtime and excess emissions data in accordance with 40 CFR 60.7 (c)-(d) for this reporting period.

- **Reportable Discharges per 60.108a(c)(6):**

There were no reportable discharges that occurred during this reporting period.

Fuel Gas System

Monroe Energy operates two fuel gas systems subject to NSPS Ja. The fuel gas systems include the North Side Fuel Gas System and the South Side Fuel Gas System. In accordance with Subpart Ja, each fuel gas system is equipped with a CMS system for measuring the concentration of H_2S in the fuel gas before being burned in any combustion device.

- **CMS Data:**

See Attachment 3 for a summary of the CMS downtime and excess emissions data in accordance with 40 CFR 60.7 (c)-(d) for this reporting period.

- **Reportable Discharges per 60.108a(c)(6):**

There were no reportable discharges for either of the fuel gas systems during this reporting period.

CMS Certification/Audit Details for all applicable sources can be found in Attachment 4.

Attachment 3: Excess Emission and Monitoring System Performance Summary Report

EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE SUMMARY REPORT

Pollutant (Circle One): SO_2 NO_X TRS H_2S **CO** Opacity

Reporting period dates: From **January 1, 2019** to **June 30, 2019**

Company: **Monroe Energy, LLC**

Emission Limitation: **500 ppm (1-hour average)**

Address: **4101 Post Rd, Trainer PA 19061**

Monitor Manufacturer: **Servomex**

Model No.: **04900C1-4202**

Date of Latest CMS Certification or Audit: **6/25/2019 (Linearity Test)**

Process Unit(s) Description: **FCCU**

Total source operating time in reporting period [1]: **4344 hours**

Emission data summary [1]		CMS performance summary [1]	
1. Duration of excess emissions in the reporting period due to:		1. CMS downtime in the reporting period due to:	
a. Startup/shutdown	**0**	a. Monitor equipment malfunctions	**0**
b. Control equipment problems	**0**	b. Non-Monitor equipment malfunctions	**0**
c. Process problems	**0**	c. Quality assurance calibration	**0**
d. Other known causes	**0**	d. Other known causes	**0**
e. Unknown causes	**0**	e. Unknown causes	**24**
2. Total duration of excess emissions	**0**	2. Total CMS Downtime	**24**
3. Total duration of excess emissions x (100) / [Total source operating time]	**0.00** %[2]	3. [Total CMS Downtime] x (100) / [Total source operating time]	**0.55** %[2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted. **See Attachment 3 for excess emissions information.**

Note: On a separate page, describe any changes since last quarter in CMS, process or controls. **No changes to the CMS, process, or controls have occurred since last reporting period.**

EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE SUMMARY REPORT

Pollutant (Circle One): **SO_2** NO_x TRS H_2S CO Opacity

Reporting period dates: From **January 1, 2019** to **June 30, 2019**

Company: **Monroe Energy, LLC**

Emission Limitation: **50 ppm (7-day rolling average); 25 ppm (365-day rolling average)**

Address: **4101 Post Rd, Trainer PA 19061**

Monitor Manufacturer: **AMETEK**

Model No.: **921**

Date of Latest CMS Certification or Audit: **6/25/2019 (Linearity Test)**

Process Unit(s) Description: **FCCU**

Total source operating time in reporting period [1]: **4344 hours**

Emission data summary [1]		CMS performance summary [1]	
1. Duration of excess emissions in the reporting period due to:		1. CMS downtime in the reporting period due to:	
a. Startup/shutdown	**0**	a. Monitor equipment malfunctions	**0**
b. Control equipment problems	**0**	b. Non-Monitor equipment malfunctions	**0**
c. Process problems	**0**	c. Quality assurance calibration	**0**
d. Other known causes	**0**	d. Other known causes	**0**
e. Unknown causes	**0**	e. Unknown causes	**41**
2. Total duration of excess emissions	**0**	2. Total CMS Downtime	**41**
3. Total duration of excess emissions x (100) / [Total source operating time]	**0.00** %[2]	3. [Total CMS Downtime] x (100) / [Total source operating time]	**0.94** %[2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted. **See Attachment 3 for excess emissions information.**

Note: On a separate page, describe any changes since last quarter in CMS, process or controls. **No changes to the CMS, process, or controls have occurred since last reporting period.**

EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE SUMMARY REPORT

Pollutant (Circle One): **SO_2** NO_x TRS H_2S CO Opacity

Reporting period dates: From **January 1, 2019** to **June 30, 2019**

Company: **Monroe Energy, LLC**

Emission Limitation: **250 ppm (12 hour rolling average)**

Address: **4101 Post Rd, Trainer PA 19061**

Monitor Manufacturer: **AMETEK**

Model No.: **Model 921**

Date of Latest CMS Certification or Audit: **6/26/2019 (Linearity Test)**

Process Unit(s) Description: **Claus Sulfur Recovery Plant**

Total source operating time in reporting period [1]: **4336 hours**

Emission data summary [1]		CMS performance summary [1]	
1. Duration of excess emissions in the reporting period due to:		1. CMS downtime in the reporting period due to:	
a. Startup/shutdown	**0**	a. Monitor equipment malfunctions	**0**
b. Control equipment problems	**0**	b. Non-Monitor equipment malfunctions	**0**
c. Process problems	**0**	c. Quality assurance calibration	**0**
d. Other known causes	**0**	d. Other known causes	**0**
e. Unknown causes	**0**	e. Unknown causes	**38**
2. Total duration of excess emissions	**0**	2. Total CMS Downtime	**38**
3. Total duration of excess emissions x (100) / [Total source operating time]	**0.00** %[2]	3. [Total CMS Downtime] x (100) / [Total source operating time]	**1.30** %[2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted. **See Attachment 3 for excess emissions information.**

Note: On a separate page, describe any changes since last quarter in CMS, process or controls. **No changes to the CMS, process, or controls have occurred since last reporting period.**

EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE SUMMARY REPORT

Pollutant (Circle One): SO_2 NO_X (TRS) H_2S CO Opacity

Reporting period dates: From **January 1, 2019** to **June 30, 2019**

Company: **Monroe Energy, LLC**

Emission Limitation: **162 ppm (3 hour average)**

Address: **4101 Post Rd, Trainer PA 19061**

Monitor Manufacturer: **Thermo**

Model No.: **SOLA II**

Date of Latest CMS Certification or Audit: **6/25/2019 (Cylinder Gas Audit)**

Process Unit(s) Description: **Main Flare**

Total source operating time in reporting period [1]: **4344 hours**

Emission data summary [1]		CMS performance summary [1]	
1. Duration of excess emissions in the reporting period due to:		1. CMS downtime in the reporting period due to:	
f. Startup/shutdown	**0**	a. Monitor equipment malfunctions	**0**
g. Control equipment problems	**0**	b. Non-Monitor equipment malfunctions	**0**
h. Process problems	**0**	c. Quality assurance calibration	**0**
i. Other known causes	**0**	d. Other known causes	**0**
j. Unknown causes	**0**	e. Unknown causes	**18**
2. Total duration of excess emissions	**0**	2. Total CMS Downtime	**18**
3. Total duration of excess emissions x (100) / [Total source operating time]	**0.0** %[2]	3. [Total CMS Downtime] x (100) / [Total source operating time]	**0.41** %[2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted. **See Attachment 3 for excess emissions information.**

Note: On a separate page, describe any changes since last quarter in CMS, process or controls. **No changes to the CMS, process, or controls have occurred since last reporting period.**

EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE SUMMARY REPORT

Pollutant (Circle One): SO_2 NO_X TRS **(H_2S)** CO Opacity

Reporting period dates: From **January 1, 2019** to **June 30, 2019**

Company: **Monroe Energy, LLC**

Emission Limitation: **162 ppm H2S (3 hour Average)**

Address: **4101 Post Rd, Trainer PA 19061**

Monitor Manufacturer: **Applied Automation**

Model No.: **AV4070**

Date of Latest CMS Certification or Audit: **6/26/2019 (Cylinder Gas Audit)**

Process Unit(s) Description: **North Side Fuel Gas System**

Total source operating time in reporting period [1]: **4344 hours**

Emission data summary [1]		CMS performance summary [1]	
1. Duration of excess emissions in the reporting period due to:		1. CMS downtime in the reporting period due to:	
f. Startup/shutdown	**0**	a. Monitor equipment malfunctions	**0**
g. Control equipment problems	**0**	b. Non-Monitor equipment malfunctions	**0**
h. Process problems	**0**	c. Quality assurance calibration	**0**
i. Other known causes	**0**	d. Other known causes	**0**
j. Unknown causes	**0**	e. Unknown causes	**66**
2. Total duration of excess emissions	**0**	2. Total CMS Downtime	**66**
3. Total duration of excess emissions x (100) / [Total source operating time]	**0.00** %[2]	3. [Total CMS Downtime] x (100) / [Total source operating time]	**1.52** %[2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted.

Note: On a separate page, describe any changes since last quarter in CMS, process or controls. **No changes to the CMS, process, or controls have occurred since last reporting period.**

EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE SUMMARY REPORT

Pollutant (Circle One): SO_2 NO_X TRS H_2S CO Opacity

Reporting period dates: From **January 1, 2019** to **June 30, 2019**

Company: **Monroe Energy, LLC**

Emission Limitation: **162 ppm H2S (3 hour Average)**

Address: **4101 Post Rd, Trainer PA 19061**

Monitor Manufacturer: **Applied Automation**

Model No.: **AV4071**

Date of Latest CMS Certification or Audit: **6/18/2019 (Cylinder Gas Audit)**

Process Unit(s) Description: **South Side Fuel Gas System**

Total source operating time in reporting period [1]: **4344 hours**

Emission data summary [1]		CMS performance summary [1]	
1. Duration of excess emissions in the reporting period due to:		1. CMS downtime in the reporting period due to:	
k. Startup/shutdown	**0**	a. Monitor equipment malfunctions	**0**
l. Control equipment problems	**0**	b. Non-Monitor equipment malfunctions	**0**
m. Process problems	**0**	c. Quality assurance calibration	**0**
n. Other known causes	**0**	d. Other known causes	**0**
o. Unknown causes	**0**	e. Unknown causes	**13**
2. Total duration of excess emissions	**0**	2. Total CMS Downtime	**13**
3. Total duration of excess emissions x (100) / [Total source operating time]	**0.00** %[2]	3. [Total CMS Downtime] x (100) / [Total source operating time]	**0.30** %[2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted.

Note: On a separate page, describe any changes since last quarter in CMS, process or controls. **No changes to the CMS, process, or controls have occurred since last reporting period.**

EXCESS EMISSION AND MONITORING SYSTEM PERFORMANCE SUMMARY REPORT

Pollutant (Circle One): SO_2 NO_x TRS **(H_2S)** CO Opacity

Reporting period dates: From **January 1, 2019** to **June 30, 2019**

Company: **Monroe Energy, LLC**

Emission Limitation: **162 ppm (3 hour average)**

Address: **4101 Post Rd, Trainer PA 19061**

Monitor Manufacturer: **ABB**

Model No.: **PGC5000**

Date of Latest CMS Certification or Audit: **6/24/2019 (Cylinder Gas Audit)**

Process Unit(s) Description: **Main Flare**

Total source operating time in reporting period [1]: **4344 hours**

Emission data summary [1]		CMS performance summary [1]	
1. Duration of excess emissions in the reporting period due to:		1. CMS downtime in the reporting period due to:	
k. Startup/shutdown	**0**	a. Monitor equipment malfunctions	**0**
l. Control equipment problems	**0**	b. Non-Monitor equipment malfunctions	**0**
m. Process problems	**0**	c. Quality assurance calibration	**0**
n. Other known causes	**7**	d. Other known causes	**0**
o. Unknown causes	**0**	e. Unknown causes	**40**
2. Total duration of excess emissions	**7**	2. Total CMS Downtime	**40**
3. Total duration of excess emissions x (100) / [Total source operating time]	**0.16** %[2]	3. [Total CMS Downtime] x (100) / [Total source operating time]	**0.92** %[2]

[1] For opacity, record all times in minutes. For gases, record all times in hours.

[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in 40 CFR 60.7(c) shall be submitted. **See Appendix B for excess emissions information.**

Note: On a separate page, describe any changes since last quarter in CMS, process or controls. **No changes to the CMS, process, or controls have occurred since last reporting period.**

Attachment 4: Excess Emissions and Emission Limit Exceedances

If any deviations occur from standards that use CEMS for compliance, refer to Attachment 7 to view detailed CEMS downtime information.

Source: FCCU

Standard: 500 PPM CO 1-Hr Average Limit

There were no deviations from this standard during the reporting period.

Source: FCCU

Standard: L:G Ratio ≥ 0.08 (Per November, 2005) – Demonstrates Compliance for PM and Opacity Standards

There were no deviations from this standard during the reporting period.

Source: FCCU

Standard: 50 ppm SO_2 (7-day rolling average); 25 ppm SO_2 (365-day rolling average)

There were no deviations from this standard during the reporting period.

Source: SRU

Standard: 250 PPM SO_2 12-Hr Rolling Average Limit

There were no deviations from this standard during the reporting period.

Source: Main Flare
Standard: 162 ppm H_2S 3-Hr Rolling Average Limit

Start	Duration	Caused by SSM event?	Nature and Cause of Event?	Corrective Action Taken?
*1/12/2019	5 hours	Yes	Wet Gas Compressor Shut down due to high level in suction drum, also causing high pressure in Frac Tower which activated and FCC shutdown for high pressure resulting in gas being sent to flare.	Unit shut down safely and returned to normal operation.
2/2/2019	1 hour	No	Sour Water Stripper upset caused Sour Gas Knock Out Pot to be sent to flare to lower sulfur train pressure.	Flare flow was reduced allowing flare gas compressors to recover gases. Sweep gas sent to flare.
5/29/2019	1 hour	No	A fire on the Isocracker Unit necessitated the depressurization of the 2nd Stage of the Isocracker, at this time the 1st Stage also lost partial pressure and sent sour material to the flare.	1st Stage pressure was re-established, 2nd Stage was shut down safely and then returned to normal operations.

***Note: This exceedance of the 162 ppm limit is not considered a violation of the standard due to NSPS Ja emergency malfunction exemption.**

Attachment 5: CEMS Certification/Audit Details

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK
Parameter: CO
System ID:
Component ID:
Span Value: 1,000.000
Span Scale Code: H

Test End Date/Time: 03/18/19 08:09
Test Number: XML (33-Q1-2019-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: Pass
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
03/18/19 07:40	518.800	525.100	-6.300	1.2
03/18/19 07:53	518.800	523.500	-4.700	0.9
03/18/19 08:05	518.800	521.800	-3.000	0.6

Reference Mean: 518.800
Measured Mean: 523.467
Level Error: 0.9
APS Indicator: False
Gas Type Code: BALN,CO
Vendor Identifier:
Cylinder #: cc160178
Cylinder Exp. Date: 01/31/2025

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
03/18/19 07:44	903.100	903.700	-0.600	0.1
03/18/19 07:56	903.100	901.800	1.300	0.1
03/18/19 08:09	903.100	902.000	1.100	0.1

Reference Mean: 903.100
Measured Mean: 902.500
Level Error: 0.1
APS Indicator: False
Gas Type Code: BALN,CO
Vendor Identifier:
Cylinder #: EB0066265
Cylinder Exp. Date: 04/16/2026

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
03/18/19 07:36	0.000	0.200	-0.200	
03/18/19 07:49	0.000	3.500	-3.500	
03/18/19 08:01	0.000	2.800	-2.800	

Reference Mean: 0.000
Measured Mean: 2.167
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK
Parameter: O2
System ID:
Component ID:
Span Value: 25.000
Span Scale Code: H

Test End Date/Time: 03/18/19 08:45
Test Number: XML (27-Q1-2019-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: Pass
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
03/18/19 08:13	0.000	0.000	0.000	
03/18/19 08:26	0.000	0.100	-0.100	
03/18/19 08:37	0.000	0.100	-0.100	

Reference Mean: 0.000
Measured Mean: 0.067
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
03/18/19 08:19	13.100	13.300	-0.200	1.5
03/18/19 08:30	13.100	13.400	-0.300	2.3
03/18/19 08:41	13.100	13.400	-0.300	2.3

Reference Mean: 13.100
Measured Mean: 13.367
Level Error: 2.0
APS Indicator: False
Gas Type Code: BALN,O2
Vendor Identifier: A12011
Cylinder #: almo51526
Cylinder Exp. Date: 01/02/2021

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
03/18/19 08:22	21.300	21.600	-0.300	1.4
03/18/19 08:34	21.300	21.500	-0.200	0.9
03/18/19 08:45	21.300	21.700	-0.400	1.9

Reference Mean: 21.300
Measured Mean: 21.600
Level Error: 1.4
APS Indicator: False
Gas Type Code: BALN,O2
Vendor Identifier:
Cylinder #: CC237707
Cylinder Exp. Date: 11/26/2026

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK
Parameter: NOXPPM9
System ID:
Component ID:
Span Value: 300.000
Span Scale Code: H

Test End Date/Time: 03/18/19 09:21
Test Number: XML (26-Q1-2019-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: Pass
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
03/18/19 08:49	0.000	0.000	0.000	
03/18/19 09:01	0.000	0.573	-0.600	
03/18/19 09:13	0.000	0.483	-0.500	

Reference Mean: 0.000
Measured Mean: 0.352
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
03/18/19 08:53	179.800	181.413	-1.600	0.9
03/18/19 09:05	179.800	177.983	1.800	1.0
03/18/19 09:17	179.800	177.718	2.100	1.2

Reference Mean: 179.800
Measured Mean: 179.038
Level Error: 0.4
APS Indicator: False
Gas Type Code: BALN,NO
Vendor Identifier: A12011
Cylinder #: ALM006568
Cylinder Exp. Date: 12/13/2020

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
03/18/19 08:57	273.600	273.327	0.300	0.1
03/18/19 09:09	273.600	273.684	-0.100	0.0
03/18/19 09:21	273.600	273.645	0.000	0.0

Reference Mean: 273.600
Measured Mean: 273.552
Level Error: 0.0
APS Indicator: False
Gas Type Code: BALN,NO,NOX
Vendor Identifier:
Cylinder #: ALM020299
Cylinder Exp. Date: 03/02/2026

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK
Parameter: SO2
System ID:
Component ID:
Span Value: 100.000
Span Scale Code: H

Test End Date/Time: 03/18/19 09:56
Test Number: XML (29-Q1-2019-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: Pass
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
03/18/19 09:25	0.000	0.000	0.000	
03/18/19 09:36	0.000	1.600	-1.600	
03/18/19 09:48	0.000	1.800	-1.800	

Reference Mean: 0.000
Measured Mean: 1.133
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
03/18/19 09:29	50.400	50.300	0.100	0.2
03/18/19 09:40	50.400	49.500	0.900	1.8
03/18/19 09:53	50.400	49.200	1.200	2.4

Reference Mean: 50.400
Measured Mean: 49.667
Level Error: 1.5
APS Indicator: False
Gas Type Code: SO2
Vendor Identifier:
Cylinder #: alm022262
Cylinder Exp. Date: 08/10/2021

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
03/18/19 09:32	87.000	88.000	-1.000	1.1
03/18/19 09:44	87.000	88.400	-1.400	1.6
03/18/19 09:56	87.000	85.900	1.100	1.3

Reference Mean: 87.000
Measured Mean: 87.433
Level Error: 0.5
APS Indicator: False
Gas Type Code: BALN,CO
Vendor Identifier:
Cylinder #: SG9113307BAL
Cylinder Exp. Date: 02/12/2027

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK
Parameter: CO
System ID:
Component ID:
Span Value: 1,000.000
Span Scale Code: H

Test End Date/Time: 06/25/19 07:56
Test Number: XML (33-Q2-2019-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: Pass
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
06/25/19 07:24	518.800	524.100	-5.300	1.0
06/25/19 07:37	518.800	519.700	-0.900	0.2
06/25/19 07:51	518.800	520.300	-1.500	0.3

Reference Mean: 518.800
Measured Mean: 521.367
Level Error: 0.5
APS Indicator: False
Gas Type Code: BALN,CO
Vendor Identifier:
Cylinder #: cc160178
Cylinder Exp. Date: 01/31/2025

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
06/25/19 07:29	902.300	910.000	-7.700	0.9
06/25/19 07:41	902.300	902.200	0.100	0.0
06/25/19 07:56	902.300	901.300	1.000	0.1

Reference Mean: 902.300
Measured Mean: 904.500
Level Error: 0.2
APS Indicator: False
Gas Type Code: BALN,CO
Vendor Identifier:
Cylinder #: SG9113307BAL
Cylinder Exp. Date: 02/12/2027

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
06/25/19 07:20	0.000	0.000	0.000	
06/25/19 07:35	0.000	1.200	-1.200	
06/25/19 07:47	0.000	1.400	-1.400	

Reference Mean: 0.000
Measured Mean: 0.867
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK
Parameter: O2
System ID:
Component ID:
Span Value: 25.000
Span Scale Code: H

Test End Date/Time: 06/25/19 08:28
Test Number: XML (27-Q2-2019-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: Pass
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
06/25/19 08:00	0.000	0.000	0.000	
06/25/19 08:10	0.000	0.200	-0.200	
06/25/19 08:20	0.000	0.200	-0.200	

Reference Mean: 0.000
Measured Mean: 0.133
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
06/25/19 08:04	13.100	13.000	0.100	0.8
06/25/19 08:13	13.100	12.900	0.200	1.5
06/25/19 08:22	13.100	13.000	0.100	0.8

Reference Mean: 13.100
Measured Mean: 12.967
Level Error: 1.0
APS Indicator: False
Gas Type Code: O2
Vendor Identifier:
Cylinder #: ALM051526
Cylinder Exp. Date: 01/02/2021

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
06/25/19 08:07	21.600	21.500	0.100	0.5
06/25/19 08:16	21.600	21.500	0.100	0.5
06/25/19 08:28	21.600	21.500	0.100	0.5

Reference Mean: 21.600
Measured Mean: 21.500
Level Error: 0.5
APS Indicator: False
Gas Type Code: BALN,O2
Vendor Identifier:
Cylinder #: CC351410
Cylinder Exp. Date: 11/16/2026

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK
Parameter: NOXPPM9
System ID:
Component ID:
Span Value: 300.000
Span Scale Code: H

Test End Date/Time: 06/25/19 09:08
Test Number: XML (26-Q2-2019-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: Pass
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
06/25/19 08:36	179.800	177.101	2.700	1.5
06/25/19 08:50	179.800	178.387	1.400	0.8
06/25/19 09:02	179.800	178.612	1.200	0.7

Reference Mean: 179.800
Measured Mean: 178.033
Level Error: 1.0
APS Indicator: False
Gas Type Code: BALN,NO
Vendor Identifier: A12011
Cylinder #: ALM006568
Cylinder Exp. Date: 12/13/2020

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
06/25/19 08:40	271.900	272.332	-0.400	0.2
06/25/19 08:53	271.900	273.218	-1.300	0.5
06/25/19 09:08	271.900	273.616	-1.700	0.6

Reference Mean: 271.900
Measured Mean: 273.055
Level Error: 0.4
APS Indicator: False
Gas Type Code: BALN,NO,NOX
Vendor Identifier:
Cylinder #: XC023559B
Cylinder Exp. Date: 12/17/2026

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
06/25/19 08:32	0.000	0.000	0.000	
06/25/19 08:46	0.000	0.397	-0.400	
06/25/19 08:59	0.000	0.358	-0.400	

Reference Mean: 0.000
Measured Mean: 0.252
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK
Parameter: SO2
System ID:
Component ID:
Span Value: 100.000
Span Scale Code: H

Test End Date/Time: 06/25/19 09:48
Test Number: XML (29-Q2-2019-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: Pass
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
06/25/19 09:12	0.000	0.200	-0.200	
06/25/19 09:26	0.000	2.100	-2.100	
06/25/19 09:40	0.000	1.500	-1.500	

Reference Mean: 0.000
Measured Mean: 1.267
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
06/25/19 09:17	50.400	49.700	0.700	1.4
06/25/19 09:30	50.400	49.700	0.700	1.4
06/25/19 09:44	50.400	49.200	1.200	2.4

Reference Mean: 50.400
Measured Mean: 49.533
Level Error: 1.7
APS Indicator: False
Gas Type Code: SO2
Vendor Identifier:
Cylinder #: alm022262
Cylinder Exp. Date: 08/10/2021

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
06/25/19 09:20	87.900	88.100	-0.200	0.2
06/25/19 09:34	87.900	88.400	-0.500	0.6
06/25/19 09:48	87.900	86.500	1.400	1.6

Reference Mean: 87.900
Measured Mean: 87.667
Level Error: 0.3
APS Indicator: False
Gas Type Code: BALN,SO2
Vendor Identifier:
Cylinder #: CC417332
Cylinder Exp. Date: 01/23/2027

Cylinder Gas Audit

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: M_FLARE
Parameter: SOLA_TRS
Instrument Span: 5000.000

Test Date/Time: 03/27/19 12:58
Test Result: Pass
Aborted?: No

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Low-Level				
03/27/19 10:26	83.900	73.900	10.000	13.5
03/27/19 11:44	76.000	73.900	2.100	2.8
03/27/19 12:34	67.400	73.900	-6.500	-8.8

CEMS Mean (Cm): 75.767
Audit Mean (Ca): 73.900
Accuracy (A) in %: 2.5
Mean Difference: 1.9
APS Indicator: 0
Cylinder #: cc234021
Cylinder Exp. Date: 01/29/2022

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Mid-Level				
03/27/19 10:34	150.700	151.400	-0.700	-0.5
03/27/19 11:52	167.000	151.400	15.600	10.3
03/27/19 12:46	149.600	151.400	-1.800	-1.2

CEMS Mean (Cm): 155.767
Audit Mean (Ca): 151.400
Accuracy (A) in %: 2.9
Mean Difference: 4.4
APS Indicator: 0
Cylinder #: ALM017637
Cylinder Exp. Date: 02/28/2020

Time	CEMS Value	Audit Value	Difference	% of Audit Value
High-Level				
03/27/19 10:46	2,061.100	2,399.000	-337.900	-14.1
03/27/19 12:04	2,145.400	2,399.000	-253.600	-10.6
03/27/19 12:58	2,524.700	2,399.000	125.700	5.2

CEMS Mean (Cm): 2243.733
Audit Mean (Ca): 2399.000
Accuracy (A) in %: -6.5
Mean Difference: -155.3
APS Indicator: 0
Cylinder #: SG9145498
Cylinder Exp. Date: 01/30/2022

Cylinder Gas Audit

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: M_FLARE
Parameter: SOLA_TRS
Instrument Span: 5000.000

Test Date/Time: 06/25/19 10:49
Test Result: Pass
Aborted?: No

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Low-Level				
06/25/19 08:50	67.300	73.900	-6.600	-8.9
06/25/19 09:34	69.200	73.900	-4.700	-6.4
06/25/19 10:25	68.300	73.900	-5.600	-7.6

CEMS Mean (Cm): 68.267
Audit Mean (Ca): 73.900
Accuracy (A) in %: -7.6
Mean Difference: -5.6
APS Indicator: 0
Cylinder #: cc234021
Cylinder Exp. Date: 01/29/2022

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Mid-Level				
06/25/19 09:02	143.800	151.400	-7.600	-5.0
06/25/19 09:46	144.500	151.400	-6.900	-4.6
06/25/19 10:37	144.500	151.400	-6.900	-4.6

CEMS Mean (Cm): 144.267
Audit Mean (Ca): 151.400
Accuracy (A) in %: -4.7
Mean Difference: -7.1
APS Indicator: 0
Cylinder #: ALM017637
Cylinder Exp. Date: 02/28/2020

Time	CEMS Value	Audit Value	Difference	% of Audit Value
High-Level				
06/25/19 09:14	2,376.700	2,399.000	-22.300	-0.9
06/25/19 09:58	2,431.500	2,399.000	32.500	1.4
06/25/19 10:49	2,396.600	2,399.000	-2.400	-0.1

CEMS Mean (Cm): 2401.600
Audit Mean (Ca): 2399.000
Accuracy (A) in %: 0.1
Mean Difference: 2.6
APS Indicator: 0
Cylinder #: SG9145498
Cylinder Exp. Date: 01/30/2022

Cylinder Gas Audit

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: N_H2S
Parameter: N_H2S
Instrument Span: 300.000

Test Date/Time: 03/19/19 08:50
Test Result: Pass
Aborted?: No

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Mid-Level				
03/19/19 07:52	150.300	152.300	-2.000	-1.3
03/19/19 08:16	153.000	152.300	0.700	0.5
03/19/19 08:40	155.400	152.300	3.100	2.0

CEMS Mean (Cm): 152.900
Audit Mean (Ca): 152.300
Accuracy (A) in %: 0.4
Mean Difference: 0.6
APS Indicator: 0
Cylinder #: CC429252
Cylinder Exp. Date: 01/10/2020

Time	CEMS Value	Audit Value	Difference	% of Audit Value
High-Level				
03/19/19 07:41	267.600	260.700	6.900	2.6
03/19/19 08:08	255.900	260.700	-4.800	-1.8
03/19/19 08:32	262.700	260.700	2.000	0.8

CEMS Mean (Cm): 262.067
Audit Mean (Ca): 260.700
Accuracy (A) in %: 0.5
Mean Difference: 1.4
APS Indicator: 0
Cylinder #: ALM049114
Cylinder Exp. Date: 06/12/2020

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Low-Level				
03/19/19 08:01	0.000	0.000	0.000	#Error
03/19/19 08:22	0.000	0.000	0.000	#Error
03/19/19 08:50	0.000	0.000	0.000	#Error

CEMS Mean (Cm): 0.000
Audit Mean (Ca): 0.000
Accuracy (A) in %: #Error
Mean Difference: 0.0
APS Indicator: 0
Cylinder #:
Cylinder Exp. Date:

Cylinder Gas Audit

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: N_H2S
Parameter: N_H2S
Instrument Span: 300.000

Test Date/Time: 06/26/19 09:01
Test Result: Pass
Aborted?: No

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Low-Level				
06/26/19 08:18	0.000	0.000	0.000	#Error
06/26/19 08:38	0.000	0.000	0.000	#Error
06/26/19 09:01	0.000	0.000	0.000	#Error

CEMS Mean (Cm): 0.000
Audit Mean (Ca): 0.000
Accuracy (A) in %: #Error
Mean Difference: 0.0
APS Indicator: 0
Cylinder #:
Cylinder Exp. Date:

Time	CEMS Value	Audit Value	Difference	% of Audit Value
High-Level				
06/26/19 08:08	261.400	262.900	-1.500	-0.6
06/26/19 08:29	264.600	262.900	1.700	0.6
06/26/19 08:51	266.100	262.900	3.200	1.2

CEMS Mean (Cm): 264.033
Audit Mean (Ca): 262.900
Accuracy (A) in %: 0.4
Mean Difference: 1.1
APS Indicator: 0
Cylinder #: CC466753
Cylinder Exp. Date: 08/08/2021

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Mid-Level				
06/26/19 08:05	151.400	151.100	0.300	0.2
06/26/19 08:25	150.000	151.100	-1.100	-0.7
06/26/19 08:47	150.100	151.100	-1.000	-0.7

CEMS Mean (Cm): 150.500
Audit Mean (Ca): 151.100
Accuracy (A) in %: -0.4
Mean Difference: -0.6
APS Indicator: 0
Cylinder #: CC277507
Cylinder Exp. Date: 05/22/2021

Cylinder Gas Audit

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: S_H2S
Parameter: S_H2S
Instrument Span: 300.000

Test Date/Time: 03/19/19 12:04
Test Result: Pass
Aborted?: No

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Mid-Level				
03/19/19 11:06	151.000	152.300	-1.300	-0.9
03/19/19 11:33	157.600	152.300	5.300	3.5
03/19/19 11:54	157.100	152.300	4.800	3.2

CEMS Mean (Cm): 155.233
Audit Mean (Ca): 152.300
Accuracy (A) in %: 1.9
Mean Difference: 2.9
APS Indicator: 0
Cylinder #: CC429252
Cylinder Exp. Date: 01/10/2020

Time	CEMS Value	Audit Value	Difference	% of Audit Value
High-Level				
03/19/19 10:55	258.100	262.500	-4.400	-1.7
03/19/19 11:25	260.700	262.500	-1.800	-0.7
03/19/19 11:47	262.200	262.500	-0.300	-0.1

CEMS Mean (Cm): 260.333
Audit Mean (Ca): 262.500
Accuracy (A) in %: -0.8
Mean Difference: -2.2
APS Indicator: 0
Cylinder #: CC466990
Cylinder Exp. Date: 12/18/2021

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Low-Level				
03/19/19 11:17	0.000	0.000	0.000	#Error
03/19/19 11:39	0.000	0.000	0.000	#Error
03/19/19 12:04	0.000	0.000	0.000	#Error

CEMS Mean (Cm): 0.000
Audit Mean (Ca): 0.000
Accuracy (A) in %: #Error
Mean Difference: 0.0
APS Indicator: 0
Cylinder #:
Cylinder Exp. Date:

Cylinder Gas Audit

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: S_H2S
Parameter: S_H2S
Instrument Span: 300.000

Test Date/Time: 06/18/19 10:19
Test Result: Pass
Aborted?: No

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Low-Level				
06/18/19 09:19	0.000	0.000	0.000	#Error
06/18/19 09:42	0.000	0.000	0.000	#Error
06/18/19 10:04	0.000	0.000	0.000	#Error

CEMS Mean (Cm): 0.000
Audit Mean (Ca): 0.000
Accuracy (A) in %: #Error
Mean Difference: 0.0
APS Indicator: 0
Cylinder #:
Cylinder Exp. Date:

Time	CEMS Value	Audit Value	Difference	% of Audit Value
Mid-Level				
06/18/19 09:29	150.300	152.300	-2.000	-1.3
06/18/19 09:50	150.500	152.300	-1.800	-1.2
06/18/19 10:14	150.900	152.300	-1.400	-0.9

CEMS Mean (Cm): 150.567
Audit Mean (Ca): 152.300
Accuracy (A) in %: -1.1
Mean Difference: -1.7
APS Indicator: 0
Cylinder #: CC429252
Cylinder Exp. Date: 01/10/2020

Time	CEMS Value	Audit Value	Difference	% of Audit Value
High-Level				
06/18/19 09:32	253.300	254.300	-1.000	-0.4
06/18/19 09:54	254.900	254.300	0.600	0.2
06/18/19 10:19	261.100	254.300	6.800	2.7

CEMS Mean (Cm): 256.433
Audit Mean (Ca): 254.300
Accuracy (A) in %: 0.8
Mean Difference: 2.1
APS Indicator: 0
Cylinder #: ALM026601
Cylinder Exp. Date: 05/11/2020

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: SRUSTACK
Parameter: SO2
System ID:
Component ID:
Span Value: 500.000
Span Scale Code: H

Test End Date/Time: 03/18/19 10:37
Test Number: XML (17-Q1-2019-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: Pass
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
03/18/19 09:40	271.600	271.700	-0.100	0.0
03/18/19 10:05	271.600	271.700	-0.100	0.0
03/18/19 10:30	271.600	270.100	1.500	0.6

Reference Mean: 271.600
Measured Mean: 271.167
Level Error: 0.2
APS Indicator: False
Gas Type Code: BALN,SO2
Vendor Identifier:
Cylinder #: CC21191
Cylinder Exp. Date: 05/30/2025

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
03/18/19 09:46	450.700	451.600	-0.900	0.2
03/18/19 10:10	450.700	450.000	0.700	0.2
03/18/19 10:37	450.700	450.000	0.700	0.2

Reference Mean: 450.700
Measured Mean: 450.533
Level Error: 0.0
APS Indicator: False
Gas Type Code: BALN,SO2
Vendor Identifier:
Cylinder #: CC107667
Cylinder Exp. Date: 05/30/2025

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
03/18/19 09:34	0.000	0.900	-0.900	
03/18/19 10:00	0.000	1.700	-1.700	
03/18/19 10:26	0.000	2.000	-2.000	

Reference Mean: 0.000
Measured Mean: 1.533
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: SRUSTACK
Parameter: O2
System ID:
Component ID:
Span Value: 25.000
Span Scale Code: H

Test End Date/Time: 03/18/19 12:09
Test Number: XML (18-Q1-2019-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: Pass
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
03/18/19 11:31	0.000	0.100	-0.100	
03/18/19 11:47	0.000	0.200	-0.200	
03/18/19 12:01	0.000	0.100	-0.100	

Reference Mean: 0.000
Measured Mean: 0.133
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
03/18/19 11:35	13.100	13.200	-0.100	0.8
03/18/19 11:51	13.100	13.300	-0.200	1.5
03/18/19 12:05	13.100	13.300	-0.200	1.5

Reference Mean: 13.100
Measured Mean: 13.267
Level Error: 1.3
APS Indicator: False
Gas Type Code: BALN,O2
Vendor Identifier: A12011
Cylinder #: ALM062568
Cylinder Exp. Date: 01/02/2021

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
03/18/19 11:40	21.400	21.500	-0.100	0.5
03/18/19 11:55	21.400	21.500	-0.100	0.5
03/18/19 12:09	21.400	21.500	-0.100	0.5

Reference Mean: 21.400
Measured Mean: 21.500
Level Error: 0.5
APS Indicator: False
Gas Type Code: BALN,O2
Vendor Identifier:
Cylinder #: EB0070771
Cylinder Exp. Date: 07/30/2026

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: SRUSTACK
Parameter: O2
System ID:
Component ID:
Span Value: 25.000
Span Scale Code: H

Test End Date/Time: 06/26/19 09:14
Test Number: XML (18-Q2-2019-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: Pass
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
06/26/19 08:41	13.100	13.100	0.000	0.0
06/26/19 08:56	13.100	13.100	0.000	0.0
06/26/19 09:10	13.100	13.100	0.000	0.0

Reference Mean: 13.100
Measured Mean: 13.100
Level Error: 0.0
APS Indicator: False
Gas Type Code: BALN,O2
Vendor Identifier: A12011
Cylinder #: ALM062568
Cylinder Exp. Date: 01/02/2021

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
06/26/19 08:46	21.900	22.000	-0.100	0.5
06/26/19 09:00	21.900	22.000	-0.100	0.5
06/26/19 09:14	21.900	22.000	-0.100	0.5

Reference Mean: 21.900
Measured Mean: 22.000
Level Error: 0.5
APS Indicator: False
Gas Type Code: BALN,O2
Vendor Identifier:
Cylinder #: ALM034330
Cylinder Exp. Date: 03/15/2024

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
06/26/19 08:36	0.000	0.000	0.000	
06/26/19 08:51	0.000	0.000	0.000	
06/26/19 09:05	0.000	0.000	0.000	

Reference Mean: 0.000
Measured Mean: 0.000
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Linearity Test

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: SRUSTACK
Parameter: SO2
System ID:
Component ID:
Span Value: 500.000
Span Scale Code: H

Test End Date/Time: 06/26/19 11:13
Test Number: XML (17-Q2-2019-1) / EDR (1)
Reason for Test: Periodic Quality Assurance
Test Result: Pass
Abbreviated?: No

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Low-Level				
06/26/19 10:18	0.000	0.600	-0.600	
06/26/19 10:41	0.000	1.700	-1.700	
06/26/19 11:02	0.000	1.800	-1.800	

Reference Mean: 0.000
Measured Mean: 1.367
Level Error:
APS Indicator: False
Gas Type Code:
Vendor Identifier:
Cylinder #:
Cylinder Exp. Date:

Injection Time	Reference Value	Measured Value	Difference	% of Reference
Mid-Level				
06/26/19 10:26	274.700	273.600	1.100	0.4
06/26/19 10:47	274.700	273.500	1.200	0.4
06/26/19 11:09	274.700	274.900	-0.200	0.1

Reference Mean: 274.700
Measured Mean: 274.000
Level Error: 0.3
APS Indicator: False
Gas Type Code: BALN,SO2
Vendor Identifier:
Cylinder #: CC353030
Cylinder Exp. Date: 12/12/2026

Injection Time	Reference Value	Measured Value	Difference	% of Reference
High-Level				
06/26/19 10:30	450.700	451.600	-0.900	0.2
06/26/19 10:51	450.700	449.100	1.600	0.4
06/26/19 11:13	450.700	451.600	-0.900	0.2

Reference Mean: 450.700
Measured Mean: 450.767
Level Error: 0.0
APS Indicator: False
Gas Type Code: BALN,SO2
Vendor Identifier:
Cylinder #: CC107667
Cylinder Exp. Date: 05/30/2025

Attachment 6: Reportable Discharges per 60.108a(c)(6)

There were no reportable discharges in the reporting period.

Attachment 7: Daily Drift Test Results for the FCCU SO2 Analyzer

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
O2														
01/01/2019 06:07	0.0	0.0	0.0	21.9	21.8	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC58203	08/13/26
01/02/2019 06:07	0.0	0.0	0.0	21.9	22.1	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC58203	08/13/26
01/03/2019 06:07	0.0	0.0	0.0	21.9	21.8	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC58203	08/13/26
01/03/2019 13:18	0.0	0.0	0.0	21.9	21.9	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC58203	08/13/26
01/04/2019 06:07	0.0	0.0	0.0	21.9	22.0	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC58203	08/13/26
01/05/2019 06:07	0.0	0.1	0.1	21.9	21.5	0.4	1.0	DIFF	Passed	Yes	BALN O2		CC58203	08/13/26
01/06/2019 06:07	0.0	0.0	0.0	21.9	21.8	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC58203	08/13/26
01/07/2019 06:07	0.0	0.0	0.0	21.9	22.4	0.5	1.0	DIFF	Passed	Yes	BALN O2		CC58203	08/13/26
01/08/2019 06:07	0.0	0.1	0.1	22.1	22.3	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC58203	08/13/26
01/09/2019 06:07	0.0	0.1	0.1	22.1	22.0	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
01/10/2019 06:07	0.0	0.1	0.1	22.1	22.0	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
01/11/2019 06:07	0.0	0.0	0.0	22.1	22.4	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
01/12/2019 06:07	0.0	0.1	0.1	22.1	22.6	0.5	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
01/13/2019 06:07	0.0	0.1	0.1	22.1	22.5	0.4	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
01/14/2019 06:07	0.0	0.1	0.1	22.1	22.4	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
01/15/2019 06:07	0.0	0.1	0.1	22.1	22.4	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
01/16/2019 06:07	0.0	0.1	0.1	22.1	22.3	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
01/17/2019 06:07	0.0	0.1	0.1	22.1	22.5	0.4	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
01/18/2019 06:07	0.0	0.0	0.0	22.1	22.5	0.4	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26

Calibration Error: **Failed Test** Failed Level Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
O2														
01/19/2019 06:07	0.0	0.1	0.1	22.1	22.5	0.4	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
01/20/2019 06:07	0.0	0.1	0.1	22.1	21.9	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
01/21/2019 06:07	0.0	0.1	0.1	22.1	22.3	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
01/22/2019 06:07	0.0	0.0	0.0	22.1	22.8	0.7	1.0	DIFF	Maint Limit	Yes	BALN O2		CC410842	07/02/26
01/23/2019 06:07	0.0	0.0	0.0	22.1	22.6	0.5	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
01/24/2019 06:07	0.0	0.1	0.1	22.1	22.0	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
01/24/2019 09:34	0.0	0.0	0.0	22.1	22.2	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
01/25/2019 06:07	0.0	0.1	0.1	22.1	22.6	0.5	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
01/26/2019 06:07	0.0	0.1	0.1	22.1	22.9	0.8	1.0	DIFF	Maint Limit	Yes	BALN O2		CC410842	07/02/26
01/27/2019 06:07	0.0	0.1	0.1	22.1	22.7	0.6	1.0	DIFF	Maint Limit	Yes	BALN O2		CC410842	07/02/26
01/28/2019 06:07	0.0	0.1	0.1	22.1	22.8	0.7	1.0	DIFF	Maint Limit	Yes	BALN O2		CC410842	07/02/26
01/29/2019 06:07	0.0	0.1	0.1	22.1	22.7	0.6	1.0	DIFF	Maint Limit	Yes	BALN O2		CC410842	07/02/26
01/30/2019 06:07	0.0	0.1	0.1	22.1	22.5	0.4	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
01/31/2019 06:07	0.0	0.0	0.0	22.1	22.9	0.8	1.0	DIFF	Maint Limit	Yes	BALN O2		CC410842	07/02/26
02/01/2019 06:07	0.0	0.0	0.0	22.1	23.1	1.0	1.0	DIFF	Maint Limit	Yes	BALN O2		CC410842	07/02/26
02/02/2019 06:07	0.0	0.0	0.0	22.1	22.9	0.8	1.0	DIFF	Maint Limit	Yes	BALN O2		CC410842	07/02/26
02/03/2019 06:07	0.0	0.0	0.0	22.1	23.0	0.9	1.0	DIFF	Maint Limit	Yes	BALN O2		CC410842	07/02/26
02/04/2019 06:07	0.0	0.0	0.0	22.1	22.9	0.8	1.0	DIFF	Maint Limit	Yes	BALN O2		CC410842	07/02/26
02/05/2019 06:07	0.0	0.0	0.0	22.1	22.7	0.6	1.0	DIFF	Maint Limit	Yes	BALN O2		CC410842	07/02/26

Calibration Error: **Failed Test** | Failed Level | Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
O2														
02/05/2019 11:21	0.0	0.0	0.0	22.1	22.6	0.5	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/06/2019 06:07	0.0	0.0	0.0	22.1	22.5	0.4	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/07/2019 06:07	0.0	0.0	0.0	22.1	22.4	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/08/2019 06:07	0.0	0.0	0.0	22.1	22.1	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/09/2019 06:07	0.0	0.0	0.0	22.1	22.8	0.7	1.0	DIFF	Maint Limit	Yes	BALN O2		CC410842	07/02/26
02/10/2019 06:07	0.0	0.0	0.0	22.1	22.8	0.7	1.0	DIFF	Maint Limit	Yes	BALN O2		CC410842	07/02/26
02/11/2019 06:07	0.0	0.0	0.0	22.1	22.3	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/12/2019 06:07	0.0	0.0	0.0	22.1	22.5	0.4	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/13/2019 06:07	0.0	0.0	0.0	22.1	22.0	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/14/2019 06:07	0.0	0.0	0.0	22.1	22.2	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/15/2019 06:07	0.0	0.0	0.0	22.1	22.1	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/16/2019 06:07	0.0	0.0	0.0	22.1	22.5	0.4	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/17/2019 06:07	0.0	0.0	0.0	22.1	22.6	0.5	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/18/2019 06:07	0.0	0.0	0.0	22.1	22.6	0.5	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/19/2019 06:07	0.0	0.0	0.0	22.1	23.1	1.0	1.0	DIFF	Maint Limit	Yes	BALN O2		CC410842	07/02/26
02/19/2019 08:36	0.0	0.0	0.0	22.1	22.1	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/20/2019 06:07	0.0	0.0	0.0	22.1	22.1	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/21/2019 00:07	0.0	0.0	0.0	22.1	22.2	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/21/2019 06:07	0.0	0.0	0.0	22.1	22.0	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26

Calibration Error: **Failed Test** Failed Level Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
O2														
02/22/2019 06:07	0.0	0.0	0.0	22.1	22.5	0.4	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/23/2019 06:07	0.0	0.0	0.0	22.1	22.6	0.5	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/23/2019 10:12	0.0	0.0	0.0	22.1	22.2	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/24/2019 06:07	0.0	0.0	0.0	22.1	21.4	0.7	1.0	DIFF	Maint Limit	Yes	BALN O2		CC410842	07/02/26
02/25/2019 06:07	0.0	0.0	0.0	22.1	21.7	0.4	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/25/2019 11:44	0.0	0.0	0.0	22.1	22.2	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/26/2019 06:07	0.0	0.0	0.0	22.1	22.5	0.4	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/27/2019 06:07	0.0	0.0	0.0	22.1	22.4	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
02/28/2019 06:07	0.0	0.0	0.0	22.1	22.2	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
03/01/2019 06:07	0.0	0.0	0.0	22.1	22.3	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
03/02/2019 06:07	0.0	0.0	0.0	22.1	21.7	0.4	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
03/03/2019 06:07	0.0	0.0	0.0	22.1	22.2	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
03/04/2019 06:07	0.0	0.0	0.0	22.1	22.3	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
03/05/2019 06:07	0.0	0.0	0.0	22.1	22.2	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
03/06/2019 06:07	0.0	0.0	0.0	22.1	22.4	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
03/07/2019 06:07	0.0	0.0	0.0	22.1	22.4	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
03/08/2019 06:07	0.0	0.0	0.0	22.1	22.3	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC410842	07/02/26
03/09/2019 06:07	0.0	0.0	0.0	21.3	21.3	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/10/2019 06:07	0.0	0.0	0.0	21.3	21.0	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26

Calibration Error: **Failed Test** Failed Level Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
O2														
03/11/2019 06:07	0.0	0.0	0.0	21.3	20.8	0.5	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/12/2019 06:07	0.0	0.0	0.0	21.3	21.0	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/12/2019 09:45	0.0	0.0	0.0	21.3	21.3	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/13/2019 06:08	0.0	0.0	0.0	21.3	21.4	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/14/2019 06:08	0.0	0.0	0.0	21.3	21.3	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/15/2019 06:08	0.0	0.0	0.0	21.3	21.2	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/15/2019 12:46	0.0	0.0	0.0	21.3	21.3	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/16/2019 05:09	0.0	0.0	0.0	21.3	21.4	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/17/2019 05:09	0.0	0.0	0.0	21.3	21.5	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/18/2019 05:09	0.0	0.0	0.0	21.3	21.6	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/19/2019 05:09	0.0	0.0	0.0	21.3	21.6	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/20/2019 05:09	0.0	0.0	0.0	21.3	21.7	0.4	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/21/2019 05:09	0.0	0.0	0.0	21.3	21.5	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/22/2019 05:09	0.0	0.0	0.0	21.3	21.0	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/22/2019 12:29	0.0	0.0	0.0	21.3	21.3	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/23/2019 05:09	0.0	0.0	0.0	21.3	21.4	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/24/2019 05:09	0.0	0.0	0.0	21.3	21.8	0.5	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/25/2019 05:09	0.0	0.0	0.0	21.3	21.5	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/26/2019 05:09	0.0	0.0	0.0	21.3	21.7	0.4	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26

Calibration Error: **Failed Test** Failed Level Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
O2														
03/27/2019 05:09	0.0	0.0	0.0	21.3	21.9	0.6	1.0	DIFF	Maint Limit	Yes	BALN O2		CC237707	11/26/26
03/28/2019 05:09	0.0	0.0	0.0	21.3	21.8	0.5	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/29/2019 05:09	0.0	0.0	0.0	21.3	21.8	0.5	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/30/2019 05:09	0.0	0.0	0.0	21.3	21.6	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
03/31/2019 05:09	0.0	0.0	0.0	21.3	21.3	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/01/2019 05:09	0.0	0.0	0.0	21.3	21.7	0.4	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/02/2019 05:09	0.0	0.0	0.0	21.3	21.8	0.5	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/03/2019 05:09	0.0	0.0	0.0	21.3	21.7	0.4	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/04/2019 05:09	0.0	0.0	0.0	21.3	21.8	0.5	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/04/2019 08:07	0.0	0.0	0.0	21.3	21.9	0.6	1.0	DIFF	Maint Limit	Yes	BALN O2		CC237707	11/26/26
04/05/2019 05:09	0.0	0.0	0.0	21.3	21.3	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/06/2019 05:09	0.0	0.0	0.0	21.3	21.0	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/07/2019 05:09	0.0	0.0	0.0	21.3	21.0	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/08/2019 05:09	0.0	0.0	0.0	21.3	20.7	0.6	1.0	DIFF	Maint Limit	Yes	BALN O2		CC237707	11/26/26
04/08/2019 08:24	0.0	0.0	0.0	21.3	21.4	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/09/2019 05:09	0.0	0.0	0.0	21.3	21.2	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/09/2019 07:34	0.0	0.0	0.0	21.3	21.4	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/10/2019 05:09	0.0	0.0	0.0	21.3	21.4	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/10/2019 15:43	0.0	0.0	0.0	21.3	21.4	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26

Calibration Error: **Failed Test** | Failed Level | Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
O2														
04/11/2019 05:09	0.0	0.0	0.0	21.3	21.7	0.4	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/11/2019 09:07	0.0	0.0	0.0	21.3	21.6	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/12/2019 05:09	0.0	0.0	0.0	21.3	21.6	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/12/2019 12:23	0.0	0.0	0.0	21.3	21.4	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/13/2019 05:09	0.0	0.0	0.0	21.3	21.3	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/14/2019 05:09	0.0	0.0	0.0	21.3	21.2	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/15/2019 05:09	0.0	0.0	0.0	21.3	20.8	0.5	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/16/2019 05:09	0.0	0.0	0.0	21.3	21.3	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/16/2019 08:29	0.0	0.0	0.0	21.3	21.4	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/17/2019 05:09	0.0	0.0	0.0	21.3	21.2	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/18/2019 05:09	0.0	0.0	0.0	21.3	21.3	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/19/2019 05:09	0.0	0.0	0.0	21.3	21.0	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/19/2019 10:21	0.0	0.0	0.0	21.3	21.0	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/20/2019 05:09	0.0	0.0	0.0	21.3	21.0	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/21/2019 05:09	0.0	0.0	0.0	21.3	21.1	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/22/2019 05:09	0.0	0.0	0.0	21.3	21.3	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/22/2019 13:00	0.0	0.0	0.0	21.3	21.3	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/23/2019 05:09	0.0	0.0	0.0	21.3	21.3	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/24/2019 05:09	0.0	0.0	0.0	21.3	21.2	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26

Calibration Error: **Failed Test** Failed Level Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
O2														
04/25/2019 05:09	0.0	0.0	0.0	21.3	21.2	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/26/2019 05:09	0.0	0.0	0.0	21.3	21.2	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/27/2019 05:09	0.0	0.0	0.0	21.3	21.1	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/28/2019 05:09	0.0	0.0	0.0	21.3	21.4	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/29/2019 05:09	0.0	0.0	0.0	21.3	21.7	0.4	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
04/30/2019 05:09	0.0	0.0	0.0	21.3	21.5	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
05/01/2019 05:09	0.0	0.0	0.0	21.3	21.6	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
05/02/2019 05:09	0.0	0.0	0.0	21.3	21.5	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC237707	11/26/26
05/03/2019 05:09	0.0	0.0	0.0	21.6	21.9	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/04/2019 05:09	0.0	0.0	0.0	21.6	21.7	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/05/2019 05:09	0.0	0.0	0.0	21.6	21.5	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/06/2019 05:09	0.0	0.0	0.0	21.6	21.7	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/07/2019 05:09	0.0	0.0	0.0	21.6	21.8	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/08/2019 05:09	0.0	0.0	0.0	21.6	21.9	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/09/2019 05:09	0.0	0.0	0.0	21.6	21.9	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/10/2019 05:09	0.0	0.0	0.0	21.6	21.9	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/11/2019 05:09	0.0	0.0	0.0	21.6	21.7	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/12/2019 05:09	0.0	0.0	0.0	21.6	21.7	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/13/2019 05:09	0.0	0.0	0.0	21.6	21.7	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26

Calibration Error: **Failed Test** Failed Level Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
O2														
05/14/2019 05:09	0.0	0.0	0.0	21.6	21.7	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/15/2019 05:09	0.0	0.1	0.1	21.6	21.7	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/16/2019 05:09	0.0	0.0	0.0	21.6	21.8	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/17/2019 05:09	0.0	0.0	0.0	21.6	21.6	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/18/2019 05:09	0.0	0.0	0.0	21.6	21.7	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/19/2019 05:09	0.0	0.0	0.0	21.6	21.8	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/20/2019 05:09	0.0	0.0	0.0	21.6	21.8	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/21/2019 05:09	0.0	0.0	0.0	21.6	21.7	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/22/2019 05:09	0.0	0.0	0.0	21.6	21.9	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/23/2019 05:09	0.0	0.0	0.0	21.6	21.9	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/24/2019 05:09	0.0	0.0	0.0	21.6	21.8	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/25/2019 05:09	0.0	0.0	0.0	21.6	21.9	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/26/2019 05:09	0.0	0.0	0.0	21.6	21.9	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/27/2019 05:09	0.0	0.0	0.0	21.6	21.7	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/28/2019 05:09	0.0	0.0	0.0	21.6	21.8	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/29/2019 05:09	0.0	0.0	0.0	21.6	21.6	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/29/2019 07:23	0.0	0.0	0.0	21.6	21.5	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/30/2019 05:09	0.0	0.0	0.0	21.6	21.7	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
05/31/2019 05:09	0.0	0.0	0.0	21.6	21.6	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26

Calibration Error: **Failed Test** Failed Level Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
O2														
06/01/2019 05:09	0.0	0.0	0.0	21.6	21.6	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/02/2019 05:09	0.0	0.0	0.0	21.6	21.6	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/03/2019 05:09	0.0	0.0	0.0	21.6	21.7	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/04/2019 05:09	0.0	0.0	0.0	21.6	21.8	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/05/2019 05:09	0.0	0.0	0.0	21.6	21.7	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/06/2019 05:09	0.0	0.0	0.0	21.6	21.5	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/07/2019 05:09	0.0	0.0	0.0	21.6	21.6	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/08/2019 05:09	0.0	0.0	0.0	21.6	21.7	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/09/2019 05:09	0.0	0.0	0.0	21.6	21.9	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/10/2019 05:09	0.0	0.0	0.0	21.6	21.7	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/11/2019 05:09	0.0	0.0	0.0	21.6	21.6	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/12/2019 05:09	0.0	0.0	0.0	21.6	21.8	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/13/2019 05:09	0.0	0.0	0.0	21.6	21.6	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/14/2019 05:09	0.0	0.0	0.0	21.6	21.7	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/15/2019 05:09	0.0	0.0	0.0	21.6	21.8	0.2	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/16/2019 05:09	0.0	0.0	0.0	21.6	21.7	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/17/2019 05:09	0.0	0.0	0.0	21.6	21.7	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/18/2019 05:09	0.0	0.0	0.0	21.6	21.6	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/19/2019 05:09	0.0	0.0	0.0	21.6	21.6	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26

Calibration Error: **Failed Test** Failed Level Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
O2														
06/20/2019 05:09	0.0	0.1	0.1	21.6	21.5	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/21/2019 05:09	0.0	0.1	0.1	21.6	21.3	0.3	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/22/2019 05:09	0.0	0.1	0.1	21.6	21.7	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/23/2019 05:09	0.0	0.1	0.1	21.6	21.7	0.1	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/24/2019 05:09	0.0	0.1	0.1	21.6	21.6	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/25/2019 05:09	0.0	0.1	0.1	21.6	21.6	0.0	1.0	DIFF	Passed	Yes	BALN O2		CC351410	11/16/26
06/26/2019 05:09	0.0	0.0	0.0	22.1	22.5	0.4	1.0	DIFF	Passed	Yes	BALN O2		ALM049834	02/11/27
06/27/2019 05:09	0.0	0.1	0.1	22.1	22.5	0.4	1.0	DIFF	Passed	Yes	BALN O2		ALM049834	02/11/27
06/28/2019 05:09	0.0	0.0	0.0	22.1	22.8	0.7	1.0	DIFF	Maint Limit	Yes	BALN O2		ALM049834	02/11/27
06/29/2019 05:09	0.0	9.5	9.5	22.1	9.6	12.5	1.0	DIFF	Failed	Yes	BALN O2		ALM049834	02/11/27
06/29/2019 10:49	0.0	0.1	0.1	22.1	22.2	0.1	1.0	DIFF	Passed	Yes	BALN O2		ALM049834	02/11/27
06/30/2019 05:09	0.0	0.1	0.1	22.1	22.0	0.1	1.0	DIFF	Passed	Yes	BALN O2		ALM049834	02/11/27
SO2														
01/01/2019 05:59	0.0	-3.5	3.5	86.8	86.1	0.7	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC218331	08/20/26
01/02/2019 05:59	0.0	-3.3	3.3	86.8	87.5	0.7	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC218331	08/20/26
01/03/2019 05:59	0.0	-3.6	3.6	86.8	86.1	0.7	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC218331	08/20/26
01/03/2019 13:10	0.0	1.4	1.4	86.8	87.5	0.7	5.0	DIFF	Passed	Yes	BALN SO2		CC218331	08/20/26
01/04/2019 05:59	0.0	-1.1	1.1	86.8	89.9	3.1	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC218331	08/20/26
01/05/2019 05:59	0.0	0.0	0.0	86.8	83.1	3.7	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC218331	08/20/26

Calibration Error: **Failed Test** | Failed Level | Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
SO2														
01/06/2019 05:59	0.0	0.0	0.0	86.8	88.5	1.7	5.0	DIFF	Passed	Yes	BALN SO2		CC218331	08/20/26
01/07/2019 05:59	0.0	-1.0	1.0	86.8	91.2	4.4	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC218331	08/20/26
01/08/2019 05:59	0.0	-0.6	0.6	87.7	89.6	1.9	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
01/09/2019 05:59	0.0	-0.1	0.1	87.7	89.6	1.9	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
01/10/2019 05:59	0.0	0.4	0.4	87.7	88.6	0.9	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
01/11/2019 05:59	0.0	-0.4	0.4	87.7	86.7	1.0	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
01/12/2019 05:59	0.0	-0.9	0.9	87.7	90.8	3.1	5.0	DIFF	Maint Limit	Yes	BALN SO2		ALM047422	04/30/26
01/13/2019 05:59	0.0	-0.2	0.2	87.7	88.6	0.9	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
01/14/2019 05:59	0.0	-0.2	0.2	87.7	84.5	3.2	5.0	DIFF	Maint Limit	Yes	BALN SO2		ALM047422	04/30/26
01/15/2019 05:59	0.0	-0.4	0.4	87.7	90.5	2.8	5.0	DIFF	Maint Limit	Yes	BALN SO2		ALM047422	04/30/26
01/16/2019 05:59	0.0	-0.2	0.2	87.7	88.4	0.7	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
01/17/2019 05:59	0.0	0.0	0.0	87.7	87.7	0.0	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
01/18/2019 05:59	0.0	-0.9	0.9	87.7	84.5	3.2	5.0	DIFF	Maint Limit	Yes	BALN SO2		ALM047422	04/30/26
01/19/2019 05:59	0.0	0.0	0.0	87.7	88.2	0.5	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
01/20/2019 05:59	0.0	0.1	0.1	87.7	87.8	0.1	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
01/21/2019 05:59	0.0	0.5	0.5	87.7	87.8	0.1	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
01/22/2019 05:59	0.0	-0.3	0.3	87.7	90.2	2.5	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
01/23/2019 05:59	0.0	-0.6	0.6	87.7	89.5	1.8	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
01/24/2019 05:59	0.0	1.0	1.0	87.7	84.6	3.1	5.0	DIFF	Maint Limit	Yes	BALN SO2		ALM047422	04/30/26

Calibration Error: **Failed Test** | Failed Level | Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
SO2														
01/24/2019 09:26	0.0	0.6	0.6	87.7	88.0	0.3	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
01/25/2019 05:59	0.0	0.2	0.2	87.7	87.3	0.4	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
01/26/2019 05:59	0.0	-0.5	0.5	87.7	88.5	0.8	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
01/27/2019 05:59	0.0	0.0	0.0	87.7	84.1	3.6	5.0	DIFF	Maint Limit	Yes	BALN SO2		ALM047422	04/30/26
01/28/2019 05:59	0.0	-0.1	0.1	87.7	87.2	0.5	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
01/29/2019 05:59	0.0	-0.6	0.6	87.7	89.2	1.5	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
01/30/2019 05:59	0.0	0.1	0.1	87.7	86.5	1.2	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
01/31/2019 05:59	0.0	0.1	0.1	87.7	87.5	0.2	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
02/01/2019 05:59	0.0	-1.2	1.2	87.7	92.2	4.5	5.0	DIFF	Maint Limit	Yes	BALN SO2		ALM047422	04/30/26
02/02/2019 05:59	0.0	-0.1	0.1	87.7	91.4	3.7	5.0	DIFF	Maint Limit	Yes	BALN SO2		ALM047422	04/30/26
02/03/2019 05:59	0.0	0.5	0.5	87.7	89.8	2.1	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
02/04/2019 05:59	0.0	0.4	0.4	87.7	92.6	4.9	5.0	DIFF	Maint Limit	Yes	BALN SO2		ALM047422	04/30/26
02/05/2019 05:59	0.0	1.1	1.1	87.7	91.9	4.2	5.0	DIFF	Maint Limit	Yes	BALN SO2		ALM047422	04/30/26
02/05/2019 11:13	0.0	1.9	1.9	87.7	87.3	0.4	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
02/06/2019 05:59	0.0	0.0	0.0	87.7	87.0	0.7	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
02/07/2019 05:59	0.0	0.1	0.1	87.7	88.2	0.5	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
02/08/2019 05:59	0.0	0.2	0.2	87.7	86.9	0.8	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
02/09/2019 05:59	0.0	-0.2	0.2	87.7	88.6	0.9	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
02/10/2019 05:59	0.0	-0.5	0.5	87.7	90.9	3.2	5.0	DIFF	Maint Limit	Yes	BALN SO2		ALM047422	04/30/26

Calibration Error: **Failed Test** Failed Level Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
SO2														
02/11/2019 05:59	0.0	-0.4	0.4	87.7	88.0	0.3	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
02/12/2019 05:59	0.0	-0.2	0.2	87.7	88.2	0.5	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
02/13/2019 05:59	0.0	0.1	0.1	87.7	87.9	0.2	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
02/14/2019 05:59	0.0	0.0	0.0	87.7	88.5	0.8	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
02/15/2019 05:59	0.0	-0.1	0.1	87.7	85.3	2.4	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
02/16/2019 05:59	0.0	0.2	0.2	87.7	89.1	1.4	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
02/17/2019 05:59	0.0	0.0	0.0	87.7	88.1	0.4	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
02/18/2019 05:59	0.0	-0.1	0.1	87.7	87.0	0.7	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
02/19/2019 05:59	0.0	-0.1	0.1	87.7	90.7	3.0	5.0	DIFF	Maint Limit	Yes	BALN SO2		ALM047422	04/30/26
02/19/2019 08:28	0.0	0.3	0.3	87.7	88.2	0.5	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
02/20/2019 05:59	0.0	-0.1	0.1	87.7	84.7	3.0	5.0	DIFF	Maint Limit	Yes	BALN SO2		ALM047422	04/30/26
02/20/2019 23:59	0.0	-0.1	0.1	87.7	87.5	0.2	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
02/21/2019 05:59	0.0	0.1	0.1	87.7	88.1	0.4	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
02/22/2019 05:59	0.0	0.2	0.2	87.7	89.7	2.0	5.0	DIFF	Passed	Yes	BALN SO2		ALM047422	04/30/26
02/23/2019 05:59	0.0	-0.3	0.3	87.0	90.0	3.0	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC173840	08/20/26
02/23/2019 10:04	0.0	0.3	0.3	87.0	87.4	0.4	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
02/24/2019 05:59	0.0	0.1	0.1	87.0	83.7	3.3	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC173840	08/20/26
02/25/2019 05:59	0.0	0.8	0.8	87.0	82.3	4.7	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC173840	08/20/26
02/25/2019 11:36	0.0	1.2	1.2	87.0	86.1	0.9	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26

Calibration Error: **Failed Test** | Failed Level | Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
SO2														
02/26/2019 05:59	0.0	-0.2	0.2	87.0	86.6	0.4	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
02/27/2019 05:59	0.0	-0.1	0.1	87.0	85.1	1.9	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
02/28/2019 05:59	0.0	-0.1	0.1	87.0	82.5	4.5	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC173840	08/20/26
03/01/2019 05:59	0.0	-0.2	0.2	87.0	86.3	0.7	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/02/2019 05:59	0.0	0.2	0.2	87.0	83.6	3.4	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC173840	08/20/26
03/03/2019 05:59	0.0	0.2	0.2	87.0	85.2	1.8	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/04/2019 05:59	0.0	0.2	0.2	87.0	84.9	2.1	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/05/2019 05:59	0.0	0.1	0.1	87.0	83.5	3.5	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC173840	08/20/26
03/06/2019 05:59	0.0	-0.3	0.3	87.0	84.1	2.9	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC173840	08/20/26
03/07/2019 05:59	0.0	-0.4	0.4	87.0	86.1	0.9	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/08/2019 05:59	0.0	0.2	0.2	87.0	85.0	2.0	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/09/2019 05:59	0.0	0.3	0.3	87.0	84.3	2.7	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC173840	08/20/26
03/10/2019 05:59	0.0	0.0	0.0	87.0	86.1	0.9	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/11/2019 05:59	0.0	0.7	0.7	87.0	85.3	1.7	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/12/2019 05:59	0.0	0.6	0.6	87.0	83.7	3.3	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC173840	08/20/26
03/12/2019 09:37	0.0	0.9	0.9	87.0	85.7	1.3	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/13/2019 06:00	0.0	0.2	0.2	87.0	86.0	1.0	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/14/2019 06:00	0.0	0.4	0.4	87.0	84.5	2.5	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/15/2019 06:00	0.0	0.2	0.2	87.0	83.0	4.0	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC173840	08/20/26

Calibration Error: **Failed Test** | Failed Level | Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
SO2														
03/15/2019 12:38	0.0	0.8	0.8	87.0	87.3	0.3	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/16/2019 05:01	0.0	1.3	1.3	87.0	88.4	1.4	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/17/2019 05:01	0.0	0.6	0.6	87.0	88.7	1.7	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/18/2019 05:01	0.0	0.3	0.3	87.0	86.1	0.9	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/19/2019 05:01	0.0	0.3	0.3	87.0	86.3	0.7	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/20/2019 05:01	0.0	0.7	0.7	87.0	86.0	1.0	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/21/2019 05:01	0.0	0.4	0.4	87.0	86.8	0.2	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/22/2019 05:01	0.0	1.1	1.1	87.0	85.2	1.8	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/22/2019 12:21	0.0	0.5	0.5	87.0	86.5	0.5	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/23/2019 05:01	0.0	0.7	0.7	87.0	86.7	0.3	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/24/2019 05:01	0.0	0.4	0.4	87.0	88.9	1.9	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/25/2019 05:01	0.0	0.6	0.6	87.0	87.5	0.5	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/26/2019 05:01	0.0	0.7	0.7	87.0	86.7	0.3	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/27/2019 05:01	0.0	-0.4	0.4	87.0	88.6	1.6	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/28/2019 05:01	0.0	-0.8	0.8	87.0	87.7	0.7	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/29/2019 05:01	0.0	-1.2	1.2	87.0	85.8	1.2	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/30/2019 05:01	0.0	-1.7	1.7	87.0	85.9	1.1	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
03/31/2019 05:01	0.0	-2.3	2.3	87.0	83.0	4.0	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC173840	08/20/26
04/01/2019 05:01	0.0	-1.9	1.9	87.0	86.0	1.0	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26

Calibration Error: **Failed Test** Failed Level Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
SO2														
04/02/2019 05:01	0.0	-2.5	2.5	87.0	85.8	1.2	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
04/03/2019 05:01	0.0	-2.9	2.9	87.0	85.1	1.9	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC173840	08/20/26
04/04/2019 05:01	0.0	-2.8	2.8	87.0	84.3	2.7	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC173840	08/20/26
04/04/2019 07:59	0.0	1.2	1.2	88.8	88.0	0.8	5.0	DIFF	Passed	Yes	BALN SO2		CC173840	08/20/26
04/05/2019 05:01	0.0	-0.2	0.2	88.8	86.0	2.8	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC401879	10/24/26
04/06/2019 05:01	0.0	-0.6	0.6	88.8	85.6	3.2	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC401879	10/24/26
04/07/2019 05:01	0.0	-0.6	0.6	88.8	84.8	4.0	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC401879	10/24/26
04/08/2019 05:01	0.0	-0.9	0.9	88.8	82.5	6.3	5.0	DIFF	Failed	Yes	BALN SO2		CC401879	10/24/26
04/08/2019 08:16	0.0	1.0	1.0	88.8	88.2	0.6	5.0	DIFF	Passed	Yes	BALN SO2		CC401879	10/24/26
04/09/2019 05:01	0.0	-2.4	2.4	88.8	82.8	6.0	5.0	DIFF	Failed	Yes	BALN SO2		CC401879	10/24/26
04/09/2019 07:26	0.0	1.0	1.0	88.8	88.4	0.4	5.0	DIFF	Passed	Yes	BALN SO2		CC401879	10/24/26
04/10/2019 05:01	0.0	-0.5	0.5	88.8	87.7	1.1	5.0	DIFF	Passed	Yes	BALN SO2		CC401879	10/24/26
04/10/2019 15:35	0.0	0.2	0.2	88.8	88.7	0.1	5.0	DIFF	Passed	Yes	BALN SO2		CC401879	10/24/26
04/11/2019 05:01	0.0	-2.8	2.8	88.8	94.5	5.7	5.0	DIFF	Failed	Yes	BALN SO2		CC401879	10/24/26
04/11/2019 08:59	0.0	1.8	1.8	88.8	87.8	1.0	5.0	DIFF	Passed	Yes	BALN SO2		CC401879	10/24/26
04/12/2019 05:01	0.0	-2.7	2.7	88.8	85.3	3.5	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC401879	10/24/26
04/12/2019 12:15	0.0	2.6	2.6	88.8	87.3	1.5	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC401879	10/24/26
04/13/2019 05:01	0.0	-1.6	1.6	88.8	86.1	2.7	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC401879	10/24/26
04/14/2019 05:01	0.0	-0.1	0.1	88.8	87.9	0.9	5.0	DIFF	Passed	Yes	BALN SO2		CC401879	10/24/26

Calibration Error: Failed Test | Failed Level | Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
SO2														
04/15/2019 05:01	0.0	3.3	3.3	88.8	90.6	1.8	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC401879	10/24/26
04/16/2019 05:01	0.0	4.6	4.6	88.8	93.8	5.0	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC401879	10/24/26
04/16/2019 08:21	0.0	0.8	0.8	88.8	89.8	1.0	5.0	DIFF	Passed	Yes	BALN SO2		CC401879	10/24/26
04/17/2019 05:01	0.0	-0.1	0.1	88.8	86.7	2.1	5.0	DIFF	Passed	Yes	BALN SO2		CC401879	10/24/26
04/18/2019 05:01	0.0	0.2	0.2	88.8	89.0	0.2	5.0	DIFF	Passed	Yes	BALN SO2		CC401879	10/24/26
04/19/2019 05:01	0.0	-1.2	1.2	88.8	83.5	5.3	5.0	DIFF	Failed	Yes	BALN SO2		CC401879	10/24/26
04/19/2019 10:13	0.0	0.3	0.3	88.8	87.5	1.3	5.0	DIFF	Passed	Yes	BALN SO2		CC401879	10/24/26
04/20/2019 05:01	0.0	0.5	0.5	88.8	89.7	0.9	5.0	DIFF	Passed	Yes	BALN SO2		CC401879	10/24/26
04/21/2019 05:01	0.0	0.5	0.5	88.8	90.3	1.5	5.0	DIFF	Passed	Yes	BALN SO2		CC401879	10/24/26
04/22/2019 05:01	0.0	0.2	0.2	88.8	91.5	2.7	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC401879	10/24/26
04/22/2019 12:52	0.0	0.1	0.1	88.8	88.9	0.1	5.0	DIFF	Passed	Yes	BALN SO2		CC401879	10/24/26
04/23/2019 05:01	0.0	-1.0	1.0	88.8	87.9	0.9	5.0	DIFF	Passed	Yes	BALN SO2		CC401879	10/24/26
04/24/2019 05:01	0.0	-0.5	0.5	88.8	87.6	1.2	5.0	DIFF	Passed	Yes	BALN SO2		CC401879	10/24/26
04/25/2019 05:01	0.0	-1.3	1.3	87.9	85.8	2.1	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
04/26/2019 05:01	0.0	0.7	0.7	87.9	88.1	0.2	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
04/27/2019 05:01	0.0	1.3	1.3	87.9	87.6	0.3	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
04/28/2019 05:01	0.0	-1.8	1.8	87.9	84.9	3.0	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
04/29/2019 05:01	0.0	0.9	0.9	87.9	90.4	2.5	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
04/30/2019 05:01	0.0	1.2	1.2	87.9	88.9	1.0	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27

Calibration Error: Failed Test | Failed Level | Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
SO2														
05/01/2019 05:01	0.0	1.0	1.0	87.9	89.6	1.7	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
05/02/2019 05:01	0.0	1.3	1.3	87.9	89.7	1.8	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
05/03/2019 05:01	0.0	1.4	1.4	87.9	90.3	2.4	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
05/04/2019 05:01	0.0	-0.7	0.7	87.9	85.2	2.7	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
05/05/2019 05:01	0.0	-1.0	1.0	87.9	84.1	3.8	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
05/06/2019 05:01	0.0	1.1	1.1	87.9	88.9	1.0	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
05/07/2019 05:01	0.0	1.1	1.1	87.9	88.9	1.0	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
05/08/2019 05:01	0.0	-0.7	0.7	87.9	86.2	1.7	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
05/09/2019 05:01	0.0	-0.9	0.9	87.9	86.8	1.1	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
05/10/2019 05:01	0.0	-0.9	0.9	87.9	87.1	0.8	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
05/11/2019 05:01	0.0	1.1	1.1	87.9	87.3	0.6	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
05/12/2019 05:01	0.0	2.8	2.8	87.9	88.6	0.7	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
05/13/2019 05:01	0.0	4.9	4.9	87.9	92.7	4.8	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
05/14/2019 05:01	0.0	4.5	4.5	87.9	92.5	4.6	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
05/15/2019 05:01	0.0	4.0	4.0	87.9	91.6	3.7	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
05/16/2019 05:01	0.0	-0.8	0.8	87.9	86.7	1.2	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
05/17/2019 05:01	0.0	-0.6	0.6	87.9	85.9	2.0	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
05/18/2019 05:01	0.0	0.2	0.2	87.9	87.0	0.9	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
05/19/2019 05:01	0.0	-0.2	0.2	87.9	87.7	0.2	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27

Calibration Error: **Failed Test** | Failed Level | Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
SO2														
05/20/2019 05:01	0.0	2.9	2.9	87.9	90.7	2.8	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
05/21/2019 05:01	0.0	2.9	2.9	87.9	89.5	1.6	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
05/22/2019 05:01	0.0	1.6	1.6	87.9	89.1	1.2	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
05/23/2019 05:01	0.0	1.9	1.9	87.9	90.4	2.5	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
05/24/2019 05:01	0.0	3.5	3.5	87.9	91.1	3.2	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
05/25/2019 05:01	0.0	2.6	2.6	87.9	89.9	2.0	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
05/26/2019 05:01	0.0	2.5	2.5	87.9	89.1	1.2	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
05/27/2019 05:01	0.0	4.0	4.0	87.9	90.6	2.7	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
05/28/2019 05:01	0.0	3.1	3.1	87.9	90.5	2.6	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
05/29/2019 05:01	0.0	7.0	7.0	87.9	93.3	5.4	5.0	DIFF	Failed	Yes	BALN SO2		CC417332	01/23/27
05/29/2019 07:15	0.0	0.7	0.7	87.9	87.3	0.6	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
05/30/2019 05:01	0.0	1.7	1.7	87.9	88.1	0.2	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
05/31/2019 05:01	0.0	2.6	2.6	87.9	89.4	1.5	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
06/01/2019 05:01	0.0	0.6	0.6	87.9	86.5	1.4	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
06/02/2019 05:01	0.0	-0.3	0.3	87.9	85.6	2.3	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
06/03/2019 05:01	0.0	-0.2	0.2	87.9	87.1	0.8	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
06/04/2019 05:01	0.0	-1.6	1.6	87.9	85.1	2.8	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
06/05/2019 05:01	0.0	-1.6	1.6	87.9	84.7	3.2	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
06/06/2019 05:01	0.0	0.7	0.7	87.9	86.9	1.0	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27

Calibration Error: Failed Test | Failed Level | Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
SO2														
06/07/2019 05:01	0.0	0.4	0.4	87.9	86.2	1.7	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
06/08/2019 05:01	0.0	-0.3	0.3	87.9	85.8	2.1	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
06/09/2019 05:01	0.0	-0.4	0.4	87.9	87.6	0.3	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
06/10/2019 05:01	0.0	-0.8	0.8	87.9	85.3	2.6	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
06/11/2019 05:01	0.0	2.4	2.4	87.9	88.7	0.8	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
06/12/2019 05:01	0.0	0.5	0.5	87.9	88.1	0.2	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
06/13/2019 05:01	0.0	0.0	0.0	87.9	85.9	2.0	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
06/14/2019 05:01	0.0	0.1	0.1	87.9	86.5	1.4	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
06/15/2019 05:01	0.0	-0.7	0.7	87.9	87.3	0.6	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
06/16/2019 05:01	0.0	-0.9	0.9	87.9	85.4	2.5	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
06/17/2019 05:01	0.0	1.6	1.6	87.9	87.9	0.0	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
06/18/2019 05:01	0.0	3.4	3.4	87.9	90.0	2.1	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
06/19/2019 05:01	0.0	4.5	4.5	87.9	89.8	1.9	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
06/20/2019 05:01	0.0	4.3	4.3	87.9	89.3	1.4	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
06/21/2019 05:01	0.0	4.4	4.4	87.9	89.5	1.6	5.0	DIFF	Maint Limit	Yes	BALN SO2		CC417332	01/23/27
06/22/2019 05:01	0.0	2.2	2.2	87.9	85.5	2.4	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
06/23/2019 05:01	0.0	1.2	1.2	87.9	87.4	0.5	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
06/24/2019 05:01	0.0	1.0	1.0	87.9	87.1	0.8	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27
06/25/2019 05:01	0.0	2.4	2.4	87.9	85.7	2.2	5.0	DIFF	Passed	Yes	BALN SO2		CC417332	01/23/27

Calibration Error: **Failed Test** | Failed Level | Maintenance Limit

Calibration Detail

Plant: MONROE ENERGY, LLC.

Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59

Source: FCCSTACK

	Zero Level			Span Level			Results				Protocol Gas Details			
End Date / Time	Reference Value	Actual Response	Cal Error	Reference Value	Actual Response	Cal Error	Cal Limit	Error Method	Pass/Fail	On-Line	Gas Type Code	Vendor ID	Cylinder ID	Expire Date
SO2														
06/26/2019 05:01	0.0	-0.6	0.6	87.9	86.4	1.5	5.0	DIFF	Passed	Yes	BALN SO2		CC232403	01/23/27
06/27/2019 05:01	0.0	-0.5	0.5	87.9	87.4	0.5	5.0	DIFF	Passed	Yes	BALN SO2		CC232403	01/23/27
06/28/2019 05:01	0.0	-0.9	0.9	87.9	87.7	0.2	5.0	DIFF	Passed	Yes	BALN SO2		CC232403	01/23/27
06/29/2019 05:01	0.0	5.7	5.7	87.9	5.6	82.3	5.0	DIFF	Failed	Yes	BALN SO2		CC232403	01/23/27
06/29/2019 10:41	0.0	0.5	0.5	87.9	88.2	0.3	5.0	DIFF	Passed	Yes	BALN SO2		CC232403	01/23/27
06/30/2019 05:01	0.0	0.7	0.7	87.9	87.6	0.3	5.0	DIFF	Passed	Yes	BALN SO2		CC232403	01/23/27

Calibration Error: Failed Test | Failed Level | Maintenance Limit

Attachment 8: Detailed CEMS Downtime

This is required by units with a deviation from a standard, which uses a CEMS for compliance. The Main Flare had limit exceedances in the second half of 2018. Therefore, the detailed CEMS downtime report is included in this attachment.

Downtime Events - Duration

Plant: MONROE ENERGY, LLC.
Report Period: 01/01/2019 00:00 Through 06/30/2019 23:59
Time Online Criteria: 1 minute(s)

Source: M_FLARE
Parameter: H2S
Interval: 001H

Incident ID	Start Date/Time	End Date/Time	Duration (hh:mm)	Reason Code - Description
1	01/03/2019 08:00	01/03/2019 08:59	1h - 0m	00 - None
2	03/18/2019 12:00	03/18/2019 13:59	2h - 0m	00 - None
3	03/19/2019 08:00	03/19/2019 08:59	1h - 0m	00 - None
4	03/19/2019 13:00	03/19/2019 13:59	1h - 0m	00 - None
5	03/20/2019 10:00	03/20/2019 18:59	9h - 0m	00 - None
6	03/21/2019 06:00	03/21/2019 07:59	2h - 0m	00 - None
7	03/21/2019 15:00	03/21/2019 15:59	1h - 0m	00 - None
8	03/25/2019 12:00	03/25/2019 14:59	3h - 0m	00 - None
9	03/26/2019 07:00	03/26/2019 10:59	4h - 0m	00 - None
10	03/27/2019 08:00	03/27/2019 09:59	2h - 0m	00 - None
11	03/27/2019 12:00	03/27/2019 12:59	1h - 0m	00 - None
12	04/09/2019 06:00	04/09/2019 07:59	2h - 0m	08 - NORMAL OPERATION
13	05/14/2019 06:00	05/14/2019 06:59	1h - 0m	08 - NORMAL OPERATION
14	06/13/2019 06:00	06/13/2019 07:59	2h - 0m	08 - NORMAL OPERATION
15	06/24/2019 07:00	06/24/2019 10:59	4h - 0m	08 - NORMAL OPERATION
16	06/25/2019 07:00	06/25/2019 10:59	4h - 0m	08 - NORMAL OPERATION
		Number of Events:	16	
		Total Duration:	40h - 0m	

Source: M_FLARE
Parameter: TRS
Interval: 001H

Incident ID	Start Date/Time	End Date/Time	Duration (hh:mm)	Reason Code - Description
17	01/03/2019 06:00	01/03/2019 07:59	2h - 0m	00 - None
18	03/21/2019 06:00	03/21/2019 15:59	10h - 0m	00 - None
19	04/09/2019 06:00	04/09/2019 07:59	2h - 0m	00 - None
20	05/14/2019 06:00	05/14/2019 06:59	1h - 0m	00 - None
21	05/30/2019 06:00	05/30/2019 06:59	1h - 0m	00 - None
22	06/13/2019 06:00	06/13/2019 07:59	2h - 0m	00 - None
		Number of Events:	6	
		Total Duration:	18h - 0m	

* Indicates duration incident could have additional data prior to the start date or following the end date.