

July 30, 2019

#### CERTIFIED: 7016 2710 0001 0589 3365

Department of Environmental Quality Office of Environmental Compliance Enforcement Division P.O. Box 4312 Baton Rouge, LA 70821-4312

Re: NSPS Excess Emissions & CEM Performance Report – 2nd Quarter 2019 Valero Refining - Meraux LLC, Agency Interest # <u>1238</u> 2235 Jacob Drive, St. Bernard Parish, Meraux, LA Title V Permit Numbers: <u>2500-00001-V17</u>

Dear Sir or Madam,

Valero Refining, Meraux LLC is submitting this Excess Emissions and Monitoring Systems Reports, per LAC 33:III, Chapter 30, 40 CFR 60.7(c), 40 CFR 60.108a(d) and 40 CFR 63.1575 for the Second Quarter 2019.

For this reporting period, no CEMS had excess emissions greater than 1% of the total operating time and no CEMS had downtime greater than 5% of the total operating time. The new NO<sub>x</sub> and O<sub>2</sub> CEMS on the NHT Charge Heater (EPN 1-17, EQT 0159) and the MDH Product and Fractionator Heaters (EPN 2-92, EQT 0033) were certified in July. The certification reports will be submitted separately.

Enclosed are the Data Assessment Reports for the appropriate CEMs and information required by NSPS Subpart Ja, 40 CFR 60.108a(d). Subpart Ja root cause and corrective action analysis reports are included with this submittal. This will be reported as a deviation in the next Semi-Annual Title V Deviation Report. Updates to previously submitted Subpart Ja root cause and corrective action analysis reports are also included if corrective actions were completed in this reporting period.

Should you have any questions regarding this submission, please contact Mr. Justin Stubbe at (504) 271-4141.

I certify, based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate, and complete.

Regards,

Never

Leslie Sullivan Vice President and General Manager Meraux Refinery

Enclosures cc: Mr. Brian Tusa, LDEQ SE Regional Office, New Orleans, LA

CEMS Overview - Valero (Meraux) Refinery					
UNIT	GAS	NSPS Subpart	STANDARD	MAKE	MODEL
#2 CDU	SO2*	Ja	250 ppm, 12-HRA	Brimstone	SGX-231
#2 SRU	O2	Ja	NA	Rosemount	Oxymitter 4000
#2 0011	SO2*	Ja	250 ppm, 12-HRA	ABB	Limas AO2000 Uras 26
#3 SRU	O2	Ja	NA	Magnos	Magnos 206
Doilor D. F.	NOx	Db	0.2 #/MMBtu, 30-DRA	ABB	Limas 11
DOIIGI D-3	O2	NOX         Db         0.2 #/MIMBtu, 30-DRA           O2         Db         NA		ABB	Magnos 27
Doilor D. C	NOx	Db	0.2 #/MMBtu, 30-DRA	ABB	Limas 11
DOILEI D-0	O2	Db	NA	ABB	Magnos 27
Area 1 Fuel Drum	H2S	J	162ppm, 3-HRA	Ametek	4661
Area 2 Fuel Drum	H2S	J	162ppm, 3-HRA	Ametek	4661
Area 4 Fuel Drum	H2S	J	162ppm, 3-HRA	Ametek	4661
HC Boiler Fuel Drum	H2S	J	162ppm, 3-HRA	Ametek	4661
HC Heater Fuel Drum	H2S	J	162ppm, 3-HRA	Ametek	4661
Doilor TD 01	NOx	Db	0.2 #/MMBtu, 30-DRA	Thermo	42i
DOILEL L D-01	O2	Db	NA		
DDLL Dahailar	NOx	Ja	40 ppm, 30-DRA	Thermo	42i
BRU Rebuiler	O2	Ja	NA		
	NOx	N/A	N/A	ABB	Limas 11
Crude Heater	O2	N/A	N/A	ABB	Magnos 27
MDUUL stars 1	NOx	N/A	N/A	ABB	URAS 26
MDH Heaters	O2	N/A	N/A	ABB	Magnos 206
NUT Charge Heater	NOx	Ja	40 ppm, 30-DRA	ABB	URAS 26
NHT Charge Healer	O2	Ja	NA	ABB	Magnos 206
			500 lbs SO2/24 hrs		
	Total Sulfur	Ja	(including HC Header)	Thermo	Sola II
North Flare	LIDE		162 ppm 3 HPA	Amotok	5100
	пдо	Ja	102 ppm, 3-HKA	Amelek	5100
		1.5	500,000 SCI/24 HIS	OF Demonstries	05000
	SCFH, MW	Ja	(Including HC Header)	GE Panametrics	GF868
	Total Sulfur	Ja	(including North Header)	Thermo	Sola II
HC Header	H2S	Ja	162 ppm, 3-HRA	Ametek	5100
	SCEH MW	Ja	500,000 scf/24 hrs (including North Header)	GF Panametrics	GE868
	00111, 1010	Ju			0.000
	Total Sulfur	Ja	500 lbs SO2/24 hrs	Thermo	Sola II
South Flare	H2S	Ja	162 ppm, 3-HRA	Ametek	5100
	SCFH, MW	Ja	500 lbs Total S/24 hrs	GE Panametrics	GF868

<sup>1</sup> CEMS installed per Consent Decree 10-cv-563

NOTE: NSPS Ja requires a Detailed Report on CEMS performance in addition to the Summary Report.

(per 40 CFR 60.7(d) and 60.108a(d))

Pollutant: SO<sub>2</sub>

Applicable NSPS Subpart: Ja

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>SO<sub>2</sub> corrected to 0% O<sub>2</sub> shall not exceed 250 ppm on a 12-hour rolling average</u>

Monitor Manufacturer and Model No.: <u>Brimstone SGX-231(SO<sub>2</sub>)/Rosemount Oxymitter 4000(O<sub>2</sub>)</u>

Date of Latest CMS Certification or Audit: RATA on 5/3/19

Process Unit(s) Description: <u>#2 SRU Incinerator (EPN 1-93, EQT 0019)</u>

Total source operating time in reporting period: 2,184 hours

Emissions Data Summary <sup>1</sup>		
1. Duration of excess emissions in reporting period due to:	(hours)	
a. Startup/shutdown	0	
b. Control equipment problems	0	
c. Process problems	0	
d. Other known causes	0	
e. Unknown causes	0	
2. Total duration of excess emission	0	
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %	

CMS Performance Summary <sup>1</sup>		
1. CMS downtime in reporting period due to:	(hours)	
a. Monitor equipment malfunctions	0	
b. Non-Monitor equipment malfunctions	0	
c. Quality assurance calibration	1	
d. Other known causes	9	
e. Unknown causes	0	
2. Total CMS Downtime	10	
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.5 %	

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d) and 60.108a(d))

Pollutant: SO<sub>2</sub>

Applicable NSPS Subpart: Ja

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>SO<sub>2</sub> corrected to 0% O<sub>2</sub> shall not exceed 250 ppm on a 12-hour rolling average.</u>

Monitor Manufacturer and Model No.: <u>ABB AO2000 Uras 26(SO<sub>2</sub>)/ Magnos 206 (O<sub>2</sub>)</u>

Date of Latest CMS Certification or Audit: RATA on 5/2/19

Process Unit(s) Description: <u>#3 SRU Incinerator (EPN 5-00, EQT 0079)</u>

Total source operating time in reporting period: 2,184 hours

Emissions Data Summary <sup>1</sup>		
1. Duration of excess emissions in reporting period due to:	(hours)	
a. Startup/shutdown	0	
b. Control equipment problems	0	
c. Process problems	0	
d. Other known causes	0	
e. Unknown causes	0	
2. Total duration of excess emission	0	
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %	

CMS Performance Summary <sup>1</sup>		
1. CMS downtime in reporting period due to:	(hours)	
a. Monitor equipment malfunctions	0	
b. Non-Monitor equipment malfunctions	0	
c. Quality assurance calibration	0	
d. Other known causes	0	
e. Unknown causes	0	
2. Total CMS Downtime	0	
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.0 %	

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d))

Pollutant: H<sub>2</sub>S

Applicable NSPS Subpart: <u>J</u>

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average</u>

Monitor Manufacturer and Model No.: Ametek, #4661

Date of Latest CMS Certification or Audit: RATA on 5/3/19

Process Unit(s) Description: <u>Area 1 Fuel Drum for Boiler TB-01 (EPN 1-06, EQT 0010)</u>; <u>Boiler B-7 (EPN 1-07, EQT 0011)</u>; <u>MDH</u> <u>Product and Fractionator Heaters (EPN 2-92, EQT 0033)</u>; <u>DHT Charge Heater (EPN 5-73, EQT 0058)</u>

Total source operating time in reporting period: EQT 0010-1,209 hours, EQT 0011-2,166 hours, EQT 0033-2,184 hours, EQT 0058-2,061 hours

Emissions Data Summary <sup>1</sup>				
1. Duration of excess emissions in reporting period due to:	EQT 0010 (hours)	EQT 0011 (hours)	EQT 0033 (hours)	EQT 0058 (hours)
a. Startup/shutdown	0	0	0	0
b. Control equipment problems	0	0	0	0
c. Process problems	0	0	0	0
d. Other known causes	0	0	0	0
e. Unknown causes	0	0	0	0
2. Total duration of excess emission	0	0	0	0
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %	0.0 %	0.0 %	0.0 %

CMS Performance Summary <sup>1</sup>				
1. CMS downtime in reporting period due to:	EQT 0010 (hours)	EQT 0011 (hours)	EQT 0033 (hours)	EQT 0058 (hours)
a. Monitor equipment malfunctions	0	0	0	0
b. Non-Monitor equipment malfunctions	0	0	0	0
c. Quality assurance calibration	0	0	0	0
d. Other known causes	0	0	0	0
e. Unknown causes	0	0	0	0
2. Total CMS Downtime	0	0	0	0
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.0 %	0.0 %	0.0 %	0.0 %

<sup>1</sup> 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 60.7(c) shall be submitted. (Percentage based on the lowest operating time.)

# SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND

## **MONITORING SYSTEMS PERFORMANCE**

(per 40 CFR 60.7(d))

Pollutant:  $H_2S$ 

Applicable NSPS Subpart: \_\_\_\_\_

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Subpart J: Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average.</u>

Monitor Manufacturer and Model No.: Ametek 4661

Date of Latest CMS Certification or Audit: RATA on 5/2/19

Process Unit(s) Description: <u>Area 2 Fuel Drum for: Vacuum Heater (EPN 1-76, EQT 0013); No.1 Crude Heater (EPN 12-72A, EQT 0022); NHT Debut Reboiler (EPN 15-72, EQT 0024); NHT Depent Reboiler (EPN 16-72 EQT 0027); Platformer Charge Heater (EPN 17-72 a,b,c, EQT 0028); Platformer Debut Reboiler (EPN 19-72, EQT 0029); ROSE Heater (EPN 1-80, EQT 0014)</u>

Total source operating time in reporting period: <u>EQT 0013-2,184 hours; EQT 0022-2,184 hours; EQT 0024-2,184 hours; EQT 0029-2,184 hours; EQT 0029-2,184 hours; EQT 0014-2,184 hours</u>

Emissions Data Summary <sup>1</sup>		
1. Duration of excess emissions in reporting period due to:	All EQT's (hours)	
a. Startup/shutdown	0	
b. Control equipment problems	0	
c. Process problems	0	
d. Other known causes	0	
e. Unknown causes	0	
2. Total duration of excess emission	0	
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %	

CMS Performance Summary <sup>1</sup>		
1. CMS downtime in reporting period due to:	All EQT's (hours)	
a. Monitor equipment malfunctions	0	
b. Non-Monitor equipment malfunctions	0	
c. Quality assurance calibration	0	
d. Other known causes	0	
e. Unknown causes	0	
2. Total CMS Downtime	0	
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.0 %	

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d) and 60.108a(d))

Pollutant:  $H_2S$ 

Applicable NSPS Subpart: Ja

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Subpart Ja: Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average and 60 ppm on a 365 day</u> rolling average.

Monitor Manufacturer and Model No.: Ametek 4661

Date of Latest CMS Certification or Audit: RATA on 5/2/19

Process Unit(s) Description: Area 2 Fuel Drum for: Benzene Recovery Unit Reboiler (EPN 1-09, EQT 0127); NHT Charge Heater

(EPN 1-17, EQT 0159)

Total source operating time in reporting period: EQT 0127-2,184 hours; EQT 0159-2,184 hours

Emissions Data Summary <sup>1</sup>		
1. Duration of excess emissions in reporting period due to:	All EQT's (hours)	
a. Startup/shutdown	0	
b. Control equipment problems	0	
c. Process problems	0	
d. Other known causes	0	
e. Unknown causes	0	
2. Total duration of excess emission	0	
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %	

CMS Performance Summary <sup>1</sup>		
1. CMS downtime in reporting period due to:	All EQT's (hours)	
a. Monitor equipment malfunctions	0	
b. Non-Monitor equipment malfunctions	0	
c. Quality assurance calibration	0	
d. Other known causes	0	
e. Unknown causes	0	
2. Total CMS Downtime	0	
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.0 %	

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d))

Pollutant:  $H_2S$ 

Applicable NSPS Subpart: \_\_\_\_\_

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average.</u>

Monitor Manufacturer and Model No.: Ametek 4661

Date of Latest CMS Certification or Audit: <u>RATA on 5/1/19</u>

Process Unit(s) Description: Area 4 Fuel Drum for Merox Disulfide Separator to Platformer Charge Heater

Total source operating time in reporting period: 2,172 hours

Emissions Data Summary <sup>1</sup>		
1. Duration of excess emissions in reporting period due to:	(hours)	
a. Startup/shutdown	0	
b. Control equipment problems	0	
c. Process problems	0	
d. Other known causes	0	
e. Unknown causes	0	
2. Total duration of excess emission	0	
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %	

CMS Performance Summary <sup>1</sup>		
1. CMS downtime in reporting period due to:	(hours)	
a. Monitor equipment malfunctions	0	
b. Non-Monitor equipment malfunctions	0	
c. Quality assurance calibration	1	
d. Other known causes	0	
e. Unknown causes	0	
2. Total CMS Downtime	1	
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.0 %	

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d))

Pollutant: H<sub>2</sub>S

Applicable NSPS Subpart: \_\_\_\_\_

Reporting period dates: From <u>4/1/19 to 6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average.</u>

Monitor Manufacturer and Model No.: Ametek 4661

Date of Latest CMS Certification or Audit: RATA on 5/6/19

Process Unit(s) Description: Area 6 Fuel Drum for Hydrocracker & Hydrotreater Charge Heaters (EPN 1-00, EQT 0009)

Total source operating time in reporting period: 2,184 hours

Emissions Data Summary <sup>1</sup>		
1. Duration of excess emissions in reporting period due to:	(hours)	
a. Startup/shutdown	0	
b. Control equipment problems	0	
c. Process problems	0	
d. Other known causes	0	
e. Unknown causes	0	
2. Total duration of excess emission	0	
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %	

CMS Performance Summary <sup>1</sup>		
1. CMS downtime in reporting period due to:	(hours)	
a. Monitor equipment malfunctions	0	
b. Non-Monitor equipment malfunctions	0	
c. Quality assurance calibration	2	
d. Other known causes	7	
e. Unknown causes	0	
2. Total CMS Downtime	9	
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.4 %	

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d))

Pollutant: H<sub>2</sub>S

Applicable NSPS Subpart: <u>J</u>

Reporting period dates: From <u>4/1/19 to 6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average.</u>

Monitor Manufacturer and Model No.: Ametek 4661

Date of Latest CMS Certification or Audit: RATA on 5/2/19

Process Unit(s) Description: Area 6 Fuel Drum for Boiler B-5 (EPN 2-00, EQT 0030) and Boiler B-6 (EPN 3-00, EQT 0048)

Total source operating time in reporting period: EQT 0030-2,182 hours; EQT 0048-0 hours<sup>3</sup>

Emissions Data Summary <sup>1</sup>		
1. Duration of excess emissions in reporting period due to:	EQT 0030 (hours)	EQT 0048 (hours)
a. Startup/shutdown	0	0
b. Control equipment problems	0	0
c. Process problems	0	0
d. Other known causes	0	0
e. Unknown causes	0	0
2. Total duration of excess emission	0	0
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %	0.0 %

CMS Performance Summary <sup>1</sup>		
1. CMS downtime in reporting period due to:	EQT 0030 (hours)	EQT 0048 (hours)
a. Monitor equipment malfunctions	0	0
b. Non-Monitor equipment malfunctions	0	0
c. Quality assurance calibration	1	0
d. Other known causes	0	0
e. Unknown causes	0	0
2. Total CMS Downtime	1	0
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.0 %	0.0 %

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

<sup>3</sup>Boiler B-6 ran on purchased natural gas for the entire Quarter.

 $<sup>^{2}</sup>$  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 60.7(c) shall be submitted.

(per 40 CFR 60.7(d))

Pollutant: NO<sub>x</sub>

Applicable NSPS Subpart: <u>Db</u>

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Nitrogen Oxide shall not exceed 0.1 pound/MMBtu on a 30-day rolling average.</u>

Monitor Manufacturer and Model No.: <u>ABB Limas11( NOx), Magnos27 (O2)</u>

Date of Latest CMS Certification or Audit: RATA on 5/7/19

Process Unit(s) Description: Boiler B-5 (EPN 2-00, EQT 0030)

Total source operating time in reporting period: 2,182 hours

Emissions Data Summary <sup>1</sup>		
1. Duration of excess emissions in reporting period due to:	(hours)	
a. Startup/shutdown	0	
b. Control equipment problems	0	
c. Process problems	0	
d. Other known causes	0	
e. Unknown causes	0	
2. Total duration of excess emission	0	
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %	

CMS Performance Summary <sup>1</sup>		
1. CMS downtime in reporting period due to:	(hours)	
a. Monitor equipment malfunctions	0	
b. Non-Monitor equipment malfunctions	0	
c. Quality assurance calibration	0	
d. Other known causes	0	
e. Unknown causes	0	
2. Total CMS Downtime	0	
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.0 %	

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d))

Pollutant: NO<sub>x</sub>

Applicable NSPS Subpart: <u>Db</u>

Reporting period dates: From <u>4/1/19 to 6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Nitrogen Oxide shall not exceed 0.1 pound/MMBtu on a 30-day rolling average.</u>

Monitor Manufacturer and Model No.: <u>ABB Limas11( NOx), Magnos27 (O<sub>2</sub>)</u>

Date of Latest CMS Certification or Audit: RATA on 5/8/19

Process Unit(s) Description: Boiler B-6 (EPN 3-00, EQT 0048)

Total source operating time in reporting period: 2,184 hours

Emissions Data Summary <sup>1</sup>		
1. Duration of excess emissions in reporting period due to:	(hours)	
a. Startup/shutdown	0	
b. Control equipment problems	0	
c. Process problems	0	
d. Other known causes	0	
e. Unknown causes	0	
2. Total duration of excess emission	0	
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %	

CMS Performance Summary <sup>1</sup>		
1. CMS downtime in reporting period due to:	(hours)	
a. Monitor equipment malfunctions	0	
b. Non-Monitor equipment malfunctions	0	
c. Quality assurance calibration	0	
d. Other known causes	0	
e. Unknown causes	0	
2. Total CMS Downtime	0	
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.0 %	

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d))

Pollutant: NO<sub>x</sub>

Applicable NSPS Subpart: <u>Db</u>

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Nitrogen Oxide shall not exceed 0.1 pound/MMBtu on a 30-day rolling average.</u>

Monitor Manufacturer and Model No.: <u>Thermo Environmental 42i (NOx)/(O<sub>2</sub>)</u>

Date of Latest CMS Certification or Audit: RATA on 6/28/19

Process Unit(s) Description: Boiler TB-01 (EPN 1-06, EQT 0010)

Total source operating time in reporting period: 1,209 hours

Emissions Data Summary <sup>1</sup>		
1. Duration of excess emissions in reporting period due to:	(hours)	
a. Startup/shutdown	0	
b. Control equipment problems	0	
c. Process problems	0	
d. Other known causes	0	
e. Unknown causes	0	
2. Total duration of excess emission	0	
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %	

CMS Performance Summary <sup>1</sup>		
1. CMS downtime in reporting period due to:	(hours)	
a. Monitor equipment malfunctions	0	
b. Non-Monitor equipment malfunctions	0	
c. Quality assurance calibration	0	
d. Other known causes	0	
e. Unknown causes	0	
2. Total CMS Downtime	0	
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.0 %	

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d) and 60.108a(d))

Pollutant: NO<sub>x</sub>

Applicable NSPS Subpart: Ja

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Nitrogen Oxide corrected to 0% O<sub>2</sub> shall not exceed 40 ppm on a 30-day rolling average</u>

Monitor Manufacturer and Model No.: Thermo Environmental 42i (NOx)/(O<sub>2</sub>)

Date of Latest CMS Certification or Audit: RATA on 5/6/19

Process Unit(s) Description: Benzene Recovery Unit Reboiler (EPN 1-09, EQT 0127)

Total source operating time in reporting period: 2,184 hours

Emissions Data Summary <sup>1</sup>		
1. Duration of excess emissions in reporting period due to:	(hours)	
a. Startup/shutdown	0	
b. Control equipment problems	0	
c. Process problems	0	
d. Other known causes	0	
e. Unknown causes	0	
2. Total duration of excess emission	0	
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %	

CMS Performance Summary <sup>1</sup>	
1. CMS downtime in reporting period due to:	(hours)
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	0
d. Other known causes	3
e. Unknown causes	0
2. Total CMS Downtime	3
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.1 %

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d) and 60.108a(d))

Pollutant: NO<sub>x</sub>

Applicable NSPS Subpart: Ja

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Nitrogen Oxide corrected to 0% O<sub>2</sub> shall not exceed 40 ppm on a 30-day rolling average</u>

Monitor Manufacturer and Model No.: <u>ABB Limas11( NOx)</u>, Magnos27 (O<sub>2</sub>)

Date of Latest CMS Certification or Audit: Initial Certification (RATA) Performed on 7/15/19

Process Unit(s) Description: NHT Charge Heater (EPN 1-17, EQT 0159)

Total source operating time in reporting period: 2,184 hours

Emissions Data Summary <sup>1</sup>	
1. Duration of excess emissions in reporting period due to:	(hours)
a. Startup/shutdown	0
b. Control equipment problems	0
c. Process problems	0
d. Other known causes	0
e. Unknown causes	0
2. Total duration of excess emission	0
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %

CMS Performance Summary <sup>1</sup>	
1. CMS downtime in reporting period due to:	(hours)
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	0
d. Other known causes	7
e. Unknown causes	0
2. Total CMS Downtime	7
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.3 %

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d) and 60.108a(d))

Pollutant: NO<sub>x</sub>

Applicable NSPS Subpart: <u>N/A</u> (Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 36.a)

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: None

Monitor Manufacturer and Model No.: <u>ABB Limas11( NOx), Magnos27 (O<sub>2</sub>)</u>

Date of Latest CMS Certification or Audit: RATA on 5/6/19

Process Unit(s) Description: No.1 Crude Heater (EPN 12-72A, EQT 0022)

Total source operating time in reporting period: 2,184 hours

Emissions Data Summary <sup>1</sup>	
1. Duration of excess emissions in reporting period due to:	(hours)
a. Startup/shutdown	0
b. Control equipment problems	0
c. Process problems	0
d. Other known causes	0
e. Unknown causes	0
2. Total duration of excess emission	0
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %

CMS Performance Summary <sup>1</sup>	
1. CMS downtime in reporting period due to:	(hours)
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	1
d. Other known causes	0
e. Unknown causes	0
2. Total CMS Downtime	1
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.0 %

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d) and 60.108a(d))

Pollutant: NO<sub>x</sub>

Applicable NSPS Subpart: <u>N/A</u> (Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 36.a)

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: None

Monitor Manufacturer and Model No.: <u>ABB Limas11( NOx)</u>, Magnos27 (O<sub>2</sub>)

Date of Latest CMS Certification or Audit: Initial Certification (RATA) Performed on 7/16/19

Process Unit(s) Description: MDH Product and Fractionator Heaters (EPN 2-92, EQT 0033)

Total source operating time in reporting period: 2,184 hours

Emissions Data Summary <sup>1</sup>	
1. Duration of excess emissions in reporting period due to:	(hours)
a. Startup/shutdown	0
b. Control equipment problems	0
c. Process problems	0
d. Other known causes	0
e. Unknown causes	0
2. Total duration of excess emission	0
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %

CMS Performance Summary <sup>1</sup>	
1. CMS downtime in reporting period due to:	(hours)
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	0
d. Other known causes	33
e. Unknown causes	0
2. Total CMS Downtime	33
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	1.5 %

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d) and 60.108a(d))

Pollutant: H<sub>2</sub>S

Applicable NSPS Subpart: Ja

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average.</u>

Monitor Manufacturer and Model No.: Ametek 5100

Date of Latest CMS Certification or Audit: RATA on 5/8/19

Process Unit(s) Description: North Flare Stack (EPN 20-72, EQT 0035), North Flare Header

Total source operating time in reporting period: 2,184 hours

Emissions Data Summary <sup>1</sup>	
1. Duration of excess emissions in reporting period due to:	(hours)
a. Startup/shutdown	0
b. Control equipment problems	0
c. Process problems	0
d. Other known causes	0
e. Unknown causes	0
2. Total duration of excess emission	0
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %

CMS Performance Summary <sup>1</sup>	
1. CMS downtime in reporting period due to:	(hours)
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	0
d. Other known causes	0
e. Unknown causes	0
2. Total CMS Downtime	0
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.0 %

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d) and 60.108a(d))

Pollutant: H<sub>2</sub>S

Applicable NSPS Subpart: Ja

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average.</u>

Monitor Manufacturer and Model No.: Ametek 5100

Date of Latest CMS Certification or Audit: RATA on 5/7/19

Process Unit(s) Description: North Flare Stack (EPN 20-72, EQT 0035), Hydrocracker Flare Header

Total source operating time in reporting period: 2,184 hours

Emissions Data Summary <sup>1</sup>	
1. Duration of excess emissions in reporting period due to:	(hours)
a. Startup/shutdown	0
b. Control equipment problems	0
c. Process problems	0
d. Other known causes	0
e. Unknown causes	0
2. Total duration of excess emission	0
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %

CMS Performance Summary <sup>1</sup>	
1. CMS downtime in reporting period due to:	(hours)
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	0
d. Other known causes	0
e. Unknown causes	0
2. Total CMS Downtime	0
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.0 %

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d) and 60.108a(d))

Pollutant: H<sub>2</sub>S

Applicable NSPS Subpart: Ja

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average.</u>

Monitor Manufacturer and Model No.: Ametek 5100

Date of Latest CMS Certification or Audit: RATA on 5/7/19

Process Unit(s) Description: South Flare Stack (EPN 3-77, EQT 0049)

Total source operating time in reporting period: 2,184 hours

Emissions Data Summary <sup>1</sup>	
1. Duration of excess emissions in reporting period due to:	(hours)
a. Startup/shutdown	0
b. Control equipment problems	0
c. Process problems	0
d. Other known causes	0
e. Unknown causes	0
2. Total duration of excess emission	0
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %

CMS Performance Summary <sup>1</sup>					
1. CMS downtime in reporting period due to:					
a. Monitor equipment malfunctions	0				
b. Non-Monitor equipment malfunctions	0				
c. Quality assurance calibration	1				
d. Other known causes	0				
e. Unknown causes					
2. Total CMS Downtime					
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup> 0.1					

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d) and 60.108a(d))

Pollutant: Total Sulfur

Applicable NSPS Subpart: Ja (Also Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From <u>4/1/19 to 6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: None

Monitor Manufacturer and Model No.: Thermo Scientific SOLA II

Date of Latest CMS Certification or Audit: RATA on 5/8/19

Process Unit(s) Description: North Flare Stack (EPN 20-72, EQT 0035), North Flare Header

Total source operating time in reporting period: 2,184 hours

Emissions Data Summary <sup>1</sup>					
1. Duration of excess emissions in reporting period due to:	(hours)				
a. Startup/shutdown	0				
b. Control equipment problems	0				
c. Process problems	0				
d. Other known causes	0				
e. Unknown causes	0				
2. Total duration of excess emission	0				
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %				

CMS Performance Summary <sup>1</sup>					
1. CMS downtime in reporting period due to:	(hours)				
a. Monitor equipment malfunctions	0				
b. Non-Monitor equipment malfunctions	0				
c. Quality assurance calibration	1				
d. Other known causes	0				
e. Unknown causes					
2. Total CMS Downtime	1				
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup> 0					

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d) and 60.108a(d))

Pollutant: Total Sulfur

Applicable NSPS Subpart: Ja (Also Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: None

Monitor Manufacturer and Model No.: Thermo Scientific SOLA II

Date of Latest CMS Certification or Audit: RATA on 5/8/19

Process Unit(s) Description: North Flare Stack (EPN 20-72, EQT 0035), Hydrocracker Flare Header

Total source operating time in reporting period: 2,184 hours

Emissions Data Summary <sup>1</sup>					
1. Duration of excess emissions in reporting period due to:	(hours)				
a. Startup/shutdown	0				
b. Control equipment problems	0				
c. Process problems	0				
d. Other known causes	0				
e. Unknown causes	0				
2. Total duration of excess emission	0				
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %				

CMS Performance Summary <sup>1</sup>					
1. CMS downtime in reporting period due to:	(hours)				
a. Monitor equipment malfunctions	0				
b. Non-Monitor equipment malfunctions	0				
c. Quality assurance calibration	6				
d. Other known causes	0				
e. Unknown causes	0				
2. Total CMS Downtime	6				
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>					

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d) and 60.108a(d))

Pollutant: Total Sulfur

Applicable NSPS Subpart: Ja (Also Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: None

Monitor Manufacturer and Model No.: Thermo Scientific SOLA II

Date of Latest CMS Certification or Audit: RATA on 5/8/19

Process Unit(s) Description: South Flare Stack (EPN 3-77, EQT 0049)

Total source operating time in reporting period: 2,184 hours

Emissions Data Summary <sup>1</sup>					
1. Duration of excess emissions in reporting period due to:	(hours)				
a. Startup/shutdown	0				
b. Control equipment problems	0				
c. Process problems	0				
d. Other known causes	0				
e. Unknown causes	0				
2. Total duration of excess emission	0				
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %				

CMS Performance Summary <sup>1</sup>					
1. CMS downtime in reporting period due to:	(hours)				
a. Monitor equipment malfunctions	0				
b. Non-Monitor equipment malfunctions	0				
c. Quality assurance calibration	33				
d. Other known causes	0				
e. Unknown causes	0				
2. Total CMS Downtime	33				
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>					

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d) and 60.108a(d))

Pollutant: Flow

Applicable NSPS Subpart: Ja (Also Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From <u>4/1/19 to 6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: None

Monitor Manufacturer and Model No.: <u>GE Panametrics GF 868</u>

Date of Latest CMS Certification or Audit: N/A

Process Unit(s) Description: North Flare Stack (EPN 20-72, EQT 0035), North Flare Header

Total source operating time in reporting period: 2,184 hours

CMS Performance Summary <sup>1</sup>	
1. CMS downtime in reporting period due to:	(hours)
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	0
d. Other known causes	0
e. Unknown causes	0
2. Total CMS Downtime	0
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.0 %

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d) and 60.108a(d))

Pollutant: Flow

Applicable NSPS Subpart: Ja (Also Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: None

Monitor Manufacturer and Model No.: <u>GE Panametrics GF 868</u>

Date of Latest CMS Certification or Audit: N/A

Process Unit(s) Description: North Flare Stack (EPN 20-72, EQT 0035), Hydrocracker Flare Header

Total source operating time in reporting period: 2,184 hours

CMS Performance Summary <sup>1</sup>					
1. CMS downtime in reporting period due to:	(hours)				
a. Monitor equipment malfunctions	0				
b. Non-Monitor equipment malfunctions	0				
c. Quality assurance calibration	0				
d. Other known causes	0				
e. Unknown causes	0				
2. Total CMS Downtime	0				
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>					

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(d) and 60.108a(d))

Pollutant: Flow

Applicable NSPS Subpart: Ja (Also Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: None

Monitor Manufacturer and Model No.: <u>GE Panametrics GF 868</u>

Date of Latest CMS Certification or Audit: N/A

Process Unit(s) Description: South Flare Stack (EPN 3-77, EQT 0049)

Total source operating time in reporting period: 2,184 hours

CMS Performance Summary <sup>1</sup>					
1. CMS downtime in reporting period due to:	(hours)				
a. Monitor equipment malfunctions	0				
b. Non-Monitor equipment malfunctions	0				
c. Quality assurance calibration	0				
d. Other known causes	0				
e. Unknown causes	0				
2. Total CMS Downtime	0				
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup> 0					

<sup>1</sup> For opacity, record all times in minutes. For gases, record all times in hours.

(per 40 CFR 60.7(c) and 60.108a(d))

Pollutant: SO<sub>2</sub>

Applicable NSPS Subpart: Ja

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>SO<sub>2</sub> corrected to 0% O<sub>2</sub> shall not exceed 250 ppm on a 12-hour rolling average</u>

Monitor Manufacturer and Model No.: Brimstone SGX-231(SO<sub>2</sub>)/Rosemount Oxymitter 4000(O<sub>2</sub>)

Date of Latest CMS Certification or Audit: RATA on 5/3/19

Process Unit(s) Description: #2 SRU Incinerator (EPN 1-93, EQT 0019)

Total source operating time in reporting period: 2,184 hours

Ja EXCESS EMISSIONS						
Date	Start	End	Duration (hours)	Max 12- HRA (ppm)	Cause	Corrective Action
None						
TOTAL			0			

Ja CMS PERFORMANCE <sup>1</sup>					
Date	Start	End	Duration (hours)	Cause	Corrective Action
4/4/19	13:00	20:00	7	Analyzer offline due to loss of electrical power from a damaged conduit.	Analyzer was placed on temporary power, calibrated, and returned to service.
4/5/19	10:00	11:00	1	Adjusted for calibration drift.	N/A
4/5/19	13:00	14:00	1	Adjusted for calibration drift.	N/A
4/22/19	13:00	14:00	1	Analyzer shut down to transfer from temporary power back to normal power.	Calibrated and returned to service.
TOTAL			10		

(per 40 CFR 60.7(c) and 60.108a(d))

Pollutant: SO<sub>2</sub>

Applicable NSPS Subpart: Ja

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>SO<sub>2</sub> corrected to 0% O<sub>2</sub> shall not exceed 250 ppm on a 12-hour rolling average.</u>

Monitor Manufacturer and Model No.: ABB AO2000 Uras 26(SO2)/ Magnos 206 (O2)

Date of Latest CMS Certification or Audit: RATA on 5/2/19

Process Unit(s) Description: <u>#3 SRU Incinerator (EPN 5-00, EQT 0079)</u>

Total source operating time in reporting period: 2,184 hours

	Ja EXCESS EMISSIONS									
Date	Start	End	Duration (hours)	Max 12- HRA (ppm)	Cause	Corrective Action				
None										
TOTAL			0							

	Ja CMS PERFORMANCE <sup>1</sup>								
Date	Start	End	Duration (hours)	Cause	Corrective Action				
None									
TOTAL			0						

(per 40 CFR 60.7(c) and 60.108a(d))

Pollutant:  $H_2S$ 

Applicable NSPS Subpart: Ja

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average and 60 ppm on a 365 day rolling average

Monitor Manufacturer and Model No.: Ametek 4661

Date of Latest CMS Certification or Audit: RATA on 5/2/19

Process Unit(s) Description: <u>Area 2 Fuel Drum for: Benzene Recovery Unit Reboiler (EPN 1-09, EQT 0127); NHT Charge Heater</u> (EPN 1-17, EQT 0159)

Total source operating time in reporting period: EQT 0127-2,184 hours; EQT 0159-2,184 hours

	Ja EXCESS EMISSIONS								
Date	Start	End	Duration (hours)	Max 3- HRA (ppm)	Cause	Corrective Action			
None									
TOTAL			0						

	Ja CMS PERFORMANCE <sup>1</sup>									
Date	Start	End	Duration (hours)	Cause	Corrective Action					
None										
TOTAL			0							

(per 40 CFR 60.7(c) and 60.108a(d))

Pollutant: NO<sub>x</sub>

Applicable NSPS Subpart: Ja

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Nitrogen Oxide corrected to 0% O<sub>2</sub> shall not exceed 40 ppm on a 30-day rolling average</u>

Monitor Manufacturer and Model No.: Thermo Environmental 42i (NOx)/(O2)

Date of Latest CMS Certification or Audit: RATA on 5/6/19

Process Unit(s) Description: Benzene Recovery Unit Reboiler (EPN 1-09, EQT 0127)

Total source operating time in reporting period: 2,184 hours

	Ja EXCESS EMISSIONS									
Date	Start	End	Duration (hours)	Max 30- DRA (ppm)	Cause	Corrective Action				
None										
TOTAL			0							

	Ja CMS PERFORMANCE <sup>1</sup>									
Date	Start	End	Duration (hours)	Cause	Corrective Action					
6/11/19	14:00	16:00	2	Annual preventative maintenance.	N/A					
6/19/19	09:00	10:00	1	Adjusted for calibration drift.	N/A					
TOTAL			3							

(per 40 CFR 60.7(c) and 60.108a(d))

Pollutant: NO<sub>x</sub>

Applicable NSPS Subpart: Ja

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Nitrogen Oxide corrected to 0% O<sub>2</sub> shall not exceed 40 ppm on a 30-day rolling average</u>

Monitor Manufacturer and Model No.: ABB Limas11( NOx), Magnos27 (O2)

Date of Latest CMS Certification or Audit: Initial Certification Performed on 7/15/19

Process Unit(s) Description: NHT Charge Heater (EPN 1-17, EQT 0159)

Total source operating time in reporting period: 2,184 hours

	Ja EXCESS EMISSIONS									
Date	Start	End	Duration (hours)	Max 30- DRA (ppm)	Cause	Corrective Action				
None										
TOTAL			0							

	Ja CMS PERFORMANCE <sup>1</sup>									
Date	Start	End	Duration (hours)	Cause	Corrective Action					
4/23/19	11:00	14:00	3	Offline to troubleshoot high variation of NOx analyzer output with factory technician.	Calibrated and returned to service.					
5/9/19	10:00	14:00	4	Offline to troubleshoot high variation of NOx analyzer output. Analyzer was swapped with the MDH NOx analyzer to determine if the high variation of the MDH NOx analyzer was due to the analyzer or the MDH installation.	Calibrated and returned to service.					
TOTAL			7							

(per 40 CFR 60.7(c) and 60.108a(d))

Pollutant: H<sub>2</sub>S

Applicable NSPS Subpart: Ja

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average.</u>

Monitor Manufacturer and Model No.: Ametek 5100

Date of Latest CMS Certification or Audit: <u>RATA on 5/8/19</u>

Process Unit(s) Description: North Flare Stack (EPN 20-72, EQT 0035), North Flare Header

Total source operating time in reporting period: 2,184 hours

	Ja EXCESS EMISSIONS									
Date	Start	End	Duration (hours)	Max 3- HRA (ppm)	Cause	Corrective Action				
None										
TOTAL			0							

	Ja CMS PERFORMANCE <sup>2</sup>								
Date	Start	End	Duration (hours)	Cause	Corrective Action				
None									
TOTAL			0						

<sup>1</sup>Due to the physical arrangement of the headers supplying the North Flare Stack (EPN 20-72, EQT 0035), two analyzers are required to measure  $H_2S$  concentration of the gas combusted in the North Flare. Conservatively, excess emission on either of these analyzers will be considered excess emissions at the North Flare. However, the CEMS performance will be tracked separately.

(per 40 CFR 60.7(c) and 60.108a(d))

Pollutant: H<sub>2</sub>S

Applicable NSPS Subpart: <u>Ja</u>

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average.</u>

Monitor Manufacturer and Model No.: Ametek 5100

Date of Latest CMS Certification or Audit: RATA on 5/7/19

Process Unit(s) Description: North Flare Stack (EPN 20-72, EQT 0035), Hydrocracker Flare Header

Total source operating time in reporting period: 2,184 hours

	Ja EXCESS EMISSIONS								
Date	Start	End	Duration (hours)	Max 3- HRA (ppm)	Cause	Corrective Action			
None									
TOTAL			0						

	Ja CMS PERFORMANCE <sup>2</sup>								
Date	Start	End	Duration (hours)	Cause	Corrective Action				
None									
TOTAL			0						

<sup>1</sup>Due to the physical arrangement of the headers supplying the North Flare Stack (EPN 20-72, EQT 0035), two analyzers are required to measure  $H_2S$  concentration of the gas combusted in the North Flare. Conservatively, excess emission on either of these analyzers will be considered excess emissions at the North Flare. However, the CEMS performance will be tracked separately.

(per 40 CFR 60.7(c) and 60.108a(d))

Pollutant:  $H_2S$ 

Applicable NSPS Subpart: Ja

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average.</u>

Monitor Manufacturer and Model No.: Ametek 5100

Date of Latest CMS Certification or Audit: RATA on 5/7/19

Process Unit(s) Description: South Flare Stack (EPN 3-77, EQT 0049)

Total source operating time in reporting period: 2,184 hours

Ja EXCESS EMISSIONS							
Date	Start	End	Duration (hours)	Max 3- HRA (ppm)	Cause	Corrective Action	
None							
TOTAL			0				

Ja CMS PERFORMANCE <sup>2</sup>					
Date Start End Duration (hours) Cause		Corrective Action			
5/20/19	13:00	14:00	1	Adjusted for calibration drift.	N/A
TOTAL			1		

(per 40 CFR 60.7(c) and 60.108a(d))

Pollutant: Total Sulfur

Applicable NSPS Subpart: Ja (Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: None

Monitor Manufacturer and Model No.: Thermo Scientific SOLA II

Date of Latest CMS Certification or Audit: RATA on 5/8/19

Process Unit(s) Description: North Flare Stack (EPN 20-72, EQT 0035), North Flare Header

Total source operating time in reporting period: 2,184 hours

Ja CMS PERFORMANCE <sup>1</sup>						
Date Start		End	Duration	Cause	Corrective	
Date	Start	Lilu	(hours)	Cause	Action	
5/8/19	13:00	14:00	1	Relative Accuracy Test Audit.	N/A	
TOTAL			1			

(per 40 CFR 60.7(c) and 60.108a(d))

Pollutant: Total Sulfur

Applicable NSPS Subpart: Ja (Also Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: None

Monitor Manufacturer and Model No.: Thermo Scientific SOLA II

Date of Latest CMS Certification or Audit: RATA on 5/8/19

Process Unit(s) Description: North Flare Stack (EPN 20-72, EQT 0035), Hydrocracker Flare Header

Total source operating time in reporting period: 2,184 hours

Ja CMS PERFORMANCE <sup>1</sup>					
Date	Start	End	Duration (hours)	Cause	Corrective Action
4/18/19	13:00	15:00	2	Adjusted for calibration drift.	N/A
5/8/19	13:00	14:00	1	Relative Accuracy Test Audit.	N/A
6/28/19	09:00	12:00	3	Analyzer adjusted for improper operation after switching to the high range during the daily validation check. The high range is not used for Ja compliance.	Calibrated and returned to service.
TOTAL			6		

(per 40 CFR 60.7(c) and 60.108a(d))

Pollutant: Total Sulfur

Applicable NSPS Subpart: Ja (Also Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: None

Monitor Manufacturer and Model No.: Thermo Scientific SOLA II

Date of Latest CMS Certification or Audit: RATA on 5/8/19

Process Unit(s) Description: South Flare Stack (EPN 3-77, EQT 0049)

Total source operating time in reporting period: 2,184 hours

Ja CMS PERFORMANCE <sup>1</sup>					
Date	Start	End	Duration (hours)	Cause	Corrective Action
5/8/19	13:00	14:00	1	Relative Accuracy Test Audit.	N/A
6/28/19	10:00		20	Out of Control. Daily calibration check >4X the allowable limit below the span gas value. The analyzer	Valero adjusted the sampling system flow rate and pressure balance then
6/29/19		18:00	52	began operating improperly following preventative maintenance on 6/27 that involved blowing out the sample lines.	calibrated and returned the analyzer to service.
TOTAL			33		

(per 40 CFR 60.7(c) and 60.108a(d))

Pollutant: Flow

Applicable NSPS Subpart: Ja (Also Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: None

Monitor Manufacturer and Model No.: <u>GE Panametrics GF 868</u>

Date of Latest CMS Certification or Audit: N/A

Process Unit(s) Description: North Flare Stack (EPN 20-72, EQT 0035), North Flare Header

Total source operating time in reporting period: 2,184 hours

	Ja CMS PERFORMANCE <sup>1</sup>					
Date	Start	End	Duration (hours)	Cause	Corrective Action	
None						
TOTAL			0			

(per 40 CFR 60.7(c) and 60.108a(d))

Pollutant: Flow

Applicable NSPS Subpart: Ja (Also Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: None

Monitor Manufacturer and Model No.: GE Panametrics GF 868

Date of Latest CMS Certification or Audit: N/A

Process Unit(s) Description: North Flare Stack (EPN 20-72, EQT 0035), Hydrocracker Flare Header

Total source operating time in reporting period: 2,184 hours

	Ja CMS PERFORMANCE <sup>1</sup>					
Date	Start	End	Duration (hours)	Cause	Corrective Action	
None						
TOTAL			0			

(per 40 CFR 60.7(c) and 60.108a(d))

Pollutant: Flow

Applicable NSPS Subpart: Ja (Also Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: None

Monitor Manufacturer and Model No.: <u>GE Panametrics GF 868</u>

Date of Latest CMS Certification or Audit: N/A

Process Unit(s) Description: South Flare Stack (EPN 3-77, EQT 0049)

Total source operating time in reporting period: 2,184 hours

	Ja CMS PERFORMANCE <sup>1</sup>					
Date	Start	End	Duration (hours)	Cause	Corrective Action	
None						
TOTAL			0			

# DATA ASSESSMENT REPORT (per 40 CFR 60, Appendix F, Section 7)

Pollutant: SO<sub>2</sub>

Applicable NSPS Subpart: <u>Ja</u>

Reporting period dates: From <u>4/1/19 to 6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>SO<sub>2</sub> corrected to 0% O<sub>2</sub> shall not exceed 250 ppm on a 12-hour rolling average.</u>

Monitor Manufacturer and Model No.: Brimstone SGX-231(SO<sub>2</sub>)/Rosemount Oxymitter 4000(O<sub>2</sub>)

Source unit: <u>#2 SRU Incinerator (EPN 1-93, EQT 0019)</u>

CEM Sampling Location: <u>#2 SRU Incinerator (#1-93)</u>

CEM Span Value: Sulfur Dioxide 500 ppm; Oxygen 25%

# I. ACCURACY ASSESSMENT RESULTS (RATA):

$SO_2$ corrected to 0% $O_2$	
Date of Audit	5/3/19
Reference Method	EPA Method 6C/ EPA Method 3A
Average RM Value (ppmv)	50.29
Average CEM Value (ppmv)	51.40
Accuracy	1.34 %
Limit	< 10%

- A. Out of Control Periods:
  - 1. Dates: N/A
  - 2. Number of Days <u>N/A</u>
- B. Corrective Actions: <u>N/A</u>

(per 40 CFR 60, Appendix F, Section 7)

Pollutant: SO<sub>2</sub>
Applicable NSPS Subpart: <u>Ja</u>
Reporting period dates: From <u>4/1/19 to 6/30/19</u>
Date submitted: <u>7/30/19</u>
Company: <u>Valero Refining - Meraux LLC</u>
Address: <u>2500 East St. Bernard Highway, Meraux, LA 70075</u>
Emission Limitation: <u>SO<sub>2</sub> corrected to 0% O<sub>2</sub> shall not exceed 250 ppm on a 12-hour rolling average.</u>
Monitor Manufacturer and Model No.: <u>ABB AO2000 Uras 26(SO2)/ Magnos 206 (O2)</u>
Source unit: <u>#3 SRU Incinerator (EPN 5-00, EQT 0079)</u>
CEM Sampling Location: <u>#3 SRU Incinerator (#5-00)</u>
CEM Span Value: <u>Sulfur Dioxide 500 ppm; Oxygen 25%</u>

#### I. ACCURACY ASSESSMENT RESULTS (RATA):

SO2 corrected to 0% O2Date of Audit5/2/19Reference MethodEPA Method 6C/ EPA Method 3AAverage RM Value (ppmv)30.95Average CEM Value (ppmv)27.26Accuracy2.54 %Limit< 10%</td>

#### II. CALIBRATION DRIFT ASSESSMENT

- A. Out of Control Periods:
  - 1. Dates: N/A
  - 2. Number of Days <u>N/A</u>

B. Corrective Actions: <u>N/A</u>

(per 40 CFR 60, Appendix F, Section 7)

Pollutant: H<sub>2</sub>S Applicable NSPS Subpart: J Reporting period dates: From 4/1/19 to 6/30/19Date submitted: 7/30/19 Company: Valero Refining - Meraux LLC Address: 2500 East St. Bernard Highway, Meraux, LA 70075 Emission Limitation: <u>Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average.</u> Monitor Manufacturer and Model No.: Ametek 4661 Source Unit: Area 1 Fuel Drum for Boiler TB-01 (EPN 1-06, EQT 0010); Boiler B-7 (EPN 1-07, EQT 0011); MDH Product and Fractionator Heaters (EPN 2-92, EQT 0033); DHT Charge Heater (EPN 5-73, EQT 0058) CEM Sampling Location: Area 1 Fuel Drum CEM Span Value: <u>Hydrogen Sulfide</u>, 300 ppm

#### I. ACCURACY ASSESSMENT RESULTS (RATA):

		<u>H<sub>2</sub>S #1</u>	<u>H<sub>2</sub>S #2</u>	
	Date of Audit	5/3/19	5/3/19	
	Reference Method	EPA Method 11	EPA Method 11	
		(Alternate RATA)	(Alternate RATA)	
	Average RM Value (ppmv)	81.94	172.10	
	Average CEM Value (ppmv)	80.71	173.51	
	Accuracy	1.51 %	0.82 %	
	Limit	< 15 %	< 15 %	
II. CALIBRATION	DRIFT ASSESSMENT			
A. Out of C	Control Periods:			
1. Dat	es: <u>N/A</u>			

- 2. Number of Days <u>N/A</u>
- B. Corrective Actions: <u>N/A</u>

(per 40 CFR 60, Appendix F, Section 7)

Pollutant:  $H_2S$ 

Applicable NSPS Subpart: <u>J and Ja</u> (Benzene Recovery Unit Reboiler Subject to Ja)

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average(J and Ja) and 60 ppm on a 365 day

rolling average (Ja only)

Monitor Manufacturer and Model No.: Ametek 4661

Source Unit: Area 2 Fuel Drum for: No.1 Crude Heater (EPN 12-72A, EQT 022); ROSE Heater (EPN 1-80, EQT 0014); Vacuum Heater (EPN 1-76, EQT 0013); Platformer Charge Heater (EPN 17-72 a,b,c, EQT 0028); Platformer Debut Reboiler (EPN 19-72, EQT 0029); NHT Charge Heater (EPN 14-72, EQT 0023); NHT Debut Reboiler (EPA 15-72, EQT 0024); NHT Depent Reboiler (EPA 16-72, EQT 0027); Benzene Recovery Unit Reboiler (EPN 1-09, EQT 0127); NHT Charge Heater (EPN 1-17, EQT 0159)

CEM Sampling Location: Area 2 Fuel Drum

CEM Span Value: Hydrogen Sulfide, 300 ppm

#### I. ACCURACY ASSESSMENT RESULTS (RATA):

	<u>H<sub>2</sub>S #1</u>	<u>H<sub>2</sub>S #2</u>
Date of Audit	5/2/19	5/2/19
Reference Method	EPA Method 11	EPA Method 11
	(Alternate RATA)	(Alternate RATA)
Average RM Value (ppmv)	81.94	172.10
Average CEM Value (ppmv)	77.05	169.94
Accuracy	5.96 %	1.26 %
Limit	< 15 %	< 15 %

- A. Out of Control Periods:
  - 1. Dates: N/A
  - 2. Number of Days <u>N/A</u>
- B. Corrective Actions: <u>N/A</u>

# DATA ASSESSMENT REPORT (per 40 CFR 60, Appendix F, Section 7)

Pollutant: H<sub>2</sub>S

Applicable NSPS Subpart: \_\_\_\_\_

Reporting period dates: From <u>4/1/19 to 6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average.</u>

Monitor Manufacturer and Model No.: Ametek 4661

Process Unit(s) Description: Area 4 Fuel Drum for Merox Disulfide Separator to Platformer Charge Heater

CEM Sampling Location: Area 4 Fuel Drum

CEM Span Value: <u>Hydrogen Sulfide</u>, 300 ppm

#### I. ACCURACY ASSESSMENT RESULTS (RATA):

	<u>H<sub>2</sub>S #1</u>	<u>H<sub>2</sub>S #2</u>
Date of Audit	5/1/19	5/1/19
Reference Method	EPA Method 11	EPA Method 11
	(Alternate RATA)	(Alternate RATA)
Average RM Value (ppmv)	81.94	172.10
Average CEM Value (ppmv)	75.56	175.66
Accuracy	7.79 %	2.07 %
Limit	< 15 %	< 15 %

#### II. CALIBRATION DRIFT ASSESSMENT

#### A. Out of Control Periods:

- 1. Dates: N/A
- 2. Number of Days <u>N/A</u>

B. Corrective Actions: <u>N/A</u>

(per 40 CFR 60, Appendix F, Section 7)

Pollutant: H<sub>2</sub>S
Applicable NSPS Subpart: \_\_J\_
Reporting period dates: From \_4/1/19\_to\_6/30/19\_
Date submitted: \_7/30/19\_
Company: Valero Refining - Meraux LLC\_
Address: \_2500 East St. Bernard Highway, Meraux, LA 70075\_
Emission Limitation: \_\_Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average. \_\_
Monitor Manufacturer and Model No.: \_\_Ametek 4661\_
Process Unit(s) Description: \_\_Area 6 Fuel Drum for Hydrocracker & Hydrotreater Charge Heaters (EPN 1-00, EQT 0009)
CEM Sampling Location: \_\_Area 6 Fuel Drum\_
CEM Span Value: \_\_Hydrogen Sulfide, 300 ppm\_\_

#### I. ACCURACY ASSESSMENT RESULTS (RATA):

		<u>H<sub>2</sub>S #1</u>	<u>H<sub>2</sub>S #2</u>
	Date of Audit	5/6/19	5/6/19
	Reference Method	EPA Method 11	EPA Method 11
		(Alternate RATA)	(Alternate RATA)
	Average RM Value (ppmv)	78.39	166.70
	Average CEM Value (ppmv)	69.52	145.27
	Accuracy	11.31 %	12.85 %
	Limit	< 15 %	< 15 %
II. CALIBRA	FION DRIFT ASSESSMENT		

# A. Out of Control Periods:

- 1. Dates: N/A
- 2. Number of Days <u>N/A</u>
- B. Corrective Actions: <u>N/A</u>

(per 40 CFR 60, Appendix F, Section 7)

Pollutant: **H**<sub>2</sub>**S** Applicable NSPS Subpart: <u>J</u>

Reporting period dates: From <u>4/1/19 to 6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average.</u>

Monitor Manufacturer and Model No.: Ametek 4661

Process Unit(s) Description: Area 6 Fuel Drum for Boilers B-5 (EPN 2-00, EQT 0030) and B-6 (EPN 3-00, EQT 0048)

CEM Sampling Location: Area 6 Fuel Drum

CEM Span Value: <u>Hydrogen Sulfide, 300 ppm</u>

## I. ACCURACY ASSESSMENT RESULTS (RATA):

	<u><math>H_2S \#1</math></u>	<u><math>H_2S \# 2</math></u>
Date of Audit	5/2/19	5/2/19
Reference Method	EPA Method 11	EPA Method 11
	(Alternate RATA)	(Alternate RATA)
Average RM Value (ppmv)	81.94	172.10
Average CEM Value (ppmv)	74.17	163.40
Accuracy	9.48 %	5.06 %
Limit	< 15 %	< 15 %

TT 0 // 1

TT 0 110

- A. Out of Control Periods:
  - 1. Dates: N/A
  - 2. Number of Days <u>N/A</u>
- B. Corrective Actions: <u>N/A</u>

(per 40 CFR 60, Appendix F, Section 7)

Pollutant: NO<sub>x</sub>

Applicable NSPS Subpart: <u>Db</u>

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Nitrogen Oxide shall not exceed 0.1 pound/MMBtu on a 30-day rolling average.</u>

Monitor Manufacturer and Model No.: <u>ABB Limas11( NO<sub>x</sub>), Magnos27 (O<sub>2</sub>)</u>

Process Unit(s) Description: Boiler B-5 (EPN 2-00, EQT 0030)

CEM Sampling Location: Boiler B-5

CEM Span Value: <u>Nitrogen Oxide 100 ppm, Oxygen 25 %</u>

## I. ACCURACY ASSESSMENT RESULTS (RATA):

NOx lb/MMBtu Date of Audit Reference Method Average RM Value Average CEM Value Accuracy Limit

5/7/19 EPA Method 7E / EPA Method 3A 0.03102 lb/MMBtu 0.03276 lb/MMBtu 0.89 % < 10 %

#### II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days <u>N/A</u>

B. Corrective Actions: <u>N/A</u>

(per 40 CFR 60, Appendix F, Section 7)

Pollutant: NO<sub>x</sub> Applicable NSPS Subpart: \_\_Db\_\_ Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u> Date submitted: <u>7/30/19</u> Company: <u>Valero Refining - Meraux LLC</u> Address: <u>2500 East St. Bernard Highway, Meraux, LA 70075</u> Emission Limitation: <u>Nitrogen Oxide shall not exceed 0.1 pound/MMBtu on a 30-day rolling average.</u> Monitor Manufacturer and Model No.: <u>ABB Limas11 (NO<sub>x</sub>), Magnos27 (O<sub>2</sub>)</u> Process Unit(s) Description: <u>Boiler B-6 (EPN 3-00, EQT 0048)</u> CEM Sampling Location: <u>Boiler B-6</u> CEM Span Value: Nitrogen Oxide 100 ppm, Oxygen 25 %

#### I. ACCURACY ASSESSMENT RESULTS (RATA):

NOx lb/MMBtu Date of Audit Reference Method Average RM Value Average CEM Value Accuracy Limit

5/8/19 EPA Method 7E / EPA Method 3A 0.02153 lb/MMBtu 0.02359 lb/MMBtu 1.05 % < 10 %

#### II. CALIBRATION DRIFT ASSESSMENT

- A. Out of Control Periods:
  - 1. Dates: N/A
  - 2. Number of Days <u>N/A</u>

B. Corrective Actions: <u>N/A</u>

(per 40 CFR 60, Appendix F, Section 7)

Pollutant:  $NO_x$ 

Applicable NSPS Subpart: <u>Db</u>

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Nitrogen Oxide shall not exceed 0.1 pound/MMBtu on a 30-day rolling average.</u>

Monitor Manufacturer and Model No.: Thermo Environmental Model 42i (NOx)/(O2)

Process Unit(s) Description: Boiler TB-01 (EPN 1-06, EQT 0010)

CEM Sampling Location: Boiler TB-01

CEM Span Value: Nitrogen Oxide 500 ppm, Oxygen 25 %

#### I. ACCURACY ASSESSMENT RESULTS (RATA):

NOx lb/MMBtu Date of Audit Reference Method Average RM Value Average CEM Value Accuracy Limit

6/28/19 EPA Method 7E / EPA Method 3A 0.03344 lb/MMBtu 0.03165 lb/MMBtu 1.18 % < 10 %

- A. Out of Control Periods:
  - 1. Dates: <u>N/A</u>
  - 2. Number of Days <u>N/A</u>
- B. Corrective Actions: <u>N/A</u>

(per 40 CFR 60, Appendix F, Section 7)

Pollutant:  $NO_x$ 

Applicable NSPS Subpart: Ja

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: Nitrogen Oxide corrected to 0% O2 shall not exceed 40 ppm on a 30-day rolling average

Monitor Manufacturer and Model No.: Thermo Environmental Model 42i (NO<sub>x</sub>)/(O<sub>2</sub>)

Process Unit(s) Description: Benzene Recovery Unit Reboiler (EPN 1-09, EQT 0127)

CEM Sampling Location: Benzene Recovery Unit Reboiler

CEM Span Value: <u>Nitrogen Oxide 100 ppm, Oxygen 25 %</u>

#### I. ACCURACY ASSESSMENT RESULTS (RATA):

	NOx at 0% O2	$O_2$
Date of Audit	5/6/19	5/6/19
Reference Method	EPA Method 7E	EPA Method 3A
Average RM Value	25.37 ppmv at 0% O <sub>2</sub>	7.493 vol %
Average CEM Value	24.63 ppmv at 0% O <sub>2</sub>	7.348 vol %
Accuracy	0.97 %	N/A
Limit	< 10 %	N/A

- A. Out of Control Periods:
  - 1. Dates: <u>N/A</u>
  - 2. Number of Days <u>N/A</u>
- B. Corrective Actions: <u>N/A</u>

(per 40 CFR 60, Appendix F, Section 7)

- Pollutant:  $NO_x$
- Applicable NSPS Subpart: Ja
- Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>
- Date submitted: 7/30/19
- Company: Valero Refining Meraux LLC
- Address: 2500 East St. Bernard Highway, Meraux, LA 70075
- Emission Limitation: <u>Nitrogen Oxide corrected to 0% O<sub>2</sub> shall not exceed 40 ppm on a 30-day rolling average</u>
- Monitor Manufacturer and Model No.: <u>ABB Limas11 (NO<sub>x</sub>), Magnos27 (O<sub>2</sub>)</u>
- Process Unit(s) Description: <u>NHT Charge Heater (EPN 1-17, EQT 0159)</u>
- CEM Sampling Location: NHT Charge Heater
- CEM Span Value: <u>Nitrogen Oxide 100 ppm, Oxygen 25 %</u>

## I. ACCURACY ASSESSMENT RESULTS (RATA):

Initial Certification Performed on 7/15/19.

- A. Out of Control Periods:
  - 1. Dates: <u>N/A</u>
  - 2. Number of Days <u>N/A</u>
- B. Corrective Actions: N/A

(per 40 CFR 60, Appendix F, Section 7)

Pollutant: NO<sub>x</sub>

Applicable NSPS Subpart: <u>N/A</u> (Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 36.a)

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: None

Monitor Manufacturer and Model No.: <u>ABB Limas11 (NO<sub>x</sub>), Magnos27 (O<sub>2</sub>)</u>

Process Unit(s) Description: No.1 Crude Heater (EPN 12-72A, EQT 0022)

CEM Sampling Location: No.1 Crude Heater

CEM Span Value: <u>Nitrogen Oxide 100 ppm, Oxygen 25 %</u>

#### I. ACCURACY ASSESSMENT RESULTS (RATA):

	NOx	$O_2$
Date of Audit	5/6/19	5/6/19
Reference Method	EPA Method 7E	EPA Method 3A
Average RM Value	5.42 ppmv	6.23 vol %
Average CEM Value	4.30 ppmv	6.37 vol %
Accuracy	2.18 %	N/A
Limit	< 10 %	N/A

#### II. CALIBRATION DRIFT ASSESSMENT

- A. Out of Control Periods:
  - 1. Dates: N/A
  - 2. Number of Days <u>N/A</u>

B. Corrective Actions: <u>N/A</u>

(per 40 CFR 60, Appendix F, Section 7)

Pollutant:  $NO_x$ 

Applicable NSPS Subpart: <u>N/A</u> (Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 36.a) Reporting period dates: From <u>4/1/19 to 6/30/19</u> Date submitted: <u>7/30/19</u> Company: <u>Valero Refining - Meraux LLC</u> Address: <u>2500 East St. Bernard Highway, Meraux, LA 70075</u> Emission Limitation: <u>None</u> Monitor Manufacturer and Model No.: <u>ABB Limas11 (NO<sub>x</sub>), Magnos27 (O<sub>2</sub>)</u> Process Unit(s) Description: <u>MDH Product and Fractionator Heaters (EPN 2-92, EQT 0033)</u> CEM Sampling Location: <u>MDH Product and Fractionator Heaters</u> CEM Span Value: <u>Nitrogen Oxide 100 ppm, Oxygen 25 %</u>

#### I. ACCURACY ASSESSMENT RESULTS (RATA):

Initial Certification Performed on 7/16/19.

- A. Out of Control Periods:
  - 1. Dates: N/A
  - 2. Number of Days <u>N/A</u>
- B. Corrective Actions: <u>N/A</u>

(per 40 CFR 60, Appendix F, Section 7)

Pollutant: H<sub>2</sub>S
Applicable NSPS Subpart: <u>Ja</u>
Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>
Date submitted: <u>7/30/19</u>
Company: <u>Valero Refining - Meraux LLC</u>
Address: <u>2500 East St. Bernard Highway, Meraux, LA 70075</u>
Emission Limitation: <u>Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average.</u>
Monitor Manufacturer and Model No.: <u>Ametek 5100</u>
Process Unit(s) Description: <u>North Flare Stack (EPN 20-72, EQT 0035), North Flare Header</u>
CEM Sampling Location: <u>North Flare Stack, North Flare Header (Y-AT-801)</u>
CEM Span Value: <u>Hydrogen Sulfide, 300 ppm</u>

#### I. ACCURACY ASSESSMENT RESULTS (RATA):

	$\underline{H}_{2}\underline{S}$
Date of Audit	5/8/19
Reference Method	EPA Method 11
Average RM Value (ppmv)	18.04 ppmv
Average CEM Value (ppmv)	19.69 ppmv
Accuracy	2.48 %
Limit	< 10 %

<sup>1</sup>Valero unable to obtain EPA Protocol 1 certified gases for the Methane balanced audit gas required by this analyzer.

- A. Out of Control Periods:
  - 1. Dates: N/A
  - 2. Number of Days <u>N/A</u>
- B. Corrective Actions: <u>N/A</u>

(per 40 CFR 60, Appendix F, Section 7)

Pollutant: H<sub>2</sub>S

Applicable NSPS Subpart: Ja

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average.</u>

Monitor Manufacturer and Model No.: Ametek 5100

Process Unit(s) Description: North Flare Stack (EPN 20-72, EQT 0035), Hydrocracker Flare Header

CEM Sampling Location: North Flare Stack, Hydrocracker Flare Header (Y-AT-800)

CEM Span Value: Hydrogen Sulfide, 300 ppm

#### I. ACCURACY ASSESSMENT RESULTS (RATA):

	$\underline{H}_{2}\underline{S}$
Date of Audit	5/7/19
Reference Method	EPA Method 11
Average RM Value (ppmv)	4.15 ppmv
Average CEM Value (ppmv)	1.99 ppmv
Accuracy	2.16 %
Limit	< 10 %

<sup>1</sup>Valero unable to obtain EPA Protocol 1 certified gases for the Methane balanced audit gas required by this analyzer.

- A. Out of Control Periods:
  - 1. Dates: N/A
  - 2. Number of Days <u>N/A</u>
- B. Corrective Actions: <u>N/A</u>

(per 40 CFR 60, Appendix F, Section 7)

Pollutant: H<sub>2</sub>S

Applicable NSPS Subpart: Ja

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: <u>Hydrogen Sulfide shall not exceed 162 ppm on a 3-hour rolling average.</u>

Monitor Manufacturer and Model No.: Ametek 5100

Process Unit(s) Description: South Flare Stack (EPN 3-77, EQT 0049)

CEM Sampling Location: South Flare Stack (Y-AT-802)

CEM Span Value: <u>Hydrogen Sulfide</u>, 300 ppm

#### I. ACCURACY ASSESSMENT RESULTS (RATA):

	$\underline{\mathrm{H}}_{2}\underline{\mathrm{S}}$
Date of Audit	5/7/19
Reference Method	EPA Method 11
Average RM Value (ppmv)	12.48 ppmv
Average CEM Value (ppmv)	11.86 ppmv
Accuracy	1.04 %
Limit	< 10 %

<sup>1</sup>Valero unable to obtain EPA Protocol 1 certified gases for the Methane balanced audit gas required by this analyzer.

- A. Out of Control Periods:
  - 1. Dates: N/A
  - 2. Number of Days <u>N/A</u>
- B. Corrective Actions: <u>N/A</u>

(per 40 CFR 60, Appendix F, Section 7)

Pollutant: Total Sulfur

Applicable NSPS Subpart: Ja (Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: None

Monitor Manufacturer and Model No.: Thermo Scientific SOLA II

Process Unit(s) Description: North Flare Stack (EPN 20-72, EQT 0035), North Flare Header

CEM Sampling Location: North Flare Stack, North Flare Header (Y-AT-303)

CEM Span Value: Total Sulfur, Dual Range: 0-10,000 ppm, 10,000-1,000,000 ppm

#### I. ACCURACY ASSESSMENT RESULTS (RATA):

	<u>H<sub>2</sub>S #1</u>	<u>H<sub>2</sub>S #2</u>
Date of Audit	5/8/19	5/8/19
Reference Method	EPA Method 11	EPA Method 11
	(Alternate RATA)	(Alternate RATA)
Average RM Value (ppmv)	1013.00	$10020.00^{1}$
Average CEM Value (ppmv)	1079.14	10102.02
Accuracy	6.53 %	0.82 %
Limit	< 15 %	< 15 %

<sup>1</sup>Valero unable to obtain EPA Protocol 1 certified gases greater than 1000 ppm.

- A. Out of Control Periods:
  - 1. Dates: N/A
  - 2. Number of Days <u>N/A</u>
- B. Corrective Actions: <u>N/A</u>

(per 40 CFR 60, Appendix F, Section 7)

Pollutant: Total Sulfur

Applicable NSPS Subpart: Ja (Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: None

Monitor Manufacturer and Model No.: Thermo Scientific SOLA II

Process Unit(s) Description: North Flare Stack (EPN 20-72, EQT 0035), Hydrocracker Flare Header

CEM Sampling Location: North Flare Stack, Hydrocracker Flare Header (Y-AT-302)

CEM Span Value: Total Sulfur, Dual Range: 0-10,000 ppm, 10,000-1,000,000 ppm

#### I. ACCURACY ASSESSMENT RESULTS (RATA):

	<u>H<sub>2</sub>S #1</u>	<u>H<sub>2</sub>S #2</u>
Date of Audit	5/8/19	5/8/19
Reference Method	EPA Method 11	EPA Method 11
	(Alternate RATA)	(Alternate RATA)
Average RM Value (ppmv)	1013.00	$10020.00^{1}$
Average CEM Value (ppmv)	1000.89	10026.45
Accuracy	1.20 %	0.06 %
Limit	< 15 %	< 15 %

<sup>1</sup>Valero unable to obtain EPA Protocol 1 certified gases greater than 1000 ppm.

- A. Out of Control Periods:
  - 1. Dates: N/A
  - 2. Number of Days <u>N/A</u>
- B. Corrective Actions: <u>N/A</u>

(per 40 CFR 60, Appendix F, Section 7)

Pollutant: Total Sulfur

Applicable NSPS Subpart: Ja (Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From <u>4/1/19</u> to <u>6/30/19</u>

Date submitted: 7/30/19

Company: Valero Refining - Meraux LLC

Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: None

Monitor Manufacturer and Model No.: Thermo Scientific SOLA II

Process Unit(s) Description: South Flare Stack (EPN 3-77, EQT 0049)

CEM Sampling Location: South Flare Stack (Y-AT-304)

CEM Span Value: Total Sulfur, Dual Range: 0-10,000 ppm, 10,000-1,000,000 ppm

#### I. ACCURACY ASSESSMENT RESULTS (RATA):

	<u>H<sub>2</sub>S #1</u>	<u>H<sub>2</sub>S #2</u>
Date of Audit	5/8/19	5/8/19
Reference Method	EPA Method 11	EPA Method 11
	(Alternate RATA)	(Alternate RATA)
Average RM Value (ppmv)	1013.00	$10020.00^{1}$
Average CEM Value (ppmv)	1053.96	10119.75
Accuracy	4.04 %	1.00 %
Limit	< 15 %	< 15 %

<sup>1</sup>Valero unable to obtain EPA Protocol 1 certified gases greater than 1000 ppm.

- A. Out of Control Periods:
  - 1. Dates: N/A
  - 2. Number of Days <u>N/A</u>
- B. Corrective Actions: <u>See GASEOUS AND OPACITY EXCESS EMISSIONS AND MONITORING SYSTEMS</u> <u>PERFORMANCE page for the South Flare Stack, Total Sulfur analyzer for causes and corrective actions. (Page 36)</u>

Appendix A

Ja Root Cause and Corrective Action Analysis

Subpart Ja Root (	Cause / Corrective Action Analysis	Incident	Number: N/A
The information conto	ined below satisfies the requirements of the NSP	S Subpart Ja 60.108a(c)(6).	
Report: Refinery: Incident Type: Emissions Source(s):	Final Valero (Meraux) Flaring (Flow) North Flare (EPN 20-72, EQT 0035)	Date Date Analysis Con	of Event: 6/14/19 npleted: N/A
(1.)			(60.108a(c)(6)(i))
A description of the D This discharge resulted damaged by corrosion After the repair was co	<b>ischarge:</b> I from the normal shutdown of the Hydrocracker U . The discharge included activities such as depres. mpleted, a normal start up of the Hydrocracker U	Init to repair a section of piping that a Valer surization and N2 sweeping of the affected nit was performed.	ro inspection had found to be area to prepare it for welding.
(2.)		(60.108a	a(c)(6)(ii)) and (60.108a(c)(6)(ix))
	Date and Time the discharge was first identified _ Date/Time the discharge had ceased _ Duration of Discharge (Calculated) _	6/14/19 8:43 6/16/19 1:20 40.6 hrs.	
(3.)			(60.108a(c)(6)(viii))
volume was required t comply with the Net H	o comply with the maintenance vent provisions of eating Value of the Combustion Zone limit (> 270 l	40 CFR 63.643 as well as additional suppler Btu/scf) of 40 CFR 63.670, that became effe	nental natural gas required to ctive on January 30, 2019.
(4-) Necessity of RC/CAA: Note: If the discharge was followed.	Determine and state whether a RC/CAA is neces was a result of a planned startup or shutdown, a R	<b>sary:</b> C/CAA analysis is not required if the flare m	(60.108a(c)(6)(XI)) nanagement plan
Did the discharge resu	It from a planned startup or shutdown?	Yes	(Yes/No)
Was the flare manage	ment plan followed?	Yes	(Yes/No/N/A)
Is the event exempt fi - If yes, skip sectior	rom a RC/CCA based on the answers above? 1 5-7.	Yes	(Yes/No)
(5.)			(60.108a(c)(6)(ix))
Root Cause Analysis: Did this discharge resu N/A	Describe in detail the Root Cause(s) of the Incide ult from root causes identified in a previous analy	nt, to the extent determinable: /sis? No	(Yes/No)
(6.) Corrective Action Ana Is corrective action re <i>N/A</i>	lysis: Include a description of the recommended quired? <u>No</u> (	<b>corrective action(s) or an explanation of w</b> Yes/No)	(60.108a(c)(6)(ix)) vhy corrective action is not
(7.)			(60.108a(c)(6)(x))
Corrective Action Sche completed, provide a N/A	edule: Include corrective actions already comple schedule for implementation, including proposed	ted within the first 45 days following the d I commencement and completion dates.	ischarge. For those not

#### (8.)

#### The measured or calculated cumulative quantity of gas discharged over the discharge duration.

Note: Measured sulfur concentrations are shown as flow-weighted averages if multiple measurement devices were used.

		(60.108a(c)(6)(iii))	(60.108a(c)(6)(iv))	(60.108a(c)(6)(vii))	(60.108a(c)(6)(vii))	
		24-hr cumulative	TRS or H2S ppm		24 hr cumulativo	
First hour of 24-hr	Last hour of 24-hr	volume of flared gas	(24-hr average, flow-	24-hr cumulative SO2	za-ni cumulative	
Period	Period	above Baseline	weighted)			
		SCF	ppmv	lbs	lbs as H2S	
6/13/19 8:00	6/14/19 7:00	3,585	18	2.0	0.0	
6/13/19 9:00	6/14/19 8:00	100,288	12	2.2	0.0	
6/13/19 10:00	6/14/19 9:00	692,190	2	2.3	0.0	
6/13/19 11:00	6/14/19 10:00	1,000,566	1	2.4	0.0	
6/13/19 12:00	6/14/19 11:00	1,000,566	19	2.4	0.0	
6/13/19 13:00	6/14/19 12:00	1,029,345	81	2.8	0.0	
6/13/19 14:00	6/14/19 13:00	1,033,885	49	1.5	0.0	
6/13/19 15:00	6/14/19 14:00	1,033,898	22	1.4	0.0	
6/13/19 16:00	6/14/19 15:00	1,033,899	20	1.3	0.0	
6/13/19 17:00	6/14/19 16:00	1,033,899	19	1.3	0.0	
6/13/19 18:00	6/14/19 17:00	1,130,962	130	3.4	0.0	
6/13/19 19:00	6/14/19 18:00	1,146,990	18	3.5	0.0	
6/13/19 20:00	6/14/19 19:00	1,156,332	17	3.5	0.0	
6/13/19 21:00	6/14/19 20:00	1,156,365	16	3.5	0.0	
6/13/19 22:00	6/14/19 21:00	1,159,249	19	3.5	0.0	
6/13/19 23:00	6/14/19 22:00	1,164,159	16	3.5	0.0	
6/14/19 0:00	6/14/19 23:00	1,164,169	19	3.5	0.0	
6/14/19 1:00	6/15/19 0:00	1,164,161	22	3.5	0.0	
6/14/19 2:00	6/15/19 1:00	1,164,150	24	3.5	0.0	
6/14/19 3:00	6/15/19 2:00	1.164.140	23	3.5	0.0	
6/14/19 4:00	6/15/19 3:00	1.178.056	31	3.6	0.0	
6/14/19 5:00	6/15/19 4:00	1,509,195	33	5.4	0.0	
6/14/19 6:00	6/15/19 5:00	2.261.514	12	6.9	0.0	
6/14/19 7:00	6/15/19 6:00	2,977,010	7	7.7	0.0	
6/14/19 8:00	6/15/19 7:00	3,622,564	3	8.1	0.0	
6/14/19 9:00	6/15/19 8:00	3,955,411	7	8.4	0.0	
6/14/19 10:00	6/15/19 9:00	3,706,580	20	9.4	0.1	
6/14/19 11:00	6/15/19 10:00	4,004,339	27	12.1	0.1	
6/14/19 12:00	6/15/19 11:00	4,104,712	49	12.9	0.1	
6/14/19 13:00	6/15/19 12:00	4,138,785	118	13.7	0.1	
6/14/19 14:00	6/15/19 13:00	4,132,659	56	13.7	0.1	
6/14/19 15:00	6/15/19 14:00	4,132,676	18	13.7	0.1	
6/14/19 16:00	6/15/19 15:00	4,253,054	61	14.9	0.1	
6/14/19 17:00	6/15/19 16:00	4,351,667	48	15.7	0.1	
6/14/19 18:00	6/15/19 17:00	4,331,615	66	14.5	0.1	
6/14/19 19:00	6/15/19 18:00	4,503,352	49	15.9	0.1	
6/14/19 20:00	6/15/19 19:00	4,552,854	25	16.2	0.1	
6/14/19 21:00	6/15/19 20:00	4,687,502	34	16.9	0.1	
6/14/19 22:00	6/15/19 21:00	4,831,245	22	17.5	0.1	
6/14/19 23:00	6/15/19 22:00	4,847,786	20	17.5	0.1	
6/15/19 0:00	6/15/19 23:00	4,975,776	22	18.0	0.1	
6/15/19 1:00	6/16/19 0:00	5,160,754	21	18.6	0.1	
6/15/19 2:00	6/16/19 1:00	5,181,895	20	18.7	0.1	
6/15/19 3:00	6/16/19 2:00	5,181,893	17	18.7	0.1	
6/15/19 4:00	6/16/19 3:00	5,167,966	17	18.6	0.1	
6/15/19 5:00	6/16/19 4:00	4,836,814	17	16.8	0.1	
6/15/19 6:00	6/16/19 5:00	4,084,481	16	15.3	0.1	
6/15/19 7:00	6/16/19 6:00	3,368,959	16	14.4	0.1	

## (8.)

#### The measured or calculated cumulative quantity of gas discharged over the discharge duration.

Note: Measured sulfur concentrations are shown as flow-weighted averages if multiple measurement devices were used.

		(60,108-(-)(6)(:::))	(60, 100 - (-))((-)(-))	(60.100-(-)(6)())	(60,100-(-)(()())
		(60.108a(C)(6)(11))	(60.1088(C)(6)(IV))	(60.108a(C)(6)(VII))	(60.1088(C)(6)(VII))
First hour of 24-hr Period	Last hour of 24-hr Period	24-hr cumulative volume of flared gas above Baseline	TRS or H2S ppm (24-hr average, flow- weighted)	24-hr cumulative SO2	24-hr cumulative reduced sulfur
		SCF	ppmv	lbs	lbs as H2S
6/15/19 8:00	6/16/19 7:00	2,723,389	15	14.1	0.1
6/15/19 9:00	6/16/19 8:00	2,293,832	14	13.6	0.1
6/15/19 10:00	6/16/19 9:00	1,950,758	11	12.5	0.1
6/15/19 11:00	6/16/19 10:00	1,344,620	17	9.7	0.1
6/15/19 12:00	6/16/19 11:00	1,244,247	16	8.9	0.0
6/15/19 13:00	6/16/19 12:00	1,181,395	15	7.6	0.0
6/15/19 14:00	6/16/19 13:00	1,179,714	12	7.6	0.0
6/15/19 15:00	6/16/19 14:00	1,179,684	13	7.6	0.0
6/15/19 16:00	6/16/19 15:00	1,059,305	14	6.3	0.0
6/15/19 17:00	6/16/19 16:00	960,692	14	5.5	0.0
6/15/19 18:00	6/16/19 17:00	883,681	15	4.6	0.0
6/15/19 19:00	6/16/19 18:00	695,915	12	3.1	0.0
6/15/19 20:00	6/16/19 19:00	637,076	12	2.8	0.0
6/15/19 21:00	6/16/19 20:00	502,403	8	2.1	0.0
6/15/19 22:00	6/16/19 21:00	355,775	8	1.5	0.0
	1	· · ·		1	1