



July 30, 2021

CERTIFIED: 7016 2710 0001 0589 4898

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 2021
Valero Refining - Meraux LLC, Agency Interest # 1238
2235 Jacob Drive, St. Bernard Parish, Meraux, LA
Title V Permit Numbers: 2500-00001-V17

Gentlemen,

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 2021.

For this reporting period, no CEMS had excess emissions greater than 1% of the total operating time and the NOx and O₂ CEMS on Boiler B-6 (EPN 3-00, EQT 0048) had downtime greater than 5% of the total operating time. On 2/5/21, a temporary rental NOx and O₂ CEMS was installed on Boiler B-6 (EPN 3-00, EQT 0048). This temporary rental CEMS was installed as a standby monitoring system in accordance with 40 CFR 60.48b (f) and was in service for the entire Second Quarter 2021. New NOx and O₂ CEMS were installed on Boiler B-5 and Boiler B-6 in July 2021.

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. 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. JC Martin 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,

A handwritten signature in dark ink, appearing to read 'Leslie Sullivan', with a date '7/27/21' written to the right of the signature.

Leslie Sullivan
Vice President and General Manager
Meraux Refinery

Enclosures

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

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

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

Pollutant: **SO₂**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

Emission Limitation: SO₂ corrected to 0% O₂ shall not exceed 250 ppm on a 12-hour rolling average

Monitor Manufacturer and Model No.: Brimstone SGX-231(SO₂)/Servomex Oxy 1800(O₂)

Date of Latest CMS Certification or Audit: RATA on 5/25/21

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

Total source operating time in reporting period: 2,052 hours

Emissions Data Summary¹	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

CMS Performance Summary¹	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	1
d. Other known causes	7
e. Unknown causes	2
2. Total CMS Downtime	10
3. Total duration of CMS Downtime x (100) [Total source operating time] ²	0.5 %

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 §60.7(c) shall be submitted.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

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

Pollutant: **SO₂**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

Emission Limitation: SO₂ corrected to 0% O₂ shall not exceed 250 ppm on a 12-hour rolling average.

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

Date of Latest CMS Certification or Audit: RATA on 5/27/21

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

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

Emissions Data Summary¹	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

CMS Performance Summary¹	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

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 §60.7(c) shall be submitted.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

(per 40 CFR 60.7(d))

Pollutant: **H₂S**

Applicable NSPS Subpart: J

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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

Date of Latest CMS Certification or Audit: RATA on 5/26/21

Process Unit(s) Description: 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)

Total source operating time in reporting period: EQT 0010-2,184 hours, EQT 0011-2,184 hours, EQT 0033-2,184 hours, EQT 0058-2,038 hours

Emissions Data Summary ¹	
1. Duration of excess emissions in reporting period due to:	<i>All EQT's (hours)</i>
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] ²	0.0 %

CMS Performance Summary ¹	
1. CMS downtime in reporting period due to:	<i>All EQT's (hours)</i>
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] ²	0.0 %

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 §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: **H₂S**

Applicable NSPS Subpart: J

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

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

Monitor Manufacturer and Model No.: Ametek 4661

Date of Latest CMS Certification or Audit: RATA on 5/26/21

Process Unit(s) Description: 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)

Total source operating time in reporting period: EQT 0013-2,184 hours; EQT 0022-2,184 hours; EQT 0024-2,184 hours; EQT 0027-2,184 hours; EQT 0028-2,184 hours; EQT 0029-2,184 hours; EQT 0014-2,184 hours

Emissions Data Summary¹	
1. Duration of excess emissions in reporting period due to:	<i>All EQT's (hours)</i>
a. Startup/shutdown	0
b. Control equipment problems	0
c. Process problems	2
d. Other known causes	0
e. Unknown causes	0
2. Total duration of excess emission	2
3. Total duration of excess emissions x (100) [Total source operating time] ²	0.1 %

CMS Performance Summary¹	
1. CMS downtime in reporting period due to:	<i>All EQT's (hours)</i>
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] ²	0.0 %

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 §60.7(c) shall be submitted.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

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

Pollutant: **H₂S**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

Emission Limitation: Subpart Ja: 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 5/26/21

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 Summary¹		
1. Duration of excess emissions in reporting period due to:	<i>EQT 0127 (hours)</i>	<i>EQT 0159 (hours)</i>
a. Startup/shutdown	0	0
b. Control equipment problems	0	0
c. Process problems	2	2
d. Other known causes	0	0
e. Unknown causes	0	0
2. Total duration of excess emission	2	2
3. Total duration of excess emissions x (100) [Total source operating time] ²	0.1 %	0.1 %

CMS Performance Summary¹		
1. CMS downtime in reporting period due to:	<i>EQT 0127 (hours)</i>	<i>EQT 0159 (hours)</i>
a. Monitor equipment malfunctions	0	0
b. Non-Monitor equipment malfunctions	0	0
c. Quality assurance calibration	0	0
d. Other known causes	0	0
e. Unknown causes	0	0
2. Total CMS Downtime	0	0
3. Total duration of CMS Downtime x (100) [Total source operating time] ²	0.0 %	0.0 %

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 §60.7(c) shall be submitted.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

(per 40 CFR 60.7(d))

Pollutant: **H₂S**

Applicable NSPS Subpart: J

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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

Date of Latest CMS Certification or Audit: RATA on 5/26/21

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

Total source operating time in reporting period: 0 hours

Emissions Data Summary¹	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

CMS Performance Summary¹	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

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 §60.7(c) shall be submitted.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

(per 40 CFR 60.7(d))

Pollutant: **H₂S**

Applicable NSPS Subpart: J

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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

Date of Latest CMS Certification or Audit: RATA on 5/26/21

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 Summary¹	
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] ²	0.0 %

CMS Performance Summary¹	
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] ²	0.0 %

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 §60.7(c) shall be submitted.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

(per 40 CFR 60.7(d))

Pollutant: **H₂S**

Applicable NSPS Subpart: J

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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

Date of Latest CMS Certification or Audit: RATA on 5/26/21

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 0030-2,163 hours; EQT 0048-0 hours³

Emissions Data Summary ¹		
1. Duration of excess emissions in reporting period due to:	<i>EQT 0030</i> (hours)	<i>EQT 0048</i> (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] ²	0.0 %	0.0 %

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

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 §60.7(c) shall be submitted.

³ Boiler B-6 ran on purchased natural gas for the entire Quarter.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

(per 40 CFR 60.7(d))

Pollutant: **NO_x**

Applicable NSPS Subpart: Db

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

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

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

Date of Latest CMS Certification or Audit: RATA on 5/24/21

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

Total source operating time in reporting period: 2,163 hours

Emissions Data Summary¹	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

CMS Performance Summary¹	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

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 §60.7(c) shall be submitted.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

(per 40 CFR 60.7(d))

Pollutant: **NO_x**

Applicable NSPS Subpart: Db

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

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

Monitor Manufacturer and Model No.: CAI NOxygen 700 Series (Rental CEMS)

Date of Latest CMS Certification or Audit: RATA on 5/24/21, CGA on 6/23/21

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

Total source operating time in reporting period: 2,061 hours

Emissions Data Summary¹	
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] ²	0.0 %

CMS Performance Summary¹	
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	96
e. Unknown causes	48
2. Total CMS Downtime	144
3. Total duration of CMS Downtime x (100) [Total source operating time] ²	7.0 %

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 §60.7(c) shall be submitted.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

(per 40 CFR 60.7(d))

Pollutant: **NO_x**

Applicable NSPS Subpart: Db

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

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

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

Date of Latest CMS Certification or Audit: RATA on 5/25/21

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

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

Emissions Data Summary¹	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

CMS Performance Summary¹	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

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 §60.7(c) shall be submitted.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

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

Pollutant: **NO_x**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 42i (NO_x)/(O₂)

Date of Latest CMS Certification or Audit: RATA on 5/26/21

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 ¹	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

CMS Performance Summary ¹	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

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 §60.7(c) shall be submitted.

SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND MONITORING SYSTEMS PERFORMANCE

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

Pollutant: **NO_x**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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.: ABB AO2000 Uras 26(NO_x)/ Magnos 206 (O₂)

Date of Latest CMS Certification or Audit: RATA on 5/25/21

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

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

Emissions Data Summary¹	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

CMS Performance Summary¹	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	3
d. Other known causes	17
e. Unknown causes	0
2. Total CMS Downtime	20
3. Total duration of CMS Downtime x (100) [Total source operating time] ²	0.9 %

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 §60.7(c) shall be submitted.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

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

Pollutant: **NO_x**

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

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

Emission Limitation: None

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

Date of Latest CMS Certification or Audit: RATA on 5/25/21

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 ¹	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

CMS Performance Summary ¹	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

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 §60.7(c) shall be submitted.

SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND MONITORING SYSTEMS PERFORMANCE

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

Pollutant: **NO_x**

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

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

Emission Limitation: None

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

Date of Latest CMS Certification or Audit: RATA on 5/25/21

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 Summary¹	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

CMS Performance Summary¹	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	3
d. Other known causes	0
e. Unknown causes	0
2. Total CMS Downtime	3
3. Total duration of CMS Downtime x (100) [Total source operating time] ²	0.1 %

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 §60.7(c) shall be submitted.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

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

Pollutant: **H₂S**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 5100

Date of Latest CMS Certification or Audit: RATA on 5/27/21

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 Summary¹	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

CMS Performance Summary¹	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

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 §60.7(c) shall be submitted.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

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

Pollutant: **H₂S**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 5100

Date of Latest CMS Certification or Audit: RATA on 5/26/21

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 Summary¹	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

CMS Performance Summary¹	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	2
d. Other known causes	0
e. Unknown causes	0
2. Total CMS Downtime	2
3. Total duration of CMS Downtime x (100) [Total source operating time] ²	0.1 %

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 §60.7(c) shall be submitted.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

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

Pollutant: **H₂S**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 5100

Date of Latest CMS Certification or Audit: RATA on 5/26/21

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

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

Emissions Data Summary¹	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

CMS Performance Summary¹	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

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 §60.7(c) shall be submitted.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

(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 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 5/26/21

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 Summary¹	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

CMS Performance Summary¹	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
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] ²	0.3 %

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 §60.7(c) shall be submitted.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

(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 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 5/26/21

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 Summary¹	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

CMS Performance Summary¹	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	4
d. Other known causes	13
e. Unknown causes	0
2. Total CMS Downtime	17
3. Total duration of CMS Downtime x (100) [Total source operating time] ²	0.8 %

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 §60.7(c) shall be submitted.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

(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 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 5/26/21

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

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

Emissions Data Summary¹	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

CMS Performance Summary¹	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	1
d. Other known causes	8
e. Unknown causes	0
2. Total CMS Downtime	9
3. Total duration of CMS Downtime x (100) [Total source operating time] ²	0.4 %

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 §60.7(c) shall be submitted.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

(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 4/1/21 to 6/30/21

Date submitted: 7/30/21

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), North Flare Header

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

CMS Performance Summary¹	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

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 §60.7(c) shall be submitted.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

(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 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

Emission Limitation: None

Monitor Manufacturer and Model No.: GE Panametries 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

CMS Performance Summary ¹	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

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 §60.7(c) shall be submitted.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

(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 4/1/21 to 6/30/21

Date submitted: 7/30/21

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: South Flare Stack (EPN 3-77, EQT 0049)

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

CMS Performance Summary ¹	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
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] ²	0.0 %

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 §60.7(c) shall be submitted.

**SUMMARY REPORT - GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

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

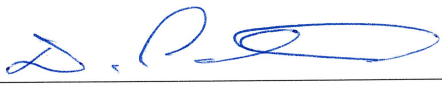
On 2/5/21, a temporary rental NO_x/O₂ CEMS was installed on Boiler B-6 (EPN 3-00, EQT 0048). This temporary rental CEMS was installed as a standby monitoring system in accordance with 40 CFR 60.48b (f) and was in service for the entire 2nd Quarter 2021. New NO_x/O₂ CEMS were installed on Boiler B-5 and Boiler B-6 in July 2021.

Additionally, Valero discovered errors in our equipment records and have been incorrectly reporting the models for the NO_x/O₂ CEMS installed on the NHT Charge Heater (EPN 1-17, EQT 0159) and the MDH Product and Fractionator Heaters (EPN 2-92, EQT 0033). The correct models are listed on this report.

For all other CMS covered in this report, no changes were made in the 2nd Quarter 2021 to CMS, process, or controls.

I certify that the information contained in this report is true, accurate, and complete.

Daniel Patroad
Name


Signature

Env. Engineer
Title

GASEOUS AND OPACITY EXCESS EMISSIONS AND MONITORING SYSTEMS PERFORMANCE

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

Pollutant: **SO₂**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

Emission Limitation: SO₂ corrected to 0% O₂ shall not exceed 250 ppm on a 12-hour rolling average

Monitor Manufacturer and Model No.: Brimstone SGX-231(SO₂)/Servomex Oxy 1800(O₂)

Date of Latest CMS Certification or Audit: RATA on 5/25/21

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

Total source operating time in reporting period: 2,052 hours

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

Ja CMS PERFORMANCE¹					
Date	Start	End	Duration (hours)	Cause	Corrective Action
4/7/21	11:00	12:00	1	Annual preventative maintenance with factory representative.	N/A
5/7/21	11:00	18:00	7	Offline for sample system maintenance.	Blew out sample line, rodded out probe, and replaced filters. Calibrated and returned to service.
5/10/21	13:00	15:00	2	While adjusting for calibration drift, the analyzer computer malfunctioned.	Shutdown analyzer and restarted it, verified that it was operating correctly and calibrated it.
TOTAL			10		

¹In accordance with 40 CFR 60.108a(d)(6), changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit have been compared with operation of the control system and affected facility before and following the period of data unavailability to ensure that any changes made in operation of the emission control system during the period of data unavailability did not affect the ability of the system to meet the applicable emission limit.

**GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

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

Pollutant: **SO₂**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

Emission Limitation: SO₂ corrected to 0% O₂ shall not exceed 250 ppm on a 12-hour rolling average.

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

Date of Latest CMS Certification or Audit: RATA on 5/27/21

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

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 ¹					
Date	Start	End	Duration (hours)	Cause	Corrective Action
None.					
TOTAL			0		

¹In accordance with 40 CFR 60.108a(d)(6), changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit have been compared with operation of the control system and affected facility before and following the period of data unavailability to ensure that any changes made in operation of the emission control system during the period of data unavailability did not affect the ability of the system to meet the applicable emission limit.

GASEOUS AND OPACITY EXCESS EMISSIONS AND MONITORING SYSTEMS PERFORMANCE

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

Pollutant: **H₂S**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 5/26/21

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

Ja EXCESS EMISSIONS – Both EQT's						
Date	Start	End	Duration (hours)	Max 3-HRA (ppm)	Cause	Corrective Action
5/4/21	17:00	19:00	2	186	H ₂ S greater than 162 ppm, 3-HRA, with SO ₂ emissions less than 500 lbs/day due to loss of lean amine flow from the #1 Amine. A pump in the #1 Amine unit tripped on motor overload due a damaged bearing. Lube oil for the pump was found to be contaminated with water and particulates. Additionally, the loss of the pump allowed vapor to backflow through the common amine header to the #2 Amine and caused a loss of lean amine from that unit as well.	Valero quickly restored lean amine flow to the refinery. Valero will provide training to refinery personnel on monitoring and maintaining pump lube oil health and add a check of lube oil quality to operator rounds. Valero will also consider adding a check valve in the #1 Amine unit to prevent vapor back flow though the common amine header.
TOTAL			2			

Ja CMS PERFORMANCE¹ – Both EQT's					
Date	Start	End	Duration (hours)	Cause	Corrective Action
None.					
TOTAL			0		

¹In accordance with 40 CFR 60.108a(d)(6), changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit have been compared with operation of the control system and affected facility before and following the period of data unavailability to ensure that any changes made in operation of the emission control system during the period of data unavailability did not affect the ability of the system to meet the applicable emission limit.

**GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

(per 40 CFR 60.7(c))

Pollutant: **NO_x**

Applicable NSPS Subpart: Db

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

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

Monitor Manufacturer and Model No.: CAI NOxygen 700 Series (Rental CEMS)

Date of Latest CMS Certification or Audit: RATA on 5/24/21, CGA on 6/23/21

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

Total source operating time in reporting period: 2,061 hours

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

CMS PERFORMANCE					
Date	Start	End	Duration (hours)	Cause	Corrective Action
4/14/21	08:00	15:00	7	Rental NOx analyzer offline, cause unknown.	Heavy rain and lightning delayed response and analyzer came back on-line on its own before technician could troubleshoot it.
4/15/21	21:00		21	Rental NOX analyzer offline due to a failed onboard pressure transducer.	NOx analyzer was replaced with a new analyzer from the rental company.
4/16/21		18:00			
4/24/21	12:00		13	Rental NOx analyzer offline, cause unknown.	Analyzer came back on-line on its own before technician was available to troubleshoot it.
4/25/21		01:00			
4/25/21	10:00	17:00	7	Rental NOx analyzer offline due to low ozoneator air supply pressure. Valero believes his was caused by a combination of a sticking regulator and the bottle valve not being fully open.	Valero repaired and cycled the regulator and ensured this air bottle valve was fully opened.

CMS PERFORMANCE cont.					
Date	Start	End	Duration (hours)	Cause	Corrective Action
5/15/21	18:00		39	Rental NOx analyzer offline due to ozoneator air supply bottled running empty and no replacement bottle available on site. The rental analyzer was consuming air bottles much faster than Valero anticipated and at a variable rate that made daily monitoring of bottle pressure less effective.	Valero rush-ordered a new air bottle and installed it on the analyzer .
5/17/21		09:00			
5/22/21	08:00		33	Sample system moisture removal chiller malfunctioned and froze its drain line. Water built up and froze in the sample line and blocked flow taking the NOx and O ₂ analyzers offline.	Valero shutdown the chiller and drained the sample system. Upon restart, the chiller appeared to be operating normally. The analyzers were calibrated and put back in service.
5/23/21		17:00			
5/29/21	13:00		24	Rental NOx analyzer offline due to ozoneator air supply bottled running empty.	Valero replaced the single bottle with a six pack of air bottles to provide additional air capacity.
5/30/21		13:00			
TOTAL			144		

**GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

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

Pollutant: **NO_x**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 42i (NO_x)/(O₂)

Date of Latest CMS Certification or Audit: RATA on 5/26/21

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 ¹					
Date	Start	End	Duration (hours)	Cause	Corrective Action
4/2/21	15:00	16:00	1	Adjusted for calibration drift.	N/A
TOTAL			1		

¹In accordance with 40 CFR 60.108a(d)(6), changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit have been compared with operation of the control system and affected facility before and following the period of data unavailability to ensure that any changes made in operation of the emission control system during the period of data unavailability did not affect the ability of the system to meet the applicable emission limit.

GASEOUS AND OPACITY EXCESS EMISSIONS AND MONITORING SYSTEMS PERFORMANCE

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

Pollutant: **NO_x**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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.: ABB Limas11(NOx), Magnos27 (O₂)

Date of Latest CMS Certification or Audit: RATA on 5/25/21

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 PERFORMANCE¹					
Date	Start	End	Duration (hours)	Cause	Corrective Action
5/3/21	11:00	14:00	3	Offline for annual preventative maintenance.	Calibrated and returned to service.
5/25/21	18:00		17	Offline due to sample pump failure.	Valero replaced the sample pump and calibrated the analyzers.
5/26/21		11:00			
TOTAL			20		

¹ In accordance with 40 CFR 60.108a(d)(6), changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit have been compared with operation of the control system and affected facility before and following the period of data unavailability to ensure that any changes made in operation of the emission control system during the period of data unavailability did not affect the ability of the system to meet the applicable emission limit.

GASEOUS AND OPACITY EXCESS EMISSIONS AND MONITORING SYSTEMS PERFORMANCE

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

Pollutant: **H₂S**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 5100

Date of Latest CMS Certification or Audit: RATA on 5/27/21

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 PERFORMANCE²					
Date	Start	End	Duration (hours)	Cause	Corrective Action
4/19/21	13:00	14:00	1	Offline for annual preventative maintenance.	Calibrated and returned to service.
TOTAL			1		

¹Due to the physical arrangement of the headers supplying the North Flare Stack (EPN 20-72, EQT 0035), two analyzers are required to measure H₂S 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.

²In accordance with 40 CFR 60.108a(d)(6), changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit have been compared with operation of the control system and affected facility before and following the period of data unavailability to ensure that any changes made in operation of the emission control system during the period of data unavailability did not affect the ability of the system to meet the applicable emission limit.

GASEOUS AND OPACITY EXCESS EMISSIONS AND MONITORING SYSTEMS PERFORMANCE

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

Pollutant: **H₂S**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 5100

Date of Latest CMS Certification or Audit: RATA on 5/26/21

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 PERFORMANCE²					
Date	Start	End	Duration (hours)	Cause	Corrective Action
4/19/21	11:00	13:00	2	Offline for annual preventative maintenance.	Calibrated and returned to service.
TOTAL			2		

¹Due to the physical arrangement of the headers supplying the North Flare Stack (EPN 20-72, EQT 0035), two analyzers are required to measure H₂S 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.

²In accordance with 40 CFR 60.108a(d)(6), changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit have been compared with operation of the control system and affected facility before and following the period of data unavailability to ensure that any changes made in operation of the emission control system during the period of data unavailability did not affect the ability of the system to meet the applicable emission limit.

**GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

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

Pollutant: **H₂S**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 5100

Date of Latest CMS Certification or Audit: RATA on 5/26/21

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 ²					
Date	Start	End	Duration (hours)	Cause	Corrective Action
4/19/21	12:00	13:00	1	Offline for annual preventative maintenance.	Calibrated and returned to service.
TOTAL			1		

¹ In accordance with 40 CFR 60.108a(d)(6), changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit have been compared with operation of the control system and affected facility before and following the period of data unavailability to ensure that any changes made in operation of the emission control system during the period of data unavailability did not affect the ability of the system to meet the applicable emission limit.

**GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

(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 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 5/26/21

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 ¹					
Date	Start	End	Duration (hours)	Cause	Corrective Action
4/6/21	13:00	19:00	6	Offline for annual preventative maintenance.	Calibrated and returned to service.
TOTAL			6		

¹In accordance with 40 CFR 60.108a(d)(6), changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit have been compared with operation of the control system and affected facility before and following the period of data unavailability to ensure that any changes made in operation of the emission control system during the period of data unavailability did not affect the ability of the system to meet the applicable emission limit.

**GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

(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 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 5/26/21

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 ¹					
Date	Start	End	Duration (hours)	Cause	Corrective Action
4/6/21	09:00	17:00	8	Offline for annual preventative maintenance.	Calibrated and returned to service.
4/25/21	14:00	16:00	2	Adjusted for calibration drift.	N/A
5/14/21	09:00	10:00	1	Adjusted for calibration drift.	N/A
5/30/21	16:00	21:00	5	Offline to troubleshoot and fix delayed transition from calibration gas back to sample.	Replaced switching valve rotor, calibrated analyzer, and returned to service.
6/21/21	11:00	12:00	1	Adjusted for calibration drift.	N/A
TOTAL			17		

¹ In accordance with 40 CFR 60.108a(d)(6), changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit have been compared with operation of the control system and affected facility before and following the period of data unavailability to ensure that any changes made in operation of the emission control system during the period of data unavailability did not affect the ability of the system to meet the applicable emission limit.

**GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

(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 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 5/26/21

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 ¹					
Date	Start	End	Duration (hours)	Cause	Corrective Action
4/7/21	08:00	15:00	7	Offline for annual preventative maintenance.	Calibrated and returned to service.
4/12/21	11:00	12:00	1	Offline to rebuild sample pump.	Calibrated and returned to service.
5/8/21	16:00	17:00	1	Adjusted for calibration drift.	N/A
TOTAL			9		

¹ In accordance with 40 CFR 60.108a(d)(6), changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit have been compared with operation of the control system and affected facility before and following the period of data unavailability to ensure that any changes made in operation of the emission control system during the period of data unavailability did not affect the ability of the system to meet the applicable emission limit.

**GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

(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 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

Emission Limitation: None

Monitor Manufacturer and Model No.: GE Panametries GF 868

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 ¹					
Date	Start	End	Duration (hours)	Cause	Corrective Action
None.					
TOTAL			0		

¹In accordance with 40 CFR 60.108a(d)(6), changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit have been compared with operation of the control system and affected facility before and following the period of data unavailability to ensure that any changes made in operation of the emission control system during the period of data unavailability did not affect the ability of the system to meet the applicable emission limit.

**GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

(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 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 ¹					
Date	Start	End	Duration (hours)	Cause	Corrective Action
None.					
TOTAL			0		

¹In accordance with 40 CFR 60.108a(d)(6), changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit have been compared with operation of the control system and affected facility before and following the period of data unavailability to ensure that any changes made in operation of the emission control system during the period of data unavailability did not affect the ability of the system to meet the applicable emission limit.

**GASEOUS AND OPACITY EXCESS EMISSIONS AND
MONITORING SYSTEMS PERFORMANCE**

(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 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

Emission Limitation: None

Monitor Manufacturer and Model No.: GE Panametries GF 868

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 ¹					
Date	Start	End	Duration (hours)	Cause	Corrective Action
None.					
TOTAL			0		

¹In accordance with 40 CFR 60.108a(d)(6), changes made in operation of the emission control system during the period of data unavailability which could affect the ability of the system to meet the applicable emission limit have been compared with operation of the control system and affected facility before and following the period of data unavailability to ensure that any changes made in operation of the emission control system during the period of data unavailability did not affect the ability of the system to meet the applicable emission limit.

DATA ASSESSMENT REPORT

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

Pollutant: **SO₂**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

Emission Limitation: SO₂ corrected to 0% O₂ shall not exceed 250 ppm on a 12-hour rolling average.

Monitor Manufacturer and Model No.: Brimstone SGX-231(SO₂)/Servomex Oxy 1800(O₂)

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

CEM Sampling Location: #2 SRU Incinerator (#1-93)

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

I. ACCURACY ASSESSMENT RESULTS (RATA):

SO ₂ corrected to 0% O ₂	
Date of Audit	5/25/21
Reference Method	EPA Method 6C/ EPA Method 3A
Average RM Value (ppmv)	55.79
Average CEM Value (ppmv)	48.09
Accuracy	4.17 %
Limit	< 10%

II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

DATA ASSESSMENT REPORT

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

Pollutant: **SO₂**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

Emission Limitation: SO₂ corrected to 0% O₂ shall not exceed 250 ppm on a 12-hour rolling average.

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

Source unit: #3 SRU Incinerator (EPN 5-00, EQT 0079)

CEM Sampling Location: #3 SRU Incinerator (#5-00)

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

I. ACCURACY ASSESSMENT RESULTS (RATA):

SO ₂ corrected to 0% O ₂	
Date of Audit	5/27/21
Reference Method	EPA Method 6C/ EPA Method 3A
Average RM Value (ppmv)	69.48
Average CEM Value (ppmv)	48.85
Accuracy	8.66 %
Limit	< 10%

II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

DATA ASSESSMENT REPORT

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

Pollutant: **H₂S**

Applicable NSPS Subpart: J

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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

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: Hydrogen Sulfide, 300 ppm

I. ACCURACY ASSESSMENT RESULTS (RATA):

	<u>H₂S #1</u>	<u>H₂S #2</u>
Date of Audit	5/26/21	5/26/21
Reference Method	EPA Method 11 (Alternate RATA)	EPA Method 11 (Alternate RATA)
Average RM Value (ppmv)	75.8	162.2
Average CEM Value (ppmv)	74.6	153.8
Accuracy	1.6 %	5.2 %
Limit	< 15 %	< 15 %

II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

DATA ASSESSMENT REPORT

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

Pollutant: **H₂S**

Applicable NSPS Subpart: J and Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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>H₂S #1</u>	<u>H₂S #2</u>
Date of Audit	5/26/21	5/26/21
Reference Method	EPA Method 11 (Alternate RATA)	EPA Method 11 (Alternate RATA)
Average RM Value (ppmv)	75.8	162.2
Average CEM Value (ppmv)	76.0	151.0
Accuracy	0.2 %	6.9%
Limit	< 15 %	< 15 %

II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

DATA ASSESSMENT REPORT

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

Pollutant: **H₂S**

Applicable NSPS Subpart: J

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 4 Fuel Drum for Merox Disulfide Separator to Platformer Charge Heater

CEM Sampling Location: Area 4 Fuel Drum

CEM Span Value: Hydrogen Sulfide, 300 ppm

I. ACCURACY ASSESSMENT RESULTS (RATA):

	<u>H₂S #1</u>	<u>H₂S #2</u>
Date of Audit	5/26/21	5/26/21
Reference Method	EPA Method 11 (Alternate RATA)	EPA Method 11 (Alternate RATA)
Average RM Value (ppmv)	75.8	162.2
Average CEM Value (ppmv)	71.1	144.8
Accuracy	6.3 %	10.8 %
Limit	< 15 %	< 15 %

II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

DATA ASSESSMENT REPORT

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

Pollutant: **H₂S**

Applicable NSPS Subpart: J

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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>H₂S #1</u>	<u>H₂S #2</u>
Date of Audit	5/26/21	5/26/21
Reference Method	EPA Method 11 (Alternate RATA)	EPA Method 11 (Alternate RATA)
Average RM Value (ppmv)	75.8	162.2
Average CEM Value (ppmv)	77.3	159.0
Accuracy	1.9 %	2.0 %
Limit	< 15 %	< 15 %

II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

DATA ASSESSMENT REPORT

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

Pollutant: **H₂S**

Applicable NSPS Subpart: J

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 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: Hydrogen Sulfide, 300 ppm

I. ACCURACY ASSESSMENT RESULTS (RATA):

	<u>H₂S #1</u>	<u>H₂S #2</u>
Date of Audit	5/26/21	5/26/21
Reference Method	EPA Method 11 (Alternate RATA)	EPA Method 11 (Alternate RATA)
Average RM Value (ppmv)	75.8	162.2
Average CEM Value (ppmv)	73.3	155.3
Accuracy	3.3 %	4.3 %
Limit	< 15 %	< 15 %

II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

DATA ASSESSMENT REPORT

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

Pollutant: **NO_x**

Applicable NSPS Subpart: Db

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

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

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

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

CEM Sampling Location: Boiler B-5

CEM Span Value: Nitrogen Oxide 100 ppm, Oxygen 25 %

I. ACCURACY ASSESSMENT RESULTS (RATA):

NO _x lb/MMBtu	
Date of Audit	5/24/21
Reference Method	EPA Method 7E / EPA Method 3A
Average RM Value	0.033 lb/MMBtu
Average CEM Value	0.034 lb/MMBtu
Accuracy	6.59 %
Limit	< 10 %

II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

DATA ASSESSMENT REPORT

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

Pollutant: **NO_x**

Applicable NSPS Subpart: Db

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

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

Monitor Manufacturer and Model No.: CAI NOxygen 700 Series

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

CEM Sampling Location: Boiler B-6

CEM Span Value: Nitrogen Oxide 100 ppm, Oxygen 25 %

I. ACCURACY ASSESSMENT RESULTS (RATA):

NO _x lb/MMBtu	
Date of Audit	5/24/21
Reference Method	EPA Method 7E / EPA Method 3A
Average RM Value	0.025 lb/MMBtu
Average CEM Value	0.025 lb/MMBtu
Accuracy	4.17 %
Limit	< 20 %

	NO _x #1 <u>(low scale)</u>	NO _x #2 <u>(high scale)</u>	O ₂ #1 <u>(low scale)</u>	O ₂ #2 <u>(high scale)</u>
Date of Audit	6/23/21	6/23/21	6/23/21	6/23/21
Audit Gas Cylinder No.	BLM003457	LL64747	CC483685	LL167062
Date of Audit Gas Cert.	10/4/19	5/3/16	5/23/16	1/28/14
Type of Certification	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1
Certified Audit Value	25.3 ppmv	54.5 ppmv	6.00 vol %	10.01 vol %
CEM Response Value	25.5 ppmv	55.3 ppmv	6.13 vol %	10.15 vol %
Accuracy	0.8%	1.5%	2.2%	1.4%
Standard	<15%	<15%	<15%	<15%

II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

DATA ASSESSMENT REPORT

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

Pollutant: **NO_x**

Applicable NSPS Subpart: Db

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

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

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

NO _x lb/MMBtu	
Date of Audit	5/25/21
Reference Method	EPA Method 7E / EPA Method 3A
Average RM Value	0.048 lb/MMBtu
Average CEM Value	0.051 lb/MMBtu
Accuracy	13.78 %
Limit	< 20 %

II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

DATA ASSESSMENT REPORT

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

Pollutant: **NO_x**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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_x)/(O₂)

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

CEM Sampling Location: Benzene Recovery Unit Reboiler

CEM Span Value: Nitrogen Oxide 100 ppm, Oxygen 25 %

I. ACCURACY ASSESSMENT RESULTS (RATA):

	NO _x , ppmvd	O ₂ , vol % (dry)
Date of Audit	5/26/21	5/26/21
Reference Method	EPA Method 7E	EPA Method 3A
Average RM Value	15.77 ppmvd	8.28 vol %
Average CEM Value	16.75 ppmvd	8.29 vol %
Accuracy	8.94 %	2.63 %
Limit	< 20 %	< 20 %

II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

DATA ASSESSMENT REPORT

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

Pollutant: **NO_x**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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.: ABB AO2000 Uras 26(NO_x)/ Magnos 206 (O₂)

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

CEM Sampling Location: NHT Charge Heater

CEM Span Value: Nitrogen Oxide 100 ppm, Oxygen 25 %

I. ACCURACY ASSESSMENT RESULTS (RATA):

	NO _x , ppmvd	O ₂ , vol % (dry)
Date of Audit	5/25/21	5/25/21
Reference Method	EPA Method 7E	EPA Method 3A
Average RM Value	20.42 ppmvd	4.83 vol %
Average CEM Value	23.37 ppmvd	4.85 vol %
Accuracy	15.64 %	0.44 %
Limit	< 20 %	< 20 %

II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

DATA ASSESSMENT REPORT

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

Pollutant: **NO_x**

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

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

Emission Limitation: None

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

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

CEM Sampling Location: No.1 Crude Heater

CEM Span Value: Nitrogen Oxide 100 ppm, Oxygen 25 %

I. ACCURACY ASSESSMENT RESULTS (RATA):

	NO _x , ppmvd	O ₂ , vol % (dry)
Date of Audit	5/25/21	5/25/21
Reference Method	EPA Method 7E	EPA Method 3A
Average RM Value	6.35 ppmvd	5.97 vol %
Average CEM Value	7.11 ppmvd	6.16 vol %
Accuracy	13.48 %	3.62 %
Limit	< 20 %	< 20 %

II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

DATA ASSESSMENT REPORT

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

Pollutant: **NO_x**

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

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

Company: Valero Refining - Meraux LLC

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

Emission Limitation: None

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

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

CEM Sampling Location: MDH Product and Fractionator Heaters

CEM Span Value: Nitrogen Oxide 100 ppm, Oxygen 25 %

I. ACCURACY ASSESSMENT RESULTS (RATA):

	NO _x , ppmvd	O ₂ , vol % (dry)
Date of Audit	5/25/21	5/25/21
Reference Method	EPA Method 7E	EPA Method 3A
Average RM Value	17.19 ppmvd	8.47 vol %
Average CEM Value	14.76 ppmvd	8.10 vol %
Accuracy	15.41 %	5.47 %
Limit	< 20 %	< 20 %

II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

DATA ASSESSMENT REPORT

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

Pollutant: **H₂S**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 5100

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-801)

CEM Span Value: Hydrogen Sulfide, 300 ppm

I. ACCURACY ASSESSMENT RESULTS (RATA):

	<u>H₂S</u>
Date of Audit	5/27/21
Reference Method	EPA Method 11
Average RM Value (ppmv)	41.0 ppmv
Average CEM Value (ppmv)	33.8 ppmv
Accuracy	8.83 %
Limit	< 10 %

II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

DATA ASSESSMENT REPORT

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

Pollutant: **H₂S**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 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):

	<u>H₂S</u>
Date of Audit	5/26/21
Reference Method	EPA Method 11
Average RM Value (ppmv)	6.63 ppmv
Average CEM Value (ppmv)	15.58 ppmv
Accuracy	7.26 %
Limit	< 10 %

II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

DATA ASSESSMENT REPORT

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

Pollutant: **H₂S**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/21 to 6/30/21

Date submitted: 7/30/21

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 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: Hydrogen Sulfide, 300 ppm

I. ACCURACY ASSESSMENT RESULTS (RATA):

	<u>H₂S</u>
Date of Audit	5/26/21
Reference Method	EPA Method 11
Average RM Value (ppmv)	6.7 ppmv
Average CEM Value (ppmv)	1.4 ppmv
Accuracy	4.23 %
Limit	< 10 %

II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

DATA ASSESSMENT REPORT

(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 4/1/21 to 6/30/21

Date submitted: 7/30/21

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>H₂S #1</u>	<u>H₂S #2</u>
Date of Audit	5/26/21	5/26/21
Reference Method	PS 2	PS 2
	Alternate RATA	Alternate RATA
Average RM Value (ppmv)	1113.0	10000.0 ¹
Average CEM Value (ppmv)	1061.3	10223.7
Accuracy	4.8 %	2.2 %
Limit	< 15 %	< 15 %

¹ Valero unable to obtain EPA Protocol 1 certified gases greater than 1000 ppm.

II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

DATA ASSESSMENT REPORT

(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 4/1/21 to 6/30/21

Date submitted: 7/30/21

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>H₂S #1</u>	<u>H₂S #2</u>
Date of Audit	5/26/21	5/26/21
Reference Method	PS 2	PS 2
	Alternate RATA	Alternate RATA
Average RM Value (ppmv)	1113.0	10000.0 ¹
Average CEM Value (ppmv)	1037.8	10053.5
Accuracy	2.4 %	0.5 %
Limit	< 15 %	< 15 %

¹ Valero unable to obtain EPA Protocol 1 certified gases greater than 1000 ppm.

II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

DATA ASSESSMENT REPORT

(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 4/1/21 to 6/30/21

Date submitted: 7/30/21

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>H₂S #1</u>	<u>H₂S #2</u>
Date of Audit	5/26/21	5/26/21
Reference Method	PS 2	PS 2
	Alternate RATA	Alternate RATA
Average RM Value (ppmv)	1113.0	10000.0 ¹
Average CEM Value (ppmv)	1072.1	10081.6
Accuracy	5.8 %	0.8 %
Limit	< 15 %	< 15 %

¹ Valero unable to obtain EPA Protocol 1 certified gases greater than 1000 ppm.

II. CALIBRATION DRIFT ASSESSMENT

A. Out of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

Appendix A

Ja Root Cause and Corrective Action Analysis

Subpart Ja Root Cause / Corrective Action AnalysisImpact Incident Number: **372656**

The information contained below satisfies the requirements of the NSPS Subpart Ja 60.108a(c)(6).

Report: Final
Refinery: Valero (Meraux)
Incident Type: Flaring (Flow)
Emissions Source(s): North Flare (EPN 20-72, EQT 0035)

Date of Event: 6/15/18
Date Analysis Completed: 7/26/18

(1.) (60.108a(c)(6)(i))

A description of the Discharge:

On June 14, 2018 at approximately 06:45, while unloading one of the Naphtha Hydrotreater (NHT) compressors in preparation for maintenance, it made an abnormal noise and shutdown. Immediately after this, the remaining compressor also shutdown which required Valero to perform unplanned shutdowns of the NHT and downstream Reformer unit.

A small amount of flaring of Hydrogen rich gas occurred during the unit shutdowns, but the bulk of the gas volume flared began on June 15, 2018 at approximately 09:06 as part of a normal Reformer start up.

(2.) (60.108a(c)(6)(ii)) and (60.108a(c)(6)(ix))

	North Flare
Date and Time the discharge was first identified	<u>6/15/18 9:06</u>
Date/Time the discharge had ceased	<u>6/15/18 17:30</u>
Duration of Discharge (Calculated)	<u>8.4</u> hrs

(3.) (60.108a(c)(6)(viii))

The steps taken to limit the emissions during the discharge:

Valero followed its Flare Minimization Plan and Operations Procedures to minimize the volume of this discharge.

(4.) (60.108a(c)(6)(xi))

Necessity of RC/CAA: Determine and state whether a RC/CAA is necessary:

Note: If the discharge was a result of a planned startup or shutdown, a RC/CAA analysis is not required if the flare management plan was followed.

Did the discharge result from a planned startup or shutdown?

No (Yes/No)

Was the flare management plan followed?

Yes (Yes/No/N/A)

Is the event exempt from a RC/CCA based on the answers above?

No (Yes/No)

- If yes, skip section 5-7.

(5.) (60.108a(c)(6)(ix))

Root Cause Analysis: Describe in detail the Root Cause(s) of the Incident, to the extent determinable:

Did this discharge result from root causes identified in a previous analysis? No (Yes/No)

Valero has determined the root cause of this incident to be liquids accumulating in the NHT Make-Up Compressor suction line piping. Contributing to this was the fact that prior to this the NHT was operated with the valve supplying offsite vendor Hydrogen open leaving the Make-Up Compressors lightly loaded. When this valve was shut and the compressor that was being shut down was unloaded, the load on the remaining compressor rapidly increased. This dislodged the accumulated liquid into the Make-Up Compressor Suction Drum where it was detected as a high level and automatically shut down both compressors.

(6.) (60.108a(c)(6)(ix))

Corrective Action Analysis: Include a description of the recommended corrective action(s) or an explanation of why corrective action is not required.
Is corrective action required? Yes (Yes/No)

1) Evaluate the piping lay out from the Chloride Treater to the NHT Compressor Make-Up Drum for improvements to prevent liquid accumulation.

2) Add a step to the operating procedures to open the drain lines on the Make-Up Compressor Suction Drum prior to increasing load on a compressor.

3) Add to the NHT Night Orders a warning not to use the valve supplying offsite vendor Hydrogen unless it is required.

(7.) (60.108a(c)(6)(x))

Corrective Action Schedule: Include corrective actions already completed within the first 45 days following the discharge. For those not completed, provide a schedule for implementation, including proposed commencement and completion dates.

1) Evaluate the piping lay out from the Chloride Treater to the NHT Compressor Make-Up Drum for improvements to prevent liquid accumulation.

Commencement Date: 7/26/18

Completed: 12/4/18

2) Add a step to the operating procedures to open the drain lines on the Make-Up Compressor Suction Drum prior to increasing load on a compressor.

Commencement Date: 7/26/18

Completed: 10/2/18

3) Add to the NHT Night Orders a warning not to use the valve supplying offsite vendor Hydrogen unless it is required.

Commencement Date: 7/26/18

Completed: 10/2/18

4) Complete the piping lay out changes identified in the previous corrective action.

Commencement Date: 12/4/18

Estimated Completion Date: 5/24/21

Valero determined that changes to operating procedures to prevent liquid accumulation have been effective in preventing recurrence of this incident and that piping changes are not necessary.

(8.) North and South Flares**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))
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
6/14/18 10:00	6/15/18 9:00	409,160	178	11.2	0.1
6/14/18 11:00	6/15/18 10:00	920,821	178	11.9	0.1
6/14/18 12:00	6/15/18 11:00	1,504,335	112	8.4	0.0
6/14/18 13:00	6/15/18 12:00	1,569,958	113	8.4	0.0
6/14/18 14:00	6/15/18 13:00	1,571,770	113	8.4	0.0
6/14/18 15:00	6/15/18 14:00	1,571,770	113	8.4	0.0
6/14/18 16:00	6/15/18 15:00	1,654,807	115	8.9	0.0
6/14/18 17:00	6/15/18 16:00	1,870,248	81	9.0	0.0
6/14/18 18:00	6/15/18 17:00	1,866,092	70	7.7	0.0
6/14/18 19:00	6/15/18 18:00	1,842,613	55	6.3	0.0
6/14/18 20:00	6/15/18 19:00	1,834,844	45	6.0	0.0
6/14/18 21:00	6/15/18 20:00	1,805,169	26	3.7	0.0
6/14/18 22:00	6/15/18 21:00	1,802,890	16	3.6	0.0
6/14/18 23:00	6/15/18 22:00	1,802,890	16	3.6	0.0
6/15/18 0:00	6/15/18 23:00	1,802,890	16	3.6	0.0
6/15/18 1:00	6/16/18 0:00	1,802,890	16	3.6	0.0
6/15/18 2:00	6/16/18 1:00	1,802,884	9	3.6	0.0
6/15/18 3:00	6/16/18 2:00	1,802,884	9	3.6	0.0
6/15/18 4:00	6/16/18 3:00	1,802,884	9	3.6	0.0
6/15/18 5:00	6/16/18 4:00	1,802,884	9	3.6	0.0
6/15/18 6:00	6/16/18 5:00	1,802,758	8	3.6	0.0
6/15/18 7:00	6/16/18 6:00	1,802,758	8	3.6	0.0
6/15/18 8:00	6/16/18 7:00	1,802,737	7	3.6	0.0
6/15/18 9:00	6/16/18 8:00	1,802,670	6	3.6	0.0
6/15/18 10:00	6/16/18 9:00	1,511,218	6	3.0	0.0
6/15/18 11:00	6/16/18 10:00	999,557	5	2.3	0.0
6/15/18 12:00	6/16/18 11:00	400,009	5	1.7	0.0

Subpart Ja Root Cause / Corrective Action AnalysisIncident Number: **438635**

The information contained below satisfies the requirements of the NSPS Subpart Ja 60.108a(c)(6).

Report: Update
Refinery: Valero (Meraux)
Incident Type: Flaring (Flow and SO2)
Emissions Source(s): North Flare (EPN 20-72, EQT 0035)
South Flare (EPN 3-77, EQT 0049)

Date of Event: 11/18/20
Date Analysis Completed: 12/22/20

(1.) (60.108a(c)(6)(i))

A description of the Discharge:

On November 18, 2020 at approximately 18:03, Valero experienced a partial power interruption due to an electrical failure at a third-party substation providing power to the refinery. The resulting unit upsets led to excess emissions of SO2 from the refinery flares and the #2 Sulfur Recovery Unit (SRU). The SO2 emissions from the refinery flares was greater than 500 lbs in a 24 hour period, but the SO2 emissions from the refinery SRU's was less than 500 lbs above allowable in a 24 hour period.

(2.) (60.108a(c)(6)(ii)) and (60.108a(c)(6)(ix))

Date and Time the discharge was first identified 11/18/20 18:03
Date/Time the discharge had ceased 11/21/20 9:26
Duration of Discharge (Calculated) 63.4 hrs.

(3.) (60.108a(c)(6)(viii))

The steps taken to limit the emissions during the discharge:

Valero followed its Flare Minimization Plan and Operations Procedures to minimize the volume and SO2 emissions of this discharge.

(4.) (60.108a(c)(6)(xi))

Necessity of RC/CAA: Determine and state whether a RC/CAA is necessary:

Note: If the discharge was a result of a planned startup or shutdown, a RC/CAA analysis is not required if the flare management plan was followed.

Did the discharge result from a planned startup or shutdown?	<u>No</u>	(Yes/No)
Was the flare management plan followed?	<u>Yes</u>	(Yes/No/N/A)
Is the event exempt from a RC/CCA based on the answers above?	<u>No</u>	(Yes/No)

- If yes, skip section 5-7.

(5.) (60.108a(c)(6)(ix))

Root Cause Analysis: Describe in detail the Root Cause(s) of the Incident, to the extent determinable:

Did this discharge result from root causes identified in a previous analysis? No (Yes/No)

Valero investigated this incident and determined that a raccoon shorted equipment at the neighboring Entergy substation

(6.) (60.108a(c)(6)(ix))

Corrective Action Analysis: Include a description of the recommended corrective action(s) or an explanation of why corrective action is not

Is corrective action required? Yes (Yes/No)

1) Coordinate review with Entergy for installation of animal-deterrent electric fencing around the Entergy Substation in Meraux.

2) Coordinate with Entergy to add improved animal resistant technology, such as molded insulation covers, at the Entergy substation in Meraux.

(7.)

(60.108a(c)(6)(x))

Corrective Action Schedule: Include corrective actions already completed within the first 45 days following the discharge. For those not completed, provide a schedule for implementation, including proposed commencement and completion dates.

1) *Coordinate review with Entergy for installation of animal-deterrent electric fencing around the Entergy Substation in Meraux.*

Commencement Date: 12/22/20

Completed Date: 6/18/21

Animal-deterrent electric fencing installed.

2) *Coordinate with Entergy to add improved animal resistant technology, such as molded insulation covers, at the Entergy substation in Meraux.*

Commencement Date: 12/22/20

Estimated Completion Date: 3/15/22

(8.) The measured or calculated cumulative quantity of gas discharged over the discharge duration. <i>Note: Measured sulfur concentrations are shown as flow-weighted averages if multiple measurement devices were used.</i>					
		(60.108a(c)(6)(iii))	(60.108a(c)(6)(iv))	(60.108a(c)(6)(vii))	(60.108a(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
11/17/20 18:00	11/18/20 17:00	111,807	11	0.5	0.0
11/17/20 19:00	11/18/20 18:00	647,566	247	22.7	0.1
11/17/20 20:00	11/18/20 19:00	885,507	287	34.3	0.2
11/17/20 21:00	11/18/20 20:00	1,085,114	416	48.6	0.3
11/17/20 22:00	11/18/20 21:00	1,561,695	119	58.1	0.3
11/17/20 23:00	11/18/20 22:00	2,081,184	108	67.5	0.4
11/18/20 0:00	11/18/20 23:00	2,412,929	83	72.1	0.4
11/18/20 1:00	11/19/20 0:00	2,883,655	18	73.5	0.4
11/18/20 2:00	11/19/20 1:00	3,409,482	13	74.6	0.4
11/18/20 3:00	11/19/20 2:00	3,898,318	32	77.2	0.4
11/18/20 4:00	11/19/20 3:00	4,202,975	260	90.6	0.5
11/18/20 5:00	11/19/20 4:00	4,386,019	214	97.3	0.5
11/18/20 6:00	11/19/20 5:00	4,661,267	62	100.2	0.5
11/18/20 7:00	11/19/20 6:00	4,984,646	33	102.0	0.5
11/18/20 8:00	11/19/20 7:00	5,309,505	22	103.2	0.6
11/18/20 9:00	11/19/20 8:00	5,662,529	15	104.1	0.6
11/18/20 10:00	11/19/20 9:00	7,751,708	1078	476.5	2.6
11/18/20 11:00	11/19/20 10:00	8,381,083	22	478.7	2.6
11/18/20 12:00	11/19/20 11:00	8,967,471	33	482.0	2.6
11/18/20 13:00	11/19/20 12:00	9,549,837	43	486.2	2.6
11/18/20 14:00	11/19/20 13:00	10,043,580	35	489.1	2.6
11/18/20 15:00	11/19/20 14:00	10,667,571	26	491.7	2.6
11/18/20 16:00	11/19/20 15:00	10,987,509	20	492.8	2.6
11/18/20 17:00	11/19/20 16:00	11,225,570	16	493.5	2.7
11/18/20 18:00	11/19/20 17:00	11,426,712	17	494.1	2.7
11/18/20 19:00	11/19/20 18:00	11,078,009	18	472.5	2.5
11/18/20 20:00	11/19/20 19:00	11,035,449	18	461.4	2.5
11/18/20 21:00	11/19/20 20:00	11,026,102	16	447.6	2.4
11/18/20 22:00	11/19/20 21:00	10,732,962	15	438.6	2.4
11/18/20 23:00	11/19/20 22:00	10,418,519	15	429.7	2.3
11/19/20 0:00	11/19/20 23:00	10,287,215	14	425.5	2.3
11/19/20 1:00	11/20/20 0:00	10,017,772	13	424.6	2.3
11/19/20 2:00	11/20/20 1:00	9,930,147	9	424.1	2.3
11/19/20 3:00	11/20/20 2:00	9,558,754	18	421.8	2.3
11/19/20 4:00	11/20/20 3:00	9,438,882	13	408.8	2.2
11/19/20 5:00	11/20/20 4:00	9,498,396	10	402.5	2.2
11/19/20 6:00	11/20/20 5:00	9,667,321	25	401.5	2.2
11/19/20 7:00	11/20/20 6:00	9,606,565	21	400.6	2.2
11/19/20 8:00	11/20/20 7:00	9,478,708	12	399.8	2.1
11/19/20 9:00	11/20/20 8:00	9,473,301	9	399.4	2.1
11/19/20 10:00	11/20/20 9:00	7,627,554	26	28.1	0.2
11/19/20 11:00	11/20/20 10:00	7,429,240	29	27.9	0.1
11/19/20 12:00	11/20/20 11:00	7,343,835	0	24.7	0.1
11/19/20 13:00	11/20/20 12:00	7,088,533	2	20.5	0.1
11/19/20 14:00	11/20/20 13:00	6,740,438	5	17.8	0.1
11/19/20 15:00	11/20/20 14:00	6,354,405	5	15.3	0.1
11/19/20 16:00	11/20/20 15:00	6,178,156	5	14.3	0.1
11/19/20 17:00	11/20/20 16:00	6,091,682	6	13.8	0.1
11/19/20 18:00	11/20/20 17:00	6,119,669	94	16.9	0.1

(8.)					
The measured or calculated cumulative quantity of gas discharged over the discharge duration.					
<i>Note: Measured sulfur concentrations are shown as flow-weighted averages if multiple measurement devices were used.</i>					
		(60.108a(c)(6)(iii))	(60.108a(c)(6)(iv))	(60.108a(c)(6)(vii))	(60.108a(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
11/19/20 19:00	11/20/20 18:00	6,659,549	186	38.9	0.2
11/19/20 20:00	11/20/20 19:00	7,205,158	7	39.1	0.2
11/19/20 21:00	11/20/20 20:00	7,742,484	2	38.8	0.2
11/19/20 22:00	11/20/20 21:00	8,282,496	52	44.7	0.2
11/19/20 23:00	11/20/20 22:00	8,753,311	71	52.2	0.3
11/20/20 0:00	11/20/20 23:00	9,078,722	28	54.1	0.3
11/20/20 1:00	11/21/20 0:00	9,511,466	99	64.2	0.3
11/20/20 2:00	11/21/20 1:00	9,751,591	625	134.3	0.7
11/20/20 3:00	11/21/20 2:00	10,167,792	931	217.2	1.2
11/20/20 4:00	11/21/20 3:00	10,261,894	1117	269.7	1.4
11/20/20 5:00	11/21/20 4:00	10,182,453	1124	301.2	1.6
11/20/20 6:00	11/21/20 5:00	9,923,769	1312	341.3	1.8
11/20/20 7:00	11/21/20 6:00	9,803,996	2657	406.9	2.2
11/20/20 8:00	11/21/20 7:00	9,700,539	3942	473.2	2.5
11/20/20 9:00	11/21/20 8:00	9,440,199	5942	566.9	3.0
11/20/20 10:00	11/21/20 9:00	9,223,890	291	567.6	3.1
11/20/20 11:00	11/21/20 10:00	8,788,374	171	565.6	3.0
11/20/20 12:00	11/21/20 11:00	8,282,947	230	565.8	3.0
11/20/20 13:00	11/21/20 12:00	7,951,427	229	565.8	3.0
11/20/20 14:00	11/21/20 13:00	7,803,859	250	566.0	3.0
11/20/20 15:00	11/21/20 14:00	7,565,915	193	566.1	3.0
11/20/20 16:00	11/21/20 15:00	7,417,302	183	566.2	3.0
11/20/20 17:00	11/21/20 16:00	7,265,664	190	566.3	3.0
11/20/20 18:00	11/21/20 17:00	7,036,501	255	563.0	3.0
11/20/20 19:00	11/21/20 18:00	6,309,557	259	540.9	2.9
11/20/20 20:00	11/21/20 19:00	5,568,570	245	540.4	2.9
11/20/20 21:00	11/21/20 20:00	4,840,993	230	540.5	2.9
11/20/20 22:00	11/21/20 21:00	4,117,542	222	534.5	2.9
11/20/20 23:00	11/21/20 22:00	3,441,673	213	526.7	2.8
11/21/20 0:00	11/21/20 23:00	2,915,817	203	524.6	2.8
11/21/20 1:00	11/22/20 0:00	2,281,787	194	514.4	2.8
11/21/20 2:00	11/22/20 1:00	1,603,450	188	443.9	2.4
11/21/20 3:00	11/22/20 2:00	1,069,809	181	360.9	1.9
11/21/20 4:00	11/22/20 3:00	790,936	175	308.2	1.7
11/21/20 5:00	11/22/20 4:00	627,823	169	276.6	1.5
11/21/20 6:00	11/22/20 5:00	442,332	166	234.8	1.3

Subpart Ja Root Cause / Corrective Action AnalysisIncident Number: **441292**

The information contained below satisfies the requirements of the NSPS Subpart Ja 60.108a(c)(6).

Report: Initial
Refinery: Valero (Meraux)
Incident Type: Flaring (Flow and SO2)
Emissions Source(s): North Flare (EPN 20-72, EQT 0035)
South Flare (EPN 3-77, EQT 0049)

Date of Event: 2/15/21
Date Analysis Completed: 4/1/21

(1.) (60.108a(c)(6)(i))

A description of the Discharge:

On February 15, 2021 at approximately 17:37, Valero experienced a loss of boiler feed water to boilers B-5 and B-6, the #2 Sulfur Recovery Unit (SRU), and the #3 SRU. This caused an automatic shutdown of the two main boilers and the #3 SRU at approximately 17:45. The loss of steam upset other refinery units and caused an automatic safety shut down and depressurization of the Hydrocracker Unit to the North Flare at approximately 18:00. The resulting unit upsets led to excess emissions of SO2 from the refinery flares and the #3 Sulfur Recovery Unit (SRU). The SO2 emissions from the refinery flares was greater than 500 lbs in a 24 hour period, but the SO2 emissions from the refinery SRU's was less than 500 lbs above allowable in a 24 hour period.

(2.) (60.108a(c)(6)(ii)) and (60.108a(c)(6)(ix))

Date and Time the discharge was first identified 2/15/21 17:45
Date/Time the discharge had ceased 2/17/21 15:55
Duration of Discharge (Calculated) 46.2 hrs.

(3.) (60.108a(c)(6)(viii))

The steps taken to limit the emissions during the discharge:

Valero followed its Flare Minimization Plan and Operations Procedures to minimize the volume and SO2 emissions of this discharge.

(4.) (60.108a(c)(6)(xi))

Necessity of RC/CAA: Determine and state whether a RC/CAA is necessary:

Note: If the discharge was a result of a planned startup or shutdown, a RC/CAA analysis is not required if the flare management plan was followed.

Did the discharge result from a planned startup or shutdown?

No (Yes/No)

Was the flare management plan followed?

Yes (Yes/No/N/A)

Is the event exempt from a RC/CCA based on the answers above?

No (Yes/No)

- If yes, skip section 5-7.

(5.) (60.108a(c)(6)(ix))

Root Cause Analysis: Describe in detail the Root Cause(s) of the Incident, to the extent determinable:

Did this discharge result from root causes identified in a previous analysis? No (Yes/No)

Valero determined that the root cause was insufficient thermal protection on the level indicator for a boiler feed water deaerator. The level indicator froze and gave a faulty high-high level reading. When the signal from the level indicator failed high, the valve supplying softened water to the boiler feed water system closed. Other instruments detected the loss of boiler feed water supply and initiated automatic safety shutdowns at Boilers B-5 and B-6. Valero found that the electrical heat tracing was not in working order due to a ground fault, and a portion of the level indicator was not insulated.

(6.)

(60.108a(c)(6)(ix))

**Corrective Action Analysis: Include a description of the recommended corrective action(s) or an explanation of why corrective action is not
Is corrective action required? Yes (Yes/No)**

- 1) *Add glycol antifreeze to the North Deaerator's level transmitter legs and add deviation alarms to alert operators to potential level instrument inaccuracy.*
- 2) *Evaluate using a Distributed Control System soft stop or setpoint to prevent Deaerator softened water valve from closing.*
- 3) *Evaluate the overall Cause and Effect document for the boiler feed water Deaerator system.*
- 4) *Evaluate other technology for measuring level that isn't impacted by freezing temperatures such as capillaries or radar.*
- 5) *Implement repair or replacement of electric heat tracing and insulation on the North Deaerator level transmitters.*
- 6) *Review and evaluate operator rounds to ensure they include the necessary freeze protection items.*
- 7) *Review and evaluate freeze precaution checklists and procedures to ensure that all necessary freeze protection items are addressed.*

(7.)

(60.108a(c)(6)(x))

Corrective Action Schedule: Include corrective actions already completed within the first 45 days following the discharge. For those not completed, provide a schedule for implementation, including proposed commencement and completion dates.

1) Add glycol antifreeze to the North Deaerator's level transmitter legs and add deviation alarms to alert operators to potential level instrument inaccuracy.

Commencement Date: 4/1/21

Completed Date: 6/8/21

Canceled. Level instruments and piping are scheduled to be replaced.

2) Evaluate using a Distributed Control System soft stop or setpoint to prevent Deaerator softened water valve from closing.

Commencement Date: 4/1/21

Completed Date: 5/28/21

Valero decided to implement a hard and soft stop on the softened water valves. New corrective action #8 created for implementation.

3) Evaluate the overall Cause and Effect document for the boiler feed water Deaerator system.

Commencement Date: 4/1/21

Completed Date: 5/28/21

Valero the reviewed the Cause and Effect document for the boiler feed water Deaerator system and identified potential control improvements.

Valero also decided to review the entire boiler feed water control system at a high level to determine potential control improvements. New corrective action #9 created for implementation the of Deaerator system improvements and review of the entire boiler feedwater control system.

4) Evaluate other technology for measuring level that isn't impacted by freezing temperatures such as capillaries or radar.

Commencement Date: 4/1/21

Completed Date: 5/28/21

New corrective action #10 created for installation of the new level measurement technology.

5) Implement repair or replacement of electric heat tracing and insulation on the North Deaerator level transmitters.

Commencement Date: 4/1/21

Estimated Completion Date: 10/19/21

Extended due date due to scheduling issue with heat trace vendor.

6) Review and evaluate operator rounds to ensure they include the necessary freeze protection items.

Commencement Date: 4/1/21

Estimated Completion Date: 8/31/21

7) Review and evaluate freeze precaution checklists and procedures to ensure that all necessary freeze protection items are addressed.

Commencement Date: 4/1/21

Estimated Completion Date: 8/31/21 (Corrected due date.)

8) Implement the hard and soft stops on the Deaerator Softened Water Valves before the 2021-2022 winter.

Commencement Date: 5/28/21

Estimated Completion Date: 11/30/21

9) Implement the improvements identified in the review of the Cause and Effect document for the Deaerator control system and perform a review of the entire boiler feed water control system at a high level to determine potential control improvements.

Commencement Date: 5/28/21

Estimated Completion Date: 11/30/21

10) Complete installation of the new level measurement technology.

Commencement Date: 5/28/21

Estimated Completion Date: 11/30/21

(8.) The measured or calculated cumulative quantity of gas discharged over the discharge duration. <i>Note: Measured sulfur concentrations are shown as flow-weighted averages if multiple measurement devices were used.</i>					
		(60.108a(c)(6)(iii))	(60.108a(c)(6)(iv))	(60.108a(c)(6)(vii))	(60.108a(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
2/14/21 17:00	2/15/21 16:00	120,303	94	0.9	0.0
2/14/21 18:00	2/15/21 17:00	158,486	184	2.3	0.0
2/14/21 19:00	2/15/21 18:00	2,587,641	2809	1130.2	6.1
2/14/21 20:00	2/15/21 19:00	3,328,219	8311	2156.4	11.6
2/14/21 21:00	2/15/21 20:00	4,120,692	6764	3049.3	16.4
2/14/21 22:00	2/15/21 21:00	5,030,494	3561	3588.2	19.3
2/14/21 23:00	2/15/21 22:00	5,760,855	2115	3845.8	20.7
2/15/21 0:00	2/15/21 23:00	6,015,103	278	3857.9	20.7
2/15/21 1:00	2/16/21 0:00	6,112,114	243	3862.1	20.8
2/15/21 2:00	2/16/21 1:00	6,267,048	266	3869.3	20.8
2/15/21 3:00	2/16/21 2:00	6,421,444	264	3876.4	20.8
2/15/21 4:00	2/16/21 3:00	6,544,634	251	3881.8	20.9
2/15/21 5:00	2/16/21 4:00	6,642,932	212	3885.5	20.9
2/15/21 6:00	2/16/21 5:00	6,685,537	100	3886.4	20.9
2/15/21 7:00	2/16/21 6:00	6,723,052	68	3886.9	20.9
2/15/21 8:00	2/16/21 7:00	6,760,203	82	3887.5	20.9
2/15/21 9:00	2/16/21 8:00	6,797,379	68	3888.0	20.9
2/15/21 10:00	2/16/21 9:00	6,836,513	48	3888.3	20.9
2/15/21 11:00	2/16/21 10:00	6,876,187	43	3888.6	20.9
2/15/21 12:00	2/16/21 11:00	6,916,091	34	3888.9	20.9
2/15/21 13:00	2/16/21 12:00	6,955,973	28	3889.1	20.9
2/15/21 14:00	2/16/21 13:00	6,995,110	33	3889.3	20.9
2/15/21 15:00	2/16/21 14:00	7,033,897	36	3889.6	20.9
2/15/21 16:00	2/16/21 15:00	7,072,393	36	3889.8	20.9
2/15/21 17:00	2/16/21 16:00	7,098,532	27	3889.7	20.9
2/15/21 18:00	2/16/21 17:00	7,099,126	33	3888.5	20.9
2/15/21 19:00	2/16/21 18:00	4,789,494	372	2768.5	14.9
2/15/21 20:00	2/16/21 19:00	4,091,102	133	1743.4	9.4
2/15/21 21:00	2/16/21 20:00	3,345,984	84	851.2	4.6
2/15/21 22:00	2/16/21 21:00	2,646,813	144	317.5	1.7
2/15/21 23:00	2/16/21 22:00	2,107,974	138	64.4	0.3
2/16/21 0:00	2/16/21 23:00	2,033,806	107	55.7	0.3
2/16/21 1:00	2/17/21 0:00	2,122,288	82	54.1	0.3
2/16/21 2:00	2/17/21 1:00	2,084,712	37	47.7	0.3
2/16/21 3:00	2/17/21 2:00	2,071,092	46	41.7	0.2
2/16/21 4:00	2/17/21 3:00	2,060,295	54	37.3	0.2
2/16/21 5:00	2/17/21 4:00	2,131,449	48	35.0	0.2
2/16/21 6:00	2/17/21 5:00	2,218,646	44	35.2	0.2
2/16/21 7:00	2/17/21 6:00	2,287,649	30	35.2	0.2
2/16/21 8:00	2/17/21 7:00	2,307,438	39	35.0	0.2
2/16/21 9:00	2/17/21 8:00	2,322,419	35	34.8	0.2
2/16/21 10:00	2/17/21 9:00	2,426,228	46	35.6	0.2
2/16/21 11:00	2/17/21 10:00	2,533,022	30	36.0	0.2
2/16/21 12:00	2/17/21 11:00	2,625,182	23	36.3	0.2
2/16/21 13:00	2/17/21 12:00	2,714,922	17	36.4	0.2
2/16/21 14:00	2/17/21 13:00	2,824,617	17	36.6	0.2
2/16/21 15:00	2/17/21 14:00	2,915,493	12	36.6	0.2
2/16/21 16:00	2/17/21 15:00	2,994,057	11	36.6	0.2
2/16/21 17:00	2/17/21 16:00	2,983,228	22	36.5	0.2

(8.)					
The measured or calculated cumulative quantity of gas discharged over the discharge duration.					
<i>Note: Measured sulfur concentrations are shown as flow-weighted averages if multiple measurement devices were used.</i>					
		(60.108a(c)(6)(iii))	(60.108a(c)(6)(iv))	(60.108a(c)(6)(vii))	(60.108a(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
2/16/21 18:00	2/17/21 17:00	2,970,497	21	36.4	0.2
2/16/21 19:00	2/17/21 18:00	2,877,623	22	28.6	0.2
2/16/21 20:00	2/17/21 19:00	2,863,307	24	27.6	0.1
2/16/21 21:00	2/17/21 20:00	2,840,339	30	27.0	0.1
2/16/21 22:00	2/17/21 21:00	2,629,307	25	21.8	0.1
2/16/21 23:00	2/17/21 22:00	2,437,798	22	17.3	0.1
2/17/21 0:00	2/17/21 23:00	2,257,733	18	14.0	0.1
2/17/21 1:00	2/18/21 0:00	2,072,258	14	11.4	0.1
2/17/21 2:00	2/18/21 1:00	1,954,916	13	10.6	0.1
2/17/21 3:00	2/18/21 2:00	1,814,149	18	9.5	0.1
2/17/21 4:00	2/18/21 3:00	1,701,775	24	8.5	0.0
2/17/21 5:00	2/18/21 4:00	1,532,302	26	7.1	0.0
2/17/21 6:00	2/18/21 5:00	1,402,438	26	6.1	0.0
2/17/21 7:00	2/18/21 6:00	1,295,878	28	5.6	0.0
2/17/21 8:00	2/18/21 7:00	1,238,885	32	5.2	0.0
2/17/21 9:00	2/18/21 8:00	1,186,672	26	4.9	0.0
2/17/21 10:00	2/18/21 9:00	1,043,692	21	3.8	0.0
2/17/21 11:00	2/18/21 10:00	897,192	22	3.0	0.0
2/17/21 12:00	2/18/21 11:00	765,072	22	2.5	0.0
2/17/21 13:00	2/18/21 12:00	635,428	17	2.2	0.0
2/17/21 14:00	2/18/21 13:00	486,554	24	1.8	0.0

Subpart Ja Root Cause / Corrective Action AnalysisIncident Number: **444559***The information contained below satisfies the requirements of the NSPS Subpart Ja 60.108a(c)(6).*

Report: Initial
Refinery: Valero (Meraux)
Incident Type: Flaring (Flow)
Emissions Source(s): North Flare (EPN 20-72, EQT 0035)

Date of Event: 5/8/21
Date Analysis Completed: 6/17/21

(1.) (60.108a(c)(6)(i))

A description of the Discharge:

On February 15, 2021 at approximately 17:37, Valero experienced an automatic shutdown of the Net Gas Compressor in the Reformer Unit due to a brief period of low lube oil pressure. The loss of the Net Gas Compressor caused Hydrogen gas to be flared to the North Flare for approximately 2 hours until the compressor could be restarted.

(2.) (60.108a(c)(6)(ii)) and (60.108a(c)(6)(ix))

Date and Time the discharge was first identified 5/8/21 9:02
Date/Time the discharge had ceased 5/8/21 10:56
Duration of Discharge (Calculated) 1.9 hrs.

(3.) (60.108a(c)(6)(viii))

The steps taken to limit the emissions during the discharge:

Valero followed its Flare Minimization Plan and Operations Procedures to minimize the volume flared from this discharge.

(4.) (60.108a(c)(6)(xi))

Necessity of RC/CAA: Determine and state whether a RC/CAA is necessary:

Note: If the discharge was a result of a planned startup or shutdown, a RC/CAA analysis is not required if the flare management plan was followed.

Did the discharge result from a planned startup or shutdown?	<u>No</u>	(Yes/No)
Was the flare management plan followed?	<u>Yes</u>	(Yes/No/N/A)
Is the event exempt from a RC/CCA based on the answers above?	<u>No</u>	(Yes/No)

- If yes, skip section 5-7.

(5.) (60.108a(c)(6)(ix))

Root Cause Analysis: Describe in detail the Root Cause(s) of the Incident, to the extent determinable:

Did this discharge result from root causes identified in a previous analysis? No (Yes/No)

Valero was unable to determine the exact root cause of the low lube oil pressure. The initial assumption was that the electric lube oil pump had tripped offline due to an electrical problem. The pump remained running through the compressor trip, but was inadvertently tripped later because of multiple attempts to restart it, which delayed the restart of the Net Gas Compressor. Valero determined the possible root causes for this incident to be:

1) Running with the electric lube oil pump always running instead of as an auto start backup to the steam turbine driven lube oil pump. This removed a redundant source of lube oil pressure.

2) Possible undesirable material in the lube oil system that caused a brief blockage of flow.

3) Brief malfunction of one of two pressure control regulators that regulate lube oil system pressures.

(6.) (60.108a(c)(6)(ix))

Corrective Action Analysis: Include a description of the recommended corrective action(s) or an explanation of why corrective action is not

Is corrective action required? Yes (Yes/No)

1) Operate the lube oil system with the steam driven lube oil pump running and the electric pump as an auto start backup.

2) Open, inspect, and flush the lube oil system during the next unit outage.

3) Pull and inspect the two pressure control regulator at the next available outage and repair or refurbish them as necessary. Create a preventative maintenance schedule to periodically perform this maintenance.

(7.) (60.108a(c)(6)(x))

Corrective Action Schedule: Include corrective actions already completed within the first 45 days following the discharge. For those not completed, provide a schedule for implementation, including proposed commencement and completion dates.

1) Operate the lube oil system with the steam driven lube oil pump running and the electric pump as an auto start backup.

Completed Date: 6/17/21

2) Open, inspect, and flush the lube oil system during the next unit outage.

Commencement Date: 6/17/21

Estimated Completion Date: 9/14/21

3) Pull and inspect the two pressure control regulator at the next available outage and repair or refurbish them as necessary. Create a preventative maintenance schedule to periodically perform this maintenance

Commencement Date: 6/17/21

Estimated Completion Date: 9/14/21

(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))
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
5/7/21 9:00	5/8/21 8:00	106,890	3	0.2	0.0
5/7/21 10:00	5/8/21 9:00	770,469	15	1.9	0.0
5/7/21 11:00	5/8/21 10:00	822,185	25	2.1	0.0
5/7/21 12:00	5/8/21 11:00	835,260	6	2.1	0.0
5/7/21 13:00	5/8/21 12:00	835,229	6	2.1	0.0
5/7/21 14:00	5/8/21 13:00	835,172	7	2.1	0.0
5/7/21 15:00	5/8/21 14:00	835,125	6	2.1	0.0
5/7/21 16:00	5/8/21 15:00	835,128	6	2.1	0.0
5/7/21 17:00	5/8/21 16:00	835,155	7	2.2	0.0
5/7/21 18:00	5/8/21 17:00	835,154	8	2.2	0.0
5/7/21 19:00	5/8/21 18:00	835,165	6	2.2	0.0
5/7/21 20:00	5/8/21 19:00	835,169	5	2.2	0.0
5/7/21 21:00	5/8/21 20:00	835,153	5	2.2	0.0
5/7/21 22:00	5/8/21 21:00	835,160	8	2.2	0.0
5/7/21 23:00	5/8/21 22:00	835,150	8	2.2	0.0
5/8/21 0:00	5/8/21 23:00	835,134	7	2.2	0.0
5/8/21 1:00	5/9/21 0:00	835,130	7	2.2	0.0
5/8/21 2:00	5/9/21 1:00	835,130	7	2.2	0.0
5/8/21 3:00	5/9/21 2:00	835,119	6	2.2	0.0
5/8/21 4:00	5/9/21 3:00	835,105	6	2.2	0.0
5/8/21 5:00	5/9/21 4:00	835,089	6	2.2	0.0
5/8/21 6:00	5/9/21 5:00	835,090	6	2.2	0.0
5/8/21 7:00	5/9/21 6:00	835,126	6	2.2	0.0
5/8/21 8:00	5/9/21 7:00	835,108	6	2.2	0.0
5/8/21 9:00	5/9/21 8:00	835,101	5	2.2	0.0
5/8/21 10:00	5/9/21 9:00	171,521	5	0.5	0.0