VALERO

July 30, 2018

CERTIFIED: 7008 2810 0002 1315 1500

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 2018
Valero Refining - Meraux LLC, Agency Interest # 1238
2235 Jacob Drive, St. Bernard Parish, Meraux, LA
Title V Permit Numbers: 2500-00001-V16

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 2018.

For this reporting period, the #2 SRU (EPN 1-93, EQT 0019) and the #3 SRU (EPN 5-00, EQT 0079) had excess emissions greater than 1% of the total operating time and no CEMS had downtime greater than 5% of the total operating time.

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. Justin Stubbe at (504) 271-4141.

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

Regards,

Jack E. Merrill
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: **SO_2**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

Company: Valero Refining - Meraux LLC

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

Emission Limitation: SO_2 corrected to 0% O_2 shall not exceed 250 ppm on a 12-hour rolling average

Monitor Manufacturer and Model No.: Brimstone SGX-231(SO_2)/Rosemount Oxymitter 4000(O_2)

Date of Latest CMS Certification or Audit: RATA on 5/7/18

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

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

Emissions Data Summary[1]	
1. Duration of excess emissions in reporting period due to:	*(hours)*
a. Startup/shutdown	64
b. Control equipment problems	0
c. Process problems	8
d. Other known causes	0
e. Unknown causes	0
2. Total duration of excess emission	72
3. Total duration of excess emissions x (100) [Total source operating time][2]	3.3 %

CMS Performance Summary[1]	
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) and 60.108a(d))

Pollutant: **SO_2**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

Company: Valero Refining - Meraux LLC

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

Emission Limitation: SO_2 corrected to 0% O_2 shall not exceed 250 ppm on a 12-hour rolling average.

Monitor Manufacturer and Model No.: ABB AO2000 Uras 26(SO_2)/ Magnos 206 (O_2)

Date of Latest CMS Certification or Audit: RATA on 5/9/18

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

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

Emissions Data Summary[1]	
1. Duration of excess emissions in reporting period due to:	*(hours)*
a. Startup/shutdown	49
b. Control equipment problems	0
c. Process problems	0
d. Other known causes	0
e. Unknown causes	0
2. Total duration of excess emission	49
3. Total duration of excess emissions x (100) [Total source operating time][2]	2.2 %

CMS Performance Summary[1]	
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: **H_2S**

Applicable NSPS Subpart: J

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 5/9/18

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)

Total source operating time in reporting period: EQT 0010- 2,116 hours, EQT 0011- 2,180 hours, EQT 0033- 2,184 hours

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

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

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

(per 40 CFR 60.7(d))

Pollutant: H_2S

Applicable NSPS Subpart: J

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 5/8/18

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 Charge Heater (EPN 14-72, EQT 0023); 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); DHT Charge Heater (EPN 5-73, EQT 0058); 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 0023-2,178 hours; EQT 0024-2,176 hours; EQT 0027-2,178 hours; EQT 0028-2,182 hours; EQT 0029-2,157 hours; EQT 0058-1,672 hours; EQT 0014-2,142 hours

Emissions Data Summary[1]		
1. Duration of excess emissions in reporting period due to:	*EQT 0058 (hours)*	*All Other EQT's (hours)*
a. Startup/shutdown	0	0
b. Control equipment problems	0	0
c. Process problems	4	4
d. Other known causes	0	0
e. Unknown causes	0	0
2. Total duration of excess emission	4	4
3. Total duration of excess emissions x (100) [Total source operating time][2]	0.2 %	0.1 %

CMS Performance Summary[1]		
1. CMS downtime in reporting period due to:	*EQT 0058 (hours)*	*All Other EQT's (hours)*
a. Monitor equipment malfunctions	0	0
b. Non-Monitor equipment malfunctions	0	0
c. Quality assurance calibration	1	1
d. Other known causes	2	2
e. Unknown causes	0	0
2. Total CMS Downtime	3	3
3. Total duration of CMS Downtime x (100) [Total source operating time][2]	0.2 %	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: **H_2S**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 5/8/18

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

Total source operating time in reporting period: 2,144 hours

Emissions Data Summary[1]	
1. Duration of excess emissions in reporting period due to:	*(hours)*
a. Startup/shutdown	0
b. Control equipment problems	0
c. Process problems	4
d. Other known causes	0
e. Unknown causes	0
2. Total duration of excess emission	4
3. Total duration of excess emissions x (100) [Total source operating time][2]	0.2 %

CMS Performance Summary[1]	
1. CMS downtime in reporting period due to:	*(hours)*
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	1
d. Other known causes	2
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))

Pollutant: **H_2S**

Applicable NSPS Subpart: J

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 5/8/18

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

Total source operating time in reporting period: 2,168 hours

Emissions Data Summary[1]	
1. Duration of excess emissions in reporting period due to:	*(hours)*
a. Startup/shutdown	0
b. Control equipment problems	0
c. Process problems	4
d. Other known causes	0
e. Unknown causes	0
2. Total duration of excess emission	4
3. Total duration of excess emissions x (100) [Total source operating time][2]	0.2 %

CMS Performance Summary[1]	
1. CMS downtime in reporting period due to:	*(hours)*
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	1
d. Other known causes	6
e. Unknown causes	0
2. Total CMS Downtime	7
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))

Pollutant: **H_2S**

Applicable NSPS Subpart: J

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 5/9/18

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: 1,976 hours

Emissions Data Summary[1]	
1. Duration of excess emissions in reporting period due to:	*(hours)*
a. Startup/shutdown	0
b. Control equipment problems	0
c. Process problems	5
d. Other known causes	0
e. Unknown causes	0
2. Total duration of excess emission	5
3. Total duration of excess emissions x (100) [Total source operating time][2]	0.3 %

CMS Performance Summary[1]	
1. CMS downtime in reporting period due to:	*(hours)*
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	1
d. Other known causes	0
e. Unknown causes	0
2. Total CMS Downtime	1
3. Total duration of CMS Downtime x (100) [Total source operating time][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: H_2S

Applicable NSPS Subpart: J

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 5/9/18

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 0030-2,184 hours; EQT 0048-0 hours[3]

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

CMS Performance Summary[1]		
1. CMS downtime in reporting period due to:	*EQT 0030 (hours)*	*EQT 0048 (hours)*
a. Monitor equipment malfunctions	0	0
b. Non-Monitor equipment malfunctions	0	0
c. Quality assurance calibration	2	0
d. Other known causes	0	0
e. Unknown causes	0	0
2. Total CMS Downtime	2	0
3. Total duration of CMS Downtime x (100) [Total source operating time][2]	0.1 %	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 4/1/18 to 6/30/18

Date submitted: 7/30/18

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(NOx), Magnos27 (O_2)

Date of Latest CMS Certification or Audit: RATA on 5/7/18

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

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

Emissions Data Summary[1]	
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 Summary[1]	
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: **NO_x**

Applicable NSPS Subpart: Db

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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(NOx), Magnos27 (O_2)

Date of Latest CMS Certification or Audit: RATA on 5/7/18

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

Total source operating time in reporting period: 2,157 hours

Emissions Data Summary[1]	
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 Summary[1]	
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: **NO_x**

Applicable NSPS Subpart: Db

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 $(NOx)/(O_2)$

Date of Latest CMS Certification or Audit: RATA on 5/7/18

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

Total source operating time in reporting period: 2,112 hours

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

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

Company: Valero Refining - Meraux LLC

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

Emission Limitation: Nitrogen Oxide corrected to 0% O_2 shall not exceed 40 ppm on a 30-day rolling average

Monitor Manufacturer and Model No.: Thermo Environmental 42i (NOx)/(O_2)

Date of Latest CMS Certification or Audit: RATA on 5/8/18

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

Total source operating time in reporting period: 2,144 hours

Emissions Data Summary[1]	
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 Summary[1]	
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	6
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: **NO_x**

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

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

Company: Valero Refining - Meraux LLC

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

Emission Limitation: None

Monitor Manufacturer and Model No.: ABB Limas11(NOx), Magnos27 (O_2)

Date of Latest CMS Certification or Audit: RATA on 5/8/18

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:	*(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 Summary[1]	
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) and 60.108a(d))

Pollutant: H_2S

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 5/8/18

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

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

Emissions Data Summary[1]	
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 Summary[1]	
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) and 60.108a(d))

Pollutant: **H_2S**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 5/8/18

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

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

Emissions Data Summary[1]	
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 Summary[1]	
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	2
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: H_2S

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 5/9/18

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

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

Emissions Data Summary[1]	
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 Summary[1]	
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) 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 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 5/10/18

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

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

Emissions Data Summary[1]	
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 Summary[1]	
1. CMS downtime in reporting period due to:	*(hours)*
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	1
d. Other known causes	0
e. Unknown causes	0
2. Total CMS Downtime	1
3. Total duration of CMS Downtime x (100) [Total source operating time][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 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 5/10/18

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

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

Emissions Data Summary[1]	
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 Summary[1]	
1. CMS downtime in reporting period due to:	*(hours)*
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	3
d. Other known causes	6
e. Unknown causes	0
2. Total CMS Downtime	8
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: **Total Sulfur**

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

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 5/10/18

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

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

Emissions Data Summary[1]	
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 Summary[1]	
1. CMS downtime in reporting period due to:	*(hours)*
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	8
d. Other known causes	0
e. Unknown causes	0
2. Total CMS Downtime	8
3. Total duration of CMS Downtime x (100) [Total source operating time][2]	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 4/1/18 to 6/30/18

Date submitted: 7/30/18

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

Emissions Data Summary[1]	
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 Summary[1]	
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) 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 4/1/18 to 6/30/18

Date submitted: 7/30/18

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

Emissions Data Summary[1]	
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 Summary[1]	
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) 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 4/1/18 to 6/30/18

Date submitted: 7/30/18

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

Emissions Data Summary[1]	
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 Summary[1]	
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	99
e. Unknown causes	0
2. Total CMS Downtime	99
3. Total duration of CMS Downtime x (100) [Total source operating time][2]	4.5 %

[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))

For all CMS covered in this report, no changes were made in the 2nd Quarter 2018 to CMS, process, or controls. I certify that the information contained in this report is true, accurate, and complete.

_____

Name

_____

Signature

_____

Title

GASEOUS AND OPACITY EXCESS EMISSIONS AND MONITORING SYSTEMS PERFORMANCE

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

Pollutant: **SO_2**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

Company: Valero Refining - Meraux LLC

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

Emission Limitation: SO_2 corrected to 0% O_2 shall not exceed 250 ppm on a 12-hour rolling average

Monitor Manufacturer and Model No.: Brimstone SGX-231(SO_2)/Rosemount Oxymitter 4000(O_2)

Date of Latest CMS Certification or Audit: RATA on 5/7/18

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

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

Ja EXCESS EMISSIONS						
Date	Start	End	Duration (hours)	Max 12-HRA (ppm)	Cause	Corrective Action
6/16/18	12:00	20:00	8	321	SO_2 at 0% O_2 greater than 250 ppm, 12-HRA, with SO_2 emissions greater than 500 lbs/day above the allowable limit after all acid gas from the #3 SRU was quickly shifted to #2 SRU following an automatic safety shutdown of the #3 SRU. Due to this event occurring in the last month of the 2nd Quarter, the root cause and corrective action analysis was not completed by the end of the reporting period. Causes and corrective actions for this event will be reported in the 3rd Quarter NSPS Excess Emissions & CEM Performance Report.	
6/21/18	11:00		64	1127	SO_2 at 0% O_2 greater than 250 ppm, 12-HRA, with SO_2 emissions greater than 500 lbs/day above the allowable limit due to an automatic safety shutdown of the #2 Tail Gas Treater while operating in hot standby. Due to this event occurring in the last month of the 2nd Quarter, the root cause and corrective action analysis was not completed by the end of the reporting period. Causes and corrective actions for this event will be reported in the 3rd Quarter NSPS Excess Emissions & CEM Performance Report.	
6/24/18		03:00				
TOTAL			72			

Ja CMS PERFORMANCE[1]					
Date	Start	End	Duration (hours)	Cause	Corrective Action
None					
TOTAL			0		

[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: **SO_2**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

Company: Valero Refining - Meraux LLC

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

Emission Limitation: SO_2 corrected to 0% O_2 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 5/9/18

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
6/11/18	06:00		35	901	SO_2 at 0% O_2 greater than 250 ppm, 12-HRA, with SO_2 emissions greater than 500 lbs/day above the allowable limit due to an automatic safety shutdown of the #3 Tail Gas Treater when the #3 SRU was operating in hot standby. Due to this event occurring in the last month of the 2nd Quarter, the root cause and corrective action analysis was not completed by the end of the reporting period. Causes and corrective actions for this event will be reported in the 3rd Quarter NSPS Excess Emissions & CEM Performance Report.	
6/12/18		17:00				
6/16/18	08:00	22:00	14	548	SO_2 at 0% O_2 greater than 250 ppm, 12-HRA, with SO_2 emissions greater than 500 lbs/day above the allowable limit due to an automatic safety shutdown of the #3 SRU. Due to this event occurring in the last month of the 2nd Quarter, the root cause and corrective action analysis was not completed by the end of the reporting period. Causes and corrective actions for this event will be reported in the 3rd Quarter NSPS Excess Emissions & CEM Performance Report.	
TOTAL			49			

Ja CMS PERFORMANCE[1]					
Date	Start	End	Duration (hours)	**Cause**	Corrective Action
None					
TOTAL			0		

[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: **H_2S**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 5/8/18

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

Total source operating time in reporting period: 2,144 hours

Ja EXCESS EMISSIONS						
Date	Start	End	Duration (hours)	Max 3-HRA (ppm)	Cause	Corrective Action
6/16/18	09:00	13:00	4	300	H_2S greater than 162 ppm, 3-HRA, with SO_2 emissions less than 500 lbs/day above the allowable limit from the Benzene Recovery Unit due to an automatic safety shutdown of the #3 SRU. Due to this event occurring in the last month of the 2nd Quarter, the root cause and corrective action analysis was not completed by the end of the reporting period. Causes and corrective actions for this event will be reported in the 3rd Quarter NSPS Excess Emissions & CEM Performance Report.	
TOTAL			4			

Ja CMS PERFORMANCE[1]					
Date	Start	End	Duration (hours)	Cause	Corrective Action
None					
TOTAL			0		

[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: **NO_x**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

Company: Valero Refining - Meraux LLC

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

Emission Limitation: Nitrogen Oxide corrected to 0% O_2 shall not exceed 40 ppm on a 30-day rolling average

Monitor Manufacturer and Model No.: Thermo Environmental 42i (NOx)/(O_2)

Date of Latest CMS Certification or Audit: RATA on 5/8/18

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

Total source operating time in reporting period: 2,144 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
5/9/18	08:00	14:00	6	Annual preventative maintenance with factory technician	N/A
TOTAL			6		

[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: H_2S

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 5/8/18

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

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

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

Ja CMS PERFORMANCE[2]					
Date	Start	End	Duration (hours)	Cause	Corrective Action
None					
TOTAL			0		

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

[2]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: **H_2S**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 5/8/18

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

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

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

Ja CMS PERFORMANCE[2]					
Date	Start	End	Duration (hours)	Cause	Corrective Action
None					
TOTAL			0		

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

[2] 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: H_2S

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 5/9/18

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

[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 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 5/10/18

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
5/10/18	09:00	10:00	1	Relative Accuracy Test Assessment	N/A
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 (Also Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 5/10/18

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
5/10/18	09:00	10:00	1	Relative Accuracy Test Assessment	N/A
6/5/18	08:00	09:00	1	Analyzer adjusted for calibration drift.	Calibrated and returned to service.
6/7/18	05:00	11:00	6	Sample pump rebuilt.	Calibrated and returned to service.
6/15/18	10:00	11:00	1	Analyzer adjusted for calibration drift.	Calibrated and returned to service.
TOTAL			8		

[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 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 5/10/18

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
5/10/18	09:00	10:00	1	Relative Accuracy Test Assessment	N/A
6/5/18	09:00	10:00	1	Analyzer adjusted for calibration drift.	Calibrated and returned to service.
6/15/18	10:00	14:00	4	Analyzer offline to troubleshoot unusual behavior. Sample lines and analyzer purged and calibration checked multiple time.	Calibrated and returned to service.
6/18/18	08:00	10:00	2	Analyzer adjusted for calibration drift.	Calibrated and returned to service.
TOTAL			7		

[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 4/1/18 to 6/30/18

Date submitted: 7/30/18

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

Ja CMS PERFORMANCE[1]					
Date	Start	End	Duration (hours)	Cause	Corrective Action
None					
TOTAL			0		

[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 4/1/18 to 6/30/18

Date submitted: 7/30/18

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		

[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 4/1/18 to 6/30/18

Date submitted: 7/30/18

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

Ja CMS PERFORMANCE[1]					
Date	Start	End	Duration (hours)	Cause	Corrective Action
6/25/18	13:00		99	Flowmeter malfunctioned and could not be repaired by Valero personnel.	Technician with the required expertise was contacted and scheduled to repair the flow meter as soon as practicable.
6/29/18		16:00			
TOTAL			99		

[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.

DATA ASSESSMENT REPORT

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

Pollutant: **SO_2**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

Company: Valero Refining - Meraux LLC

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

Emission Limitation: SO_2 corrected to 0% O_2 shall not exceed 250 ppm on a 12-hour rolling average.

Monitor Manufacturer and Model No.: Brimstone SGX-231(SO_2)/Rosemount Oxymitter 4000(O_2)

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	5/7/18
Reference Method	EPA Method 6C/ EPA Method 3A
Average RM Value (ppmv)	21.67
Average CEM Value (ppmv)	19.32
Accuracy	1.06 %
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: SO_2

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

Company: Valero Refining - Meraux LLC

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

Emission Limitation: SO_2 corrected to 0% O_2 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	5/9/18
Reference Method	EPA Method 6C/ EPA Method 3A
Average RM Value (ppmv)	35.14
Average CEM Value (ppmv)	29.60
Accuracy	2.36 %
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: **H_2S**

Applicable NSPS Subpart: J

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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)

CEM Sampling Location: Area 1 Fuel Drum

CEM Span Value: Hydrogen Sulfide, 300 ppm

I. ACCURACY ASSESSMENT RESULTS (RATA):

	H_2S #1	H_2S #2
Date of Audit	5/9/18	5/9/18
Reference Method	EPA Method 11 (Alternate RATA)	EPA Method 11 (Alternate RATA)
Average RM Value (ppmv)	74.24	159.10
Average CEM Value (ppmv)	67.32	143.76
Accuracy	9.32 %	9.64 %
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: **H_2S**

Applicable NSPS Subpart: J and Ja (Benzene Recovery Unit Reboiler Subject to Ja)

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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: MDH Product and Fractionator Heaters (EPN 2-92, EQT 0033); 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); DHT Charge Heater (EPN 5-73, EQT 0058); Benzene Recovery Unit Reboiler (EPN 1-09, EQT 0127)

CEM Sampling Location: Area 2 Fuel Drum

CEM Span Value: Hydrogen Sulfide, 300 ppm

I. ACCURACY ASSESSMENT RESULTS (RATA):

	H_2S #1	H_2S #2
Date of Audit	5/8/18	5/8/18
Reference Method	EPA Method 11 (Alternate RATA)	EPA Method 11 (Alternate RATA)
Average RM Value (ppmv)	74.24	159.10
Average CEM Value (ppmv)	75.83	158.47
Accuracy	2.14 %	0.39 %
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: **H_2S**

Applicable NSPS Subpart: J

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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):

	H_2S #1	H_2S #2
Date of Audit	5/8/18	5/8/18
Reference Method	EPA Method 11 (Alternate RATA)	EPA Method 11 (Alternate RATA)
Average RM Value (ppmv)	74.24	159.10
Average CEM Value (ppmv)	73.23	153.64
Accuracy	1.36 %	3.43 %
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: **H_2S**

Applicable NSPS Subpart: J

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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):

	H_2S #1	H_2S #2
Date of Audit	5/9/18	5/9/18
Reference Method	EPA Method 11 (Alternate RATA)	EPA Method 11 (Alternate RATA)
Average RM Value (ppmv)	74.24	159.10
Average CEM Value (ppmv)	70.79	148.11
Accuracy	4.64 %	6.91 %
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: **H_2S**

Applicable NSPS Subpart: J

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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):

	H_2S #1	H_2S #2
Date of Audit	5/9/18	5/9/18
Reference Method	EPA Method 11 (Alternate RATA)	EPA Method 11 (Alternate RATA)
Average RM Value (ppmv)	74.24	159.10
Average CEM Value (ppmv)	74.67	149.92
Accuracy	0.59 %	5.77 %
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 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 (O_2)

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):

NOx lb/MMBtu	
Date of Audit	5/7/18
Reference Method	EPA Method 7E / EPA Method 3A
Average RM Value	0.03080 lb/MMBtu
Average CEM Value	0.03114 lb/MMBtu
Accuracy	0.24 %
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 4/1/18 to 6/30/18

Date submitted: 7/30/18

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 (O_2)

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):

NOx lb/MMBtu	
Date of Audit	5/7/18
Reference Method	EPA Method 7E / EPA Method 3A
Average RM Value	0.03654 lb/MMBtu
Average CEM Value	0.03969 lb/MMBtu
Accuracy	1.68 %
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 4/1/18 to 6/30/18

Date submitted: 7/30/18

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)/(O_2)

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

CEM Sampling Location: Boiler TB-01

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

I. ACCURACY ASSESSMENT RESULTS (RATA):

NOx lb/MMBtu	
Date of Audit	5/7/18
Reference Method	EPA Method 7E / EPA Method 3A
Average RM Value	0.04729 lb/MMBtu
Average CEM Value	0.04533 lb/MMBtu
Accuracy	1.18 %
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: Ja

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

Company: Valero Refining - Meraux LLC

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

Emission Limitation: Nitrogen Oxide corrected to 0% O_2 shall not exceed 40 ppm on a 30-day rolling average

Monitor Manufacturer and Model No.: Thermo Environmental Model 42i (NO_x)/(O_2)

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):

	NOx	O_2
Date of Audit	5/8/18	5/8/18
Reference Method	EPA Method 7E	EPA Method 3A
Average RM Value	26.25 ppmv at 0% O_2	8.307 vol %
Average CEM Value	25.66 ppmv at 0% O_2	8.432 vol %
Accuracy	1.30 %	N/A
Limit	< 10 %	N/A

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 4/1/18 to 6/30/18

Date submitted: 7/30/18

Company: Valero Refining - Meraux LLC

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

Emission Limitation: Nitrogen Oxide corrected to 0% O_2 shall not exceed 40 ppm on a 30-day rolling average

Monitor Manufacturer and Model No.: Thermo Environmental Model 42i (NO_x)/(O_2)

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):

	NOx	O_2
Date of Audit	5/8/18	5/8/18
Reference Method	EPA Method 7E	EPA Method 3A
Average RM Value	5.623 ppmv	5.82 vol %
Average CEM Value	6.648 ppmv	6.01 vol %
Accuracy	1.30 %	N/A
Limit	< 10 %	N/A

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: **H_2S**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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):

	H_2S
Date of Audit	5/8/18
Reference Method	EPA Method 11
Average RM Value (ppmv)	11.217 ppmv
Average CEM Value (ppmv)	15.797 ppmv
Accuracy	5.09 %
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: **H_2S**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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):

	H_2S
Date of Audit	5/8/18
Reference Method	EPA Method 11
Average RM Value (ppmv)	16.419 ppmv
Average CEM Value (ppmv)	21.227 ppmv
Accuracy	3.93 %
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: **H_2S**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/1/18 to 6/30/18

Date submitted: 7/30/18

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):

	H_2S
Date of Audit	5/9/18
Reference Method	EPA Method 11
Average RM Value (ppmv)	5.377 ppmv
Average CEM Value (ppmv)	7.787 ppmv
Accuracy	2.72 %
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 4/1/18 to 6/30/18

Date submitted: 7/30/18

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):

	H_2S #1	H_2S #2
Date of Audit	5/10/18	5/10/18
Reference Method	EPA Method 11 (Alternate RATA)	EPA Method 11 (Alternate RATA)
Average RM Value (ppmv)	1013.00	9992.00[1]
Average CEM Value (ppmv)	1000.80	10076.25
Accuracy	1.20 %	0.84 %
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 4/1/18 to 6/30/18

Date submitted: 7/30/18

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):

	H_2S #1	H_2S #2
Date of Audit	5/10/18	5/10/18
Reference Method	EPA Method 11 (Alternate RATA)	EPA Method 11 (Alternate RATA)
Average RM Value (ppmv)	1013.00	9992.00[1]
Average CEM Value (ppmv)	987.61	10057.07
Accuracy	0.11 %	0.65 %
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 4/1/18 to 6/30/18

Date submitted: 7/30/18

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):

	H_2S #1	H_2S #2
Date of Audit	5/10/18	5/10/18
Reference Method	EPA Method 11 (Alternate RATA)	EPA Method 11 (Alternate RATA)
Average RM Value (ppmv)	1013.00	9992.00[1]
Average CEM Value (ppmv)	1054.84	10332.00
Accuracy	4.13 %	3.40 %
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

2nd Quarter Ja Root Cause and Corrective Action Analysis Still in Progress at End of Reporting Period

Incident Date	Incident Type	Incident Description
6/10/18	Flare Flow & SO_2, SRU SO_2	Hydrocracker Recycle Gas Compressor Trip
6/15/18	Flare Flow	Loss of Both Naphtha Hydrotreater Compressors, Reformer Low Pressure Separator Relieved to Flare
6/16/18	SRU SO_2	#3 Sulfur Recovery Unit Tripped on High Level in Acid Gas Knock Out Pot
6/17/18	Flare Flow	Pressure Swing Absorption Unit Tailgas Compressor Tripped on Low Lube Oil Pressure
6/18/18	Flare Flow	Pressure Swing Absorption Unit Tailgas Compressor Tripped
6/21/18	SRU SO_2	#2 Sulfur Recovery Unit Incinerator Tripped, #2 Tailgas Treater Tripped
6/26/18	Flare Flow & SO_2	Hydrocracker Recycle Gas Compressor Trip

RCCA's still in progress at the end of this reporting period will be submitted in the next NSPS Excess Emissions & CEM Performance Report.

Subpart Ja Root Cause / Corrective Action Analysis

Impact Incident Number: 176002

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)**	Date of Event:	**11/29/16**
Emissions Source(s):	**North Flare (EPN 20-72, EQT 0035)**	Date Analysis Completed:	**1/5/17**

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

A description of the Discharge:

On 11/29/16 at approximately 14:00, a leak developed in the Hydrocracker Unit (HC) on the Stripper Feed Exchanger (HC-E-003). This leak caused the high pressure of the intermediate separator vapor circuit to dump into the lower pressure stripper system. The resulting high pressure in the stripper system caused all PSVs in this circuit (Stripper, Stripper Off-gas Scrubber and Rich Amine Flash Drum) to relieve to the flare. This flaring exceeded 500,000 SCF/24 hours and 500 lbs of SO2/24 hours. Valero quickly initiated a HC shutdown and additional flaring continued until 12/1/16 at 17:00.

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

Date and Time the discharge was first identified	**11/29/16 14:07**	
Date/Time the discharge had ceased	**12/1/16 17:00**	
Duration of Discharge (Calculated)	**50.9**	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 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)

Inspection of the heat exchanger revealed rapid Chloride corrosion on the outside diameter of the tubes, concentrated between the last two baffles. This was the result of the presence of Ammonium chloride and water in the shell side (stripper feed) of the exchanger. Though some chlorides are expected in this stream, water is not. Water carryover into this exchanger is likely the result of poor oil/water separation in the Cold Flash Drum due to the following possibilities:

1) An undersized water boot.

2) Increased wash water rate post HC revamp (wash water rate increased approximately 50%).

3) Fouled mesh blanket.

(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

Is corrective action required? Yes (Yes/No)

1) Determine a maximum Ammonium Bisulfide concentration to set the minimum wash water injection rate upstream of HC-E-004 to reduce likelihood of water carryover in stripper feed stream, and determine adjusted corrosion rates.

2) Review design of the Cold Flash Drum and generate MOCs and EWRs as needed to correct any deficiencies.

3) Generate MOC or EWR to replace or upgrade mesh blanket in Cold Flash Drum.

4) Order new HC-E-003 bundle for 2018. Evaluate possible metallurgy upgrade.

5) Find an alternate location for the Flash Gas Scrubber KO Drum (HC-V-065) liquid and generate an EWR to reroute it.

(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) Determine a maximum Ammonium Bisulfide concentration to set the minimum wash water injection rate upstream of HC-E-004 to reduce likelihood of water carryover in stripper feed stream, and determine adjusted corrosion rates.
Commencement Date: 1/5/17
Completed: 3/24/17

2) Review design of the Cold Flash Drum and generate MOCs and EWRs as needed to correct any deficiencies.
Commencement Date: 1/5/17
Completed: 6/26/17
The Cold Flash Drum does not need to be redesigned. The only design change needed is to replace the mesh blanket/demister pad with a plated frame type. New Action Item created 8/1/17.

3) Generate MOC or EWR to replace or upgrade mesh blanket in Cold Flash Drum.
Commencement Date: 1/5/17
Completed: 3/28/17

4) Order new HC-E-003 bundle for 2018. Evaluate possible metallurgy upgrade.
Commencement Date: 1/5/17
Completed: 12/29/17

5) Find an alternate location for the Flash Gas Scrubber KO Drum (HC-V-065) liquid and generate an EWR to reroute it.
Commencement Date: 1/5/17
Completed: 4/30/18

6) Replace the Cold Flash Drum mesh blanket/demister pad with a plated frame type.
Commencement Date: 8/1/17
Estimated Completion Date: 12/18/18

(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
11/28/16 14:00	11/29/16 13:00	442,131	37895	53.9	0.3
11/28/16 15:00	11/29/16 14:00	1,747,430	38574	3555.9	19.1
11/28/16 16:00	11/29/16 15:00	3,384,372	39341	8518.0	45.8
11/28/16 17:00	11/29/16 16:00	4,864,786	39651	10331.7	55.5
11/28/16 18:00	11/29/16 17:00	6,137,194	39757	10868.4	58.4
11/28/16 19:00	11/29/16 18:00	6,621,544	39846	11038.1	59.3
11/28/16 20:00	11/29/16 19:00	6,637,905	39920	11042.9	59.3
11/28/16 21:00	11/29/16 20:00	6,665,046	39934	11044.4	59.3
11/28/16 22:00	11/29/16 21:00	6,687,899	39941	11045.1	59.4
11/28/16 23:00	11/29/16 22:00	6,721,724	39952	11046.5	59.4
11/29/16 0:00	11/29/16 23:00	6,866,231	39961	11051.3	59.4
11/29/16 1:00	11/30/16 0:00	6,964,842	39962	11052.0	59.4
11/29/16 2:00	11/30/16 1:00	7,042,602	39973	11055.3	59.4
11/29/16 3:00	11/30/16 2:00	7,137,068	39977	11056.7	59.4
11/29/16 4:00	11/30/16 3:00	7,223,966	39979	11057.3	59.4
11/29/16 5:00	11/30/16 4:00	7,246,471	39795	11030.9	59.3
11/29/16 6:00	11/30/16 5:00	7,219,344	39781	11027.1	59.3
11/29/16 7:00	11/30/16 6:00	7,249,132	39770	11025.9	59.2
11/29/16 8:00	11/30/16 7:00	7,594,364	39758	11025.0	59.2
11/29/16 9:00	11/30/16 8:00	7,906,155	39853	11182.7	60.1
11/29/16 10:00	11/30/16 9:00	8,111,141	40001	11373.4	61.1
11/29/16 11:00	11/30/16 10:00	8,402,137	39654	11477.9	61.7
11/29/16 12:00	11/30/16 11:00	8,767,134	2739	11598.5	62.3
11/29/16 13:00	11/30/16 12:00	9,129,514	2713	11674.3	62.7
11/29/16 14:00	11/30/16 13:00	9,443,967	2641	11711.4	62.9
11/29/16 15:00	11/30/16 14:00	8,453,648	1973	8222.9	44.2
11/29/16 16:00	11/30/16 15:00	7,244,608	1211	3269.3	17.6
11/29/16 17:00	11/30/16 16:00	6,028,272	904	1458.6	7.8
11/29/16 18:00	11/30/16 17:00	4,778,453	802	922.3	5.0
11/29/16 19:00	11/30/16 18:00	4,403,343	743	765.2	4.1
11/29/16 20:00	11/30/16 19:00	4,638,495	728	819.7	4.4
11/29/16 21:00	11/30/16 20:00	4,684,620	760	831.6	4.5
11/29/16 22:00	11/30/16 21:00	4,700,482	800	838.1	4.5
11/29/16 23:00	11/30/16 22:00	4,694,191	819	839.9	4.5
11/30/16 0:00	11/30/16 23:00	4,572,301	835	837.3	4.5
11/30/16 1:00	12/1/16 0:00	4,490,705	840	837.0	4.5
11/30/16 2:00	12/1/16 1:00	4,451,088	839	835.3	4.5
11/30/16 3:00	12/1/16 2:00	4,400,707	847	836.0	4.5
11/30/16 4:00	12/1/16 3:00	4,371,611	856	837.8	4.5
11/30/16 5:00	12/1/16 4:00	4,332,023	873	838.9	4.5
11/30/16 6:00	12/1/16 5:00	4,308,423	884	839.3	4.5
11/30/16 7:00	12/1/16 6:00	4,257,383	900	839.9	4.5
11/30/16 8:00	12/1/16 7:00	3,801,902	903	830.2	4.5
11/30/16 9:00	12/1/16 8:00	3,592,594	785	674.1	3.6
11/30/16 10:00	12/1/16 9:00	3,359,769	631	480.1	2.6
11/30/16 11:00	12/1/16 10:00	3,096,404	551	376.7	2.0
11/30/16 12:00	12/1/16 11:00	2,765,661	483	258.1	1.4
11/30/16 13:00	12/1/16 12:00	2,436,801	442	183.9	1.0
11/30/16 14:00	12/1/16 13:00	2,154,612	421	147.8	0.8
11/30/16 15:00	12/1/16 14:00	1,871,867	428	136.5	0.7
11/30/16 16:00	12/1/16 15:00	1,473,125	429	128.5	0.7

(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
11/30/16 17:00	12/1/16 16:00	1,238,898	474	131.4	0.7
11/30/16 18:00	12/1/16 17:00	1,216,310	469	130.9	0.7
11/30/16 19:00	12/1/16 18:00	1,107,070	440	118.3	0.6
11/30/16 20:00	12/1/16 19:00	855,557	380	58.9	0.3
11/30/16 21:00	12/1/16 20:00	782,290	334	45.6	0.2
11/30/16 22:00	12/1/16 21:00	743,575	287	38.4	0.2
11/30/16 23:00	12/1/16 22:00	716,041	257	35.2	0.2
12/1/16 0:00	12/1/16 23:00	693,425	233	33.0	0.2
12/1/16 1:00	12/2/16 0:00	676,409	227	32.6	0.2
12/1/16 2:00	12/2/16 1:00	638,266	216	31.0	0.2
12/1/16 3:00	12/2/16 2:00	594,181	205	29.0	0.2
12/1/16 4:00	12/2/16 3:00	536,379	194	26.5	0.1
12/1/16 5:00	12/2/16 4:00	517,036	176	25.1	0.1
12/1/16 6:00	12/2/16 5:00	502,803	164	24.4	0.1
12/1/16 7:00	12/2/16 6:00	478,861	143	22.4	0.1

Subpart Ja Root Cause / Corrective Action Analysis

Incident Number: 345189/345193

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), SRU (SO2)	Date of Event:	1/2/18
Emissions Source(s):	North Flare (EPN 20-72, EQT 0035)	Date Analysis Completed:	2/15/18
	South Flare (EPN 3-77, EQT 0049)		
	#3 SRU Incinerator (EPN 5-00, EQT 0079)		

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

A description of the Discharge:

Beginning at approximately 07:00 on January 1, 2018, the Meraux Refinery began experiencing SO2 emissions caused by multiple instrumentation failures throughout the refinery due to exceptionally cold air temperatures (approximately 24 F). Intermittent SO2 emissions began on January 1 due to instability of the #3 Sulfur Recovery Unit (SCU) followed by the loss of the Flare Gas Recovery Unit compressor on January 2nd from 06:20-08:35. One of the refinery's two main boilers, Boiler B-5, tripped offline at 04:33 on January 2nd and could not be restarted. Later at 08:11 the remaining main boiler, Boiler B-6, tripped offline and caused a shortage of steam and reduced steam header pressures across the entire refinery. At 09:02, the Hydrocracker Unit (HCU) tripped offline and performed an automatic depressurization due to reduced flow from its steam driven Recycle Gas Compressor. The bulk of the SO2 emissions from flaring occurred during this depressurization event, and the resultant trip of the #3 SRU, which takes it's feed from the HCU. The restart of the #3 SRU was also delayed by instrumentation failures, causing additional SO2 emissions.

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

	Flares	#3 SRU	
Date and Time the discharge was first identified	1/2/18 6:20	1/1/18 7:00	
Date/Time the discharge had ceased	1/2/18 16:20	1/3/18 10:00	
Duration of Discharge (Calculated)	10.0	51.0	hrs

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

The steps taken to limit the emissions during the discharge:

Valero initiated it's refinery sulfur shedding procedure and 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)

The root cause(s) of this incident were the cold weather or other instrumentation failures on Boiler B-5, Boiler B-6, and the #3 SRU as described below:

1) Boiler B-5

a) B-5 tripped on low fuel gas pressure. The fuel gas pressure regulator pilot filter is not free draining and its tubing is not protected from freezing. Liquids accumulated and froze and clogged the pilot filter.

b) B-5 could not be restarted due to slack in the linkages for switch feedback causing false position indications on the Flue Gas Recirculation Damper, Stack Damper, and Fresh Air Damper. The false position indications prevented start up permissives from being satisfied. These feedback switches were newly installed in 2017.

2) Boiler B-6

a) B-6 tripped on a false high steam pressure indication. This trip is provided by a single pressure instrument. The impulse lines for this instrument were not properly insulated and froze.

3) #3 SRU

a) The temperature of the analyzer probe for the Air Demand Analyzer got too low and caused the Air Demand Analyzer to indicate a fault. This fault prevents automatic operation of the SRU Main Burner combustion air and led to several trips of the Main Burner.

b) Several other critical instruments were not working properly due to frozen impulse lines.

c) Some purge gas rotameters on critical instruments were cracked during the freeze causing the loss of that instrument.

(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 necessary.

Is corrective action required? Yes (Yes/No)

1) Re-pipe B-5 and B-6 fuel gas regulator pilot filters to eliminate the low point, add insulation and tracing, and install pressure gauges across pilot filters.

2) Add checking the fuel gas regulator pilot filter differential pressure to operator rounds.

3) Remove the newly installed feedback switches and replace them with the original ones that had better reliability.

4) Install additional steam pressure instruments to provide 2 out of 3 logic for the high steam pressure trip.

5) Add insulation and heat tracing to B-5 and B-6 steam pressure instruments.

6) Pull and inspect the #3 SRU Air Demand Analyzer probe and verify that it is installed correctly.

7) Develop a preventative maintenance schedule for the periodic replacement of purge gas rotameters in the SRUs.

8) Evaluate moving the #3 SRU Air Flowmeter to Tail Gas Burner transmitters above taps

9) Provide winterization protection for the affected instruments in the #3 SRU.

(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) Re-pipe B-5 and B-6 fuel gas regulator pilot filters to eliminate the low point, add insulation and tracing, and install pressure gauges across pilot filters.
Commencement Date: 2/15/18
Estimated Completion Date: 10/30/18

2) Add checking the fuel gas regulator pilot filter differential pressure to operator rounds.
Commencement Date: 2/15/18
Estimated Completion Date: 11/13/18

3) Remove the newly installed feedback switches and replace them with the original ones that had better reliability.
Commencement Date: 2/15/18
Estimated Completion Date: 10/30/18

4) Install additional steam pressure instruments to provide 2 out of 3 logic for the high steam pressure trip.
Commencement Date: 2/15/18
Estimated Completion Date: 10/30/18

5) Add insulation and heat tracing to B-5 and B-6 steam pressure instruments.
Commencement Date: 2/15/18
Estimated Completion Date: 10/30/18

6) Pull and inspect the #3 SRU Air Demand Analyzer probe and verify that it is installed correctly.
Commencement Date: 2/15/18
Estimated Completion Date: 10/30/18

7) Develop a preventative maintenance schedule for the periodic replacement of purge gas rotameters in the SRUs.
Commencement Date: 2/15/18
Completed: 4/3/18

8) Evaluate moving the #3 SRU Air Flowmeter to Tail Gas Burner transmitters above taps
Commencement Date: 2/15/18
Completed: 4/17/18

9) Provide winterization protection for the affected instruments in the #3 SRU.
Commencement Date: 2/15/18
Estimated Completion Date: 9/25/18

(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
1/1/18 9:00	1/2/18 8:00	385,450	27	12.4	0.1
1/1/18 10:00	1/2/18 9:00	759,797	65	67.3	0.4
1/1/18 11:00	1/2/18 10:00	962,465	390	327.7	1.8
1/1/18 12:00	1/2/18 11:00	1,174,431	490	411.4	2.2
1/1/18 13:00	1/2/18 12:00	1,174,431	490	411.4	2.2
1/1/18 14:00	1/2/18 13:00	1,174,431	490	411.4	2.2
1/1/18 15:00	1/2/18 14:00	1,174,431	490	411.4	2.2
1/1/18 16:00	1/2/18 15:00	1,186,246	527	413.2	2.2
1/1/18 17:00	1/2/18 16:00	1,187,174	555	413.3	2.2
1/1/18 18:00	1/2/18 17:00	1,187,174	555	413.3	2.2
1/1/18 19:00	1/2/18 18:00	1,187,174	555	413.3	2.2
1/1/18 20:00	1/2/18 19:00	1,187,174	555	413.3	2.2
1/1/18 21:00	1/2/18 20:00	1,187,174	555	413.3	2.2
1/1/18 22:00	1/2/18 21:00	1,187,174	555	413.3	2.2
1/1/18 23:00	1/2/18 22:00	1,191,686	559	413.4	2.2
1/2/18 0:00	1/2/18 23:00	1,192,796	570	413.4	2.2
1/2/18 1:00	1/3/18 0:00	1,192,796	570	413.4	2.2
1/2/18 2:00	1/3/18 1:00	1,192,796	570	413.4	2.2
1/2/18 3:00	1/3/18 2:00	1,192,796	570	413.4	2.2
1/2/18 4:00	1/3/18 3:00	1,192,796	570	413.4	2.2
1/2/18 5:00	1/3/18 4:00	1,192,796	570	413.4	2.2
1/2/18 6:00	1/3/18 5:00	1,192,796	570	413.4	2.2
1/2/18 7:00	1/3/18 6:00	1,134,034	557	410.3	2.2
1/2/18 8:00	1/3/18 7:00	984,955	551	406.9	2.2
1/2/18 9:00	1/3/18 8:00	807,346	543	401.0	2.2
1/2/18 10:00	1/3/18 9:00	432,999	505	346.1	1.9
1/2/18 11:00	1/3/18 10:00	230,330	180	85.7	0.5

(9.) #3 SRU

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)(vi))	(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	SO_2 ppm (24-hr average, flow-weighted)[1]	24-hr cumulative SO_2 above allowable[2]	24-hr cumulative reduced sulfur above allowable
		SCF	ppmv	lbs	lbs as H2S
1/2/18 7:00	1/3/18 6:00	559,815	964	485.4	2.6
1/2/18 8:00	1/3/18 7:00	561,818	1000	554.8	3.0
1/2/18 9:00	1/3/18 8:00	576,345	1000	620.8	3.3
1/2/18 10:00	1/3/18 9:00	569,923	817	604.5	3.2
1/2/18 11:00	1/3/18 10:00	506,300	158	573.9	3.1
1/2/18 12:00	1/3/18 11:00	491,990	57	547.9	2.9
1/2/18 13:00	1/3/18 12:00	521,233	39	521.0	2.8
1/2/18 14:00	1/3/18 13:00	596,520	40	496.4	2.7
1/2/18 15:00	1/3/18 14:00	570,301	32	477.0	2.6

[1] SRU SO2 CEMS are spanned to 500 ppm. For emissions calculations, Valero assumes 2 times the span, 1000 ppm, for CEMS readings >= 500 ppm.

[2] Tail Gas Treater bypass emissions are calculated using a mass balance method, not using the flow and concentration values listed here.

Subpart Ja Root Cause / Corrective Action Analysis

Incident Number: 345418

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)**	Date of Event:	**1/15/18**
Emissions Source(s):	**North Flare (EPN 20-72, EQT 0035)**	Date Analysis Completed:	**3/1/18**
	South Flare (EPN 3-77, EQT 0049)		

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

A description of the Discharge:

On 1/15/18 at 16:52 the running Flare Gas Recovery (FGR) Compressor shutdown on low suction pressure due to plugging of its inlet cone strainer. The FGR Unit at the Meraux Refinery has two compressors, however the other compressor had been recently shutdown because of high differential pressure (dP) across its own inlet cone strainer. Valero was unable to quickly restart either compressor because of the plugged inlet strainers. Removing and cleaning the inlet cone strainers is a time consuming and complicated maintenance job involving the erection of scaffolding, purging of equipment, breaking flanges, and safety precautions to prevent worker exposure to hazardous gases. The inlet cone strainer was cleaned and the originally running FGR Compressor was started on 1/16/18 at 04:07.

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

	Flares
Date and Time the discharge was first identified	**1/15/18 16:52**
Date/Time the discharge had ceased	**1/16/18 4:18**
Duration of Discharge (Calculated)	**11.4**

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

The steps taken to limit the emissions during the discharge:

Valero expedited the removal and cleaning of the inlet cone strainer and 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)

When the FGR Unit was in the design phase, Valero predicted the difficulties of cleaning these inlet cone strainers and installed a duplex strainer upstream of the inlet cone strainers for both machines. The duplex strainer is capable of being swapped and cleaned online and is easily accessible. A finer mesh filter material was also installed in the duplex strainer in the theory that it would make the need to clean the inlet cone strainers an infrequent event. Consequently, the instrumentation and alarms were implemented primarily on the duplex strainer and not the inlet cone strainers. However, due to the duplex strainer being significantly larger in surface area than the inlet cone strainers, and in spite of the duplex having a finer mesh, the inlet cone strainers were plugging more frequently than the duplex.

The investigation identified the root causes of this event to be:

1) There were no alarms for high inlet cone strainer dP.

2) There was no procedural guidance as to what inlet cone dP the compressor should be shutdown and cleaned.

3) The inlet cone strainer may not have been cleaned effectively the prior to the incident.

(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) Evaluate the need for the both the duplex and the inlet cone strainers at the FGR compressors with the manufacturer. If not needed, eliminate the inlet cone strainers.

2) Implement alarms on the dP across inlet cone strainer. Evaluate a rate of change alarm on the dP.

3) Evaluate a dP value where the compressor should be shutdown and the intel cone strainer cleaned.

4) Outline the cleaning steps for the FGR strainers, both duplex and inlet cone.

5) Purchase a spare inlet cone strainer basket to reduce compressor downtime due to cleaning.

(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 need for the both the duplex and the inlet cone strainers at the FGR compressors with the manufacturer. If not needed, eliminate the inlet cone strainers.
Commencement Date: 3/1/18
Completed: 4/30/18 - Valero determined that the inlet cone strainers were not required.

2) Implement alarms on the dP across inlet cone strainer. Evaluate a rate of change alarm on the dP.
Commencement Date: 3/1/18
Completed: 6/4/18 - Not required after inlet cone strainers were removed.

3) Evaluate a dP value where the compressor should be shutdown and the inlet cone strainer cleaned.
Commencement Date: 3/1/18
Completed: 5/21/18 - Not required after inlet cone strainers were removed.

4) Outline the cleaning steps for the FGR strainers, both duplex and inlet cone.
Commencement Date: 3/1/18
Completed: 6/11/18

5) Purchase a spare inlet cone strainer basket to reduce compressor downtime due to cleaning.
Commencement Date: 3/1/18
Completed: 6/6/18 - Not required after inlet cone strainers were removed.

(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
1/14/18 17:00	1/15/18 16:00	14,921	22	1	0
1/14/18 18:00	1/15/18 17:00	116,062	22	1.4	0.0
1/14/18 19:00	1/15/18 18:00	224,454	23	1.6	0.0
1/14/18 20:00	1/15/18 19:00	309,418	23	1.7	0.0
1/14/18 21:00	1/15/18 20:00	433,722	24	1.8	0.0
1/14/18 22:00	1/15/18 21:00	549,223	24	2.2	0.0
1/14/18 23:00	1/15/18 22:00	647,830	24	2.2	0.0
1/15/18 0:00	1/15/18 23:00	756,912	25	2.7	0.0
1/15/18 1:00	1/16/18 0:00	842,771	26	2.7	0.0
1/15/18 2:00	1/16/18 1:00	945,866	26	2.9	0.0
1/15/18 3:00	1/16/18 2:00	1,045,482	27	3.1	0.0
1/15/18 4:00	1/16/18 3:00	1,137,318	27	3.4	0.0
1/15/18 5:00	1/16/18 4:00	1,165,626	28	3.5	0.0
1/15/18 6:00	1/16/18 5:00	1,165,626	28	3.5	0.0
1/15/18 7:00	1/16/18 6:00	1,165,626	28	3.5	0.0
1/15/18 8:00	1/16/18 7:00	1,165,626	28	3.5	0.0
1/15/18 9:00	1/16/18 8:00	1,165,626	28	3.5	0.0
1/15/18 10:00	1/16/18 9:00	1,165,626	28	3.5	0.0
1/15/18 11:00	1/16/18 10:00	1,165,626	28	3.5	0.0
1/15/18 12:00	1/16/18 11:00	1,165,588	28	3.5	0.0
1/15/18 13:00	1/16/18 12:00	1,165,588	28	3.5	0.0
1/15/18 14:00	1/16/18 13:00	1,165,588	28	3.5	0.0
1/15/18 15:00	1/16/18 14:00	1,165,588	28	3.5	0.0
1/15/18 16:00	1/16/18 15:00	1,165,588	28	3.5	0.0
1/15/18 17:00	1/16/18 16:00	1,150,705	6	2.2	0.0
1/15/18 18:00	1/16/18 17:00	1,049,564	5	2.1	0.0
1/15/18 19:00	1/16/18 18:00	941,172	5	1.9	0.0
1/15/18 20:00	1/16/18 19:00	856,208	5	1.8	0.0
1/15/18 21:00	1/16/18 20:00	731,904	4	1.6	0.0
1/15/18 22:00	1/16/18 21:00	622,901	315	9.3	0.0

Note: Another event requiring a Root Cause and Corrective Action Analysis began on 1/16/18 at 21:14.

Subpart Ja Root Cause / Corrective Action Analysis

Incident Number: 350609/350639

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)**	Date of Event:	**1/28/18**
Emissions Source(s):	**North Flare (EPN 20-72, EQT 0035)**	Date Analysis Completed:	**3/8/18**

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

A description of the Discharge:

On January 28, 2018 at 12:53. Valero began flaring clean Hydrogen from the Reformer as part of a normal unit start up. The refinery was restarting units after the power failure and complete refinery shutdown on 1/16/18. The Reformer is a Hydrogen producing unit, but it does not produce Hydrogen at a high enough pressure to be used by most units in the refinery. This requires the Reformers' Net Gas Compressor to be running. The Net Gas Compressor sends this Hydrogen to the Pressure Swing Absorption (PSA) Unit. The PSA also has a Tail Gas Compressor to compress the offgas from the Hydrogen purification process and send it to fuel gas. Excess Hydrogen is also sent to the fuel gas system with this tail gas. Consequentially, the Tail Gas Compressor must running before the Net Gas Compressor is started or else the Hydrogen being flared just ends up back in the flare.

Valero was unable to start a PSA Tail Gas Compressor when it was required to minimize the volume of Hydrogen flared.

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

	North Flare
Date and Time the discharge was first identified	**1/28/18 12:53**
Date/Time the discharge had ceased	**1/29/18 2:27**
Duration of Discharge (Calculated)	**13.6**

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

The steps taken to limit the emissions during the discharge:

Valero halted the start up of the Reformer Unit and minimized the amount of Hydrogen produced and began troubleshooting the PSA Tail Gas Compressors.

(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 the root cause(s) of this incident to be not ensuring that the PSA Tail Gas Compressor was available prior to beginning the Reformer Unit start up. The Net Gas Compressor needs the PSA Tail Gas Compressor to stay out of the flare, but the PSA Tail Gas Compressor does not need the Net Gas Compressor to be running. Also, neither of the PSA Tail Gas Compressors could be started due to operation of the lube oil system for extended periods with non running compressors with their discharge valves open. The PSA Tail Gas Compressors are wetted-screw compressors where the lube oil and process gas are mixed in the suction of the machine. After compression, this oil gas mixture goes to an Oil Separator to drop out the oil, which is then reused. The Oil Separator is also the reservoir where excess oil is stored. If the lube oil system is operated for a long time without the discharge valve shut on a non running compressor the oil migrates from the Oil Separator back to the screw case and fills it with oil. The compressor will not start until enough of this oil is removed from the case, either by manual draining, or successive start attempts pumping it out.

(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 necessary.

Is corrective action required? Yes (Yes/No)

1) Add a warning to the Reformer Startup Procedure(s) saying that a PSA Tail Gas Compressor should be running prior to beginning Reformer Start Up to minimize flaring, or plan for an alternative location for the Hydrogen.

2) Evaluate the possibility of installing a means of determining the oil level in the compressor case and, if feasible, add a step to the Tail Gas Compressor startup procedure to check this level.

3) Revise PSA Tail Gas Compressor Operating Procedures, as necessary, to minimize the potential for excessive oil migration into the case of a non-running machine and preventing the compressor from starting.

(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 a warning to the Reformer Startup Procedure(s) saying that a PSA Tail Gas Compressor should be running prior to beginning Reformer Start Up to minimize flaring, or plan for an alternative location for the Hydrogen.
Commencement Date: 3/8/18
Completed: 5/11/18

2) Evaluate the possibility of installing a means of determining the oil level in the compressor case and, if feasible, add a step to the Tail Gas Compressor startup procedure to check this level.
Commencement Date: 3/8/18
Completed: 6/4/18

3) Revise PSA Tail Gas Compressor Operating Procedures, as necessary, to minimize the potential for excessive oil migration into the case of a non-running machine and preventing the compressor from starting.
Commencement Date: 3/8/18
Completed: 6/4/18

(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
1/27/18 12:00	1/28/18 11:00	173,399	235	19	0
1/27/18 13:00	1/28/18 12:00	175,262	250	19.1	0.1
1/27/18 14:00	1/28/18 13:00	335,045	261	26.4	0.1
1/27/18 15:00	1/28/18 14:00	748,772	265	31.8	0.2
1/27/18 16:00	1/28/18 15:00	1,139,097	267	35.6	0.2
1/27/18 17:00	1/28/18 16:00	1,535,650	270	39.2	0.2
1/27/18 18:00	1/28/18 17:00	1,757,480	273	42.5	0.2
1/27/18 19:00	1/28/18 18:00	1,885,523	279	45.4	0.2
1/27/18 20:00	1/28/18 19:00	1,996,272	286	48.3	0.3
1/27/18 21:00	1/28/18 20:00	2,102,207	292	51.0	0.3
1/27/18 22:00	1/28/18 21:00	2,190,206	299	53.3	0.3
1/27/18 23:00	1/28/18 22:00	2,206,080	309	55.4	0.3
1/28/18 0:00	1/28/18 23:00	2,183,993	306	53.7	0.3
1/28/18 1:00	1/29/18 0:00	2,215,627	226	51.8	0.3
1/28/18 2:00	1/29/18 1:00	2,242,031	235	52.8	0.3
1/28/18 3:00	1/29/18 2:00	2,246,873	245	52.9	0.3
1/28/18 4:00	1/29/18 3:00	2,247,148	247	52.9	0.3
1/28/18 5:00	1/29/18 4:00	2,247,148	247	52.9	0.3
1/28/18 6:00	1/29/18 5:00	2,247,148	247	52.9	0.3
1/28/18 7:00	1/29/18 6:00	2,247,148	247	52.9	0.3
1/28/18 8:00	1/29/18 7:00	2,247,358	248	52.9	0.3
1/28/18 9:00	1/29/18 8:00	2,247,358	248	52.9	0.3
1/28/18 10:00	1/29/18 9:00	2,235,595	176	49.1	0.3
1/28/18 11:00	1/29/18 10:00	2,211,140	120	41.0	0.2
1/28/18 12:00	1/29/18 11:00	2,215,819	126	41.1	0.2
1/28/18 13:00	1/29/18 12:00	2,215,784	114	41.0	0.2
1/28/18 14:00	1/29/18 13:00	2,062,181	107	33.8	0.2
1/28/18 15:00	1/29/18 14:00	1,669,453	119	29.6	0.2
1/28/18 16:00	1/29/18 15:00	1,279,437	122	25.9	0.1
1/28/18 17:00	1/29/18 16:00	882,884	119	22.2	0.1
1/28/18 18:00	1/29/18 17:00	661,054	116	18.9	0.1
1/28/18 19:00	1/29/18 18:00	533,011	110	16.0	0.1
1/28/18 20:00	1/29/18 19:00	422,262	103	13.2	0.1

Subpart Ja Root Cause / Corrective Action Analysis

Impact Incident Number: 359746

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 and SO2)**	Date of Event:	**3/21/18**
Emissions Source(s):	**North Flare (EPN 20-72, EQT 0035)**	Date Analysis Completed:	**4/5/18**

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

A description of the Discharge:

On 3/21/18 at 09:06, while a maintenance technician was replacing 1 of 2 redundant field power supplies for the Hydrocracker (HCU) Safety Instrumented System (SIS) lost power and initiated a complete shutdown of the HCU including an emergency depressurization to the flare. Additional flaring continued until the HCU could be returned to normal operation due to Hydrogen system imbalance. Additional SO2 emissions also occured at the #3 Sulfur Recovery Unit on the following day during start up.

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

	North Flare	#3 SRU	
Date and Time the discharge was first identified	**3/21/18 9:06**	**3/22/18 7:25**	
Date/Time the discharge had ceased	**3/21/18 22:36**	**3/22/18 21:00**	
Duration of Discharge (Calculated)	**13.5**	**13.6**	hrs

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

The steps taken to limit the emissions during the discharge:

Valero initiated it's refinery sulfur shedding procedure and followed its Flare Minimization Plan and Operations Procedures to minimize the volume and SO2 emissions of this discharge. Valero repaired the damaged chassis and replaced the redundant power supplies.

(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)

The root cause of this incident was a damaged 37 pin connector on the chassis where the power supplies are connected to the system. The power supplies are completely redundant, but they do communicate with each other using this connection to coordinate the duration each one is provideing power to even out service life.

Valero has determined that this connection design (37 pin) is not robust enough for the way the power supplies are loaded into the chassis. The power supplies are heavy and the main AC and DC connections are tight fitting, so the power supply needs to be slid into the chassis with force. This force is enough to easily bend the pins or damage the connector if the chassis isn't perfectly aligned.

(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) Conduct a survey of all Kepco power supplies in the plant and develop a plan to replace with Phoenix-type power supplies in upcoming outages.

(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) Conduct a survey of all Kepco power supplies in the plant and develop a plan to replace with Phoenix-type power supplies in upcoming outages.

Commencement Date: 4/5/18

Completed: 6/4/18

(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
3/20/18 9:00	3/21/18 8:00	0	0	0	0
3/20/18 10:00	3/21/18 9:00	1,760,142	313	2176.7	11.7
3/20/18 11:00	3/21/18 10:00	3,086,350	463	2964.9	15.9
3/20/18 12:00	3/21/18 11:00	3,909,813	488	3044.1	16.4
3/20/18 13:00	3/21/18 12:00	5,320,567	586	3593.7	19.3
3/20/18 14:00	3/21/18 13:00	6,671,527	653	3952.9	21.2
3/20/18 15:00	3/21/18 14:00	7,965,280	732	4356.5	23.4
3/20/18 16:00	3/21/18 15:00	8,734,870	734	4360.7	23.4
3/20/18 17:00	3/21/18 16:00	9,496,971	735	4363.3	23.4
3/20/18 18:00	3/21/18 17:00	10,266,462	735	4365.1	23.5
3/20/18 19:00	3/21/18 18:00	11,185,479	737	4370.3	23.5
3/20/18 20:00	3/21/18 19:00	11,999,827	737	4373.3	23.5
3/20/18 21:00	3/21/18 20:00	12,799,897	739	4378.0	23.5
3/20/18 22:00	3/21/18 21:00	13,328,089	741	4381.8	23.5
3/20/18 23:00	3/21/18 22:00	13,410,146	745	4383.2	23.6
3/21/18 0:00	3/21/18 23:00	13,410,146	745	4383.2	23.6
3/21/18 1:00	3/22/18 0:00	13,410,146	745	4383.2	23.6
3/21/18 2:00	3/22/18 1:00	13,410,146	745	4383.2	23.6
3/21/18 3:00	3/22/18 2:00	13,410,146	745	4383.2	23.6
3/21/18 4:00	3/22/18 3:00	13,410,146	745	4383.2	23.6
3/21/18 5:00	3/22/18 4:00	13,410,146	745	4383.2	23.6
3/21/18 6:00	3/22/18 5:00	13,446,303	763	4385.7	23.6
3/21/18 7:00	3/22/18 6:00	13,675,917	773	4395.4	23.6
3/21/18 8:00	3/22/18 7:00	13,884,286	784	4404.2	23.7
3/21/18 9:00	3/22/18 8:00	13,884,286	784	4404.2	23.7
3/21/18 10:00	3/22/18 9:00	12,124,144	471	2227.5	12.0
3/21/18 11:00	3/22/18 10:00	10,797,936	321	1439.3	7.7
3/21/18 12:00	3/22/18 11:00	9,975,944	300	1360.1	7.3
3/21/18 13:00	3/22/18 12:00	8,565,190	202	810.5	4.4
3/21/18 14:00	3/22/18 13:00	7,214,230	135	451.3	2.4
3/21/18 15:00	3/22/18 14:00	5,921,761	71	47.7	0.3
3/21/18 16:00	3/22/18 15:00	5,152,171	69	43.6	0.2
3/21/18 17:00	3/22/18 16:00	4,390,070	69	41.0	0.2
3/21/18 18:00	3/22/18 17:00	3,620,579	68	39.2	0.2
3/21/18 19:00	3/22/18 18:00	2,701,562	67	34.0	0.2
3/21/18 20:00	3/22/18 19:00	1,887,229	67	31.0	0.2
3/21/18 21:00	3/22/18 20:00	1,087,158	66	26.3	0.1
3/21/18 22:00	3/22/18 21:00	560,196	75	22.6	0.1
3/21/18 23:00	3/22/18 22:00	478,139	71	21.2	0.1
3/22/18 0:00	1/0/00 0:00	478,139	71	21.2	0.1

(9.) #3 SRU

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)(vi))	(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**	**SO_2 ppm (24-hr average, flow-weighted)[1]**	**24-hr cumulative SO_2 above allowable[2]**	**24-hr cumulative reduced sulfur above allowable**
		SCF	ppmv	lbs	lbs as H2S
3/21/18 20:00	3/22/18 19:00	480,648	1000	479.0	2.6
3/21/18 21:00	3/22/18 20:00	469,086	880	527.5	2.8
3/21/18 22:00	3/22/18 21:00	391,374	105	527.5	2.8
3/21/18 23:00	3/22/18 22:00	371,836	65	527.5	2.8
3/22/18 0:00	3/22/18 23:00	342,994	66	527.5	2.8
3/22/18 1:00	3/23/18 0:00	357,600	60	527.5	2.8
3/22/18 2:00	3/23/18 1:00	350,381	56	527.5	2.8
3/22/18 3:00	3/23/18 2:00	364,928	53	527.5	2.8
3/22/18 4:00	3/23/18 3:00	374,980	48	527.5	2.8
3/22/18 5:00	3/23/18 4:00	400,348	46	527.5	2.8
3/22/18 6:00	3/23/18 5:00	431,683	48	527.5	2.8
3/22/18 7:00	3/23/18 6:00	436,076	46	527.5	2.8
3/22/18 8:00	3/23/18 7:00	449,882	30	518.4	2.8
3/22/18 9:00	3/23/18 8:00	466,155	21	475.4	2.6
3/22/18 10:00	3/23/18 9:00	515,287	25	475.4	2.6
3/22/18 11:00	3/23/18 10:00	522,525	25	472.2	2.5

[1] SRU SO2 CEMS are spanned to 500 ppm. For emissions calculations, Valero assumes 2 times the span, 1000 ppm, for CEMS readings >= 500 ppm.

[2] Tail Gas Treater bypass emissions are calculated using a mass balance method, not using the flow and concentration values listed here.

Subpart Ja Root Cause / Corrective Action Analysis

Incident Number: N/A

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)**	Date of Event:	**5/13/18**
Emissions Source(s):	**North Flare (EPN 20-72, EQT 0035)**	Date Analysis Completed:	**N/A**

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

A description of the Discharge:

Flaring during Net Gas Chloride Treater shutdown for media replacement.

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

Date and Time the discharge was first identified	**5/13/18 13:23**
Date/Time the discharge had ceased	**5/15/18 15:40**
Duration of Discharge (Calculated)	**50.3** 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?	**Yes**	(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?	**Yes**	(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)

N/A

(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? **No** (Yes/No)

N/A

(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.

N/A

(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
5/13/18 23:00	5/14/18 22:00	492,620	104	5.9	0.0
5/14/18 0:00	5/14/18 23:00	630,045	93	5.5	0.0
5/14/18 1:00	5/15/18 0:00	769,726	83	5.0	0.0
5/14/18 2:00	5/15/18 1:00	907,114	74	4.6	0.0
5/14/18 3:00	5/15/18 2:00	1,044,371	65	4.2	0.0
5/14/18 4:00	5/15/18 3:00	1,184,743	58	4.0	0.0
5/14/18 5:00	5/15/18 4:00	1,326,407	53	3.8	0.0
5/14/18 6:00	5/15/18 5:00	1,464,183	47	3.7	0.0
5/14/18 7:00	5/15/18 6:00	1,604,935	43	3.8	0.0
5/14/18 8:00	5/15/18 7:00	1,703,928	41	3.9	0.0
5/14/18 9:00	5/15/18 8:00	1,852,652	40	3.9	0.0
5/14/18 10:00	5/15/18 9:00	2,002,002	40	3.9	0.0
5/14/18 11:00	5/15/18 10:00	2,144,871	37	3.8	0.0
5/14/18 12:00	5/15/18 11:00	2,293,202	36	3.8	0.0
5/14/18 13:00	5/15/18 12:00	2,400,055	36	3.9	0.0
5/14/18 14:00	5/15/18 13:00	2,553,305	36	4.0	0.0
5/14/18 15:00	5/15/18 14:00	2,707,521	35	4.0	0.0
5/14/18 16:00	5/15/18 15:00	2,761,970	36	4.1	0.0
5/14/18 17:00	5/15/18 16:00	2,757,572	17	3.6	0.0
5/14/18 18:00	5/15/18 17:00	2,714,468	10	2.2	0.0
5/14/18 19:00	5/15/18 18:00	2,645,174	8	1.7	0.0
5/14/18 20:00	5/15/18 19:00	2,611,844	6	1.4	0.0
5/14/18 21:00	5/15/18 20:00	2,554,779	5	1.1	0.0
5/14/18 22:00	5/15/18 21:00	2,486,559	4	0.9	0.0
5/14/18 23:00	5/15/18 22:00	2,390,594	4	0.8	0.0
5/15/18 0:00	5/15/18 23:00	2,246,155	4	0.8	0.0
5/15/18 1:00	5/16/18 0:00	2,097,996	4	0.8	0.0
5/15/18 2:00	5/16/18 1:00	1,951,973	4	0.8	0.0
5/15/18 3:00	5/16/18 2:00	1,806,650	4	0.8	0.0
5/15/18 4:00	5/16/18 3:00	1,660,469	4	0.8	0.0
5/15/18 5:00	5/16/18 4:00	1,514,530	4	0.8	0.0
5/15/18 6:00	5/16/18 5:00	1,370,524	4	0.8	0.0
5/15/18 7:00	5/16/18 6:00	1,226,219	3	0.6	0.0
5/15/18 8:00	5/16/18 7:00	1,126,892	3	0.4	0.0
5/15/18 9:00	5/16/18 8:00	978,720	3	0.4	0.0
5/15/18 10:00	5/16/18 9:00	829,920	3	0.4	0.0
5/15/18 11:00	5/16/18 10:00	681,274	3	0.4	0.0
5/15/18 12:00	5/16/18 11:00	533,494	3	0.4	0.0
5/15/18 13:00	5/16/18 12:00	427,193	3	0.2	0.0