VALERO

July 24, 2013

CERTIFIED: 7001 1140 0001 6090 6329

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 2013
Valero Refining - Meraux LLC, Agency Interest # 1238
2500 East St. Bernard Hwy., St. Bernard Parish, Meraux, LA
Title V Permit Numbers: 2500-00001-V8

Gentlemen,

Valero Refining, Meraux LLC hereby submits 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 2013.

A new Opacity CEMS was installed on the #2 FCCU ESP Stack (EPN 2-77, EQT 0032). This CEMS was certified on April 20, 2013 and monitoring began on May 5, 2013, when the #2 FCC was started up after a planned maintenance turnaround. All Opacity monitoring in the 2nd Quarter was conducted with this new CEMS.

For this reporting period, excess emissions greater than or equal to 1 percent of the total operating time occurred at the #2 FCCU ESP Stack (EPN 2-77, EQT 0032) for Carbon Monoxide, the #2 SRU Incinerator (EPN 1-93, EQT 0019) for Sulfur Dioxide, the #3 SRU Incinerator (EPN 5-00, EQT 0079) for Sulfur Dioxide, and sources fueled by the Hydrocracker Heaters and Hydrocracker Boilers Fuel Drums for Hydrogen Sulfide. No CEMS had downtime greater than 5 percent of the total operating time. Also enclosed are the Data Assessment Reports for the appropriate CEMs.

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,

Lauren K. Bird
Vice President & General Manager
Valero Refining – Meraux LLC

Enclosures

cc: Mr. Mike Algero, LDEQ SE Regional Office, New Orleans, LA

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

*(per 40 CFR 60.7(d))*

Pollutant: **Opacity**

Applicable NSPS Subpart: J

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

Company: Valero Refining - Meraux LLC
Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: Opacity shall not exceed 30% for more than one 6-minute interval in any 1-hour period

Monitor Manufacturer and Model No.: Teledyne Monitor Labs LightHawk 560

Date of Latest CMS Certification or Audit: Certification (4/20/13)

Process Unit(s) Description: #2 FCCU ESP Stack (EPN 2-77, EQT 0032)

Total source operating time in reporting period[1]: 81,362 minutes

| Emissions Data Summary[1] | |
|---|---|
| 1. Duration of excess emissions in reporting period due to: | *(minutes)* |
| 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: | *(minutes)* |
| 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: **CO**

Applicable NSPS Subpart: J (Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 27)

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

Company: Valero Refining - Meraux LLC
Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: CO corrected to 0% $O_2$ shall not exceed 500 ppm on a 1 hour rolling average

Monitor Manufacturer and Model No.: Thermo Environmental 48i (CO)/Servomex 1155 ($O_2$)

Date of Latest CMS Certification or Audit: RATA on 5/28/13

Process Unit(s) Description: #2 FCCU ESP Stack (EPN 2-77, EQT 0032)

Total source operating time in reporting period: 1,356 hours

| Emissions Data Summary[1] | |
|---|---|
| 1. Duration of excess emissions in reporting period due to: | *(hours)* |
| a. Startup/shutdown | 14 |
| b. Control equipment problems | 0 |
| c. Process problems | 0 |
| d. Other known causes | 0 |
| e. Unknown causes | 0 |
| 2. Total duration of excess emission | 14 |
| 3. Total duration of excess emissions x (100) [Total source operating time][2] | 1.0 % |

| 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: **$SO_2$**

Applicable NSPS Subpart: __J__ (Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 18)

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 50 ppm on a 7 day rolling average and 25 ppm on a 365 day rolling average (Consent Decree Limits)

Monitor Manufacturer and Model No.: Thermo Environmental 43i ($SO_2$)/Servomex 1155 ($O_2$)

Date of Latest CMS Certification or Audit: RATA on 5/28/13

Process Unit(s) Description: #2 FCCU ESP Stack (EPN 2-77, EQT 0032)

Total source operating time in reporting period: 1,356 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: None (Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 15)

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

Company: Valero Refining - Meraux LLC
Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: Not Applicable

Monitor Manufacturer and Model No.: Thermo Environmental 42i (NOx)/Servomex 1155 ($O_2$)

Date of Latest CMS Certification or Audit: RATA on 5/28/13

Process Unit(s) Description: #2 FCCU ESP Stack (EPN 2-77, EQT 0032)

Total source operating time in reporting period: 1,356 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 | 4 |
| 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] | 0.3 % |

[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: **$SO_2$**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 5/24/13

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

Total source operating time in reporting period: 1,677 hours

| **Emissions Data Summary**[1] | |
|---|---|
| 1. Duration of excess emissions in reporting period due to: | *(hours)* |
| a. Startup/shutdown | 94 |
| b. Control equipment problems | 0 |
| c. Process problems | 12 |
| d. Other known causes | 0 |
| e. Unknown causes | 0 |
| 2. Total duration of excess emission | 106 |
| 3. Total duration of excess emissions x (100) [Total source operating time][2] | 6.3 % |

| **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 | 2 |
| d. Other known causes | 0 |
| e. Unknown causes | 0 |
| 2. Total CMS Downtime | 2 |
| 3. Total duration of CMS Downtime x (100) [Total source operating time][2] | 0.1 % |

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

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

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

Pollutant: $SO_2$

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 991-CEM-X($SO_2$)/ Rosemount Oxymitter 4000($O_2$)

Date of Latest CMS Certification or Audit: RATA on 6/24/13

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

Total source operating time in reporting period: 1,933 hours

| **Emissions Data Summary**[1] | |
|---|---|
| 1. Duration of excess emissions in reporting period due to: | *(hours)* |
| a. Startup/shutdown | 188 |
| b. Control equipment problems | 0 |
| c. Process problems | 12 |
| d. Other known causes | 0 |
| e. Unknown causes | 0 |
| 2. Total duration of excess emission | 200 |
| 3. Total duration of excess emissions x (100) [Total source operating time][2] | 10.3 % |

| **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 | 20 |
| d. Other known causes | 0 |
| e. Unknown causes | 0 |
| 2. Total CMS Downtime | 20 |
| 3. Total duration of CMS Downtime x (100) [Total source operating time][2] | 1.0 % |

[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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 5/23/13

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: 2,184 hours

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

| 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 | 37 |
| d. Other known causes | 2 |
| e. Unknown causes | 0 |
| 2. Total CMS Downtime | 39 |
| 3. Total duration of CMS Downtime x (100) [Total source operating time][2] | 1.8 % |

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

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

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

Pollutant: $H_2S$

Applicable NSPS Subpart: J

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 5/23/13

Process Unit(s) Description: Area 2 Fuel Drum for: No.1 Crude Heater (EPN 12-72A, EQT 0022); 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)

Total source operating time in reporting period: EQT 0022 - 1,639 hours; EQT 0013 - 1,639 hours; EQT 0028 - 1,679 hours; EQT 0029 - 1,650 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 | 12 |
| d. Other known causes | 0 |
| e. Unknown causes | 0 |
| 2. Total duration of excess emission | 12 |
| 3. Total duration of excess emissions x (100) [Total source operating time][2] | 0.7 % |

| **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 | 6 |
| d. Other known causes | 0 |
| e. Unknown causes | 0 |
| 2. Total CMS Downtime | 6 |
| 3. Total duration of CMS Downtime x (100) [Total source operating time][2] | 0.4 % |

[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: $H_2S$

Applicable NSPS Subpart: J

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 5/23/13

Process Unit(s) Description: Area 2 Fuel Drum for: NHT Charge Heater (EPN 14-72, EQT 0023); NHT Debut Reboiler (EPN 15-72, EQT 0024); NHT Depent Reboiler (EPN 16-72 EQT 0027)

Total source operating time in reporting period: EQT 0023 - 1,763 hours, EQT's 0024, & 0027 - 1,766 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 | 12 |
| d. Other known causes | 0 |
| e. Unknown causes | 0 |
| 2. Total duration of excess emission | 12 |
| 3. Total duration of excess emissions x (100) [Total source operating time][2] | 0.7 % |

| **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 | 7 |
| d. Other known causes | 0 |
| e. Unknown causes | 0 |
| 2. Total CMS Downtime | 7 |
| 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: **$H_2S$**

Applicable NSPS Subpart: J

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 5/23/13

Process Unit(s) Description: Area 2 Fuel Drum for: DHT Charge Heater (EPN 5-73, EQT 0058)

Total source operating time in reporting period: 1,530 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 | 12 |
| d. Other known causes | 0 |
| e. Unknown causes | 0 |
| 2. Total duration of excess emission | 12 |
| 3. Total duration of excess emissions x (100) [Total source operating time][2] | 0.8 % |

| **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 | 6 |
| d. Other known causes | 0 |
| e. Unknown causes | 0 |
| 2. Total CMS Downtime | 6 |
| 3. Total duration of CMS Downtime x (100) [Total source operating time][2] | 0.4 % |

[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: $H_2S$

Applicable NSPS Subpart: J

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 5/23/13

Process Unit(s) Description: Area 2 Fuel Drum for: ROSE Heater (EPN 1-80, EQT 0014)

Total source operating time in reporting period: 1,608 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 | 12 |
| d. Other known causes | 0 |
| e. Unknown causes | 0 |
| 2. Total duration of excess emission | 12 |
| 3. Total duration of excess emissions x (100) [Total source operating time][2] | 0.7 % |

| 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 | 4 |
| d. Other known causes | 0 |
| e. Unknown causes | 0 |
| 2. Total CMS Downtime | 4 |
| 3. Total duration of CMS Downtime x (100) [Total source operating time][2] | 0.2 % |

[1] For opacity, record all times in minutes. For gases, record all times in hours.
[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in §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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 5/23/13

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: 897 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 | 0 |
| e. Unknown causes | 0 |
| 2. Total CMS Downtime | 3 |
| 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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 6/24/13

Process Unit(s) Description: Area 4 Fuel Drum for Alky Reboiler (EPN 1-77, EQT 0078)

Total source operating time in reporting period: 1,597 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 | 13 |
| d. Other known causes | 0 |
| e. Unknown causes | 0 |
| 2. Total duration of excess emission | 13 |
| 3. Total duration of excess emissions x (100) [Total source operating time][2] | 0.8 % |

| 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 | 5 |
| d. Other known causes | 0 |
| e. Unknown causes | 0 |
| 2. Total CMS Downtime | 5 |
| 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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 5/24/13

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: 1,519 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 | 12 |
| d. Other known causes | 0 |
| e. Unknown causes | 3 |
| 2. Total duration of excess emission | 15 |
| 3. Total duration of excess emissions x (100) [Total source operating time][2] | 1.0 % |

| **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 | 4 |
| d. Other known causes | 0 |
| e. Unknown causes | 0 |
| 2. Total CMS Downtime | 4 |
| 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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 5/24/13

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)

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 | 10 |
| b. Control equipment problems | 0 |
| c. Process problems | 25 |
| d. Other known causes | 0 |
| e. Unknown causes | 3 |
| 2. Total duration of excess emission | 28 |
| 3. Total duration of excess emissions x (100) [Total source operating time][2] | 1.7 % |

| **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 | 11 |
| d. Other known causes | 0 |
| e. Unknown causes | 0 |
| 2. Total CMS Downtime | 11 |
| 3. Total duration of CMS Downtime x (100) [Total source operating time][2] | 0.5 % |

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

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

*(per 40 CFR 60.7(d))*

Pollutant: **$NO_x$**

Applicable NSPS Subpart: Db

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 Lumus 11, Serial No. 23042-5-8018413

Date of Latest CMS Certification or Audit: RATA on 5/23/13

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 | 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))*

Pollutant: **$NO_x$**

Applicable NSPS Subpart: Db

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 Lumus 11, Serial No. 23042-5-8018413

Date of Latest CMS Certification or Audit: RATA on 5/23/13

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

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

| **Emissions Data Summary**[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 | 27 |
| d. Other known causes | 0 |
| e. Unknown causes | 0 |
| 2. Total CMS Downtime | 27 |
| 3. Total duration of CMS Downtime x (100) [Total source operating time][2] | 1.2 % |

[1] For opacity, record all times in minutes. For gases, record all times in hours.
[2] For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in §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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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), Thermo Environmental ($O_2$)

Date of Latest CMS Certification or Audit: RATA on 5/22/13

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

Total source operating time in reporting period: 1,838 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 | 31 |
| d. Other known causes | 0 |
| e. Unknown causes | 0 |
| 2. Total CMS Downtime | 31 |
| 3. Total duration of CMS Downtime x (100) [Total source operating time][2] | 1.7 % |

[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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 6/25/13

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

Total source operating time in reporting period: 897 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 | 30 |
| d. Other known causes | 0 |
| e. Unknown causes | 0 |
| 2. Total CMS Downtime | 30 |
| 3. Total duration of CMS Downtime x (100) [Total source operating time][2] | 3.3 % |

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

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

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

Pollutant: **Total Sulfur**

Applicable NSPS Subpart: Ja[1] (Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 6/24/13

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[2]** | |
|---|---|
| 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][3] | 0.0 % |

| **CMS Performance Summary[2]** | |
|---|---|
| 1. CMS downtime in reporting period due to: | *(hours)* |
| a. Monitor equipment malfunctions | 0 |
| b. Non-Monitor equipment malfunctions | 0 |
| c. Quality assurance calibration | 38 |
| d. Other known causes | 5 |
| e. Unknown causes | 0 |
| 2. Total CMS Downtime | 43 |
| 3. Total duration of CMS Downtime x (100) [Total source operating time][3] | 2.0 % |

[1] According to 40 CFR 60.107a(e), in place monitoring systems capable of complying with Subpart Ja must comply with the monitoring requirements of Subpart Ja.
[2] For opacity, record all times in minutes. For gases, record all times in hours.
[3] 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[1] (Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 6/24/13

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[2]** | |
|---|---|
| 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][3] | 0.0 % |

| **CMS Performance Summary[2]** | |
|---|---|
| 1. CMS downtime in reporting period due to: | *(hours)* |
| a. Monitor equipment malfunctions | 0 |
| b. Non-Monitor equipment malfunctions | 0 |
| c. Quality assurance calibration | 11 |
| d. Other known causes | 2 |
| e. Unknown causes | 0 |
| 2. Total CMS Downtime | 13 |
| 3. Total duration of CMS Downtime x (100) [Total source operating time][3] | 0.6 % |

[1] According to 40 CFR 60.107a(e), in place monitoring systems capable of complying with Subpart Ja must comply with the monitoring requirements of Subpart Ja.
[2] For opacity, record all times in minutes. For gases, record all times in hours.
[3] 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[1] (Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 6/24/13

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 | 18 |
| d. Other known causes | 10 |
| e. Unknown causes | 0 |
| 2. Total CMS Downtime | 28 |
| 3. Total duration of CMS Downtime x (100) [Total source operating time][2] | 1.3 % |

[1] According to 40 CFR 60.107a(e), in place monitoring systems capable of complying with Subpart Ja must comply with the monitoring requirements of Subpart Ja.
[2] For opacity, record all times in minutes. For gases, record all times in hours.
[3] 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.

# GASEOUS AND OPACITY EXCESS EMISSIONS AND MONITORING SYSTEMS PERFORMANCE (per 40 CFR 60.7(c))

Pollutant: **CO**

Applicable NSPS Subpart: J

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

Company: Valero Refining - Meraux LLC
Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: CO corrected to 0% $O_2$ shall not exceed 500 ppm on a 1 hour rolling average
Monitor Manufacturer and Model No.: Thermo Environmental 48i (CO)/Servomex 1155 ($O_2$)

Date of Latest CMS Certification or Audit: RATA on 5/28/13

Process Unit(s) Description: #2 FCCU ESP Stack (EPN 2-77, EQT 0032)

Total source operating time in reporting period: 1,356 hours

| EXCESS EMISSIONS | | | | | | |
|---|---|---|---|---|---|---|
| Date | Start | End | Duration (hours) | Max 1-HRA (ppm) | Cause | Corrective Action |
| 5/5/13 | 08:43 | 11:43 | 3 | >1000 | #2 FCC CO >500 ppm, 1-HRA, during unit start up on Torch Oil following a planned maintenance turnaround. | The use of Torch Oil with low unit charge causes elevated levels of CO. Valero used the #2 FCC Air Preheater to minimize the time CO was > 500 ppm. Valero completed the unit startup per the SSM Plan. |
| 5/5/13 | 13:54 | 15:54 | 2 | >1000 | | |
| 5/5/13 | 16:53 | 17:53 | 1 | >1000 | | |
| 5/6/13 | 03:00 | 10:00 | 7 | >1000 | | |
| 5/6/13 | 11:50 | 12:50 | 1 | 770 | | |
| TOTAL | | | 14 | | | |

| CMS PERFORMANCE | | | | | |
|---|---|---|---|---|---|
| Date | Start | End | Duration (hours) | Cause | Corrective Action |
| None | | | | | |
| TOTAL | | | 0 | | |

# 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 4/01/13 to 6/30/13
Date submitted: 7/24/13
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 5/24/13
Process Unit(s) Description: #2 SRU Incinerator (EPN 1-93, EQT 0019)
Total source operating time in reporting period: 1,677 hours

| EXCESS EMISSIONS | | | | | | |
|---|---|---|---|---|---|---|
| Date | Start | End | Duration (hours) | Max 12-HRA (ppm) | Cause | Corrective Action |
| 4/3/13 | 04:00 | 16:00 | 12 | 309 | $SO_2$ at 0% $O_2$ greater than 250 ppm, 12-HRA, with $SO_2$ emissions less than 500 lbs/day above the allowable limit. The #2 SRU was shut down with no acid gas feeding the unit. Valero was Nitrogen purging the unit to the incinerator with the Tail Gas Treater (TGT) bypass valve open. | With no acid gas being combusted in the unit, the flow out of the incinerator is greatly reduced and higher concentrations of $SO_2$ are observed.<br><br>Valero completed Nitrogen purge and shut down the #2 SRU per the SSM Plan. |
| 4/4/13 | 19:47 | | 67 | >500 | $SO_2$ at 0% $O_2$ greater than 250 ppm, 12-HRA, with $SO_2$ emissions less than 500 lbs/day above the allowable limit. The #2 SRU was shut down with no acid gas feeding the unit. Valero was cooling down the unit with air and Nitrogen to the incinerator with the TGT bypass valve open. | With no acid gas being combusted in the unit, the flow out of the incinerator is greatly reduced and higher concentrations of $SO_2$ are observed.<br><br>Valero completed Nitrogen purge and shut down the #2 SRU per the SSM Plan. |
| 4/7/13 | | 14:47 | | | | |
| 5/2/13 | 07:34 | 22:34 | 15 | 298 | $SO_2$ at 0% $O_2$ greater than 250 ppm, 12-HRA, with $SO_2$ emissions less than 500 lbs/day above the allowable limit. Valero was heating up the unit for start up with the TGT Bypass valve open. No acid gas was feeding the unit. | With no acid gas being combusted in the unit, the flow out of the incinerator is greatly reduced and higher concentrations of $SO_2$ are observed.<br><br>Valero completed the unit startup per the SSM Plan. |
| 5/17/13 | 19:26 | | 12 | 329 | $SO_2$ at 0% $O_2$ greater than 250 ppm, 12-HRA, with $SO_2$ emissions less than 500 lbs/day above the allowable limit. Please see attached Unauthorized Discharge Notification Report for SERC Incident #: 13-02180 dated July 12, 2013 for cause and corrective actions. | |
| 5/18/13 | | 07:26 | | | | |
| TOTAL | | | 106 | | | |

# 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 4/01/13 to 6/30/13
Date submitted: 7/24/13
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 5/24/13
Process Unit(s) Description: #2 SRU Incinerator (EPN 1-93, EQT 0019)
Total source operating time in reporting period: 1,677 hours

| CMS PERFORMANCE[1] | | | | | |
|---|---|---|---|---|---|
| Date | Start | End | Duration (hours) | Cause | Corrective Action |
| 6/12/13 | 12:52 | 14:52 | 2 | Adjusted for calibration drift. | N/A |
| TOTAL | | | 2 | | |

[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 4/01/13 to 6/30/13
Date submitted: 7/24/13
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 991-CEM-X($SO_2$)/ Rosemount Oxymitter 4000($O_2$)
Date of Latest CMS Certification or Audit: RATA on 6/24/13
Process Unit(s) Description: #3 SRU Incinerator (EPN 5-00, EQT 0079)
Total source operating time in reporting period: 1,933 hours

| EXCESS EMISSIONS | | | | | | |
|---|---|---|---|---|---|---|
| Date | Start | End | Duration (hours) | Max 12-HRA (ppm) | Cause | Corrective Action |
| 4/5/13 | 16:03 | | 16 | > 500 | $SO_2$ at 0% $O_2$ greater than 250 ppm, 12-HRA with $SO_2$ emissions greater than 500 lbs/day above the allowable limit. Please see attached Unauthorized Discharge Notification Report for SERC Incident #: 13-01449 dated June 3, 2013 for cause and corrective actions. | |
| 4/6/13 | | 08:03 | | | | |
| 4/7/13 | 06:04 | 18:04 | 12 | 317 | $SO_2$ at 0% $O_2$ greater than 250 ppm, 12-HRA with $SO_2$ emissions less than 500 lbs/day above the allowable limit due to a unit upset caused by a rapid increase in the feed sulfur content at the Distillate Hydrotreater Unit (DHT). This caused a rapid spike in the acid gas rate to the #3 SRU. The refinery was operating in an abnormal configuration with several units shutdown for a planned maintenance turnaround. Valero was feeding the DHT with a combination of remaining distillate inventory and purchased high sulfur diesel. | Valero cut the high sulfur diesel out of the charge to the DHT and restored the #3 SRU $SO_2$ to < 250 ppm.<br><br>Valero then slowly introduced the high sulfur diesel back into the DHT charge at a rate that the #3 SRU could accommodate. |
| 4/12/13 | 10:36 | | 85 | > 500 | $SO_2$ at 0% $O_2$ greater than 250 ppm, 12-HRA, with $SO_2$ emissions less than 500 lbs/day above allowable limit. The #3 SRU was shutdown with no acid gas feeding the unit. Valero was performing a "heat soak" process in an attempt to remove blockage causing high reactor D/P. This process consisted of running the #3 SRU at operating temperatures using natural gas with the TGT Bypassed for an extended period. | With no acid gas being combusted in the unit, the flow out of the incinerator is greatly reduced and higher concentrations of $SO_2$ are observed.<br><br>Valero completed the shutdown of the #3 SRU according to the MACT UUU SSM plan. |
| 4/15/13 | | 23:36 | | | | |
| 5/18/13 | 22:13 | | 60 | > 500 | $SO_2$ at 0% $O_2$ greater than 250 ppm, 12-HRA with $SO_2$ emissions less than 500 lbs/day above the allowable limit. Please see attached Unauthorized Discharge Notification Report for SERC Incident #: 13-02180 dated July 12, 2013 for cause and corrective actions. | |
| 5/21/13 | | 10:13 | | | | |

# 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 4/01/13 to 6/30/13
Date submitted: 7/24/13
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 991-CEM-X($SO_2$)/ Rosemount Oxymitter 4000($O_2$)
Date of Latest CMS Certification or Audit: RATA on 6/24/13
Process Unit(s) Description: #3 SRU Incinerator (EPN 5-00, EQT 0079)
Total source operating time in reporting period: 1,933 hours

| EXCESS EMISSIONS cont. | | | | | | |
|---|---|---|---|---|---|---|
| Date | Start | End | Duration (hours) | Max 12-HRA (ppm) | Cause | Corrective Action |
| 5/30/13 | 19:30 | | 27 | > 500 | $SO_2$ at 0% $O_2$ greater than 250 ppm, 12-HRA, with $SO_2$ emissions less than 500 lbs/day above allowable limit during unit startup with the TGT Bypassed. | Valero completed the start up of the #3 SRU according to the MACT UUU SSM plan. |
| 5/31/13 | | 22:30 | | | | |
| TOTAL | | | 200 | | | |

| CMS PERFORMANCE[1] | | | | | |
|---|---|---|---|---|---|
| Date | Start | End | Duration (hours) | Cause | Corrective Action |
| 5/13/13 | 13:07 | 14:30 | 1 | $SO_2$ readings instantaneously fell to obviously incorrect values. | Valero maintenance personnel inspected the analyzer and recalibrated it. |
| 5/13/13 | 14:30 | | 18 | Out of Control. $SO_2$ daily validation high span above the reference gas greater than 4x the allowable drift. | Valero recalibrated the analyzer and returned it to service. |
| 5/14/13 | | 08:30 | | | |
| 6/14/13 | 10:40 | 11:40 | 1 | $SO_2$ adjusted for calibration drift | N/A |
| TOTAL | | | 20 | | |

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

# ROOT CAUSE ANALYSIS SUMMARY REPORT
## (per 40 CFR 60.108a(d)(5))

| SUBPART Ja ROOT CAUSE ANALYSIS SUMMARY | | | | | |
|---|---|---|---|---|---|
| 60.108a (c)(6)(i) | Affected Facility: | #3 SRU Incinerator (EPN 1-93, EQT 0019) | | | |
| | Description of Discharge: | #3 SRU Incinerator $SO_2$ emissions >500 lbs/day due to a loss of power to the refinery's Distributed Control System (DCS). | | | |
| (ii) | Start: | 4/5/13 08:47 | | | |
| | Stop: | 4/5/13 22:52 | | | |
| | Duration: | 14.1 hrs | | | |
| (iii) | $SO_2$ Emissions[1]: | 731 lbs | | | |
| | $H_2S$ Emissions[1]: | 2 lbs | | | |
| (iv) | Measured Total Sulfur Concentration of Discharge from a Flare | Not applicable to Sulfur Recovery Units. | | | |
| (v) | Measured Concentration of $H_2S$ in Fuel Gas or $SO_2$ of Discharge from a Fuel Gas Combustion Device | Not applicable to Sulfur Recovery Units. | | | |
| (vi) | Measured Concentration $SO_2$ Discharged from a Sulfur Recovery Plant | >500 ppm (Maximum Range of $SO_2$ CEMS) | | | |
| (vii) | Total $SO_2$ Emissions[1]: | 731 lbs | | | |
| | Total $H_2S$ Emissions[1]: | 2 lbs | | | |
| (viii) | Steps Taken to Limit Emissions During Discharge: | Valero restored power to the DCS and restarted the #3 SRU. | | | |
| (ix) | Root Cause: | Please see attached Unauthorized Discharge Notification Report for SERC Incident #: 13-01449 dated June 3, 2013 for cause and corrective actions. | | | |
| | Was discharge the result of a Root Cause identified by previous Root Cause Analysis? (Yes/No) | | | | |
| (x) | Corrective Action(s) Completed within 45 days of Discharge[2]: | | | | |
| | Incomplete Correction Actions (Include scheduled commencement and completion dates) | | | | |

[1] If the discharge duration exceeds 24 hours, record the discharge quantity for each 24-hour period.
[2] Enter a description of the recommended corrective actions or a an explanation of why corrective action is not necessary.

# 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: J
Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13
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 5/24/13
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: 1,519 hours

| EXCESS EMISSIONS | | | | | | |
|---|---|---|---|---|---|---|
| Date | Start | End | Duration (hours) | Max 12-HRA (ppm) | Cause | Corrective Action |
| 5/17/13 | 18:16 | | 12 | > 300 | $H_2S$ > 162 ppm, 3-HRA. Please see attached Unauthorized Discharge Notification Report for SERC Incident #: 13-02180 dated July 12, 2013 for cause and corrective actions. | |
| 5/18/13 | | 06:18 | | | | |
| 6/21/13 | 15:17 | 18:17 | 3 | 180 | $H_2S$ > 162 ppm, 3-HRA during an upset in the Gas Oil Hydrocracker/ Hydrotreater Unit (HCU). Valero had to quickly shutdown the ROSE unit to repair a mechanical issue on the ROSE charge pump. The ROSE unit supplies the Hydrotreater with De-Asphalted Oil feed. Light material may have been transferred to the Hydrotreater during the ROSE shutdown and overwhelmed the $H_2S$ removal capability of the HCU scrubbers. | Valero raised lean amine flow rates to the HCU scrubbers to maximize $H_2S$ removal. Once the surge of light material decreased the fuel drum H2S returned to normal.<br><br>Valero repaired the ROSE charge pump and restarted the ROSE unit. |
| TOTAL | | | 15 | | | |

| CMS PERFORMANCE | | | | | |
|---|---|---|---|---|---|
| Date | Start | End | Duration (hours) | Cause | Corrective Action |
| 5/24/13 | 11:12 | 15:12 | 4 | Annual RATA. | N/A |
| TOTAL | | | 4 | | |

# 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: J
Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13
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 5/24/13
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)
Total source operating time in reporting period: 2,184 hours

| EXCESS EMISSIONS | | | | | | |
|---|---|---|---|---|---|---|
| Date | Start | End | Duration (hours) | Max 12-HRA (ppm) | Cause | Corrective Action |
| 4/5/13 | 12:11 | 22:11 | 10 | > 300 | $H_2S$ > 162 ppm, 3-HRA. Please see attached Unauthorized Discharge Notification Report for SERC Incident #: 13-01449 dated June 3, 2013 for cause and corrective actions. | |
| 4/10/13 | 06:12 | 19:12 | 13 | > 300 | $H_2S$ > 162 ppm, 3-HRA due to operator error. The operator failed to make timely adjustments to amine circulation rates upon receiving $H_2S$ alarms. | Valero counseled the operator on the importance of paying close attention the alarms and responding in a timely manner. |
| 5/17/13 | 18:17 | | 12 | > 300 | $H_2S$ > 162 ppm, 3-HRA. Please see attached Unauthorized Discharge Notification Report for SERC Incident #: 13-02180 dated July 12, 2013 for cause and corrective actions. | |
| 5/18/13 | | 06:17 | | | | |
| 6/21/13 | 15:14 | 18:14 | 3 | 174 | $H_2S$ > 162 ppm, 3-HRA during an upset in the Gas Oil Hydrocracker/ Hydrotreater Unit (HCU). Valero had to quickly shutdown the ROSE unit to repair a mechanical issue on the ROSE charge pump. The ROSE unit supplies the Hydrotreater with De-Asphalted Oil feed. Light material may have been transferred to the Hydrotreater during the ROSE shutdown and overwhelmed the $H_2S$ removal capability of the HCU scrubbers. | Valero raised lean amine flow rates to the HCU scrubbers to maximize $H_2S$ removal. Once the surge of light material decreased the fuel drum H2S returned to normal.<br><br>Valero repaired the ROSE charge pump and restarted the ROSE unit. |
| TOTAL | | | 38 | | | |

# 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: J
Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13
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 5/24/13
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)
Total source operating time in reporting period: 2,184 hours

| CMS PERFORMANCE | | | | | |
|---|---|---|---|---|---|
| Date | Start | End | Duration (hours) | Cause | Corrective Action |
| 4/2/13 | 10:30 | 11:30 | 1 | Adjusted for calibration drift | N/A |
| 4/5/13 | 07:50 | 08:50 | 1 | Adjusted for calibration drift | N/A |
| 4/6/13 | 07:41 | 08:41 | 1 | Adjusted for calibration drift | N/A |
| 4/9/13 | 08:15 | 09:15 | 1 | Adjusted for calibration drift | N/A |
| 4/12/13 | 07:56 | 08:56 | 1 | Adjusted for calibration drift | N/A |
| 4/13/13 | 07:33 | 08:33 | 1 | Adjusted for calibration drift | N/A |
| 4/19/13 | 08:10 | 09:10 | 1 | Adjusted for calibration drift | N/A |
| 5/24/13 | 07:27 | 11:27 | 4 | Annual RATA | N/A |
| TOTAL | | | 11 | | |

# 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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 5/23/13

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: 897 hours

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

| Ja CMS PERFORMANCE[1] | | | | | |
|---|---|---|---|---|---|
| Date | Start | End | Duration (hours) | Cause | Corrective Action |
| 4/2/13 | 13:36 | 15:36 | 2 | Adjusted for calibration drift. | N/A |
| 6/13/13 | 07:33 | 08:33 | 1 | Adjusted for calibration drift. | N/A |
| TOTAL | | | 3 | | |

[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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 6/25/13

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

Total source operating time in reporting period: 897 hours

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

| CMS PERFORMANCE[1] | | | | | |
|---|---|---|---|---|---|
| Date | Start | End | Duration (hours) | Cause | Corrective Action |
| 6/26/13 | 07:50 | | 30 | Out of Control. On 6/27/13, the BRU NOx was below the high span > 4x the allowable limit and the O2 zero check was > 1% O2 above zero. | Valero maintenance personnel recalibrated the analyzers and returned them to service. |
| 6/27/13 | | 13:50 | | | |
| TOTAL | | | 30 | | |

[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 4/01/13 to 6/30/13
Date submitted: 7/24/13
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 6/24/13
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

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

| CMS PERFORMANCE[1] | | | | | |
|---|---|---|---|---|---|
| Date | Start | End | Duration (hours) | Cause | Corrective Action |
| 4/3/13 | 10:55 | 13:55 | 3 | Analyzer taken offline to clean out the vent and sample lines. | Valero recalibrated the analyzer and returned it to service. |
| 5/22/13 | 21:07 | 22:07 | 1 | Replaced 10-port valve rotor. | N/A |
| 5/22/13 | 22:52 | 23:52 | 1 | Calibration checked after rotor replacement. | N/A |
| 5/27/13 | 07:40 | | 29 | Out of control due to failing the zero span check on 5/28/13. Instead of going down to zero when the zero gas was applied the value increased from the sample value. | Valero maintenance inspected the analyzer and found nothing wrong. Valero maintenance then performed a satisfactory validation and the problem did not reoccur. Valero believes that this was probably due to a solenoid valve leaking by and interfering with the zero check. |
| 5/28/13 | | 12:40 | | | |
| 6/24/13 | 13:08 | 20:08 | 7 | Annual RATA | N/A |
| 6/30/13 | 15:32 | 17:32 | 2 | Adjusted for calibration drift | N/A |
| TOTAL | | | 43 | | |

[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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 6/24/13

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

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

| CMS PERFORMANCE[1] | | | | | |
|---|---|---|---|---|---|
| Date | Start | End | Duration (hours) | Cause | Corrective Action |
| 4/10/13 | 08:24 | 09:24 | 1 | Adjusted for calibration drift | N/A |
| 5/3/13 | 08:58 | 09:58 | 1 | Adjusted for calibration drift | N/A |
| 5/22/13 | 21:07 | 23:07 | 2 | Analyzer taken offline to replace 10-port valve rotor. Calibrated. | N/A |
| 6/10/13 | 10:12 | 12:12 | 2 | Adjusted for calibration drift | N/A |
| 6/24/13 | 13:08 | 20:08 | 7 | Annual RATA | N/A |
| TOTAL | | | 13 | | |

[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 4/01/13 to 6/30/13
Date submitted: 7/24/13
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 6/24/13
Process Unit(s) Description: South Flare Stack (EPN 3-77, EQT 0049)
Total source operating time in reporting period: 2,184 hours

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

| CMS PERFORMANCE[1] | | | | | |
|---|---|---|---|---|---|
| Date | Start | End | Duration (hours) | Cause | Corrective Action |
| 5/1/13 | 13:02 | 13:42 | 1 | Adjusted for calibration drift | N/A |
| 5/22/13 | 21:07 | 22:07 | 1 | Analyzer taken offline to replace 10-port valve rotor. | N/A |
| 5/22/13 | 23:15 | 00:15 | 1 | Calibration checked after rotor replacement. | N/A |
| 6/6/13 | 13:32 | 14:32 | 1 | Adjusted for calibration drift | N/A |
| 6/10/13 | 10:12 | 12:12 | 2 | Adjusted for calibration drift | N/A |
| 6/24/13 | 10:07 | 20:07 | 10 | Annual RATA | N/A |
| 6/28/13 | 13:32 | 15:32 | 2 | Adjusted for calibration drift | N/A |
| 6/29/13 | 08:02 | 16:02 | 8 | Analyzer malfunctioned after daily validation. Sample pump failed. | Sample pump replaced. Analyzer calibrated and returned to service. |
| 6/30/13 | 15:28 | 16:38 | 1 | Adjusted for calibration drift | N/A |
| 6/30/13 | 17:34 | 18:34 | 1 | Adjusted for calibration drift | N/A |
| TOTAL | | | 28 | | |

[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: **Opacity**

Applicable NSPS Subpart: J

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

Company: Valero Refining - Meraux LLC
Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: Opacity shall not exceed 30% for more than one 6-minute interval in any 1-hour period

Monitor Manufacturer and Model No.: Teledyne Monitor Labs LightHawk 560

Process Unit(s) Description: #2 FCCU ESP Stack (EPN 2-77, EQT 0032)

CEM Sampling Location: #2 FCCU ESP Stack

CEM Span Value: Opacity 100%

I. ACCURACY ASSESSMENT RESULTS

Not applicable to opacity monitors.

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: **CO**

Applicable NSPS Subpart: J (Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 27)

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

Company: Valero Refining - Meraux LLC
Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: CO corrected to 0% $O_2$ shall not exceed 500 ppm on a 1 hour rolling average

Monitor Manufacturer and Model No.: Thermo Environmental 48i (CO)/Servomex 1155 ($O_2$)

Process Unit(s) Description: #2 FCCU ESP Stack (EPN 2-77, EQT 0032)

CEM Sampling Location: #2 FCCU ESP Stack

CEM Span Value: Carbon Monoxide 1000 ppm

I. ACCURACY ASSESSMENT RESULTS (RATA):

| CO corrected to 0% $O_2$ | |
|---|---|
| Date of Audit | 5/28/13 |
| Reference Method | EPA Method 10 |
| Average RM Value (ppmv) | 13.1 |
| Average CEM Value (ppmv) | 23.5 |
| Accuracy | 2.3 % |
| Limit | < 5 % |

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: __J__ (Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 18)

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 50 ppm on a 7 day rolling average and 25 ppm on a 365 day rolling average

Monitor Manufacturer and Model No.: Thermo Environmental 43i ($SO_2$)/Servomex 1155 ($O_2$)

Process Unit(s) Description: #2 FCCU ESP Stack (EPN 2-77, EQT 0032)

CEM Sampling Location: #2 FCCU ESP Stack

CEM Span Value: Sulfur Dioxide 500 ppm

I. ACCURACY ASSESSMENT RESULTS (RATA):

| $SO_2$ corrected to 0% $O_2$ | |
|---|---|
| Date of Audit | 5/28/13 |
| Reference Method | EPA Method 10 |
| Average RM Value (ppmv) | 18.77 |
| Average CEM Value (ppmv) | 18.05 |
| Accuracy | 1.8 % |
| 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: **NOx**

Applicable NSPS Subpart: None (Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 15)

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

Company: Valero Refining - Meraux LLC
Address: 2500 East St. Bernard Highway, Meraux, LA 70075

Emission Limitation: Not Applicable

Monitor Manufacturer and Model No.: Thermo Environmental 42i (NOx)/Servomex 1155 ($O_2$)

Process Unit(s) Description: #2 FCCU ESP Stack (EPN 2-77, EQT 0032)

CEM Sampling Location: #2 FCCU ESP Stack

CEM Span Value: Nitrogen Oxide 250 ppm

I. ACCURACY ASSESSMENT RESULTS (RATA):

| | |
|---|---|
| NOx corrected to 0% $O_2$ | |
| Date of Audit | 5/28/13 |
| Reference Method | EPA Method 10 |
| Average RM Value (ppmv) | 43.82 |
| Average CEM Value (ppmv) | 44.43 |
| Accuracy | 8.9 % |
| 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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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):

| | |
|---|---|
| Date of Audit | 5/24/13 |
| Reference Method | EPA Method 6C / EPA Method 3A |
| Average RM Value (ppmv) | 31.85 |
| Average CEM Value (ppmv) | 22.29 |
| Accuracy | 5.4 %. |
| Limit | < 10 % |

II. CALIBRATION DRIFT ASSESSMENT

C. Out-of Control Periods:

3. Dates: N/A

4. Number of Days N/A

D. 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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 991-CEM-X ($SO_2$), Rosemount Oxymitter 4000 (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):

| | |
|---|---|
| Date of Audit | 6/24/13 |
| Reference Method | EPA Method 6C / EPA Method 3A |
| Average RM Value (ppmv) | 121.41 |
| Average CEM Value (ppmv) | 110.74 |
| Accuracy | 6.0 % |
| Limit | < 10% |

II. CALIBRATION DRIFT ASSESSMENT

A. Out-of Control Periods:

1. Dates: 5/13/13

2. Number of Days 1

B. Corrective Actions: On 5/14/13, the $SO_2$ analyzer failed the automatic daily validation. The high span value was greater than 4x the allowable limit above the reference gas. Valero maintenance calibrated the $SO_2$ analyzer and returned it to service.

# DATA ASSESSMENT REPORT

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

Pollutant: $H_2S$

Applicable NSPS Subpart: J

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

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):

| | Gas #1 | Gas #2 |
|---|---|---|
| Date of Audit | 5/23/13 | 5/23/13 |
| Reference Method | EPA Method 11 (Alternate RATA) | EPA Method 11 (Alternate RATA) |
| Average RM Value (ppmv) | 83.60 | 170.00 |
| Average CEM Value (ppmv) | 76.82 | 152.79 |
| Accuracy | 8.11 % | 10.12 % |
| Limit | < 15 % | < 15 % |

II. CALIBRATION DRIFT ASSESSMENT

A. Out-of Control Periods:

1. Dates: 4/24/13

2. Number of Days 1

B. Corrective Actions: On 4/25/13, the analyzer went to max scale when the high span reference gas was applied. This was due to poor condensate water quality and flow supplied to the analyzer over the past few days due to shutdowns and maintenance being performed in the refinery. Valero maintenance cleaned analyzer, replaced the condensate filters, and performed a satisfactory validation before returning the analyzer to service.

# 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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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):

| | Gas #1 | Gas #2 |
|---|---|---|
| Date of Audit | 5/23/13 | 5/23/13 |
| Reference Method | EPA Method 11 (Alternate RATA) | EPA Method 11 (Alternate RATA) |
| Average RM Value (ppmv) | 83.60 | 170.00 |
| Average CEM Value (ppmv) | 82.64 | 164.06 |
| Accuracy | 1.48 % | 3.49 % |
| 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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 Alky Reboiler (EPN 1-77, EQT 0078)

CEM Sampling Location: Area 4 Fuel Drum

CEM Span Value: Hydrogen Sulfide, 300 ppm

I. ACCURACY ASSESSMENT RESULTS (RATA):

| | Gas #1 | Gas #2 |
|---|---|---|
| Date of Audit | 6/24/13 | 6/24/13 |
| Reference Method | EPA Method 11 (Alternate RATA) | EPA Method 11 (Alternate RATA) |
| Average RM Value (ppmv) | 82.00 | 165.00 |
| Average CEM Value (ppmv) | 80.58 | 170.93 |
| Accuracy | 3.01 % | 3.59 % |
| 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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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):

| | Gas #1 | Gas #2 |
|---|---|---|
| Date of Audit | 5/24/13 | 5/24/13 |
| Reference Method | EPA Method 11 (Alternate RATA) | EPA Method 11 (Alternate RATA) |
| Average RM Value (ppmv) | 76.40 | 170.00 |
| Average CEM Value (ppmv) | 75.17 | 156.22 |
| Accuracy | 2.72 % | 8.11 % |
| 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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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):

| | Gas #1 | Gas #2 |
|---|---|---|
| Date of Audit | 5/24/13 | 5/24/13 |
| Reference Method | EPA Method 11 (Alternate RATA) | EPA Method 11 (Alternate RATA) |
| Average RM Value (ppmv) | 83.60 | 170.00 |
| Average CEM Value (ppmv) | 88.41 | 170.89 |
| Accuracy | 5.75 % | 1.41 % |
| 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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 23042-5-8018413

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):

| | |
|---|---|
| Date of Audit | 5/23/13 |
| Reference Method | EPA Method 7E / EPA Method 3A |
| Average RM Value | 0.0455 lb/MMBtu |
| Average CEM Value | 0.0474 lb/MMBtu |
| Accuracy | 2.0 % |
| 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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 23042-5-8018413

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):

| | |
|---|---|
| Date of Audit | 5/23/13 |
| Reference Method | EPA Method 7E / EPA Method 3A |
| Average RM Value | 0.0340 lb/MMBtu |
| Average CEM Value | 0.0350 lb/MMBtu |
| Accuracy | 1.5 % |
| Limit | < 10 % |

II. CALIBRATION DRIFT ASSESSMENT

A. Out-of Control Periods:

1. Dates: 4/30/13

2. Number of Days 1

B. Corrective Actions: On 4/30/13, the B-6 NOx analyzer completed its 5th consecutive day with the high span value > 2x the allowable limit due to calibration drift. This was not recognized by Valero personnel until 5/1/13. On 5/1/13 Valero maintenance personnel calibrated the analyzer and returned it to service.

# DATA ASSESSMENT REPORT

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

Pollutant: **$NO_x$**

Applicable NSPS Subpart: Db

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 (NOx)/($O_2$)

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):

| | |
|---|---|
| Date of Audit | 5/22/13 |
| Reference Method | EPA Method 7E / EPA Method 3A |
| Average RM Value | 0.0252 lb/MMBtu |
| Average CEM Value | 0.0261 lb/MMBtu |
| Accuracy | 1.1 % |
| Limit | < 10 % |

II. CALIBRATION DRIFT ASSESSMENT

A. Out-of Control Periods:

1. Dates: 4/10/13

2. Number of Days 1

B. Corrective Actions: On 4/11/13, the NOx analyzer high span was above the reference gas > 4x the allowable limit. Valero believes the cause to be a power interruption that occurred in that area on 4/10/13. Valero maintenance personnel calibrated the analyzer and returned it to service. The problem did not reoccur.

# DATA ASSESSMENT REPORT

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

Pollutant: **$NO_x$**

Applicable NSPS Subpart: Ja

Reporting period dates: From 4/01/13 to 6/30/13
Date submitted: 7/24/13

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 (NOx)/($O_2$)

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):

| | |
|---|---|
| Date of Audit | 6/25/13 |
| Reference Method | EPA Method 7E / EPA Method 3A |
| Average RM Value (ppmv) | 17.85 |
| Average CEM Value (ppmv) | 17.83 |
| Accuracy | 0.5 % |
| Limit | < 10 % |

III. CALIBRATION DRIFT ASSESSMENT

A. Out-of Control Periods:

1. Dates: 6/27/13

2. Number of Days 1

B. Corrective Actions: On 6/27/13, the BRU NOx was below the high span > 4x the allowable limit and the $O_2$ zero check was > 1% $O_2$ above zero. Valero maintenance personnel recalibrated the analyzers and returned them to service.

# 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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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

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

I. ACCURACY ASSESSMENT RESULTS (RATA):

| | Gas #1 | Gas #2 |
|---|---|---|
| Date of Audit | 6/24/13 | 6/24/13 |
| Reference Method | EPA Method 11 (Alternate RATA) | EPA Method 11 (Alternate RATA) |
| Average RM Value (ppmv) | 1021.00 | 10020.00 |
| Average CEM Value (ppmv) | 1058.41 | 10046.35 |
| Accuracy | 3.66 % | 0.53 % |
| 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: 5/27/13

2. Number of Days 1

B. Corrective Actions: Out of control due to failing the zero span check on 5/28/13. Instead of going down to zero when the zero gas was applied the value increased from the sample value. Valero maintenance inspected the analyzer and found nothing wrong. Valero maintenance then performed a satisfactory validation and the problem did not reoccur. Valero believes that this was probably due to a solenoid valve leaking by and interfering with the zero check.

# 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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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

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

I. ACCURACY ASSESSMENT RESULTS (RATA):

| | Gas #1 | Gas #2 |
|---|---|---|
| Date of Audit | 6/24/13 | 6/24/13 |
| Reference Method | EPA Method 11 (Alternate RATA) | EPA Method 11 (Alternate RATA) |
| Average RM Value (ppmv) | 1021.00 | 10020.00 |
| Average CEM Value (ppmv) | 1018.31 | 9507.04 |
| Accuracy | 0.68 % | 5.12 % |
| 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 4/01/13 to 6/30/13
Date submitted: 7/24/13

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

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

I. ACCURACY ASSESSMENT RESULTS (RATA):

| | Gas #1 | Gas #2 |
|---|---|---|
| Date of Audit | 6/24/13 | 6/24/13 |
| Reference Method | EPA Method 11 (Alternate RATA) | EPA Method 11 (Alternate RATA) |
| Average RM Value (ppmv) | 1021.00 | 10020.00 |
| Average CEM Value (ppmv) | 1078.19 | 9938.62 |
| Accuracy | 5.60 % | 1.27 % |
| 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

VALERO

June 3, 2013

CERTIFIED: 7011 2970 0002 0808 3972

Department of Environmental Quality
Single Point of Contact (SPOC)
Office of Environmental Compliance
Attn: Emergency Response
P.O. Box 4312
Baton Rouge, LA 70821-4312

Re: UNAUTHORIZED DISCHARGE NOTIFICATION REPORT
Valero Refining – Meraux LLC, Agency Interest #1238
2500 E. St. Bernard Hwy, St. Bernard Parish, Meraux, LA
Title V Permit: 2500-00001-V8
SERC Incident #: 13-01449

Gentlemen,

Valero Refining-Meraux LLC (Valero) is submitting this written notification for an air upset incident reported verbally to the Department on 4/05/13, pursuant to LAC 33:III.927, Louisiana Air Emission Permit General Condition XI.A. and 40 CFR 70 General Condition R.1. Valero has previously submitted a written notification on 4/12/13. This is the final written notification. The incident is described as follows:

#3 SRU Trip 4/5/13

Should you have any questions regarding this submission, please contact 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,

VALERO REFINING – MERAUX LLC

Lauren K. Bird
Vice President and General Manager
Meraux Refinery

cc: Mr. Mike Algero, LDEQ SE Regional Office, New Orleans, LA

# EMERGENCY OCCURRENCE AND/OR AIR UPSET NOTIFICATION FORM

**COMPANY NAME:** Valero Refining – Meraux LLC
**PHYSICAL LOCATION:** 2500 E. St. Bernard Hwy.
**P. O. BOX:**
**CITY, STATE, ZIP:** Meraux, LA 70075
**TELEPHONE NO:** (504) 271-4141

**DATE/TIME OF CALL:** 4/5/13 09:38
**DEQ OFFICIAL CONTACTED:** SERC Hazardous Materials Hotline Operator
**VALERO OFFICIAL WHO MADE CALL:** Justin Stubbe

**APPLICABLE PERMIT INVOLVED?** 2500-00001-V8

**EMISSION PT. SOURCE(S) INVOLVED?**

| Point Source | EPN | EQT |
|---|---|---|
| South Flare Stack | 3-77 | 0049 |
| SRU No.3 Incinerator | 5-00 | 0079 |
| Boiler B-5 | 2-00 | 0030 |
| Boiler B-6 | 3-00 | 0048 |
| Boiler B-7 | 1-07 | 0010 |
| Boiler TB-01 | 1-06 | 0011 |
| MDH Product Fractionator and Charge Heater | 2-92 | 0033 |

**APPLICABLE AIR QUALITY REGULATIONS INVOLVED?** LAC 33:III.927

**UPSET DESCRIPTION, CAUSE, AND WHAT OFFSITE IMPACT RESULTED:**
On April 5, 2013 at approximately 08:47, Valero experienced excess emissions of Sulfur Dioxide ($SO_2$) and Hydrogen Sulfide ($H_2S$) at the South Flare, the #3 Sulfur Recovery Unit (SRU), and several refinery fuel gas fired sources due to a loss of power to the refinery's Distributed Control System (DCS). The DCS is a computerized system used to monitor and control the refinery process units.

At the time of the incident, most refinery units were shutdown for planned maintenance, only the Reformer, Naphtha Hydrotreater (NHT), Middle Distillate Hydrotreater (MDH), #3 SRU, and the four boilers remained in service. In order to perform work on the electrical distribution system, a temporary generator was installed to power vital loads, including the DCS. Additionally, the DCS Uninterruptible Power Supplies (UPSs) were bypassed for protection, so that battery backup was not available.

This temporary power generator dropped offline due to loss of communications between the generator and the engine driving the generator. The root cause of the loss of communications was a loose termination connection on a communications cable.

The loss of the DCS caused the immediate shutdown of the remaining refinery units. Upon shutdown of the #3 SRU, field operators cut stripping steam to the #2 Amine unit to prevent acid gas flaring. This allowed some $H_2S$ to enter the refinery fuel gas system which was then combusted to $SO_2$ as the fired sources were returned to service. The bulk of the $SO_2$ emissions came from the actuation of a Pressure Safety Valve in the MDH that vented $H_2S$ containing material to the South Flare.

The DCS was restored in less than 25 minutes. Valero restarted all four boilers, the #3 SRU, and the MDH. The Reformer Charge Heater was re-lit as part of a controlled shutdown and the NHT was shutdown.

SERC Incident #13-01449

Valero provided verbal notification to the SERC within 1 hour of determining the release to be greater than a Reportable Quantity of $SO_2$. Valero received no citizen complaints as a result of this event and downwind ambient monitoring for $SO_2$ and $H_2S$ produced low, intermittent readings that were unlikely to have caused an offsite impact.

**DATE/TIME RELEASE BEGAN AND TIME IT LASTED:**
$SO_2$ emissions from the North Flare occurred on 4/5/13 from 08:47 to 4/5/13 22:51 for a duration of 14.1 hours.

**WHICH SPECIFIC POLLUTANTS WERE EMITTED AND HOW MUCH OF EACH COMPOUND WAS RELEASED?**
$SO_2$, estimated at 2,417 pounds, and $H_2S$, estimated at 10 pounds.

**WHAT OTHER AGENCIES WERE NOTIFIED?** LDEQ and LEPC.

**IMMEDIATE CORRECTIVE ACTION TAKEN?**
The rental company technician for the generator quickly identified the loose termination connection as the issue, corrected the loose termination, and placed the generator back online in approximately ten to fifteen minutes. Power to the DCS was quickly restored and the affected units were shutdown in a controlled manner. Valero requested a backup generator from the rental company as a spare for the one that had tripped, which arrived later that day.

An additional generator was brought onsite and the loads were divided so that two generators were supplying separate loads to minimize the impact from the loss of one generator. Valero also re-connected the generators to feed electrical power through the UPS, allowing for battery backup in the event of a generator trip.

**SPECIFIC ACTIONS TAKEN/PLANNED TO PREVENT RECURRENCE?**
The electrical maintenance was completed without further incident and the temporary generators were removed. To reduce the likelihood of future upsets when using temporary power generators, Valero has committed to the following:

1. Valero will develop a procedure for the use of portable generators to provide temporary power to process equipment/controls to ensure that an adequate backup plan is in place in the event of a generator failure.
2. Valero will develop a "Loss of Steam" emergency operating procedure for the MDH Unit.
3. Valero will revise Risk Management Committee (RMC) policy to require RMC approval for the use of temporary generators to provide power to process equipment.

**WAS THE RELEASE PREVENTABLE?** (if no, provide details):
Yes. There were no injuries as a result of this episode.

**REGULATION NOTIFICATION REQUIREMENT(S):**
_x_ LAC 33:III.927 (Upset/Emergency)
_x_ LAC 33:I.3917 (RQ)
___ LAC 33:III.5107B (Air Toxics)

SIGNATURE _____ DATE 5/31/13
TITLE Sr. Environmental Engineer

# CALCULATION SHEET

## #3 SRU Trip (4/5/13)
## Valero Refining – Meraux LLC

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**Emissions for Heaters, Boilers, Flares, and the #3 SRU Incinerator**

Pounds of $SO_2$ = [FR][TD][Conc$H_2S$][EF][$1.69 \times 10^{-7}$]
Pounds of $H_2S$ = [FR][TD][Conc$H_2S$][1-EF][$8.96 \times 10^{-8}$]

| | | |
|---|---|---|
| FR | = | Average Flow Rate of gas combusted (SCFH) |
| TD | = | Total Duration (hrs) |
| Conc$H_2S$ | = | Average Concentration of $H_2S$ in gas (ppm) |
| EF | = | Combustion Efficiency |
| $1.69 \times 10^{-7}$ | = | [lb mole $H_2S$/379.5 scf $H_2S$][64 lbs $SO_2$/lb mole $H_2S$]/1000000 |
| $8.96 \times 10^{-8}$ | = | [lb mole $H_2S$/379.5 scf $H_2S$][34 lbs $H_2S$/lb mole $H_2S$]/1000000 |

Notes:

1. Heaters and Boilers -The flow rates was measured by fuel gas flow meters. The $H_2S$ concentration was estimated using a Fuel Drum $H_2S$ Analyzer that measures $H_2S$ concentration from 0-300 ppm. During periods where the Fuel Drum $H_2S$ Analyzer was at maximum scale (i.e. >300 ppm), the value of 600 ppm (2 x 300 ppm) was substituted.
2. South Flare - continuously monitored for both flow and total Sulfur concentration.
3. The flow rate for the #3 SRU Incinerator was estimated using engineering judgment based on material balance and stack test information. The $SO_2$ concentration was measured using a CEMS spanned from 0-500 ppm. During periods where the $SO_2$ CEMS was at maximum scale (i.e. > 500 ppm), the value of 1000 ppm (2 x 500 ppm) was substituted.

# CALCULATION SHEET

## #3 SRU Trip (4/5/13)
## Valero Refining – Meraux LLC

| Heaters, Boilers, South Flare, and the #3 SRU Incinerator | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Point Source(s) | Start | Stop | TD (hrs) | FR (SCFH) | Conc$H_2S$ (ppm) | EF | $SO_2$ (lbs) | $H_2S$ (lbs) | Event Description |
| South Flare | 4/5/13 08:47 | 4/5/13 15:30 | 6.7 | 80,728 | 14,071 | 0.99 | 1,277 | 7 | Incident start to South Flare total sulfur concentrations returned to normal. Includes MDH PSV actuation. |
| #3 SRU | 4/5/13 08:47 | 4/5/13 22:52 | 14.1 | 309,998 | 995 | 0.995 | 731 | 2 | Incident start to #3 SRU back in service with Incinerator $SO_2$ < 250 ppm. |
| Area 1 Fuel Drum: Boiler B-7, Boiler TB-01, MDH Heaters | 4/5/13 09:50 | 4/5/13 12:48 | 3.0 | 132,662 | 363 | 0.995 | 24 | 0 | Fuel gas combusted with $H_2S$ > 162 ppm. |
| Area 2 Fuel Drum: Reformer Charge Heater | 4/5/13 10:47 | 4/5/13 21:29 | 10.7 | 279,842 | 544 | 0.995 | 274 | 1 | Fuel gas combusted with $H_2S$ > 162 ppm. |
| Hydrocracker Boilers Fuel Drum: Boiler B-5, Boiler B-6 | 4/5/13 11:03 | 4/5/13 20:05 | 9.0 | 127,889 | 572 | 0.995 | 111 | 0 | Fuel gas combusted with $H_2S$ > 162 ppm. |
| | | | | | | **Total** | 2,417 | 10 | |

SERC Incident #13-01449

VALERO

July 12, 2013

CERTIFIED: 7011 2970 0002 0808 3781

Department of Environmental Quality
Single Point of Contact (SPOC)
Office of Environmental Compliance
Attn: Emergency Response
P.O. Box 4312
Baton Rouge, LA 70821-4312

Re: UNAUTHORIZED DISCHARGE NOTIFICATION REPORT
Valero Refining – Meraux LLC, Agency Interest #1238
2500 E. St. Bernard Hwy, St. Bernard Parish, Meraux, LA
Title V Permit: 2500-00001-V8
SERC Incident #: 13-02180

Gentlemen,

Valero Refining-Meraux LLC (Valero) is submitting this written notification for an air upset incident reported verbally to the Department on 5/17/13, pursuant to LAC 33:III.927, Louisiana Air Emission Permit General Condition XI.A. and 40 CFR 70 General Condition R.1. Valero has previously submitted a written notification on 5/24/13. This is the final written notification. The incident is described as follows:

#3 SRU Shutdown 5/17/13

Should you have any questions regarding this submission, please contact me 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,

VALERO REFINING – MERAUX LLC

Lauren K. Bird
Vice President and General Manager
Meraux Refinery

cc: Mr. Mike Algero, LDEQ SE Regional Office, New Orleans, LA

# EMERGENCY OCCURRENCE AND/OR AIR UPSET NOTIFICATION FORM

**COMPANY NAME:** Valero Refining – Meraux LLC
**PHYSICAL LOCATION:** 2500 E. St. Bernard Hwy.
**P. O. BOX:**
**CITY, STATE, ZIP:** Meraux, LA 70075
**TELEPHONE NO:** (504) 271-4141

**DATE/TIME OF CALL:** 5/17/13 17:22
**DEQ OFFICIAL CONTACTED:** Elizabeth, SERC Hazardous Materials Hotline Operator
**VALERO OFFICIAL WHO MADE CALL:** Matt Dobbins

**APPLICABLE PERMIT INVOLVED?** 2500-00001-V8

**EMISSION PT. SOURCE(S) INVOLVED?**

| Point Sources | EPN | EQT |
|---|---|---|
| No. 1 Crude Heater | 12-72A | 0022 |
| NHT Charge Heater | 14-72 | 0023 |
| NHT Debut Reboiler | 15-72 | 0024 |
| NHT Depent Reboiler | 16-72 | 0027 |
| Platformer Charge Heater | 17-72a,b,c | 0028 |
| Platformer Debut Reboiler | 19-72 | 0029 |
| DHT Charge Heater | 5-73 | 0058 |
| Vacuum Heaters | 1-76 | 0013 |
| No. 2 Alky Reboiler | 1-77 | 0078 |
| ROSE Heater | 1-80 | 0014 |
| Hydrocracker/Hydrotreater/Fractionator Charge Heaters | 1-00 | 0009 |
| Boiler B-5 | 2-00 | 0030 |
| Boiler B-6 | 3-00 | 0048 |
| North Flare Stack | 20-72 | 0035 |
| South Flare Stack | 3-77 | 0049 |
| SRU #2 Incinerator | 1-93 | 0019 |
| SRU No.3 Incinertator | 5-00 | 0079 |

**APPLICABLE AIR QUALITY REGULATIONS INVOLVED?** LAC 33:III.927

**UPSET DESCRIPTION, CAUSE, AND WHAT OFFSITE IMPACT RESULTED:**
On May 17, 2013 at approximately 15:43, Valero experienced excess emissions of Sulfur Dioxide ($SO_2$) at the North Flare, the #2 and #3 Sulfur Recovery Units (SRU), and several refinery fuel gas-fired sources due to an unexpected shutdown of the #3 SRU. The #3 SRU shut down on high burner pressure caused by a plugged condenser seal leg.

After several unsuccessful attempts to unplug and restart the #3 SRU, Valero determined that the unit could not be restarted and completely shut down the unit. The Gas-Oil Hydrocracker/Hydrotreater was also shut down and refinery charge rates were reduced accordingly.

Valero opened up the unit for inspection and discovered that catalyst from one of the reactor beds had migrated into the condenser and caused the plugging in the seal legs. Valero could not definitively identify the exact cause of the catalyst migration, but believes that it was most likely due to improper catalyst loading during the last catalyst replacement in 2010.

SERC Incident #13-02180

Valero provided verbal notification to the SERC within 1 hour of determining the release to be greater than a Reportable Quantity of $SO_2$. Valero received no citizen complaints as a result of this event and downwind ambient monitoring for $SO_2$ and $H_2S$ produced no detectable readings. There were no injuries as a result of this episode.

**DATE/TIME RELEASE BEGAN AND TIME IT LASTED:**
$SO_2$ emissions occurred on 5/17/13 from 15:43 to 5/18/13 09:00, for a duration of 17.3 hours.

**WHICH SPECIFIC POLLUTANTS WERE EMITTED AND HOW MUCH OF EACH COMPOUND WAS RELEASED?**
$SO_2$, estimated at 2,708 pounds, and $H_2S$, estimated at 10 pounds.

**WHAT OTHER AGENCIES WERE NOTIFIED?** LDEQ and LEPC.

**IMMEDIATE CORRECTIVE ACTION TAKEN?**
Valero immediately initiated its sulfur shedding procedure and attempted to unplug the # 3 SRU condenser and restart the #3 SRU. Valero transferred as much of the remaining sulfur load to the #2 SRU as the unit's capacity would allow. Before the sulfur shedding procedure reduced the sulfur load to within the capacity of the #2 SRU, $H_2S$ entered the refinery fuel gas system and was combusted to $SO_2$ in the refinery heaters and boilers. $H_2S$ concentrations in the refinery fuel gas system returned to less than the 162 ppm NSPS Subpart J limit at approximately 05:14 on 5/18/13.

**SPECIFIC ACTIONS TAKEN/PLANNED TO PREVENT RECURRENCE?**
Valero reloaded the #3 SRU with new catalyst and ensured that the catalyst was properly loaded and supported with additional support media. Valero plans to install a smaller mesh screen on top of the existing ¼" screen that currently supports the catalyst bed and support media.

**WAS THE RELEASE PREVENTABLE?** (if no, provide details):
Yes.

**REGULATION NOTIFICATION REQUIREMENT(S):**

- _x_ LAC 33:III.927 (Upset/Emergency)
- _x_ LAC 33:I.3917 (RQ)
- ___ LAC 33:III.5107B (Air Toxics)

SIGNATURE _____ DATE 7/11/13
TITLE Sr. Environmental Engineer

# CALCULATION SHEET

## #3 SRU Shutdown (5/17/13)
## Valero Refining – Meraux LLC

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**North Flare, Heaters, and Boilers Emissions Calculations**

Estimated emissions from the combustion of $H_2S$ containing gas:

Pounds of $SO_2$ = [FR][TD][Conc$H_2S$][EF][$1.69 \times 10^{-7}$]

Pounds of $H_2S$ = [FR][TD][Conc$H_2S$][1-EF][$8.96 \times 10^{-8}$]

| | | |
|---|---|---|
| FR | = | Average Flow Rate of gas combusted (SCFH) |
| TD | = | Total Duration (hrs) |
| Conc | = | Average Concentration of $H_2S$ in gas (ppm) |
| EF | = | Combustion Efficiency |
| $1.69 \times 10^{-7}$ | = | [lb mole $H_2S$/379.5 scf $H_2S$][64 lbs $SO_2$/lb mole $H_2S$]/1000000 |
| $8.96 \times 10^{-8}$ | = | [lb mole $H_2S$/379.5 scf $H_2S$][34 lbs $H_2S$/lb mole $H_2S$]/1000000 |

**#2 and #3 SRU Incinerator Calculations**

Estimated emissions from Incinerator $SO_2$ monitoring:

Pounds of $SO_2$ = [FR][TD][Conc$SO_2$][$1.69 \times 10^{-7}$]

Pounds of $H_2S$ = [FR][TD][Conc$SO_2$][1-EF][$8.96 \times 10^{-8}$]/[EF]

| | | |
|---|---|---|
| FR | = | Average Flow Rate of (SCFH) |
| TD | = | Total Duration (hrs) |
| Conc | = | Average Concentration of $SO_2$ in Incinerator Exhaust (ppm) |
| EF | = | Combustion Efficiency |
| $1.69 \times 10^{-7}$ | = | [lb mole $SO_2$/379.5 scf $SO_2$][64 lbs $SO_2$/lb mole $H_2S$]/1000000 |
| $8.96 \times 10^{-8}$ | = | [lb mole $H_2S$/379.5 scf $H_2S$][34 lbs $H_2S$/lb mole $H_2S$]/1000000 |

Notes:

1. Heaters and Boilers -The flow rates was measured by fuel gas flow meters. The $H_2S$ concentration was estimated using a Fuel Drum $H_2S$ Analyzer that measures $H_2S$ concentration from 0-300 ppm. During periods where the Fuel Drum $H_2S$ Analyzer was at maximum scale (i.e. >300 ppm), a value of 600 ppm (2 x 300 ppm) was substituted unless indicated otherwise by manual sampling (Dragers).
2. North Flare - continuously monitored for both flow and total Sulfur concentration.
3. The flow rates for the #2 and #3 SRU Incinerators was estimated using engineering judgment based on material balance and stack test information. The $SO_2$ concentrations were measured using a CEMS spanned from 0-500 ppm. During periods where the $SO_2$ CEMS was at maximum scale (i.e. > 500 ppm), a value of 1000 ppm (2 x 500 ppm) was substituted.

# CALCULATION SHEET

## #3 SRU Shutdown (5/17/13)
## Valero Refining – Meraux LLC

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**Emissions Calculations**

| Point Source(s) | Start | Stop | TD (hrs) | FR (SCFH) | Conc $H_2S$ (or $SO_2$) (ppm) | EF | $SO_2$ (lbs) | $H_2S$ (lbs) | Event Description |
|---|---|---|---|---|---|---|---|---|---|
| North Flare | 5/17/13 16:34 | 5/18/13 05:50 | 13.3 | 244,535 | 613 | 0.980 | 330 | 4 | North Flare Total Sulfur above normal |
| #2 SRU Incinerator | 5/17/13 15:43 | 5/17/13 20:43 | 5.0 | 364,469 | 918 | 0.995 | 283 | 1 | Incinerator $SO_2$ > 250 ppm |
| #3 SRU Incinerator | 5/17/13 15:43 | 5/18/13 09:00 | 17.3 | 83,914 | 242 | 0.995 | 59 | 0 | Incinerator $SO_2$ > 250 ppm |
| Area 2 Fuel Drum | 5/17/13 16:47 | 5/18/13 03:57 | 11.2 | 505,737 | 1,520 | 0.995 | 1,448 | 4 | Fuel Drum $H_2S$ > 162 ppm |
| Area 4 Fuel Drum | 5/17/13 16:32 | 5/18/13 05:15 | 12.7 | 41,480 | 550 | 0.995 | 49 | 0 | Fuel Drum $H_2S$ > 162 ppm |
| Hydrocracker Heaters Fuel Drum | 5/17/13 16:36 | 5/18/13 05:02 | 12.4 | 107,384 | 1,726 | 0.995 | 386 | 1 | Fuel Drum $H_2S$ > 162 ppm |
| Hydrocracker Boilers Fuel Drum | 5/17/13 16:49 | 5/18/13 04:24 | 11.6 | 158,266 | 494 | 0.995 | 153 | 0 | Fuel Drum $H_2S$ > 162 ppm |
| | | | | | | **Total** | 2,708 | 10 | |

SERC Incident #13-02180