



April 30, 2013

CERTIFIED: 7011 2970 0002 0808 3842

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 – 1st 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 First Quarter 2013.

For this reporting period, excess emissions greater than or equal to 1 percent of the total operating time occurred at 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 Area 2, Area 4, Hydrocracker Heaters, and Hydrocracker Boilers Fuel Drums for Hydrogen Sulfide. The Total Sulfur Analyzer on the North Flare Stack (EPN 20-72, EQT 0035), North Flare Header, 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,

A handwritten signature in black ink that reads 'Lauren K. Bird'.

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  1/01/13  to  3/31/13 

Date submitted:  4/30/13 

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.:  Monitor Labs Model 550 

Date of Latest CMS Certification or Audit:  Certification (4/11/01) 

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

Total source operating time in reporting period<sup>1</sup>:  85,955 minutes 

<b>Emissions Data Summary<sup>1</sup></b>	
1. Duration of excess emissions in reporting period due to:	<i>(minutes)</i>
a. Startup/shutdown	0
b. Control equipment problems	0
c. Process problems	0
d. Other known causes	36
e. Unknown causes	0
2. Total duration of excess emission	36
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.0 %

<b>CMS Performance Summary<sup>1</sup></b>	
1. CMS downtime in reporting period due to:	<i>(minutes)</i>
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	0
d. Other known causes	110
e. Unknown causes	0
2. Total CMS Downtime	110
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.1 %

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

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

**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  1/01/13  to  3/31/13 

Date submitted:  4/30/13 

Company: Valero Refining - Meraux LLC

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

Emission Limitation: CO corrected to 0% O<sub>2</sub> shall not exceed 500 ppm on a 1 hour rolling average

Monitor Manufacturer and Model No.: Thermo Environmental 48i (CO)/Servomex 1155 (O<sub>2</sub>)

Date of Latest CMS Certification or Audit: CGA on 2/20/13 (CO), 2/14/13 (O<sub>2</sub>)

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

Total source operating time in reporting period: 1,432 hours

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

<b>CMS Performance Summary<sup>1</sup></b>	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	0
d. Other known causes	20
e. Unknown causes	0
2. Total CMS Downtime	20
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	1.4 %

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

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



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

*(per 40 CFR 60.7(d))*

Pollutant: SO<sub>2</sub>

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

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

Company: Valero Refining - Meraux LLC

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

Emission Limitation: SO<sub>2</sub> corrected to 0% O<sub>2</sub> 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<sub>2</sub>)/Servomex 1155 (O<sub>2</sub>)

Date of Latest CMS Certification or Audit: CGA on 2/19/13 (SO<sub>2</sub>), 2/14/13 (O<sub>2</sub>)

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

Total source operating time in reporting period: 1,432 hours

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

<b>CMS Performance Summary<sup>1</sup></b>	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	0
d. Other known causes	20
e. Unknown causes	0
2. Total CMS Downtime	20
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	1.4 %

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

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



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

*(per 40 CFR 60.7(d))*

Pollutant: NO<sub>x</sub>

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

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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 (NO<sub>x</sub>)/Servomex 1155 (O<sub>2</sub>)

Date of Latest CMS Certification or Audit: CGA on 2/18/13 (NO<sub>x</sub>), 2/14/12 (O<sub>2</sub>)

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

Total source operating time in reporting period: 1,432 hours

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

<b>CMS Performance Summary<sup>1</sup></b>	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	0
d. Other known causes	20
e. Unknown causes	0
2. Total CMS Downtime	20
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	1.4 %

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

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

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

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

Pollutant: **SO<sub>2</sub>**

Applicable NSPS Subpart: Ja

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

Company: Valero Refining - Meraux LLC

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

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

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

Date of Latest CMS Certification or Audit: CGA on 2/18/13 (SO<sub>2</sub>), 2/19/13 (O<sub>2</sub>)

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

Total source operating time in reporting period: 2,160 hours

<b>Emissions Data Summary<sup>1</sup></b>	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
a. Startup/shutdown	58
b. Control equipment problems	0
c. Process problems	0
d. Other known causes	0
e. Unknown causes	0
2. Total duration of excess emission	58
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	2.7 %

<b>CMS Performance Summary<sup>1</sup></b>	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	24
d. Other known causes	5
e. Unknown causes	0
2. Total CMS Downtime	29
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	1.3 %

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

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

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

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

Pollutant: SO<sub>2</sub>

Applicable NSPS Subpart: Ja

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

Company: Valero Refining - Meraux LLC

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

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

Monitor Manufacturer and Model No.: Brimstone 991-CEM-X(SO<sub>2</sub>)/ Rosemount Oxymitter 4000(O<sub>2</sub>)

Date of Latest CMS Certification or Audit: CGA on 2/19/13(SO<sub>2</sub>), 2/19/13 (O<sub>2</sub>)

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

Total source operating time in reporting period: 2,160 hours

<b>Emissions Data Summary<sup>1</sup></b>	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
a. Startup/shutdown	89
b. Control equipment problems	0
c. Process problems	0
d. Other known causes	12
e. Unknown causes	0
2. Total duration of excess emission	101
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	4.7 %

<b>CMS Performance Summary<sup>1</sup></b>	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	30
d. Other known causes	11
e. Unknown causes	0
2. Total CMS Downtime	41
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	1.9 %

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

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



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

*(per 40 CFR 60.7(d))*

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

Applicable NSPS Subpart: J

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 2/21/13

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: 2,160 hours

<b>Emissions Data Summary<sup>1</sup></b>	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
a. Startup/shutdown	0
b. Control equipment problems	0
c. Process problems	8
d. Other known causes	0
e. Unknown causes	0
2. Total duration of excess emission	8
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	0.4 %

<b>CMS Performance Summary<sup>1</sup></b>	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	0
d. Other known causes	4
e. Unknown causes	0
2. Total CMS Downtime	4
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.3 %

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

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

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

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

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

Applicable NSPS Subpart: J

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 2/21/13

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); NHT Charge Heater (EPN 14-72, EQT 0023); NHT Debut Reboiler (EPA 15-72, EQT 0024); NHT Depent Reboiler (EPA 16-72, EQT 0027)

Total source operating time in reporting period: EQT 0022 - 2,109 hours; EQT 0013 - 2,107 hours; EQT 0028 & 0029 - 2,094 hours; EQT 0023, 0024, & 0027 - 2,098 hours

<b>Emissions Data Summary<sup>1</sup></b>	
1. Duration of excess emissions in reporting period due to:	(hours)
a. Startup/shutdown	0
b. Control equipment problems	0
c. Process problems	24
d. Other known causes	0
e. Unknown causes	0
2. Total duration of excess emission	24
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	1.1 %

<b>CMS Performance Summary<sup>1</sup></b>	
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	8
e. Unknown causes	0
2. Total CMS Downtime	38
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	1.8 %

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

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

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

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

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

Applicable NSPS Subpart: J

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 2/21/13

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

Total source operating time in reporting period: 1,942 hours

<b>Emissions Data Summary<sup>1</sup></b>	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
a. Startup/shutdown	0
b. Control equipment problems	0
c. Process problems	21
d. Other known causes	0
e. Unknown causes	0
2. Total duration of excess emission	21
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	1.1 %

<b>CMS Performance Summary<sup>1</sup></b>	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	30
d. Other known causes	9
e. Unknown causes	0
2. Total CMS Downtime	39
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	2.0%

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

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



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

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

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

Applicable NSPS Subpart: Ja

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 2/21/13

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: 1,492 hours

<b>Emissions Data Summary<sup>1</sup></b>	
1. Duration of excess emissions in reporting period due to:	(hours)
a. Startup/shutdown	0
b. Control equipment problems	0
c. Process problems	3
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] <sup>2</sup>	0.2 %

<b>CMS Performance Summary<sup>1</sup></b>	
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	8
e. Unknown causes	0
2. Total CMS Downtime	38
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	2.6 %

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

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

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

*(per 40 CFR 60.7(d))*

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

Applicable NSPS Subpart: J

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 2/20/13

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

Total source operating time in reporting period: 1,547 hours

<b>Emissions Data Summary<sup>1</sup></b>	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
a. Startup/shutdown	0
b. Control equipment problems	0
c. Process problems	27
d. Other known causes	0
e. Unknown causes	0
2. Total duration of excess emission	27
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	1.7 %

<b>CMS Performance Summary<sup>1</sup></b>	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	0
d. Other known causes	9
e. Unknown causes	0
2. Total CMS Downtime	9
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.6 %

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

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

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

*(per 40 CFR 60.7(d))*

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

Applicable NSPS Subpart: J

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 2/20/13

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: 1,791 hours

<b>Emissions Data Summary<sup>1</sup></b>	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
a. Startup/shutdown	0
b. Control equipment problems	0
c. Process problems	24
d. Other known causes	0
e. Unknown causes	0
2. Total duration of excess emission	24
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	1.3 %

<b>CMS Performance Summary<sup>1</sup></b>	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	33
d. Other known causes	2
e. Unknown causes	0
2. Total CMS Downtime	35
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	2.0 %

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

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



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

*(per 40 CFR 60.7(d))*

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

Applicable NSPS Subpart: J

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 2/20/13

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: 2,160 hours

<b>Emissions Data Summary<sup>1</sup></b>	
1. Duration of excess emissions in reporting period due to:	<i>(hours)</i>
a. Startup/shutdown	0
b. Control equipment problems	0
c. Process problems	22
d. Other known causes	0
e. Unknown causes	0
2. Total duration of excess emission	22
3. Total duration of excess emissions x (100) [Total source operating time] <sup>2</sup>	1.0 %

<b>CMS Performance Summary<sup>1</sup></b>	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	0
d. Other known causes	4
e. Unknown causes	1
2. Total CMS Downtime	5
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.2 %

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

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

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

*(per 40 CFR 60.7(d))*

Pollutant: NO<sub>x</sub>

Applicable NSPS Subpart: Db

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 2/18/13 (NO<sub>x</sub>), 2/14/13 (O<sub>2</sub>)

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

Total source operating time in reporting period: 2,160 hours

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

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

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

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

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

*(per 40 CFR 60.7(d))*

Pollutant: NO<sub>x</sub>

Applicable NSPS Subpart: Db

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 2/18/13 (NO<sub>x</sub>), 2/14/13 (O<sub>2</sub>)

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

Total source operating time in reporting period: 2,160 hours

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

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

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

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



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

*(per 40 CFR 60.7(d))*

Pollutant: NO<sub>x</sub>

Applicable NSPS Subpart: Db

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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 (NO<sub>x</sub>), Thermo Environmental (O<sub>2</sub>)

Date of Latest CMS Certification or Audit: CGA on 2/18/13 (NO<sub>x</sub>), 2/14/13 (O<sub>2</sub>)

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

Total source operating time in reporting period: 2,160 hours

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

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

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

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

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

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

Pollutant: NO<sub>x</sub>

Applicable NSPS Subpart: Ja

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

Company: Valero Refining - Meraux LLC

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

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

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

Date of Latest CMS Certification or Audit: CGA on 3/19/13 (NO<sub>x</sub>), 3/19/13 (O<sub>2</sub>)

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

Total source operating time in reporting period: 1,456 hours

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

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

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

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

**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<sup>1</sup> (Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 3/13/13

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

Total source operating time in reporting period: 2,160 hours

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

<b>CMS Performance Summary<sup>2</sup></b>	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	147
d. Other known causes	13
e. Unknown causes	0
2. Total CMS Downtime	160
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>3</sup>	7.4 %

<sup>1</sup> 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.

<sup>2</sup> For opacity, record all times in minutes. For gases, record all times in hours.

<sup>3</sup> For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in §60.7(c) shall be submitted.



**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<sup>1</sup> (Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 3/13/13

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

Total source operating time in reporting period: 2,160 hours

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

<b>CMS Performance Summary<sup>2</sup></b>	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	30
d. Other known causes	5
e. Unknown causes	0
2. Total CMS Downtime	35
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>3</sup>	1.6 %

<sup>1</sup> 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.

<sup>2</sup> For opacity, record all times in minutes. For gases, record all times in hours.

<sup>3</sup> For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in §60.7(c) shall be submitted.

**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<sup>1</sup> (Required by Consent Decree: 3:10-cv-00563-bbc, Paragraph 49.a.ii)

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 3/13/13

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

Total source operating time in reporting period: 2,160 hours

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

<b>CMS Performance Summary<sup>1</sup></b>	
1. CMS downtime in reporting period due to:	<i>(hours)</i>
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	6
d. Other known causes	4
e. Unknown causes	0
2. Total CMS Downtime	10
3. Total duration of CMS Downtime x (100) [Total source operating time] <sup>2</sup>	0.5 %

<sup>1</sup> 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.

<sup>2</sup> For opacity, record all times in minutes. For gases, record all times in hours.

<sup>3</sup> For the reporting period: If the total duration of excess emissions is 1 percent or greater of the total operating time or the total CMS downtime is 5 percent or greater of the total operating time, both the summary report form and the excess emission report described in §60.7(c) shall be submitted.

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

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

Pollutant: **SO<sub>2</sub>**

Applicable NSPS Subpart: Ja

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

Company: Valero Refining - Meraux LLC

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

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

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

Date of Latest CMS Certification or Audit: CGA on 2/18/13 (SO<sub>2</sub>), 2/19/13 (O<sub>2</sub>)

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

Total source operating time in reporting period: 2,160 hours

<b>EXCESS EMISSIONS</b>						
Date	Start	End	Duration (hours)	Max 12-HRA (ppm)	Cause	Corrective Action
2/10/13	10:11		58	> 500	SO <sub>2</sub> at 0% O <sub>2</sub> greater than 250 ppm, 12-HRA, with SO <sub>2</sub> emissions less than 500 lbs/day above the allowable limit. Please see attached Unauthorized Discharge Notification Report dated April 11, 2013 for cause and corrective actions.	
2/12/13		20:11				
TOTAL			58			

<b>CMS PERFORMANCE<sup>1</sup></b>						
Date	Start	End	Duration (hours)	Cause	Corrective Action	
1/3/13	13:05	14:05	1	Adjusted for calibration drift	N/A	
2/4/13	08:28	09:28	1	Adjusted for calibration drift	N/A	
2/13/13	07:57	08:57	1	Adjusted for calibration drift	N/A	
2/13/13	08:30		24	Out of Control, SO <sub>2</sub> daily validation high span differed from reference gas greater than 4 times allowable limit on 2/14/13 due to contaminated sample lines from the extended upset 2/10/13-2/12/13.	Valero steamed out the sample lines, replaced sample line filters, adjusted and calibrated the analyzer, and performed a satisfactory calibration check.	
2/14/13		08:30				
2/18/13	10:33	11:33	1	SO <sub>2</sub> Cylinder Gas Audit	N/A	
2/19/13	13:28	14:28	1	O <sub>2</sub> Cylinder Gas Audit	N/A	
TOTAL			29			

<sup>1</sup>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<sub>2</sub>**

Applicable NSPS Subpart: Ja

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

Company: Valero Refining - Meraux LLC

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

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

Monitor Manufacturer and Model No.: Brimstone 991-CEM-X(SO<sub>2</sub>)/ Rosemount Oxymitter 4000(O<sub>2</sub>)

Date of Latest CMS Certification or Audit: CGA on 2/19/13(SO<sub>2</sub>), 2/19/13 (O<sub>2</sub>)

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

Total source operating time in reporting period: 2,160 hours

<b>EXCESS EMISSIONS</b>						
Date	Start	End	Duration (hours)	Max 12-HRA (ppm)	Cause	Corrective Action
2/10/13	11:13		29	> 500	SO <sub>2</sub> at 0% O <sub>2</sub> greater than 250 ppm, 12-HRA with SO <sub>2</sub> emissions greater than 500 lbs/day above the allowable limit. Please see attached Unauthorized Discharge Notification Report dated April 11, 2013 for cause and corrective actions.	
2/11/13		16:13				
2/11/13	20:24	08:24	12	324		
3/17/13	21:00	09:00	12	267	SO <sub>2</sub> at 0% O <sub>2</sub> greater than 250 ppm, 12-HRA with SO <sub>2</sub> emissions less than 500 lbs/day above the allowable limit during a shutdown of the #3 SRU for planned maintenance.	Valero completed the shutdown of the #3 SRU according to the MACT UUU SSM plan.
3/29/13	23:41	23:41	48	> 500	SO <sub>2</sub> at 0% O <sub>2</sub> greater than 250 ppm, 12-HRA, with SO <sub>2</sub> emissions less than 500 lbs/day above allowable limit during unit startup.	Valero completed the start up of the #3 SRU according to the MACT UUU SSM plan.
TOTAL			101			

<b>CMS PERFORMANCE<sup>1</sup></b>					
Date	Start	End	Duration (hours)	Cause	Corrective Action
1/9/13	08:17	09:17	1	SO <sub>2</sub> adjusted for calibration drift	N/A
2/15/13	10:48	11:48	1	SO <sub>2</sub> adjusted for calibration drift	N/A
2/15/13	13:37	14:37	1	SO <sub>2</sub> adjusted for calibration drift	N/A
2/19/13	10:08	12:08	2	SO <sub>2</sub> and O <sub>2</sub> Cylinder Gas Audits	N/A
2/28/13	08:00	14:00	6	SO <sub>2</sub> shut down to replace analyzer lamp.	Calibrated and returned to service.
3/14/13	10:43	16:43	30	Out of Control. SO <sub>2</sub> daily validation greater than 4 times allowable calibration drift on low and high spans caused by contamination from brief upset on 3/14 that did not result in excess emissions.	Valero steamed out the sample lines, replaced sample line filters, adjusted and calibrated the analyzer, and performed a satisfactory calibration check.
TOTAL			41		

<sup>1</sup>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 <sub>2</sub> emissions >500 lbs/day due to an upset of the #2 SRU and #2 TGT.			
(ii)	Start:	2/10/13 06:43	2/11/13 16:13		
	Stop:	2/11/13 05:06	2/11/13 21:49		
	Duration:	22.4 hrs	5.4		
(iii)	SO <sub>2</sub> Emissions <sup>1</sup> :	1,701 lbs	684 lbs		
	H <sub>2</sub> S Emissions <sup>1</sup> :	5 lbs	2 lbs		
(iv)	Measured Total Sulfur Concentration of Discharge from a Flare	Not applicable to Sulfur Recovery Units.			
(v)	Measured Concentration of H <sub>2</sub> S in Fuel Gas or SO <sub>2</sub> of Discharge from a Fuel Gas Combustion Device	Not applicable to Sulfur Recovery Units.			
(vi)	Measured Concentration SO <sub>2</sub> Discharged from a Sulfur Recovery Plant	>500 ppm (Maximum Range of SO <sub>2</sub> CEMS)			
(vii)	Total SO <sub>2</sub> Emissions <sup>1</sup> :	2,385 lbs			
	Total H <sub>2</sub> S Emissions <sup>1</sup> :	7 lbs			
(viii)	Steps Taken to Limit Emissions During Discharge:	Valero initiated the Sulfur Shedding Procedure and followed the MACT UUU SSM Plan to recover the #2 and #3 SRU's.			
(ix)	Root Cause:	Please see attached Unauthorized Discharge Notification Report dated April 11, 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 <sup>2</sup> :				
	Incomplete Correction Actions (Include scheduled commencement and completion dates)				

<sup>1</sup> If the discharge duration exceeds 24 hours, record the discharge quantity for each 24-hour period.

<sup>2</sup> Enter a description of the recommended corrective actions or 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<sub>2</sub>S**

Applicable NSPS Subpart: J

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 2/21/13

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); NHT Charge Heater (EPN 14-72, EQT 0023); NHT Debut Reboiler (EPA 15-72, EQT 0024); NHT Depent Reboiler (EPA 16-72, EQT 0027)

Total source operating time in reporting period: EQT 0022 - 2,109 hours; EQT 0013 - 2,107 hours; EQT 0028 & 0029 – 2,094 hours; EQT 0023, 0024, & 0027 – 2,098 hours

J EXCESS EMISSIONS						
Date	Start	End	Duration (hours)	Max 12-HRA (ppm)	Cause	Corrective Action
2/10/13	08:34	15:34	7	> 300	H <sub>2</sub> S > 162 ppm, 3-HRA. Please see attached Unauthorized Discharge Notification Report dated April 11, 2013 for cause and corrective actions.	
2/10/13	17:30		14	> 300		
2/11/13		07:30				
3/31/13	07:07	10:07	3	245	H <sub>2</sub> S > 162 ppm, 3-HRA due to high H <sub>2</sub> S in the MDH offgas. A high sulfur diesel offload from the dock into the MDH charge tank caused the sulfur content to rise rapidly and overcome the scrubbing capacity of the MDH, allowing H <sub>2</sub> S to enter the fuel gas system.	Valero immediately reduced MDH charge rate and stopped the high sulfur diesel offload. Valero then increased stripping steam to the Amine unit, increased amine strength, and increased amine circulation to the MDH to maximum. Valero then resumed the high sulfur diesel offload without further incident.
TOTAL			24			

<b>Ja CMS PERFORMANCE<sup>1</sup></b>						
Date	Start	End	Duration (hours)	Cause	Corrective Action	
1/28/13	14:04	15:04	1	Adjusted for calibration drift	N/A	
2/13/13	06:10	10:10	4	Analyzer output became erratic shortly after a satisfactory daily validation.	Instrument maintenance adjusted and calibrated the analyzer and returned it to service.	
2/21/13	07:33	08:33	1	Cylinder Gas Audit	N/A	
2/27/13	07:38		30	Daily validation high span differed from reference gas greater than 4 times the allowable limit	Instrument maintenance replaced all filters and the analyzer lamp. Recalibrated and returned to service.	
2/28/13		13:38				
3/1/13	08:27	10:27	2	Adjusted for calibration drift	N/A	
TOTAL			38			



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

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

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

Applicable NSPS Subpart: J

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 2/21/13

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

Total source operating time in reporting period: 1,942 hours

J EXCESS EMISSIONS						
Date	Start	End	Duration (hours)	Max 12-HRA (ppm)	Cause	Corrective Action
2/10/13	08:34	15:34	7	> 300	H <sub>2</sub> S > 162 ppm, 3-HRA. Please see attached Unauthorized Discharge Notification Report dated April 11, 2013 for cause and corrective actions.	
2/10/13	17:30		14	> 300		
2/11/13		07:30				
TOTAL			21			

<b>Ja CMS PERFORMANCE<sup>1</sup></b>						
Date	Start	End	Duration (hours)	Cause	Corrective Action	
1/28/13	14:04	15:04	1	Adjusted for calibration drift	N/A	
2/13/13	06:10	10:10	4	Analyzer output became erratic shortly after a satisfactory daily validation.	Instrument maintenance adjusted and calibrated the analyzer and returned it to service.	
2/21/13	07:33	08:33	1	Cylinder Gas Audit	N/A	
2/27/13	07:38		30	Daily validation high span differed from reference gas greater than 4 times the allowable limit	Instrument maintenance replaced all filters and the analyzer lamp. Recalibrated and returned to service.	
2/28/13		13:38				
3/1/13	08:27	10:27	2	Adjusted for calibration drift	N/A	
3/6/13	09:41	10:41	1	Adjusted for calibration drift	N/A	
TOTAL			39			

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

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

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

Applicable NSPS Subpart: Ja

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 2/21/13

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: 1,492 hours

<b>J EXCESS EMISSIONS</b>						
Date	Start	End	Duration (hours)	Max 12-HRA (ppm)	Cause	Corrective Action
3/31/13	07:07	10:07	3	245	H <sub>2</sub> S > 162 ppm, 3-HRA due to high H <sub>2</sub> S in the MDH offgas. A high sulfur diesel offload from the dock into the MDH charge tank caused the sulfur content to rise rapidly and overcome the scrubbing capacity of the MDH, allowing H <sub>2</sub> S to enter the fuel gas system.	Valero immediately reduced MDH charge rate and stopped the high sulfur diesel offload. Valero then increased stripping steam to the Amine unit, increased amine strength, and increased amine circulation to the MDH to maximum. Valero then resumed the high sulfur diesel offload without further incident.
TOTAL			24			

<b>Ja CMS PERFORMANCE<sup>1</sup></b>					
Date	Start	End	Duration (hours)	Cause	Corrective Action
1/28/13	14:04	15:04	1	Adjusted for calibration drift	N/A
2/13/13	06:10	10:10	4	Analyzer output became erratic shortly after a satisfactory daily validation.	Instrument maintenance adjusted and calibrated the analyzer and returned it to service.
2/21/13	07:33	08:33	1	Cylinder Gas Audit	N/A
2/27/13	07:38		30	Daily validation high span differed from reference gas greater than 4 times the allowable limit	Instrument maintenance replaced all filters and the analyzer lamp. Recalibrated and returned to service.
2/28/13		13:38			
3/1/13	08:27	10:27	2	Adjusted for calibration drift	N/A
TOTAL			38		

<sup>1</sup>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))*

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

Applicable NSPS Subpart: J

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 2/20/13

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

Total source operating time in reporting period: 1,547 hours

EXCESS EMISSIONS						
Date	Start	End	Duration (hours)	Max 12-HRA (ppm)	Cause	Corrective Action
2/10/13	08:26		27	> 300	H <sub>2</sub> S > 162 ppm, 3-HRA. Please see attached Unauthorized Discharge Notification Report dated April 11, 2013 for cause and corrective actions.	
2/11/13		11:26				
TOTAL			27			

CMS PERFORMANCE					
Date	Start	End	Duration (hours)	Cause	Corrective Action
1/28/13	10:02	11:02	1	Adjusted for calibration drift	N/A
1/29/13	07:55	14:55	7	Out of service to perform periodic maintenance.	Recalibrated and returned to service.
2/20/13	07:42	08:42	1	Cylinder Gas Audit	N/A
TOTAL			9		



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

*(per 40 CFR 60.7(c))*

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

Applicable NSPS Subpart: J

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 2/20/13

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: 1,791 hours

<b>EXCESS EMISSIONS</b>						
Date	Start	End	Duration (hours)	Max 3-HRA (ppm)	Cause	Corrective Action
2/10/13	08:22		24	> 300	H <sub>2</sub> S > 162 ppm, 3-HRA. Please see attached Unauthorized Discharge Notification Report dated April 11, 2013 for cause and corrective actions.	
2/11/13		08:22				
TOTAL			24			

<b>CMS PERFORMANCE</b>					
Date	Start	End	Duration (hours)	Cause	Corrective Action
2/20/13	13:27	14:27	1	Cylinder Gas Audit	N/A
3/5/13	13:37	14:37	1	Adjusted for calibration drift	N/A
3/15/13	06:18	15:18	33	Out of Control. The analyzer did not properly validate on 3/16/13. The out of control period ended when the heaters were shutdown for planned maintenance.	Valero will ensure that the analyzer is online and properly calibrated before firing the heaters supplied from this fuel drum.
TOTAL			35		

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

*(per 40 CFR 60.7(c))*

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

Applicable NSPS Subpart: J

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 2/20/13

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: 2,160 hours

EXCESS EMISSIONS						
Date	Start	End	Duration (hours)	Max 3-HRA (ppm)	Cause	Corrective Action
2/10/13	08:25		22	> 300	H <sub>2</sub> S > 162 ppm, 3-HRA. Please see attached Unauthorized Discharge Notification Report dated April 11, 2013 for cause and corrective actions.	
2/11/13		06:25				
TOTAL			22			

CMS PERFORMANCE						
Date	Start	End	Duration (hours)	Cause	Corrective Action	
1/7/13	07:20	08:20	1	Adjusted for calibration drift	N/A	
2/4/13	07:50	08:50	1	Adjusted for calibration drift	N/A	
2/20/13	10:16	11:16	1	Cylinder Gas Audit	N/A	
3/25/13	13:28	14:28	1	Adjusted for calibration drift	N/A	
3/31/13	06:23	07:23	1	Shortly before the automatic daily validation, the data from the analyzer was flagged as bad and not recorded by the data historian. The auto validation performed satisfactorily and the analyzer continued to operate normally after. The cause for the bad data could not be determined and did not re-occur.	N/A	
TOTAL			5			

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

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

Pollutant: **NO<sub>x</sub>**

Applicable NSPS Subpart: Ja

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

Company: Valero Refining - Meraux LLC

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

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

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

Date of Latest CMS Certification or Audit: CGA on 3/19/13 (NO<sub>x</sub>), 3/19/13 (O<sub>2</sub>)

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

Total source operating time in reporting period: 1,456 hours

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

CMS PERFORMANCE <sup>1</sup>						
Date	Start	End	Duration (hours)	Cause	Corrective Action	
3/19/13	10:17	11:17	1	O <sub>2</sub> Cylinder Gas Audit	N/A	
3/19 13	13:08	14:08	1	NO <sub>x</sub> Cylinder Gas Audit	N/A	
TOTAL			2			

<sup>1</sup>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 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 3/13/13

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

Total source operating time in reporting period: 2,160 hours

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

CMS PERFORMANCE <sup>1</sup>					
Date	Start	End	Duration (hours)	Cause	Corrective Action
1/2/13	10:21	14:21	4	Analyzer taken offline to replace 10-port valve that was causing a malfunction when switching ranges.	N/A
1/18/13	08:28	10:28	2	Adjusted for calibration drift	N/A
1/21/13	08:15	10:15	2	Adjusted for calibration drift	N/A
1/22/13	10:08	11:08	1	Adjusted for calibration drift	N/A
1/23/13	20:32	21:32	1	Adjusted for calibration drift	N/A
2/15/13	06:43		77	Out of Control due to low daily validations on the low range, high span that differed from reference gas greater than 4 times the allowable limit.	Instrument maintenance performed several iterations of adjustments and parts replacements until the problem stopped . The exact cause of the failed validations remains unknown.
2/18/13		11:43			
2/18/13	11:43		46	Instrument maintenance adjusted the analyzer after each bad automatic validation and each time performed a satisfactory manual validation only to have it fail again on the next day's auto validation.	
2/20/13		09:43			
2/21/13	09:38		24		
2/22/13		09:38			
3/1/13	10:55	11:55	1	Operations requested instrument maintenance to check out analyzer because of a suspected malfunction.	Instrument maintenance determined that the instrument was working properly and returned it to service.
3/13/13	14:50	16:50	2	Cylinder Gas Audit	N/A
TOTAL			160		

<sup>1</sup>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 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 3/13/13

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

Total source operating time in reporting period: 2,160 hours

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

CMS PERFORMANCE <sup>1</sup>					
Date	Start	End	Duration (hours)	Cause	Corrective Action
1/11/13	10:19	12:19	2	Adjusted for calibration drift	N/A
1/17/13	05:41		30	Out of Control. Daily automatic validation low range, high span differed from the reference gas greater than 4 times the allowable limit.	Instrument maintenance adjusted and calibrated the analyzer.
1/18/13		11:41			
1/23/13	20:28	21:28	1	Adjusted for calibration drift	N/A
3/13/13	14:50	16:50	2	Cylinder Gas Audit	N/A
TOTAL			35		

<sup>1</sup>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 1/01/13 to 3/31/13

Date submitted: 4/30/13

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: CGA on 3/13/13

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

Total source operating time in reporting period: 2,160 hours

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

CMS PERFORMANCE <sup>1</sup>					
Date	Start	End	Duration (hours)	Cause	Corrective Action
2/20/13	07:50	13:50	6	Out of Control. Five consecutive days with low range, high span differing from reference gas greater than 2 times the allowable limit.	Instrument maintenance adjusted and calibrated the analyzer.
2/21/13	08:52	09:52	1	Adjusted for calibration drift	N/A
2/21/13	13:10	14:10	1	Adjusted for calibration drift	N/A
3/13/13	14:50	16:50	2	Cylinder Gas Audit	N/A
TOTAL			10		

<sup>1</sup>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  1/01/13  to  3/31/13 

Date submitted:  4/30/13 

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.:  Monitor Labs Model 550 

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 1/01/13 to 3/31/13

Date submitted: 4/30/13

Company: Valero Refining - Meraux LLC

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

Emission Limitation: CO corrected to 0% O<sub>2</sub> shall not exceed 500 ppm on a 1 hour rolling average

Monitor Manufacturer and Model No.: Thermo Environmental 48i (CO)/Servomex 1155 (O<sub>2</sub>)

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 (CGA):

	CO #1 (low scale)	CO #2 (high scale)	O <sub>2</sub> #1 (low scale)	O <sub>2</sub> #2 (high scale)
Date of Audit	2/20/13	2/20/13	2/14/13	2/14/13
Audit Gas Cylinder No.	CC344652	S69111608BAL	CC62176	ALM004031
Date of Audit Gas Cert.	4/20/11	1/23/12	8/31/12	8/30/12
Type of Certification	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1
Certified Audit Value	253.3	594.4	6.1	10.1
CEM Response Value	262.7	622.7	5.6	10.2
Accuracy	3.7%	4.8%	8.2%	1.0%
Standard	<15%	<15%	<15%	<15%

## II. CALIBRATION DRIFT ASSESSMENT

### A. Out-of Control Periods:

1. Dates: N/A

2. Number of Days N/A

### B. Corrective Actions: N/A

# DATA ASSESSMENT REPORT

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

Pollutant: SO<sub>2</sub>

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

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

Company: Valero Refining - Meraux LLC

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

Emission Limitation: SO<sub>2</sub> corrected to 0% O<sub>2</sub> 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<sub>2</sub>)/Servomex 1155 (O<sub>2</sub>)

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 (CGA):

	SO <sub>2</sub> #1 (low scale)	SO <sub>2</sub> #2 (high scale)	O <sub>2</sub> #1 (low scale)	O <sub>2</sub> #2 (high scale)
Date of Audit	2/19/13	2/19/13	2/14/13	2/14/13
Audit Gas Cylinder No.	CC310467	CC334126	CC62176	ALM004031
Date of Audit Gas Cert.	1/24/12	1/23/12	8/31/12	8/30/12
Type of Certification	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1
Certified Audit Value	123.6	271.6	6.1	10.1
CEM Response Value	135.3	287.7	5.6	10.2
Accuracy	9.5%	5.9%	8.2%	1.0%
Standard	<15%	<15%	<15%	<15%

## II. CALIBRATION DRIFT ASSESSMENT

### A. Out-of-Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A



# **DATA ASSESSMENT REPORT**

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

Pollutant: **NO<sub>x</sub>**

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

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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 (NO<sub>x</sub>)/Servomex 1155 (O<sub>2</sub>)

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 (CGA):**

	NO <sub>x</sub> #1 (low scale)	NO <sub>x</sub> #2 (high scale)	O <sub>2</sub> #1 (low scale)	O <sub>2</sub> #2 (high scale)
Date of Audit	2/18/13	2/18/13	2/14/13	2/14/13
Audit Gas Cylinder No.	CC283862	CC47662	CC62176	ALM004031
Date of Audit Gas Cert.	1/23/12	1/23/12	8/31/12	8/30/12
Type of Certification	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1
Certified Audit Value	55.9	127.9	6.1	10.1
CEM Response Value	55.3	129.3	5.6	10.2
Accuracy	1.1%	1.1%	8.2%	1.0%
Standard	<15%	<15%	<15%	<15%

## **II. CALIBRATION DRIFT ASSESSMENT**

### **A. Out-of Control Periods:**

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

# DATA ASSESSMENT REPORT

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

Pollutant: SO<sub>2</sub>

Applicable NSPS Subpart: Ja

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

Company: Valero Refining - Meraux LLC

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

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

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

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 (CGA):

	SO <sub>2</sub> #1	SO <sub>2</sub> #2	O <sub>2</sub> #1	O <sub>2</sub> #2
	(low scale)	(high scale)	(low scale)	(high scale)
Date of Audit	2/18/13	2/18/13	2/19/13	2/19/13
Audit Gas Cylinder No.	LL166006	LL165997	LL42560	LL42613
Date of Audit Gas Cert.	2/8/13	2/8/13	1/28/13	1/30/13
Type of Certification	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1
Certified Audit Value	125.0	279.0	5.95	10.04
CEM Response Value	125.0	278.7	6.10	10.10
Accuracy	0.0%	0.1%	2.5%	0.6%
Standard	<15%	<15%	<15%	<15%

## II. CALIBRATION DRIFT ASSESSMENT

### A. Out-of Control Periods:

1. Dates: 2/13/13

2. Number of Days 1

B. Corrective Actions: On 2/14/13 the SO<sub>2</sub> analyzer failed the automatic daily calibration check due to contaminated sample lines from the extended upset 2/10/13-2/12/13. Valero steamed out the sample lines, replaced sample line filters, adjusted and calibrated the analyzer, and performed a satisfactory calibration check.

# **DATA ASSESSMENT REPORT**

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

Pollutant: **SO<sub>2</sub>**

Applicable NSPS Subpart: Ja

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

Company: Valero Refining - Meraux LLC

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

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

Monitor Manufacturer and Model No.: Brimstone 991-CEM-X (SO<sub>2</sub>), Rosemount Oxymitter 4000 (O<sub>2</sub>)

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 (CGA):**

	SO <sub>2</sub> #1 (low scale)	SO <sub>2</sub> #2 (high scale)	O <sub>2</sub> #1 (low scale)	O <sub>2</sub> #2 (high scale)
Date of Audit	2/18/13	2/18/13	2/19/13	2/19/13
Audit Gas Cylinder No.	LL166006	LL165997	LL42560	LL42613
Date of Audit Gas Cert.	2/8/13	2/8/13	1/28/13	1/30/13
Type of Certification	EPA Protocol I	EPA Protocol I	EPA Protocol I	EPA Protocol I
Certified Audit Value	125.0	279.0	5.95	10.04
CEM Response Value	127.3	281.7	6.77	10.80
Accuracy	1.8%	1.0%	13.8%	7.6%
Standard	<15%	<15%	<15%	<15%

## **II. CALIBRATION DRIFT ASSESSMENT**

### **A. Out-of Control Periods:**

1. Dates: 3/14/13

2. Number of Days 1

B. Corrective Actions: On 3/15/13 the SO<sub>2</sub> analyzer failed the automatic daily calibration check due to contaminated sample lines from a brief upset on 3/14/13 that did not result in excess emissions. Valero steamed out the sample lines, replaced sample line filters, adjusted and calibrated the analyzer, and performed a satisfactory calibration check.



# **DATA ASSESSMENT REPORT**

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

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

Applicable NSPS Subpart: J

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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 (CGA):**

	<u>H<sub>2</sub>S #1</u> <u>(low scale)</u>	<u>H<sub>2</sub>S #2</u> <u>(high scale)</u>
Date of Audit	2/21/13	2/21/13
Audit Gas Cylinder No.	ALM060506	CC62458
Date of Audit Gas Cert.	9/10/12	9/10/12
Type of Certification	EPA Protocol 1	EPA Protocol 1
Certified Audit Value	76.4	164.0
CEM Response Value	77.0	162.3
Accuracy	0.8%	1.0%
Standard	<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

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# **DATA ASSESSMENT REPORT**

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

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

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

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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); 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 (CGA):**

	H <sub>2</sub> S #1 (low scale)	H <sub>2</sub> S #2 (high scale)
Date of Audit	2/21/13	2/21/13
Audit Gas Cylinder No.	ALM060506	CC62458
Date of Audit Gas Cert.	9/10/12	9/10/12
Type of Certification	EPA Protocol I	EPA Protocol I
Certified Audit Value	76.4	164.0
CEM Response Value	72.3	166.7
Accuracy	5.4%	1.6%
Standard	<15%	<15%

## **II. CALIBRATION DRIFT ASSESSMENT**

### **A. Out-of Control Periods:**

1. Dates: 2/27/13

2. Number of Days 1

B. Corrective Actions: On 2/28/13, the analyzer failed the automatic calibration check. Valero replaced all filters and the analyzer lamp, recalibrated the analyzer, and returned it to service.

# DATA ASSESSMENT REPORT

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

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

Applicable NSPS Subpart:   J  

Reporting period dates: From  1/01/13  to  3/31/13 

Date submitted:  4/30/13 

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 (CGA):

	H <sub>2</sub> S #1 (low scale)	H <sub>2</sub> S #2 (high scale)
Date of Audit	2/20/13	2/20/13
Audit Gas Cylinder No.	ALM060506	CC62458
Date of Audit Gas Cert.	9/10/12	9/10/12
Type of Certification	EPA Protocol 1	EPA Protocol 1
Certified Audit Value	76.4	164.0
CEM Response Value	77.3	164.7
Accuracy	1.2%	0.4%
Standard	<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<sub>2</sub>S

Applicable NSPS Subpart: J

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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 I-00, EQT 0009)

CEM Sampling Location: Area 6 Fuel Drum

CEM Span Value: Hydrogen Sulfide, 300 ppm

## I. ACCURACY ASSESSMENT RESULTS (CGA):

	H <sub>2</sub> S #1 (low scale)	H <sub>2</sub> S #2 (high scale)
Date of Audit	2/20/13	2/20/13
Audit Gas Cylinder No.	ALM060506	CC62458
Date of Audit Gas Cert.	9/10/12	9/10/12
Type of Certification	EPA Protocol I	EPA Protocol I
Certified Audit Value	76.4	164.0
CEM Response Value	75.0	159.7
Accuracy	1.8%	2.6%
Standard	<15%	<15%

## II. CALIBRATION DRIFT ASSESSMENT

### A. Out-of Control Periods:

1. Dates: 3/15/13

2. Number of Days 1

B. Corrective Actions: On 3/15/13 the analyzer began to operate erratically and output unusually low values. On 3/16/13 the analyzer failed to respond to the reference gas. The out of control period ended later that day when all the heaters supplied by this fuel drum were shutdown for planned maintenance. At the time of this report, Valero has not performed any corrective actions to this analyzer. Valero will ensure that the analyzer is operating properly and calibrated prior to the start up of these heaters.

# **DATA ASSESSMENT REPORT**

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

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

Applicable NSPS Subpart: J

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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 (CGA):**

	<u>H<sub>2</sub>S #1</u> <u>(low scale)</u>	<u>H<sub>2</sub>S #2</u> <u>(high scale)</u>
Date of Audit	2/20/13	2/20/13
Audit Gas Cylinder No.	ALM060506	CC62458
Date of Audit Gas Cert.	9/10/12	9/10/12
Type of Certification	EPA Protocol 1	EPA Protocol 1
Certified Audit Value	76.4	164.0
CEM Response Value	77.6	164.3
Accuracy	1.6%	0.2%
Standard	<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<sub>x</sub>

Applicable NSPS Subpart: Db

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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 (CGA):

	NO <sub>x</sub> #1 (low scale)	NO <sub>x</sub> #2 (high scale)	O <sub>2</sub> #1 (low scale)	O <sub>2</sub> #2 (high scale)
Date of Audit	2/18/13	2/18/13	2/14/13	2/14/13
Audit Gas Cylinder No.	CC367708	CC357679	CC62176	ALM004031
Date of Audit Gas Cert.	1/23/12	1/23/12	8/31/12	8/31/12
Type of Certification	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1
Certified Audit Value	24.9	55.9	6.10	10.10
CEM Response Value	24.0	55.7	6.04	10.05
Accuracy	3.6%	0.4%	1.0%	0.5%
Standard	<15%	<15%	<15%	<15%

## II. CALIBRATION DRIFT ASSESSMENT

### A. Out-of Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A



# **DATA ASSESSMENT REPORT**

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

Pollutant: **NO<sub>x</sub>**

Applicable NSPS Subpart: Db

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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 (CGA):**

	NO <sub>x</sub> #1 (low scale)	NO <sub>x</sub> #2 (high scale)	O <sub>2</sub> #1 (low scale)	O <sub>2</sub> #2 (high scale)
Date of Audit	2/18/13	2/18/13	2/14/13	2/14/13
Audit Gas Cylinder No.	CC367708	CC357679	CC62176	ALM004031
Date of Audit Gas Cert.	1/23/12	1/23/12	8/31/12	8/31/12
Type of Certification	EPA Protocol I	EPA Protocol I	EPA Protocol I	EPA Protocol I
Certified Audit Value	24.9	55.9	6.10	10.10
CEM Response Value	24.8	55.0	6.13	10.15
Accuracy	0.4%	1.6%	0.5%	0.5%
Standard	<15%	<15%	<15%	<15%

## **II. CALIBRATION DRIFT ASSESSMENT**

### **A. Out-of Control Periods:**

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

# DATA ASSESSMENT REPORT

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

Pollutant: NO<sub>x</sub>

Applicable NSPS Subpart: Db

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

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 (NO<sub>x</sub>)/(O<sub>2</sub>)

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 (CGA):

	NO <sub>x</sub> #1 (low scale)	NO <sub>x</sub> #2 (high scale)	O <sub>2</sub> #1 (low scale)	O <sub>2</sub> #2 (high scale)
Date of Audit	2/18/13	2/18/13	2/14/13	2/14/13
Audit Gas Cylinder No.	CC285173	CC316885	CC62176	ALM004031
Date of Audit Gas Cert.	1/23/12	1/23/12	8/31/12	8/31/12
Type of Certification	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1
Certified Audit Value	124.4	273.5	6.10	10.10
CEM Response Value	121.6	261.7	5.97	9.93
Accuracy	2.3%	4.3%	2.1%	1.7%
Standard	<15%	<15%	<15%	<15%

## II. CALIBRATION DRIFT ASSESSMENT

### A. Out-of-Control Periods:

1. Dates: N/A

2. Number of Days N/A

B. Corrective Actions: N/A

# DATA ASSESSMENT REPORT

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

Pollutant:  $\text{NO}_x$

Applicable NSPS Subpart: Ja

Reporting period dates: From 1/01/13 to 3/31/13

Date submitted: 4/30/13

Company: Valero Refining - Meraux LLC

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

Emission Limitation: Nitrogen Oxide corrected to 0%  $\text{O}_2$  shall not exceed 40 ppm on a 30-day rolling average

Monitor Manufacturer and Model No.: Thermo Environmental Model 42i ( $\text{NO}_x$ )/( $\text{O}_2$ )

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):

	$\text{NO}_x$ #1 (low scale)	$\text{NO}_x$ #2 (high scale)	$\text{O}_2$ #1 (low scale)	$\text{O}_2$ #2 (high scale)
Date of Audit	3/19/13	3/19/13	3/19/13	3/19/13
Audit Gas Cylinder No.	CC367708	LL164501	LL42560	LL42613
Date of Audit Gas Cert.	1/23/12	2/5/13	1/28/13	1/30/13
Type of Certification	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1
Certified Audit Value	25.3	54.8	5.95	10.04
CEM Response Value	25.3	54.8	5.80	9.60
Accuracy	0.1%	0.1%	2.5%	4.4%
Standard	<15%	<15%	<15%	<15%

## III. 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 1/01/13 to 3/31/13

Date submitted: 4/30/13

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 (CGA):**

	H <sub>2</sub> S #1 <u>(low scale)</u>	H <sub>2</sub> S #2 <u>(high scale)</u>
Date of Audit	3/13/13	3/13/13
Audit Gas Cylinder No.	LL54215	CC403656
Date of Audit Gas Cert.	2/11/13	4/18/12
Type of Certification	EPA Protocol 1	Certified Gas
Certified Audit Value	1021.0	8085.0
CEM Response Value	1073.1	8217.1
Accuracy	5.1%	1.6%
Standard	<15%	<15%

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

## **II. CALIBRATION DRIFT ASSESSMENT**

### **A. Out-of Control Periods:**

1. Dates: 2/15/13, 2/16/13, 2/17/13, 2/18/13, 2/19/13, 2/21/13

2. Number of Days 6

B. Corrective Actions: Out of Control due to low results on the low range, high span reference gas greater than 4 times the allowable limit. Instrument maintenance adjusted the analyzer after each bad automatic validation and each time performed a satisfactory manual validation only to have it fail again on the next day's auto validation. Instrument maintenance performed several iterations of adjustments and parts replacements until the problem stopped occurring. The exact cause of the failed validations remains unknown.

# **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 1/01/13 to 3/31/13

Date submitted: 4/30/13

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 (CGA):**

	H <sub>2</sub> S #1 (low scale)	H <sub>2</sub> S #2 (high scale)
Date of Audit	3/13/13	3/13/13
Audit Gas Cylinder No.	LL54215	CC403656
Date of Audit Gas Cert.	2/11/13	4/18/12
Type of Certification	EPA Protocol 1	Certified Gas
Certified Audit Value	1021.0	8085.0
CEM Response Value	1020.7	8068.0
Accuracy	0.0%	0.2%
Standard	<15%	<15%

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

## **II. CALIBRATION DRIFT ASSESSMENT**

### **A. Out-of Control Periods:**

1. Dates: 1/17/18

2. Number of Days 1

B. Corrective Actions: On 1/18/18, the daily automatic validation low range, high span differed from the reference gas greater than 4 times the allowable limit. Instrument maintenance adjusted and calibrated the analyzer.

# **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 1/01/13 to 3/31/13

Date submitted: 4/30/13

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 (CGA):**

	H <sub>2</sub> S #1 (low scale)	H <sub>2</sub> S #2 (high scale)
Date of Audit	3/13/13	3/13/13
Audit Gas Cylinder No.	LL54215	CC403656
Date of Audit Gas Cert.	2/11/13	4/18/12
Type of Certification	EPA Protocol 1	Certified Gas
Certified Audit Value	1021.0	8085.0
CEM Response Value	1075.7	8317.1
Accuracy	5.4%	2.9%
Standard	<15%	<15%

<sup>1</sup> 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: On 2/20/13, the analyzer completed five consecutive days with low range, high span differing from reference gas greater than 2 times the allowable limit. Instrument maintenance adjusted and calibrated the analyzer.





April, 11 2013

CERTIFIED: 7011 2970 0002 0808 3552

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 #: 13-00616

Gentlemen,

Valero Refining-Meraux LLC (Valero) hereby submits this written notification for an air upset incident reported verbally to the Department on 2/10/13, 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 2/15/13. This is the final written notification. The incident is described as follows:

#3 SRU Shutdown

2/10/13

Should you have any questions regarding this submission, please contact Justin Stubbe, Environmental Manager, 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

A handwritten signature in cursive script that reads 'Lauren K. Bird'.

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: 2/10/13 10:39  
DEQ OFFICIAL CONTACTED: SERC Hazardous Materials Hotline Operator  
VALERO OFFICIAL WHO MADE CALL: Dan Patnoid

APPLICABLE PERMIT INVOLVED? 2500-00001-V8

EMISSION PT. SOURCE(S) INVOLVED?

<u>Point Sources</u>	<u>EPN</u>	<u>EQT</u>
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
MDH Product Fractionator and Charge Heater	2-92	0033
Hydrocracker/Hydrotreater/Fractionator Charge Heaters	1-00	0009
Boiler B-5	2-00	0030
Boiler B-6	3-00	0048
Boiler B-7	1-07	0010
Boiler TB-01	1-06	0011
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 February 10, 2013 Valero Refining – Meraux LLC (Valero) experienced excess emissions of sulfur dioxide (SO<sub>2</sub>) and Hydrogen Sulfide (H<sub>2</sub>S) from all in-service refinery heaters and boilers, the #2 and #3 Sulfur Recovery Unit (SRU) Incinerator Stacks, and the North and South Flares due to an unexpected shutdown of the #3 SRU. Shortly after the #3 SRU shut down the #2 SRU tripped offline as well. The #2 and #3 SRUs generated excess emissions due to these shutdowns and the subsequent start ups. Additionally, with both SRUs shutdown, the Amine units became saturated with H<sub>2</sub>S and were no longer capable of removing H<sub>2</sub>S from gaseous refinery process streams. As a result, H<sub>2</sub>S concentrations in the refinery fuel gas and hydrotreater recycle gas systems began to increase. Elevated concentrations of H<sub>2</sub>S were then combusted in the refinery's heaters and boilers and in the North and South Flares.

## EMERGENCY OCCURRENCE AND/OR AIR UPSET NOTIFICATION FORM

The timeline of events is as follows:

<u>Date/Time</u>	<u>Event</u>	<u>Comments</u>
2/10/13 06:42	Power lost to #3 SRU Main Air Blower to Acid Gas Burner and to #2 Amine Large Amine Pump. #3 SRU shutdown.	Powered from the same transformer. Cause unknown. Refinery power monitoring system was down due to upgrades in progress.
2/10/13 06:50	Began reducing Crude unit charge rate from 121,000 Bbls/day.	Sulfur Shedding.
	Began attempts to re-light #3 SRU Burner.	
2/10/13 06:51	Feed pulled from De-asphalted Oil (DAO) Hydrotreater.	Sulfur Shedding
	Began cutting Hydrocracker charge from 34,000 Bbls/day.	Sulfur Shedding.
2/10/13 07:02	Began cutting Diesel Hydrotreater (DHT) charge from 31,700 Bbls/day.	Sulfur Shedding.
2/10/13 07:13	Began cutting Residual Oil Supercritical Extraction (ROSE) unit charge from 16,000 Bbls/day.	Sulfur Shedding.
2/10/13 07:59	#2 SRU shutdown, Incinerator SO <sub>2</sub> >500 ppm (off scale high).	Shutdown caused by not switching the acid gas interconnect line control scheme from flow control to pressure control after the loss of #3 SRU, start of #2 SRU excess emissions.
2/10/13 08:03	Began cutting Naphtha Hydrotreater (NHT) charge from 38,000 Bbls/day.	Sulfur Shedding.
2/10/13 08:10	Began cutting Kerosene Hydrotreater (KHT) charge from 12,000 Bbls/day.	Sulfur Shedding.
2/10/13 08:21	Maintenance and Technical support were called in due to #3 SRU start up difficulties.	Troubleshooting revealed a failed switch on a valve position indicator. This delayed getting the permissive to allow re-lighting of the burner. Additional delays were caused by malfunctioning field control interfaces that prevented field re-lighting the #3 SRU and #3 Tail Gas Treater (TGT) burners. This forced a more difficult light-off from the Control Room DCS console.
2/10/13 09:10	#3 SRU Burner re-lit.	
2/10/13 09:13	Began attempts to relight #3 Tail Gas Treater (TGT).	
2/10/13 10:49	#3 SRU tripped, flame out.	
2/10/13 11:02	High pressure alarm on #1 Rich Amine Flash Drum at 10 psig.	Indication of hydrocarbon carry over into #1 Amine unit.
2/10/13 11:35	#1 Rich Amine Flash Drum pressure peaks at 71 psig.	Hydrocarbon carry over was due to a malfunctioning level transmitter on the #2 FCC LPG Absorber.
2/10/13 12:00	#3 SRU Burner re-lit.	
2/10/13 12:15	Began relighting #3 TGT.	
2/10/13 12:48	#3 SRU Incinerator high temperature alarm.	After attempting to send Acid Gas to #3 SRU.
	Crude unit charge at 100,000 Bbls/day.	Sulfur Shedding.
2/10/13 14:00	ROSE unit charge at 13,500 Bbls/day.	Sulfur Shedding.



**EMERGENCY OCCURRENCE AND/OR AIR UPSET  
NOTIFICATION FORM**

<b><u>Date/Time</u></b>	<b><u>Event</u></b>	<b><u>Comments</u></b>
2/10/13 14:20	#3 SRU Incinerator high temperature alarm.	After attempting to send Acid Gas to #3 SRU.
2/10/13 14:35-17:08	Multiple attempts to relight #2 SRU.	Greater than 70 attempts were made.
2/10/13 16:41	After several attempts, continuous Amine Acid Gas flow established to #3 SRU at limited rates.	Incinerator temperature preventing full rates.
2/10/13 17:23	# 2 SRU tripped on Reactor High Temperature.	Attempts to relight unsuccessful, decision made to cool down unit and pull igniter.
2/10/13 17:37	#3 SRU Incinerator high temperature alarm.	Preventing Acid Gas from being sent to #3 SRU at adequate rates to remove H <sub>2</sub> S from fuel gas system.
2/10/13 18:08	Began cutting #2 Fluidized Catalytic Cracking (FCC) unit charge rate from 22,000 Bbls/day.	Sulfur Shedding.
2/10/13 18:21	Began sending NHT charge to tankage.	Sulfur Shedding.
2/10/13 18:44	All charge out of DAO Hydrotreater.	Sulfur Shedding.
2/10/13 18:48	All charge out of Hydrocracker.	Sulfur Shedding.
2/10/13 19:31	#3 SRU Incinerator high temperature alarm.	Preventing Acid Gas from being sent to #3 SRU at adequate rates to remove H <sub>2</sub> S from fuel gas system.
2/10/13 20:01	All charge out of DHT.	Sulfur Shedding.
2/10/13 20:52	KHT charge at 9,500 Bbls/day.	Sulfur Shedding.
2/10/13 20:45-22:21	Acid Gas flared from #2 Amine at South Flare.	The Amine system was saturated with H <sub>2</sub> S and hydrocarbons and causing high temperatures in the #3 SRU Incinerator.
2/10/13 22:35	Full Acid Gas Flow established to #3 SRU.	Removal of H <sub>2</sub> S from fuel gas commenced.
2/10/13 23:47	#2 FCC charge at 18,000 Bbls/day.	Sulfur Shedding.
2/10/13 23:57	NHT charge at 20,600 Bbls/day.	Sulfur Shedding.
2/11/13 07:45	All refinery fuel drums H <sub>2</sub> S < 162 ppm.	End of excess emissions for Heaters and Boilers.
2/11/13 8:00	South Flare Total Sulfur concentration returned to normal.	End of excess emissions for South Flare.
2/11/13 11:30	#2 SRU Igniter pulled for repair.	Flame deflector plate at tip found missing.
2/11/13 16:13-18:55	#3 Tail Gas Treater (TGT) bypassed to #3 SRU Incinerator, SO <sub>2</sub> >500 ppm (off scale high).	Operator error tripped #3 TGT.
2/11/13 17:00	#2 SRU Acid Gas Burner re-lit.	
2/11/13 18:00	#2 SRU tripped.	Unsuccessful attempts to relight the burner continue for several hours.
2/11/13 20:30	North Flare Total Sulfur concentration returned to normal.	
2/11/13 21:49	#3 SRU Incinerator SO <sub>2</sub> <250 ppm.	End of excess emissions for #3 SRU.
2/12/13 00:20	#2 SRU Acid Gas Burner re-lit.	
2/12/13 09:23	Acid Gas Flow established to #2 SRU.	
2/12/13 09:23-10:06	#2 TGT bypassed to #2 SRU Incinerator during startup, #2 SRU Incinerator SO <sub>2</sub> >500 ppm.	Normal part of start up for the #2 SRU.
2/13/13 00:30	#2 SRU Complex stable, North Flare Total Sulfur concentrations returned to normal.	End of excess emissions for North Flare.
2/13/13 01:13	#2 SRU Incinerator SO <sub>2</sub> <250 ppm.	End of excess emissions for #2 SRU.

**EMERGENCY OCCURRENCE AND/OR AIR UPSET  
NOTIFICATION FORM**

**Root Causes:**

1. Loss of 4160 Volt power to the #3 SRU Main Air Blower and #2 Lean Amine Pump. The investigation identified a 30 second power loss but was unable to identify the exact root cause because the plant power monitoring system was not running at the time.
2. The #2 SRU trip was caused by the failure to switch the acid gas interconnect line control scheme from flow control to pressure control.

Valero provided verbal notification within 1 hour of exceeding the reportable quantity for SO<sub>2</sub> of 500 lbs. Valero received reports of multiple citizen complaints called into the St. Bernard Fire Department. The wind direction on 2/10/13 placed the Valero Community Ambient Monitoring Site downwind of the refinery during the period of highest emissions and mobile ambient monitoring was performed by Valero and a third party. The highest single monitoring reading was 2.8 ppm SO<sub>2</sub>; odors may be detected at this level.

**DATE/TIME RELEASE BEGAN AND TIME IT LASTED:**

The episode occurred from approximately 06:42 on 2/10/13 to 01:13 on 2/13/13 for a duration of 66.5 hours.

**WHICH SPECIFIC POLLUTANTS WERE EMITTED AND HOW MUCH OF EACH COMPOUND WAS RELEASED?**

Sulfur dioxide, estimated at 93,347 pounds, and Hydrogen sulfide, estimated at 304 pounds, was released during this episode.

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

**IMMEDIATE CORRECTIVE ACTION TAKEN?**

Valero initiated the Sulfur Shedding Procedure and followed the MACT UUU SSM Plan to recover the #2 and #3 SRUs.

**SPECIFIC ACTIONS TAKEN/PLANNED TO PREVENT RECURRENCE?**

	Action Item	Estimated Completion Date
1	Valero will replace #3 SRU acid gas and fuel gas valve position detection with more reliable devices.	4/30/13
2	Valero will replace the existing #2 SRU Igniter with a Stack Match igniter system.	4/30/13
3	Valero will review the Sulfur Shedding Plan and make modifications where necessary and include the Loss of Both SRU's scenario. Valero will place the plan in the proper location on the Meraux Refinery intranet where it is easily accessible.	6/30/13
4	Valero will evaluate the startup procedures for the proper SRU and TGT sequencing during startup.	6/30/13
5	Valero will install a 2nd E <sup>2</sup> T device (a type of infrared temperature monitoring system) on #2 SRU that will bypass fire eyes once auto-ignition temperature is satisfied.	12/31/15
6	Valero will investigate options for more reliable field consoles for burner light-off on #2/#3 SRU's and upgrade or replace the existing ones.	8/1/13
7	Valero will consider options to detect hydrocarbon under-carry from FCC LPG absorbers to the amine system.	8/1/13



**EMERGENCY OCCURRENCE AND/OR AIR UPSET  
NOTIFICATION FORM**

8	Valero will issue a revised agency notification procedure and train environmental staff and select operations personnel in how to properly communicate with public safety and regulatory agencies during refinery upsets.	6/30/13
9	Valero will conduct training on the acid gas interconnect line emergency procedures for SRU qualified personnel.	9/30/13

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

Yes. Despite not being able to identify the exact root cause of the loss of power that initiated this incident, Valero has determined that the magnitude of this incident was largely determined by the subsequent loss of the #2 SRU and the difficulties encountered in re-starting both the #2 and #3 SRU's. The loss of a single SRU should not have led to an incident of this magnitude and duration. The procedural error that resulted in the loss of the #2 SRU was preventable. The corrective actions identified above will address the procedural deficiencies and equipment malfunctions identified in the incident investigation.

There were no injuries as a result of this episode.

**REGULATION NOTIFICATION REQUIREMENT(S):**

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

SIGNATURE



DATE

4/10/13

TITLE

Sr. Environmental Engineer



## **EMISSIONS CALCULATIONS**

### **#3 SRU Shutdown (2/10/13) Valero Refining – Meraux LLC**

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**Note:** The emissions calculations have been revised to reflect the refinery sulfur mass balance during the event. The original calculations, submitted on 2/15/13, used the results of a limited number of refinery fuel gas H<sub>2</sub>S samples to calculate the SO<sub>2</sub> emissions from Heaters and Boilers. The original assumption that the samples reflected the H<sub>2</sub>S concentration for the entire incident produced calculated SO<sub>2</sub> emissions greater than the maximum possible conversion of all available sulfur in the refinery feed streams during the incident.

#### **Equation for Emissions for Heaters, Boilers, Flares, and the SRU Incinerators Except during TGT Bypasses**

$$\begin{aligned}\text{Pounds of SO}_2 &= [\text{FR}][\text{TD}][\text{ConcH}_2\text{S}][\text{EF}][1.69 \times 10^{-7}] \\ \text{Pounds of H}_2\text{S} &= [\text{FR}][\text{TD}][\text{ConcH}_2\text{S}][1-\text{EF}][8.96 \times 10^{-8}]\end{aligned}$$

FR	=	Average Flow Rate of gas combusted (SCFH)
TD	=	Total Duration (hrs)
ConcH <sub>2</sub> S	=	Average Concentration of H <sub>2</sub> S in gas (ppm)
EF	=	Combustion Efficiency
$1.69 \times 10^{-7}$	=	[lb mole H <sub>2</sub> S/379.5 scf H <sub>2</sub> S][64 lbs SO <sub>2</sub> /lb mole H <sub>2</sub> S]/1000000
$8.96 \times 10^{-8}$	=	[lb mole H <sub>2</sub> S/379.5 scf H <sub>2</sub> S][34 lbs H <sub>2</sub> S/lb mole H <sub>2</sub> S]/1000000

#### **Notes:**

1. Heaters and Boilers -The flow rates was measured by fuel gas flow meters. The average H<sub>2</sub>S concentrations were estimated using a refinery sulfur mass balance.
2. North and South Flares - continuously monitored for both flow and total Sulfur concentration.
3. The flow rates for the #2 and #3 Incinerators when the associated TGT was not bypassed was estimated using engineering judgment based on material balance and stack test information. The SO<sub>2</sub> concentrations were estimated using a CEMS spanned 0-500 ppm. During periods where the SO<sub>2</sub> measurement was greater than maximum scale (i.e. > 500 ppm), the value of 1000 ppm (2 x 500 ppm) was substituted.

**EMISSIONS CALCULATIONS**  
**#3 SRU Shutdown (2/10/13)**  
**Valero Refining – Meraux LLC**

Heaters, Boilers, Flares, and the SRU Incinerators Except during TGT Bypasses									
Point Source(s)	Start	Stop	TD (hrs)	FR (SCFH)	ConcH <sub>2</sub> S (ppm)	EF	SO <sub>2</sub> (lbs)	H <sub>2</sub> S (lbs)	Event Description
North Flare	2/10/13 07:00	2/11/13 20:30	37.5	71,548	16,420	0.99	7,371	39	Incident start to normal concentrations
North Flare	2/12/13 18:55	2/13/13 00:30	5.6	35,473	5,823	0.99	194	1	Venting associated with #2 SRU Complex start up
South Flare	2/10/13 07:00	2/10/13 20:45	13.8	53,574	3,745	0.99	463	2	Incident start to Acid Gas Flaring
South Flare	2/10/13 20:45	2/10/13 22:21	1.6	163,140	287,854	0.99	12,571	67	Amine Acid Gas Flaring during #3 SRU start up
South Flare	2/10/13 22:21	2/11/13 08:00	9.7	59,835	3,488	0.99	339	2	End of Acid Gas Flaring to normal concentrations
Heaters and Boilers	2/10/13 06:45	2/11/13 07:46	25	1,140,388	14,477	0.995	69,403	185	Emissions for all sources supplied by Refinery Fuel Gas with H <sub>2</sub> S > 162 ppm
#2 SRU	2/10/13 08:00	2/12/13 09:23	49.4	45,078	1,095	0.995	410	1	Incinerator in Hot Standby with SO <sub>2</sub> > 500 ppm
#2 SRU	5/14/01 10:01	5/14/01 10:01	14.8	195,903	321	0.995	157	0	End of #2 TGT Bypass to Incinerator SO <sub>2</sub> < 250 ppm
#3 SRU	2/10/13 06:43	2/10/13 16:41	10.0	135,068	1,313	0.995	298	1	Incinerator in Hot Standby with SO <sub>2</sub> > 250 ppm
#3 SRU	2/10/13 16:41	2/11/13 05:06	12.4	500,553	1,344	0.995	1,403	4	SRU in operation with SO <sub>2</sub> > 250
#3 SRU	2/11/13 18:55	2/11/13 21:49	2.9	704,753	950	0.995	326	1	End of #3TGT Bypass to Incinerator SO <sub>2</sub> < 250 ppm
<b>Total</b>							<b>92,935</b>	<b>303</b>	

## **EMISSIONS CALCULATIONS**

### **#3 SRU Shutdown (2/10/13) Valero Refining – Meraux LLC**

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#### **Equation for SRU Incinerators during TGT Bypasses**

##### **#2 SRU**

$$\text{Pounds of SO}_2 = [(AR)(0.785) + (SR)(0.208)][0.015][0.169][TD][EF]$$

$$\text{Pounds of H}_2\text{S} = [(AR)(0.785) + (SR)(0.208)][0.015][0.0896][TD][1-EF]$$

##### **#3 SRU**

$$\text{Pounds of SO}_2 = [(AR)(0.937) + (SR)(0.276)][0.015][0.169][TD][EF]$$

$$\text{Pounds of H}_2\text{S} = [(AR)(0.937) + (SR)(0.276)][0.015][0.0896][TD][1-EF]$$

AR	=	Average Amine Acid Gas Flow Rate to SRU (SCFH)
SR	=	Average Sour Water Acid Gas Rate (SCFH)
TD	=	Total Duration (hrs)
EF	=	Combustion Efficiency
0.785, 0.208	=	Mole Fraction H <sub>2</sub> S in Amine Acid Gas and Sour Water Acid Gas for #2 SRU material balance
0.937, 0.276	=	Mole Fraction H <sub>2</sub> S in Amine Acid Gas and Sour Water Acid Gas for #3 SRU material balance
0.015	=	Fraction of H <sub>2</sub> S remaining in SRU Tail Gas
0.169	=	[lb mole H <sub>2</sub> S/379.5 scf H <sub>2</sub> S][64 lbs SO <sub>2</sub> /lb mole H <sub>2</sub> S]
0.0896	=	[lb mole H <sub>2</sub> S/379.5 scf H <sub>2</sub> S][34 lbs H <sub>2</sub> S/lb mole H <sub>2</sub> S]



**EMISSIONS CALCULATIONS**  
**#3 SRU Shutdown (2/10/13)**  
**Valero Refining – Meraux LLC**

SRU Incinerators during TGT Bypasses									
Point Source(s)	Start	Stop	TD (hrs)	AR (SCFH)	SR (SCFH)	EF	SO <sub>2</sub> (lbs)	H <sub>2</sub> S (lbs)	Event Description
#2 SRU	2/12/13 09:23	2/12/13 10:26	1.0	26,363	3,632	0.995	54	0.1	#2 TGT Bypassed during unit start up
#3 SRU	2/11/13 16:13	2/11/13 16:57	0.7	49,777	9,952	0.995	87	0.2	Operator Error - While testing the #3 SRU Combustion Air Blower, operator inadvertently shutdown #3 Tail Gas Blower
#3 SRU	2/11/13 17:07	2/11/13 18:55	1.8	60,899	9,420	0.995	271	0.7	Unit recovery from operator error above
Total							412	1	
Incident Total							93,347	304	