

200 Peach Street (71730) PO Box 7000 El Dorado, AR 71731-7000 (870) 862-6411

October 31, 2011

CERTIFIED: 7002 2030 0001 8075 2227

Department of Environmental Quality Office of Environmental Compliance Enforcement Division 602 North Fifth Street Baton Rouge, LA 70802 (225) 219-3700

Re: NSPS Excess Emissions & CEM Performance Report - 3rd Quarter 2011 Murphy Oil USA, Inc. Meraux Refinery, Agency Interest # 1238 2500 East St. Bernard Hwy., St. Bernard Parish, Meraux, LA Title V Permit Numbers: 2500-00001-V6

Gentlemen,

Murphy Oil USA, Inc. (MOUSA) is hereby submitting the Excess Emissions and Monitoring Systems Reports, per LAC 33:III, Chapter 30, 40 CFR 60.7(c) and 40 CFR 63.1575 for the Third Quarter 2011. An SO2 CEMS on the #2 FCCU ESP Stack (EPN 2-77, EQT 0032) has been added to this report in accordance with United States of America, the Louisiana Department of Environmental Quality and the State of Wisconsin v. Murphy Oil USA, Inc., Civil Action No. 3:10-cv-563 (W.D. Wis., entered February 16, 2011)

For the reporting period, no CEMS had excess emissions greater than 1 percent of the total operating time and no CEMS had downtime greater than 5 percent of the total operating time. Also enclosed are the Data Assessment Reports for the appropriate CEMs.

Should you have any questions regarding this submission, please contact Ms. Liz Lundmark or myself 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,

MURPHY OIL USA, INC.

Stephen F. Hunkus

VP of Worldwide Refining Murphy Oil USA, Inc.

Enclosures

cc: Mr. Mike Algero

LDEQ SE Regional Office

New Orleans, LA



(per 40 CFR 60.7(d))

Pollutant: Opacity

Reporting period dates: From 7/01/11 to 9/30/11

Date submitted: 10/30/11

Company: Murphy Oil USA, Inc., Meraux Refinery

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 hourly period.

Monitor Manufacturer and Model No.: Monitor Labs Inc., #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 period¹: 132,480 minutes

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

CMS Performance Summary ¹	
1. CMS downtime in reporting period due to:	(minutes)
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	0
d. Other known causes	51
e. Unknown causes	0
2. Total CMS Downtime	51
3. Total duration of CMS Downtime x (100) [Total source operating time] ²	0.0 %

¹ For opacity, record all times in minutes. For gases, record all times in hours.

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

(per 40 CFR 60.7(d))

Pollutant: CO

Reporting period dates: From 7/01/11 to 9/30/11

Date submitted: 10/30/11

Company: Murphy Oil USA, Inc., Meraux Refinery

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

Emission Limitation: CO corrected to 0% O₂ shall not exceed 500 ppm on a 1 hour rolling average

Monitor Manufacturer and Model No.: Thermo Environmental 48i (CO)/Servomex 1155 (O₂)

Date of Latest CMS Certification or Audit: CGA on 8/11/11

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

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

CMS Performance Summary ¹	
1. CMS downtime in reporting period due to:	(hours)
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	6
d. Other known causes	0
e. Unknown causes	0
2. Total CMS Downtime	0
3. Total duration of CMS Downtime x (100) [Total source operating time] ²	0.3 %

¹ For opacity, record all times in minutes. For gases, record all times in hours.

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

(per 40 CFR 60.7(d))

Pollutant: SO₂

Reporting period dates: From 7/01/11 to 9/30/11

Date submitted: 10/30/11

Company: Murphy Oil USA, Inc., Meraux Refinery

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

Emission Limitation: SO₂ corrected to 0% O₂ 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 (SO₂)/Servomex 1155 (O₂)

Date of Latest CMS Certification or Audit: <u>CGA on 8/11/11</u>

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

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

CMS Performance Summary ¹	
1. CMS downtime in reporting period due to:	(hours)
a. Monitor equipment malfunctions	0
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	6
d. Other known causes	0
e. Unknown causes	0
2. Total CMS Downtime	6
3. Total duration of CMS Downtime x (100) [Total source operating time] ²	0.3 %

¹ For opacity, record all times in minutes. For gases, record all times in hours.

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

(per 40 CFR 60.7(d))

Pollutant: SO₂

Reporting period dates: From 7/01/11 to 9/30/11

Date submitted: 10/30/11

Company: Murphy Oil USA, Inc., Meraux Refinery

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

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

Monitor Manufacturer and Model No.: Brimstone SGX-231(SO₂)/Rosemount Oxymitter 4000(O₂)

Date of Latest CMS Certification or Audit: CGA on 8/2/11

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

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

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

¹ For opacity, record all times in minutes. For gases, record all times in hours.

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

(per 40 CFR 60.7(d))

Pollutant: SO₂

Reporting period dates: From 7/01/11 to 9/30/11

Date submitted: 10/30/11

Company: Murphy Oil USA, Inc., Meraux Refinery

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

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

Monitor Manufacturer and Model No.: <u>Brimstone 991-CEM-X(SO₂)/ Rosemount Oxymitter 4000(O₂)</u>

Date of Latest CMS Certification or Audit: CGA on 8/2/11

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

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

CMS Performance Summary ¹	
1. CMS downtime in reporting period due to:	(hours)
a. Monitor equipment malfunctions	15
b. Non-Monitor equipment malfunctions	0
c. Quality assurance calibration	50
d. Other known causes	2
e. Unknown causes	0
2. Total CMS Downtime	67
3. Total duration of CMS Downtime x (100) [Total source operating time] ²	3.0 %

¹ For opacity, record all times in minutes. For gases, record all times in hours.

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

(per 40 CFR 60.7(d))

Pollutant: H₂S

Reporting period dates: From 7/01/11 to 9/30/11

Date submitted: 10/30/11

Company: Murphy Oil USA, Inc., Meraux Refinery

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 8/1/11

Process Unit(s) Description: Area 1 Fuel Drum for Boiler TB-01 (EPN 1-06, EQT 0010) and Boiler B-7 (EPN 1-07, EQT 0011)

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

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

¹ For opacity, record all times in minutes. For gases, record all times in hours.

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

(per 40 CFR 60.7(d))

Pollutant: H₂S

Reporting period dates: From 7/01/11 to 9/30/11

Date submitted: 10/30/11

Company: Murphy Oil USA, Inc., Meraux Refinery

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 8/1/11

Process Unit(s) Description: Area 2 Fuel Drum for: MDH Product and Fractionator Heaters (EPN 2-92, EQT 0033);

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);	
Hydrobon Charge Heater (EPN 14-72, EQT 0023)	

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

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

¹ For opacity, record all times in minutes. For gases, record all times in hours.

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

(per 40 CFR 60.7(d))

Pollutant: H₂S

Reporting period dates: From 7/01/11 to 9/30/11

Date submitted: 10/30/11

Company: Murphy Oil USA, Inc., Meraux Refinery

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: <u>CGA on 8/2/11</u>

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

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

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

¹ For opacity, record all times in minutes. For gases, record all times in hours.

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

(per 40 CFR 60.7(d))

Pollutant: H_2S

Reporting period dates: From 7/01/11 to 9/30/11

Date submitted: 10/30/11

Company: Murphy Oil USA, Inc., Meraux Refinery

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 8/5/11

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

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

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

¹ For opacity, record all times in minutes. For gases, record all times in hours.

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

(per 40 CFR 60.7(d))

Pollutant: H₂S

Reporting period dates: From 7/01/11 to 9/30/11

Date submitted: 10/30/11

Company: Murphy Oil USA, Inc., Meraux Refinery

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 8/3/11

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)

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

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

¹ For opacity, record all times in minutes. For gases, record all times in hours.

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

(per 40 CFR 60.7(d))

Pollutant: NO_x

Reporting period dates: From 7/01/11 to 9/30/11

Date submitted: <u>10/30/11</u>

Company: Murphy Oil USA, Inc., Meraux Refinery

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 8/10/11(NOx), 8/5/11 (O2)

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

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

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

¹ For opacity, record all times in minutes. For gases, record all times in hours.

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

(per 40 CFR 60.7(d))

Pollutant: NO_x

Reporting period dates: From 7/01/11 to 9/30/11

Date submitted: 10/30/11

Company: Murphy Oil USA, Inc., Meraux Refinery

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 8/10/11(NOx), 8/5/11 (O2)

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

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

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

¹ For opacity, record all times in minutes. For gases, record all times in hours.

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

(per 40 CFR 60.7(d))

Pollutant: NO_x

Reporting period dates: From 7/01/11 to 9/30/11

Date submitted: 10/30/11

Company: Murphy Oil USA, Inc., Meraux Refinery

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

Date of Latest CMS Certification or Audit: CGA on 8/10/11(NOx), 8/5/11 (O2)

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

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

CMS Performance Summary ¹		
1. CMS downtime in reporting period due to:	(hours)	
a. Monitor equipment malfunctions	11	
b. Non-Monitor equipment malfunctions	0	
c. Quality assurance calibration	3	
d. Other known causes	0	
e. Unknown causes	0	
2. Total CMS Downtime	14	
3. Total duration of CMS Downtime x (100) [Total source operating time] ²	0.6 %	

¹ For opacity, record all times in minutes. For gases, record all times in hours.

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

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

Pollutant: Opacity
Reporting period dates: From 7/01/11 to 9/30/11
Date submitted: 10/30/11
Company: Murphy Oil USA, Inc., Meraux Refinery
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 hourly 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: <u>N/A</u>
2. Number of Days <u>N/A</u>

B. Corrective Actions: N/A

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

Pollutant: CO

Reporting period dates: From 7/01/11 to 9/30/11

Date submitted: 10/30/11

Company: Murphy Oil USA, Inc., Meraux Refinery

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

Emission Limitation: CO corrected to 0% O₂ shall not exceed 500 ppm on a 1 hour rolling average

Monitor Manufacturer and Model No.: Thermo Environmental 48i (CO)/Servomex 1155 (O2)

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	CO #2	O ₂ #1	O ₂ #2
	(low scale)	(high scale)	(low scale)	(high scale)
Date of Audit	8/11/11	8/11/11	8/9/11	8/9/11
Audit Gas Cylinder No.	CC176140	CC184493	XC019583B	SG9150283BAL
Date of Audit Gas Cert.	12/22/09	12/19/09	12/11/09	12/14/09
Type of Certification	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1
Certified Audit Value	245.6	580.5	6.32	10.1
CEM Response Value	256.0	595.3	6.37	10.1
Accuracy	4.2%	2.6%	0.8%	0.3%
Standard	<15%	<15%	<15%	<15%

II. CALIBRATION DRIFT ASSESSMENT

A. Out-of Control Periods:

1. Dates: <u>N/A</u>

2. Number of Days N/A

B. Corrective Actions: N/A

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

Pollutant: SO₂

Reporting period dates: From 7/01/11 to 9/30/11

Date submitted: 10/30/11

Company: Murphy Oil USA, Inc., Meraux Refinery

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

Emission Limitation: SO₂ corrected to 0% O₂ 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 (SO₂)/Servomex 1155 (O₂)

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):

	SO ₂ #1	SO ₂ #2	O ₂ #1	O_2 #2
	(low scale)	(high scale)	(low scale)	(high scale)
Date of Audit	8/11/11	8/11/11	8/9/11	8/9/11
Audit Gas Cylinder No.	CC135773	SG9163703	XC019583B	SG9150283BAL
Date of Audit Gas Cert.	12/21/09	12/17/09	12/11/09	12/14/09
Type of Certification	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1
Certified Audit Value	124.0	274.5	6.32	10.1
CEM Response Value	135.9	284.3	6.37	10.1
Accuracy	9.6%	3.6%	0.8%	0.3%
Standard	<15%	<15%	<15%	<15%

II. CALIBRATION DRIFT ASSESSMENT

Α.	Out-of	Control	P	eriods:

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

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

Pollutant: SO₂

Reporting period dates: From 7/01/11 to 9/30/11

Date submitted: 10/30/11

Company: Murphy Oil USA, Inc., Meraux Refinery

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

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

Monitor Manufacturer and Model No.: Brimstone SGX-231(SO₂)/Rosemount Oxymitter 4000(O₂)

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

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

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

I. ACCURACY ASSESSMENT RESULTS (CGA):

	SO ₂ #1	SO ₂ #2	O ₂ #1	O ₂ #2
	(low scale)	(high scale)	(low scale)	(high scale)
Date of Audit	8/2/11	8/2/11	8/2/11	8/2/11
Audit Gas Cylinder No.	CC135773	SG9163703	XC019583B	SG9150283BAL
Date of Audit Gas Cert.	12/21/09	12/17/09	12/11/09	12/14/09
Type of Certification	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1
Certified Audit Value	124.0	274.5	6.32	10.1
CEM Response Value	132.0	279.3	6.30	9.8
Accuracy	6.5%	1.8%	0.2%	2.7%
Standard	<15%	<15%	<15%	<15%

II. CALIBRATION DRIFT ASSESSMENT

	<u> </u>	CO		1 10		
Α.	Out-c	of Ca	ntro	l Pe	rıod	s:

1. Dates: <u>N/A</u>

2. Number of Days N/A

B. Corrective Actions: N/A

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

Pollutant: SO₂

Reporting period dates: From 7/01/11 to 9/30/11

Date submitted: <u>10/30/11</u>

Company: Murphy Oil USA, Inc., Meraux Refinery

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

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

Monitor Manufacturer and Model No.: <u>Brimstone 991-CEM-X (SO₂), Rosemount Oxymitter 4000 (O2)</u>

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 ₂ #1	SO ₂ #2	$O_2 \# 1$	$O_2 \# 2$
	(low scale)	(high scale)	(low scale)	(high scale)
Date of Audit	8/2/11	8/2/11	8/2/11	8/2/11
Audit Gas Cylinder No.	CC135773	SG9163703	XC019583B	SG9150283BAL
Date of Audit Gas Cert.	12/21/09	12/17/09	12/11/09	12/14/09
Type of Certification	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1
Certified Audit Value	124.0	274.5	6.32	10.1
CEM Response Value	127.3	277.0	6.10	9.8
Accuracy	2.7%	0.9%	3.4%	2.7%
Standard	<15%	<15%	<15%	<15%

II. CALIBRATION DRIFT ASSESSMENT

Α.	Out-of	Control.	Periods:
4 x.	Out-OI	Common	i ciious.

1. Dates: 9/4/11, 9/5/11

2. Number of Days 2

B. Corrective Actions: __Water had entered the sample line of the SO2 analyzer during a heavy rainstorm on 9/3/11. Maintenance de-energized the SO2 analyzer to replace the sample line and dry out the analyzer. __Maintenance was not aware that the timer for the O2 analyzer is also powered from the same breaker. __The set time for the timer was cleared when it was de-energized. On 9/4/11 and 9/5/11, the O2 analyzer failed to run its validation sequence. On 9/6/11, the timer was reset and a satisfactory validation was performed.

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

Pollutant: H ₂	₂ S				
Reporting per	riod dates: From <u>7/01/11</u> to <u>9/30/11</u>				
Date submitte	ed: 10/30/11				
Company: N	Murphy Oil USA, Inc., Meraux Refinery				
Address: 25	00 East St. Bernard Highway, Meraux, LA 70075				
Emission Lin	nitation: Hydrogen Sulfide shall not exceed 162 pp	om on a 3-hour rolling	average.		
Monitor Man	ufacturer and Model No.: Ametek, #4661				
Source Unit:_	Area 1 Fuel Drum for Boiler TB-01 (EPN 1-06, E	QT 0010)			
CEM Samplin	ng Location: Area I Fuel Drum				
CEM Span V	alue: Hydrogen Sulfide, 300 ppm				
I. ACCUF	RACY ASSESSMENT RESULTS (CGA):				
	Date of Audit Audit Gas Cylinder No. Date of Audit Gas Cert. Type of Certification Certified Audit Value CEM Response Value Accuracy Standard	H ₂ S #1 (low scale) 8/1/11 CC152579 1/26/11 EPA Protocol 1 74.5 75.0 0.6% <15%	H ₂ S #2 (high scale) 8/1/11 CC288256 1/25/11 EPA Protocol 1 164.9 166.0 0.7% <15%		
II. CALIBRATION DRIFT ASSESSMENT					
A. Out-of Control Periods:					
	1. Dates: <u>N/A</u>				
	2. Number of Days <u>N/A</u>				
В.	Corrective Actions: N/A				

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

Pollutant: H ₂ S		
Reporting period dates: From _7/01/11_to _9/30/11_		
Date submitted: 10/30/11		
Company: Murphy Oil USA, Inc., Meraux Refinery		
Address: 2500 East St. Bernard Highway, Meraux, LA 70075		
Emission Limitation: <u>Hydrogen Sulfide shall not exceed 162 pp</u>	om on a 3-hour rolling	average.
Monitor Manufacturer and Model No.: Ametek, #4661		
Source Unit: Area 2 Fuel Drum for: MDH Product and Fractiona ROSE Heater (EPN 1-80, EQT 0014); Vacuum He Platformer Charge Heater (EPN 17-72 a,b,c, EQT 0 Hydrobon Charge Heater (EPN 14-72, EQT 0023)	ater (EPN 1-76, EQT (
CEM Sampling Location: Area 2 Fuel Drum		
CEM Span Value: <u>Hydrogen Sulfide</u> , 300 ppm		
I. ACCURACY ASSESSMENT RESULTS (CGA):		
Date of Audit Audit Gas Cylinder No. Date of Audit Gas Cert. Type of Certification Certified Audit Value CEM Response Value Accuracy Standard	H ₂ S #1 (low scale) 8/1/11 CC152579 1/26/11 EPA Protocol 1 74.5 72.3 3.0% <15%	H ₂ S #2 (high scale) 8/1/11 CC288256 1/25/11 EPA Protocol 1 164.9 160.0 3.0% <15%
II. CALIBRATION DRIFT ASSESSMENT		
A. Out-of Control Periods:		
1. Dates: <u>N/A</u>		
2. Number of Days <u>N/A</u>		
B. Corrective Actions: N/A		

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

Pollutant: H ₂ S		
Reporting period dates: From _7/01/11_to _9/30/11_		
Date submitted: 10/30/11		
Company: Murphy Oil USA, Inc., Meraux Refinery		
Address: 2500 East St. Bernard Highway, Meraux, LA 70075	_	
Emission Limitation: Hydrogen Sulfide shall not exceed 162 p	opm on a 3-hour rollin	g average.
Monitor Manufacturer and Model No.: Ametek, #4661		
Process Unit(s) Description: Area 4 Fuel Drum for Alky Reboi	iler (EPN 1-77, EQT (0078)
CEM Sampling Location: Area 4 Fuel Drum		
CEM Span Value: <u>Hydrogen Sulfide</u> , 300 ppm		
I. ACCURACY ASSESSMENT RESULTS (CGA):		
Date of Audit Audit Gas Cylinder No. Date of Audit Gas Cert. Type of Certification Certified Audit Value CEM Response Value Accuracy Standard	H ₂ S #1 (low scale) 8/2/11 CC152579 1/26/11 EPA Protocol 1 74.5 63.7 14.6% <15%	H ₂ S #2 (high scale) 8/2/11 CC288256 1/25/11 EPA Protocol 1 164.9 161.3 2.2% <15%
II. CALIBRATION DRIFT ASSESSMENT		
A. Out-of Control Periods:		
1. Dates: <u>N/A</u>		
2. Number of Days <u>N/A</u>		
D. Composition Actions. N/A		

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

Pollutant: H ₂ S		
Reporting period dates: From 7/01/11 to 9/30/11		
Date submitted: 10/30/11		
Company: Murphy Oil USA, Inc., Meraux Refinery		
Address: 2500 East St. Bernard Highway, Meraux, LA 70075	_	
Emission Limitation: <u>Hydrogen Sulfide shall not exceed 162</u>	ppm on a 3-hour rollin	g average.
Monitor Manufacturer and Model No.: Ametek, #4661		
Process Unit(s) Description: Area 6 Fuel Drum for Hydrocrac	ker & Hydrotreater Ch	arge Heaters (EPN 1-00, EQT 0009)
CEM Sampling Location: Area 6 Fuel Drum		
CEM Span Value: Hydrogen Sulfide, 300 ppm		
I. ACCURACY ASSESSMENT RESULTS (CGA):		
Date of Audit Audit Gas Cylinder No. Date of Audit Gas Cert. Type of Certification Certified Audit Value CEM Response Value Accuracy Standard	H ₂ S #1 (low scale) 8/5/11 CC152579 1/26/11 EPA Protocol 1 74.5 65.3 12.4% <15%	H ₂ S #2 (high scale) 8/5/11 CC288256 1/25/11 EPA Protocol 1 164.9 154.3 6.4% <15%
II. CALIBRATION DRIFT ASSESSMENT		
A. Out-of Control Periods:		
1. Dates: <u>N/A</u>		
2. Number of Days <u>N/A</u>		
B. Corrective Actions: N/A		

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

Pollutant: H ₂ S		
Reporting period dates: From _7/01/11_to _9/30/11_		
Date submitted: 10/30/11		
Company: Murphy Oil USA, Inc., Meraux Refinery		
Address: 2500 East St. Bernard Highway, Meraux, LA 70075		
Emission Limitation: <u>Hydrogen Sulfide shall not exceed 162 pp</u>	m on a 3-hour rolling	average.
Monitor Manufacturer and Model No.: Ametek, #4661		
Process Unit(s) Description: <u>Area 6 Fuel Drum for Boilers B-5 (</u>	EPN 2-00, EQT 0030)	and B-6 (EPN 3-00, EQT 0048)
CEM Sampling Location: Area 6 Fuel Drum		
CEM Span Value: <u>Hydrogen Sulfide, 300 ppm</u>		
I. ACCURACY ASSESSMENT RESULTS (CGA):		
Date of Audit Audit Gas Cylinder No. Date of Audit Gas Cert. Type of Certification Certified Audit Value CEM Response Value Accuracy Standard	H ₂ S #1 (low scale) 8/3/11 CC152579 1/26/11 EPA Protocol 1 74.5 74.1 0.6% <15%	H ₂ S #2 (high scale) 8/3/11 CC288256 1/25/11 EPA Protocol 1 164.9 164.0 0.5% <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		

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

Pollutant: NO_x

Reporting period dates: From 7/01/11 to 9/30/11

Date submitted: 10/30/11

Company: Murphy Oil USA, Inc., Meraux Refinery

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):

	NOx #1	NOx #2	$O_2 \# 1$	$O_2 \# 2$
	(low scale)	(high scale)	(low scale)	(high scale)
Date of Audit	8/10/11	8/10/11	8/5/11	8/5/11
Audit Gas Cylinder No.	CC182945	SG9931306	XC019583B	SG9150283BAL
Date of Audit Gas Cert.	12/9/09	12/17/09	12/11/09	12/14/09
Type of Certification	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1
Certified Audit Value	25.3	54.8	6.32	10.1
CEM Response Value	25.5	56.0	6.25	10.0
Accuracy	0.8%	2.2%	1.0%	0.8%
Standard	<15%	<15%	<15%	<15%

II. CALIBRATION DRIFT ASSESSMENT

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

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

Pollutant: NO_x

Reporting period dates: From 7/01/11 to 9/30/11

Date submitted: 10/30/11

Company: Murphy Oil USA, Inc., Meraux Refinery

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):

	NOx #1	NOx #2	O ₂ #1	O ₂ #2
	(low scale)	(high scale)	(low scale)	(high scale)
Date of Audit	8/10/11	8/10/11	8/5/11	8/5/11
Audit Gas Cylinder No.	CC182945	SG9931306	XC019583B	SG9150283BAL
Date of Audit Gas Cert.	12/9/09	12/17/09	12/11/09	12/14/09
Type of Certification	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1
Certified Audit Value	25.3	54.8	6.32	10.1
CEM Response Value	25.0	55.4	6.22	10.0
Accuracy	1.2%	1.1%	1.5%	1.1%
Standard	<15%	<15%	<15%	<15%

II. CALIBRATION DRIFT ASSESSMENT

۸	Out-of	Contro	1 Periods	
Α.	Our-or	Contro	Ferious	

1. Dates: <u>N/A</u>

2. Number of Days N/A

B. Corrective Actions: N/A

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

Pollutant: NO_x

Reporting period dates: From 7/01/11 to 9/30/11

Date submitted: 10/30/11

Company: Murphy Oil USA, Inc., Meraux Refinery

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

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

Monitor Manufacturer and Model No.: Thermo Environmental Model 42i (NOx). 43i (O2)

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

CEM Sampling Location: Boiler TB-01

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

I. ACCURACY ASSESSMENT RESULTS (CGA):

	NOx #1	NOx #2	O ₂ #1	O ₂ #2
	(low scale)	(high scale)	(low scale)	(high scale)
Date of Audit	8/10/11	8/10/11	8/5/11	8/5/11
Audit Gas Cylinder No.	CC287345	SG9163479	XC019583B	SG9150283BAL
Date of Audit Gas Cert.	1/5/10	12/29/09	12/11/09	12/14/09
Type of Certification	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1	EPA Protocol 1
Certified Audit Value	119.2	286.2	6.32	10.1
CEM Response Value	125.2	287.7	6.00	9.8
Accuracy	5.0%	0.5%	5.0%	2.4%
Standard	<15%	<15%	<15%	<15%

II. CALIBRATION DRIFT ASSESSMENT

A.	Out-of	Control	Periods:

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