Shell Oil Products US

Martinez Refinery
PO Box 711
Martinez, CA 94553-0071
Tel (925) 313-3000
Fax (925) 313-3065

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

January 15, 2019

Director of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105
Attn: Title V Reports

Subject: **Semi-Annual Title V Deviation Summary Report**
July 1, 2018 – December 31, 2018

Dear Mr. Gove:

Please find Shell Oil Products US, Martinez Refinery's Semi-Annual Title V Deviation Summary report for the period of July 1, 2018 through December 31, 2018. This report includes a summary of the inoperable monitors for the second half of 2018.

The refinery's Responsible Official, Tom Rizzo, has signed the reports.

If you have any questions regarding this matter, please contact Kathy Wheeler at (925) 313-3722.

Sincerely yours,

Gordon Johnson
Manager, Environmental Affairs Department
Shell Oil Products US, Martinez Refinery

Attachments

RECEIVED
2019 JAN 30 AM 10: 20
BAY AREA AIR QUALITY
MANAGEMENT DISTRICT

BAAQMD Title V Permit
6 Month Deviation Summary Report

From 7/1/2018 *to* 12/31/2018

A0011 Shell Oil Products US Martinez Refinery

Facility Address:
3485 Pacheco Blvd
City: Martinez
State: CA
Zip Code: 94553-0071

Mailing Address
PO Box 711
City: Martinez
State: CA
Zip Code: 94553-0071

Contact: Emily Mendelsohn Title: Associate Engineer Phone: (925) 313-3060

Title V deviations for the reporting period are summarized below:

Event Started: 7/8/2018 10:00 AM
Stopped: 7/8/2018 4:00 PM ☐ Ongoing Event

Source Number: 1507
Abatement Device : A12
Emission Point:

May have resulted in a violation of :
Permit:
AQMD: Regulation 6 Rule 1 Sec
Other: CFR 60.102(a)(2) & CFR 63.15

Event Description: COB #1 Opacity analyzer 9AI2529 showed an indicated excess of great than 1 Ringelmann in a 3 minute clock hour during the 10:00; 11:00; 14:00; 15:00 & 16:00 hour

Probable Cause: A feed diversion at the FCCU automatically tripped the Electrostatic Precipitators on the CO Boilers for safety reasons resulting in opacity excess.

Corrective actions or preventative steps taken: The ESPs were restarted as soon as it was determined to be safe.

Event Started: 7/8/2018 10:00 AM
Stopped: 7/8/2018 2:00 PM ☐ Ongoing Event

Source Number: 1509
Abatement Device : A13
Emission Point:

May have resulted in a violation of :
Permit:
AQMD: Regulation 2 Rule 1 Sec 302
Other: CFR 60.201(a)(2) & CFR 63.15

Event Description: COB #2 Opacity analyzer 9AI2531 showed an indicated excess on greater than 1 Ringelmann for 3 minutes in a clock hour during the hours of 10:00, 11:00 & 14:00

Probable Cause: A feed diversion at the FCCU automatically tripped the Electrostatic Precipitators on the CO Boilers for safety reasons resulting in opacity excess.

Corrective actions or preventative steps taken: The ESPs were restarted as soon as it was determined to be safe.

Event Started: 7/8/2018 10:00 AM
Stopped: 7/8/2018 4:00 PM ☐ Ongoing Event

Source Number: 1512
Abatement Device : A14
Emission Point:

May have resulted in a violation of :
Permit:
AQMD: Regulation 6 Rule 1 Sec 302
Other: CFR 60.102(a)(2) & CFR 63.15

Event Description: COB #3 Opacity analyzer 9AI2533 showed an indicated excess of greater than 1 Ringelmann in a 3 minute clock hour during the hours of 10:00, 11:00, 14:00, 15:00 & 16:00.

Probable Cause: A feed diversion at the FCCU automatically tripped the Electrostatic Precipitators on the CO Boilers for safety reasons resulting in opacity excess.

Corrective actions or preventative steps taken: The ESPs were restarted as soon as it was determined to be safe.

Event Started: 7/6/2018 1:20 AM
Stopped: 7/6/2018 8:30 AM ☐ Ongoing Event

Source Number: 1471
Abatement Device :
Emission Point:

May have resulted in a violation of :
Permit:
AQMD: Regulation 12 Rule 11 Sec 503
Other: 40 CFR 60.18

Event Description: There was a loss of all 3 flare pilots at the LOP Aux Flare (S-1471)

Probable Cause: Water in the flare line extinguished the flare pilots when the water was carried out during a flaring event.

Corrective actions or preventative steps taken: The pilots were re-lit.

Event Started: 7/13/2018 7:00 AM
Stopped: 7/13/2018 4:00 PM ☐ Ongoing Event

Source Number: 4161
Abatement Device : A4161
Emission Point:

May have resulted in a violation of :
Permit: Title V Condition 12271 Part 35
AQMD:
Other:

Event Description: HP3 Heater H101 exceeded the rolling 3-hour average 10 ppm Nox limit.

Probable Cause: A broken shaft on a PSA feed valve resulted in a plant upset which caused an excess in the Nox emissions. Air Products applied for breakdown relief for this event.

Corrective actions or preventative steps taken: Air Products operations reduced rates and pulled feed to get the plant back under control.

Event Started: 7/14/2018 4:00 AM
Stopped: 7/14/2018 6:00 AM ☐ Ongoing Event

Source Number: 4161
Abatement Device : A4161
Emission Point:

May have resulted in a violation of :
Permit: Title V Permit 12271 Part 35
AQMD:
Other:

Event Description: HP3 Heater H101 exceeded the 3 hour rolling 10 ppm Nox limit in the 4am and 5 am hours.

Probable Cause: The excess was caused during start up of the plant after the upset due to the broken PSA valve on 7/13. Normally this would be covered by the 24 hour startup exemption but the heater had never been completely shut down.

Corrective actions or preventative steps taken: The plant was stabilized as quickly as possible to bring the Nox emissions under the limit.

Event Started: 9/27/2018 4:00 PM
Stopped: 9/27/2018 5:00 PM ☐ Ongoing Event

Source Number: 1432
Abatement Device : A1431
Emission Point:

May have resulted in a violation of :
Permit:
AQMD: Reg 9 Rule 1 Sec 307
Other:

Event Description: SCOT #2 SO2 analyzer 8AI849 showed an indicated excess greater than 250 ppm during the 1600 hour

Probable Cause: There was a sudden change to the feed composition of the sulfur recovery unit (SRU).

Corrective actions or preventative steps taken: Install hydrocarbon coalescer to help filter the sour water feed.

Event Started: 10/1/2018 7:00 AM
Stopped: 10/1/2018 8:00 AM ☐ Ongoing Event

Source Number: 1432
Abatement Device : A1431
Emission Point:

May have resulted in a violation of :
Permit:
AQMD: Reg 9 Rule 1 Sec 307
Other:

Event Description: SCOT #2 SO2 analyzer 8AI849 showed an indicated excess of greater than 250 ppm hourly average in the 0700 hour

Probable Cause: There was a sudden change to the feed composition of the sulfur recovery unit (SRU)

Corrective actions or preventative steps taken: Periodically monitor V-687 for HC and skim HC when necessary. Control draw down of V-295 (KO pot) at 2 percent of maximum level.

Event Started: 10/6/2018 2:52 PM
Stopped: 10/6/2018 3:51 PM ☐ Ongoing Event

Source Number: 1432
Abatement Device : A1431
Emission Point:

May have resulted in a violation of :
Permit: PC 12271 Part 15
AQMD: Regulation 10
Other: 40 CFR 60.104(a)(1)

Event Description: Refinery Fuel Gas H2S Analyzer 9AI1610 showed an indicated excess of the 162 ppm 3 hour rolling average limit for the H2S in RFG

Probable Cause: Incorrect lineup on DEA 2 allowing rich DEA to flow directly to DEA 1 column

Corrective actions or preventative steps taken: Lineup was corrected and valve is chain and locked. Plan to install a blind to prevent this occurrence in the future.

Event Started: 11/14/2018 12:00 PM
Stopped: 11/14/2018 1:00 PM ☐ Ongoing Event

Source Number: 1512
Abatement Device : A14
Emission Point:

May have resulted in a violation of :
Permit:
AQMD: Regulation 6 Rule 1 Sec 302
Other:

Event Description: COB #3 Opacity analyzer 9AI2533 showed an indicated excess of greater than 1 Ringelmann for 3 minutes in a clock hour during the hour of 12:00

Probable Cause: The Boiler plant was in two COB configuration with COB 1 out of service for maintenance. A sudden increase in 650# steam demand caused the spike in opacity.

Corrective actions or preventative steps taken: Backed the soot blower out of the Boiler and reduced the load on the Boiler.

Event Started: 11/14/2018 2:00 AM Stopped: 11/15/2018 4:00 AM ☐ Ongoing Event	Source Number: 1507 Abatement Device : Emission Point:	May have resulted in a violation of : Permit: AQMD: Regulation 6 Rule 1 Sec 302 Other:

Event Description: COB #1 Opacity Analyzer 9AI2529 showed an indicated excess of greater than 1 Ringelmann for more than 3 minutes in a clock hour during the hours of 2:00, 3:00, 20:00, 22:00, 23:00 on 11/14 and the hours of 1:00, 2:00 and 3:00 on 11/15

Probable Cause: The opacity spikes occurred during shutdown of the boiler when the ESPs were turned off after removal of the CO gas and fuel gas from the boiler.

Corrective actions or preventative steps taken: Immediate: Once shutdown of all ESP fields was complete, opacity readings went back to normal levels.
Long Term: Review shutdown procedure to attempt to determine if there is an alternate shutdown strategy.

Certification Statement

I certify under penalty of law that based on the information and belief formed after reasonable inquiry, the statements and information in this document and in all attachments and other materials are true, accurate, and complete.

x	THOMAS J RIZZO	GM-Shell Martinez Ref	1/21/19
Signature of Responsible Official	Print Name	Title	Date

BAAQMD Title V Permit
6 Month Monitoring Report

From 7/1/2018 to 12/31/2018

A0011 Shell Oil Products US Martinez Refinery

Facility Address:
3485 Pacheco Blvd
City: Martinez
State: CA
Zip Code: 94553-0071

Mailing Address
PO Box 711
City: Martinez
State: CA
Zip Code: 94553-0071

Contact: Emily Mendelsohn Title: Associate Engineer Phone: (925) 313-3060

Inoperable monitors as defined by BAAQMD Regulations 1-522 and 1-523 for the reporting period are summarized below:

Started	Stopped		Source (S#)	Abatement Device (A#)	Emission Point (P#)	CEM	GLM	Fuel Gas	Parametric	NOx	SO2	CO	H2S	TRS	NH3	O2	CO2	H2O	Opacity/ LTA	Lead	Steam	Flow	Wind Dir.	Wind Speed	pH	Temp.	VOC.	Gauge Press.
8/24/2018 4:00 PM	8/26/2018 9:05 AM	☑				☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Event Description: F-128 O2 analyzer 4AI1127 was out of service for greater than 24 hours due to issues with the sampling system																												
8/24/2018 4:00 PM	8/26/2018 9:05 AM	☑				☑	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Event Description: F-128 Nox analyzer 4AI116 was out of service greater than 24 hours due to issues with the sampling system.																												
9/26/2018 7:35 AM	9/28/2018 8:00 AM	☑	52AI265			☐	☑	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Event Description: East Levee Gate GLM (S-2344) analyzer 52AI265 was out of service for greater than 24 hours for replacement of the GLM shelter. The analyzer was Calibrated & put back on line.																												
10/3/2018 6:30 AM	10/10/2018 9:15 AM	☑				☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Event Description: Clean Fuels CWT HC analyzer 40A1708 has been out of service >24 hours																												
10/8/2018 8:23 AM	10/10/2018 4:35 PM	☑	1507			☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐
Event Description: COB 1 opacity analyzer 9A2529 has been out of service for more than 24 hour. Analyzer is being replaced.																												
10/9/2018 8:40 AM	10/12/2018 7:35 PM	☑	1512			☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐
Event Description: COB3 opacity analyzer 9A2533 will be out of service greater than 24hrs. Analyzer is being replaced.																												
10/11/2018 12:20 PM	10/12/2018 2:23 PM	☑				☑	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Event Description: FXG H2S to Clean Fuels Heaters analyzer 14A1251 was out of service greater than 24hrs.																												
11/21/2018 12:50 PM	11/22/2018 5:35 PM	☑				☐	☑	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Event Description: Shell Ave H2S GLM analyzer 1A1469 was out of service greater than 24hrs due to rain getting into sample system																												
11/25/2018 11:50 AM	11/26/2018 8:00 PM	☑				☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Event Description: Clean Fuels CWT HC analyzer 40A1708 has been out of service >24 hours																												

Started	Stopped		Source (S#)	Abatement Device (A#)	Emission Point (P#)	CEM	GLM	Fuel Gas	Parametric	NOx	SO2	CO	H2S	TRS	NH3	O2	CO2	H2O	Opacity/ LTA	Lead	Steam	Flow	Wind Dir.	Wind Speed	pH	Temp.	VOC.	Gauge Press.
11/30/2018 3:45 AM	12/3/2018 4:30 PM	☑				☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Event Description: Clean Fuels CWT HC analyzer 40A1708 has been out of service >24 hours

Certification Statement

I certify under penalty of law that based on the information and belief formed after reasonable inquiry, the statements and information in this document and in all attachments and other materials are true, accurate, and complete.

x Thomas J Rizzo	Thomas J Rizzo	GM-Shell Mtz Ref.	1/21/19
Signature of Responsible Official	Print Name	Title	Date