



Tesoro Refining & Marketing Company LLC
A subsidiary of Marathon Petroleum Corporation
Martinez Refinery
150 Solano Way
Martinez, CA 94553-1487

July 28, 2020

VIA EMAIL to COMPLIANCE@BAAQMD.GOV

TV Tracking #: 26

Mr. Jeffrey Gove
Director of Compliance and Enforcement
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, California 94105

1. RECEIVED IN ENFORCEMENT: 07/29/2020

**SUBJECT: Title V Semi Annual Monitoring Report for the Martinez Refinery (Plant ID B2758), and Amorco Terminal (Plant IDs B2759 and E1200)
Reporting Period: January 1, 2020 to June 30, 2020**

Dear Mr. Gove:

Pursuant to the requirements outlined in Section I, Standard Conditions, Part F of the Tesoro Refining & Marketing Company LLC Title V Permit (issued January 11, 2016), and the Tesoro Logistics Operations LLC Title V Permit (issued August 5, 2013), the attached document includes information for deviations reported to have occurred during the reporting period. The Semi-Annual Monitoring report consists of three parts. The first part summarizes all of the Inoperative Monitors reported for the reporting period; the second part summarizes all of the source testing and audits that the refinery has been unable to complete due the temporary idling of all operations; and the third part summarizes all the Title V deviations reported for the reporting period. This Title V Semi-Annual Monitoring Report contains the signature of the Refinery's responsible official, Mr. Thomas A. Lu, as required by Regulation 2-6-502, and by 40 CFR Part 70.6.

For questions, please contact David Chetkowski of my staff at (925) 335-3451.

Sincerely,

for June Christman
Environmental Supervisor

DMC/CHM/kds

Attachment

cc: Miquel Zepeda, BAAQMD Enforcement Inspector (E-mail)

**Marathon's Tesoro Martinez Refinery and Amorcó Terminal
Inoperative Monitors
Reporting Period: 01/01/2020 to 06/30/2020**

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

| Date | IMF ID# | Unit | Pollutant / Parameter |
|-------------|----------------|-----------------------|----------------------------------|
| 1/11/2020 | 07R36 | Reformate Splitter | Unit Feed Rate |
| | | Furnace F-26 | NOX, CO, O2 |
| 2/15/2020 | 07R91 | West Air Flare | BTU |
| 2/18/2020 | 07R99 | West Air Flare | H2S |
| 4/1/2020 | 07S86 | 40-lb Fuel Gas System | H2S |
| 4/5/2020 | 07S92 | Pacheco Slough GLM | H2S |
| 4/18/2020 | 07T05 | Furnaces F-8/F-71 | NOX |
| | | | |

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.



Signature of Responsible Official

Thomas A. Lu, General Manager Martinez Refinery

Name and Title



Date

**Marathon's Tesoro Martinez Refinery and Amorco Terminal
Source Tests and Audits Postponed Due to Refinery Idling
Reporting Period: 01/01/2020 to 06/30/2020**

The following is a list of source tests and cylinder gas audits that were scheduled to occur during the reporting period but could not be performed due to idling

| Source ID | Source Description | Description of Test or Audit Postponed |
|-----------|---------------------------------------|---|
| S909 | No. 1 Feed Prep Heater (F9) | Semi-annual emissions test for NO _x , CO, O ₂ |
| S912 | No. 1 Feed Prep Heater (F12) | Semi-annual emissions test for NO _x , CO, O ₂ |
| S913 | No. 2 Feed Prep Heater (F13) | Semi-annual FAT for NO _x , CO, O ₂ |
| S916 | No. 1 HDS Heater (F16) | Semi-annual FAT for NO _x , CO, O ₂ |
| S917 | No. 1 HDS Prefract Reboiler (F17) | Annual emissions test for NO _x , CO, O ₂ |
| S950 | 50 Unit Crude Heater (F50) | Semi-annual emissions test for NO _x , CO, O ₂ |
| S802/S901 | FCCU / 7 Boiler Stack | Quarterly CGA for NO _x , SO ₂ , CO, O ₂ |
| S904 | No. 6 Boiler | Semi-annual emissions test for NO _x , CO, O ₂ , SO ₂ , CO ₂ , NH ₃ |
| S952 | No. 1 Gas Plant Engine M1 | Quarterly emissions test for NO _x , CO, O ₂ |
| S955 | No. 4 Gas Plant Wet Gas Compressor 1 | Quarterly emissions test for NO _x , CO, O ₂ |
| S956 | No. 4 Gas Plant Wet Gas Compressor 2 | Quarterly emissions test for NO _x , CO, O ₂ |
| S957 | No. 4 Gas Plant Wet Gas Compressor 3 | Quarterly emissions test for NO _x , CO, O ₂ |
| S958 | No. 4 Gas Plant Wet Gas Compressor 4 | Quarterly emissions test for NO _x , CO, O ₂ |
| S959 | No. 4 Gas Plant Wet Gas Compressor 5 | Quarterly emissions test for NO _x , CO, O ₂ |
| S960 | No. 4 Gas Plant Wet Gas Compressor 6 | Quarterly emissions test for NO _x , CO, O ₂ |
| S1411 | Sulfuric Acid Plant Stack | Quarterly CGA for SO ₂ , O ₂ |
| S1412 | Sulfuric Acid Plant Startup Preheater | Annual Tune-up per BAAQMD 9-10-306.2 |
| S1415 | Sulfuric Acid Plant Loading Rack | 5-Year emissions test for POC |

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Signature of Responsible Official



Date

Thomas A. Lu, General Manager Martinez refinery

Name and Title

BAAQMD Title V Permit
Semi-Annual Deviation Summary

JANUARY 01 - JUNE30, 2020

B2758 / B2759 / E1200 - Marathon's Tesoro Martinez Refinery and Amorco Terminal

Facility Address:

150 Solano Way

City: Martinez State: CA Zip: 94553

Mailing Address:

150 Solano Way

City: Martinez State: CA Zip: 94553

Contact:

June Christman

Title:

Environmental Supervisor

Phone:

925-370-3275

Application Regulation / Permit Condition / Other:
Condition 23139, Part 12

Date Event Date Event

Started: Stopped:

1/1/2020 1/1/2020 Source (S#): S1511 Abatement Device (A#): A1511 Emission Point (E#):

Event Description:

NOX emissions were monitored in the F78 Furnace stack to be above the emission limit and reported to the District on 1/1/2020 as RCA #07R20. Peak emissions were 7.3 ppmvd @ 3% O2 (3-hr avg). This incident was not a violation because the emission standard is 7 ppmvd @ 3% O2, not 7.0 ppmvd @ 3% O2.

Probable Cause:

The board operator did not react in a timely manner to alarms that an environmental limit was being approached.

Corrective Action or Preventative Steps Taken:

The Shift Superintendent notified the board operator that an environmental limit was in danger of exceedance, and the board operator adjusted the ammonia injection rate to the SCR. The board operator has received disciplinary action for failure to take action when the board alarmed.

Application Regulation / Permit Condition / Other:
40 CFR 60.18(c)(1), 40 CFR 63.670(c)

Date Event Date Event

Started: Stopped:

1/22/2020 1/22/2020 Source (S#): S944 Abatement Device (A#): Emission Point (E#):

Event Description:

Refinery flare camera footage shows that the North Steam Flare had visible emissions in excess of five (5) minutes in any two-hour period. The flaring occurred during an unplanned shutdown of the Hydrocracker and HDA units.

Probable Cause:

An investigation of the automated steam control system is ongoing.

Corrective Action or Preventative Steps Taken:

Corrective actions will be developed once the root cause is determined.

Application Regulation / Permit Condition / Other:

BAAQMD 9-2-301

Date Event Date Event

Started: Stopped:

2/9/2020 2/9/2020 Source (S#): B2758 Abatement Device (A#): Emission Point (E#):

Event Description:

An H2S excess (66 ppb) was monitored at the Martinez Gun Club GLM site for two (2) minutes. The GLM is located offsite, approximately one (1) mile from refinery operations. The monitored excess was reported as RCA 07R71.

Probable Cause:

Winds were blowing from the north; therefore, Tract 3 was evaluated as a potential source of H2S. No upsets or abnormal operating conditions were occurring at the time, and there is no evidence that the H2S was released from the refinery. The Ox Pond and storage tanks in Tract 3 could not have caused or contributed to the excess monitored at Gun Club. The monitored excess was a sharp, sudden increase in H2S followed by a sharp decrease in H2S. A short, sudden increase/decrease in air concentrations indicates that the source of H2S was likely very close to the GLM. Had the source of H2S been located at the refinery (over 1 mile away), the H2S would have dispersed in the air while being transported to the GLM site by the changing winds. This would have resulted in low H2S concentrations monitored over a wider range of wind directions. The Acme Landfill is a potential source of H2S and was directly upwind of the GLM at the time of the excess.

Corrective Action or Preventative Steps Taken:

No corrective actions were identified. There is no evidence that the H2S was released from the refinery.

Application Regulation / Permit Condition / Other:

Condition 8077, Part B7A

Date Event Date Event

Started: Stopped:

2/10/2020 2/10/2020 Source (S#): S908,
S1470 Abatement Device (A#): A908 Emission Point (E#):

Event Description:

A NOX excess was monitored in the combined stack for Furnaces F8 (S908) and F71 (S1470) in excess of the limit (10 ppmvd corrected to 3% O2, 3-hour average). Peak emissions were 14 ppmvd @ 3% O2 (3-hour average). The monitored excess was reported as RCA 07R73.

Probable Cause:

The ammonia system was put into "maintenance mode" to have work performed by an analyzer technician. Maintenance mode changed the ammonia system from "auto" to "local" control. Maintenance mode was turned off after the analyzer technician completed their work; however, the ammonia system remained in local control. Rate increases were made, and NOX emissions increased as a result. The board operator did not receive an alarm indicating that an environmental limit was being approached or exceeded because the alarm value was incorrectly set.

Corrective Action or Preventative Steps Taken:

The ammonia injection rate was increased and then placed back into "auto" after the board was notified that an environmental limit had been exceeded. The NOX alarm value will be corrected so that the board operator receives a warning before an environmental limit is exceeded.

Application Regulation / Permit Condition / Other:
BAAQMD 1-522.6

Date Event Date Event
Started: Stopped:
3/19/2020 3/31/2020 Source (S#): S1106 Abatement Device (A#): A908 Emission Point (E#):

Event Description:

The District notified the refinery via email on March 19, 2020, that the NOX analyzer for Furnace F-72 (S1106) failed a Field Accuracy Test (FAT) that was performed by the District on February 21, 2020.

Probable Cause:

Troubleshooting revealed that the NO2-to-NO converter in the NOX analyzer was operating inefficiently.

Corrective Action or Preventative Steps Taken:

Corrections to the NO2-to-NO converter settings were made, and the F72 Continuous Emissions Monitoring Systems (CEMS) passed a Relative Accuracy Test Audit (RATA) on March 31, 2020. The calibration gas mixture for all NOX analyzers, which currently only contains NO, will be changed to an NO/NO2 mixture. This will help ensure that the converter is accurate and healthy in all NOX CEMS. In addition, a mid-range calibration gas bottle will be added to each bottle rack, and a PM will be created to regularly challenge the mid-range of each NOX analyzer.

Application Regulation / Permit Condition / Other:
BAAQMD 9-8-503

Date Event Date Event
Started: Stopped:
4/1/2020 4/6/2020 Source (S#): S956 Abatement Device (A#): A956 Emission Point (E#):

Event Description:

The quarterly stack test of Engine #2 in 4GAS (S-956) could not be completed during the first quarter. Two attempts were made to test the engine during the quarter. The engine was down for maintenance during the first attempt. After returning to service, a second attempt was made to test the engine; however, the engine was shut down prior to the scheduled second test date due.

Probable Cause:

The engine was shutdown as the Refinery transitioned to minimum production rates. The unplanned transition to minimum rates was in response to a sudden decrease in product demand caused by the State of California COVID-19 stay-at-home orders.

Corrective Action or Preventative Steps Taken:

The refinery was able to restart the engine and perform the required test on 4/6/2020.

Application Regulation / Permit Condition / Other:
Condition 23562, Part 4b

Date Event Date Event
Started: Stopped:

4/1/2020 4/3/2020 Source (S#): 40# Fuel Abatement Device (A#): Emission Point (E#):
Gas Sys

Event Description:

The quarterly Cylinder Gas Audit (CGA) of the H2S CEMS for the Refinery's 40-lb Fuel Gas System could not be completed during the first quarter.

Probable Cause:

The Refinery's primary CGA contractor canceled all CGAs that were scheduled to take place at the Refinery in early March because a member of their test crew was ill with COVID-like symptoms.

Corrective Action or Preventative Steps Taken:

The Refinery contacted a second testing firm but they were unable to mobilize before the end of the first quarter. The CGA was completed on 4/3/2020.

Application Regulation / Permit Condition / Other:
Condition 11433, Part 2B; BAAQMD 6-1-302

Date Event Date Event
Started: Stopped:

4/24/2020 4/24/2020 Source (S#): S802 Abatement Device (A#): A30 &
S901 Emission Point (E#):

Event Description:

Opacity increased as the FCCU was transitioning to temporary idle status, beginning when fresh feed to the unit was stopped, with brief intermittent spikes occurring for a period of time after fresh feed was stopped. Opacity was greater than 20% for 3 minutes in an hour and greater than 30% for 6 minutes. The monitored excess was reported to BAAQMD on 4/27/2020 as RCA 07T09.

Probable Cause:

FCCU opacity briefly increased when the electrostatic precipitator (ESP) was de-energized for several minutes as feed was removed from the unit. Standard industry practice is to de-energize the ESP during the feed out transition period to reduce process safety risk.

Corrective Action or Preventative Steps Taken:

The ESP was re-energized after safely transitioning feed out of the unit.

Application Regulation / Permit Condition / Other:
Condition 18372, Part 22; Condition 25476, Part 21

Date Event Started: Date Event Stopped:

5/4/2020 5/4/2020 Source (S#): S971,
S972 Abatement Device (A#): A1433 Emission Point (E#):

Event Description:

Furnaces F53 and F54 failed an ammonia slip test that was performed on 12/16/2019 (NST-5713). The furnaces are temporarily idled and a retest will occur after they have been restarted.

Probable Cause:

The NOX setpoint was too low. The setpoint was set to 7 ppm prior to the test. The NOX control system unsuccessfully attempted to reduce NOX emissions to achieve the selected setpoint level by increasing the ammonia injection rate to the SCR. This resulted in an increase in ammonia slip.

Corrective Action or Preventative Steps Taken:

The NOX setpoint was raised and the ammonia injection rate decreased. A retest of the furnaces will be scheduled upon restart of the furnaces.

Application Regulation / Permit Condition / Other:
40 CFR 60.18(c)(1); 40 CFR 63.670

Date Event Started: Date Event Stopped:

5/4/2020 5/4/2020 Source (S#): S1012 Abatement Device (A#): Emission Point (E#):

Event Description:

Intermittent periods of visible emissions were observed from the West Air Flare aggregating more than five minutes in a two-hour period. The West Air Flare received flow for approximately 1 hour.

Probable Cause:

A higher flow of air to the flare tip was needed to eliminate visible emissions.

Corrective Action or Preventative Steps Taken:

Operators adjusted seal pot levels to redirect all flare flow to the Coker Flare. The control logic for the West Air Flare fan speed controller is being reviewed to improve performance.

Certification Statement:

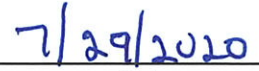
I certify under penalty of law that based on the information and belief formed after reasonable inquiry, the statements and information in this document and in all attachments and other materials are true, accurate, and complete.



Signature of Responsible Official

Thomas A. Lu
Print Name

General Manager,
Martinez Refinery
Title



Date