



2022 AUG -1 AM 11: 27

3485 Pacheco Boulevard
Martinez, CA 94553

July 27, 2022

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Pam

Mr. Jeffrey Gove
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
January 1, 2022 – June 30, 2022**

Dear Mr. Gove:

Please find Martinez Refining Company's Semi-Annual Title V Deviation Summary report for the period of January 1, 2022 through June 30, 2022. This report includes a summary of the inoperable monitors for the first half of 2022.

Should you have any questions or concerns regarding this report, please contact Mr. Rick Shih at (925) 313-0586 / richard.shih@pbfenergy.com, or you may contact me at the numbers below.

Sincerely,

Michael Marlowe
Manager, Environmental Affairs
Martinez Refining Company, LLC
3485 Pacheco Boulevard
Martinez, CA 94553
O 925.313.3705
C 831.332.2820
michael.marlowe@pbfenergy.com

Attachment

TV#511

**BAAQMD Title V Permit
6 Month Deviation Summary Report**

From 1/1/2022 to 6/30/2022

A0011	Martinez Refining Company	
<u>Facility Address:</u>	3485 Pacheco Blvd	<u>Mailing Address</u>
City: Martinez	State: CA	3485 Pacheco Blvd
Zip Code: 94553-0071	Contact: Rick Shih	City: Martinez
	Title: Environmental Engineer	State: CA
	Phone: (925) 313-0586	Zip Code: 94553-0071

Title V deviations for the reporting period are summarized below:

Event Started: 1/4/2022 3:45 PM Stopped: 1/4/2022 3:54 PM <input type="checkbox"/> Ongoing Event	Source Number: 602 Abatement Device : Emission Point:	May have resulted in a violation of: Permit: AQMD: Other: 40 CFR 63.670(f)
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Event Description: The VRS3 flare (S602) had an indicated excess of the net heating value dilution parameter (NHVdl) for approximately 10 minutes.

Probable Cause: The air blower was providing more air to the system than needed.

Corrective actions or preventative steps taken: Flaring stopped. Limit how much air is introduced into the system.

Event Started: 1/1/2022 12:01 AM Ongoing Event
Stopped: _____

Source Number: Multi COB
Abatement Device : _____
Emission Point: _____

May have resulted in a violation of :
Permit: _____
AQMD: 25134 Part 24
Other: _____

Event Description: Total annual NO2 emissions from the three CO Boilers (S1507, S1509, S1512) exceeded the consecutive 12-month period limit of 468 tons the end of December.

Probable Cause: The cause for the higher than historical NO2 levels is being investigated. One possible contributor is high CO due to operational issues. High CO can result in higher NO2 levels.

Corrective actions or preventative steps taken: Various options were employed to reduce NO2 including increasing urea injection, increasing overfire air, shifting loads between COBs, and lowering CO levels. Daily Nox levels have been lowered and continue to remain low.

Event Started: 1/25/2022 8:03 AM Ongoing Event
Stopped: 1/25/2022 5:00 PM

Source Number: 1512
Abatement Device : A14
Emission Point: _____

May have resulted in a violation of :
Permit: Condition #22165 Part 6
AQMD: Regulation 6, Rule 1, Section 302
Other: 40 CFR 60.102(a)(2) & 40 CFR 63.1564(a)

Event Description: COB#3 opacity analyzer 9A12533 showed an indicated excess of greater than 1 Ringelmann for more than 3 minutes during the 8am, 9am, 10am and 4pm clock hours. Excess of greater than 1.5 Ringelmann for more than one 6 minute average period during the 8am clock hour, and excess of greater than 1.0 Ringelmann 3 hour average starting at the 8:43am and ending at 12:08pm.

Probable Cause: Steam system upset due to Steam Turbine Generator tripping offline. COB3 shutdown while operations was adjusting load on COB3 to reduce steam make.

Corrective actions or preventative steps taken: Shutdown of COB results in shutdown of ESPs, creating opacity event. Restarted COB3.

Event Started: 2/1/2022 8:00 AM
Stopped: Ongoing Event

Source Number: 1471
Abatement Device :
Emission Point:

May have resulted in a violation of :
Permit:
AQMD: Rule 12-11-402
Other:

Event Description: Flow verification report for LOP flare (S1471) flow meter was not submitted 6 months after the previous submittal.

Probable Cause: A third party contractor has the equipment to verify the flow meter. A new contract was not put place in time to conduct the flow meter calibration.

Corrective actions or preventative steps taken: A third party specialty contractor is required to verify the flow meter. Due to issues and delays with contract agreement the flow meter could not be calibrated in time.

Long term contract has been set up with the contractor. Work scheduled to be completed in March.

Event Started: 2/1/2022 12:01 AM
Stopped: Ongoing Event

Source Number: Mult COB
Abatement Device :
Emission Point:

May have resulted in a violation of :
Permit:
AQMD: Permit Condition 25134 Part 24
Other:

Event Description: Total annual NO2 emissions from the three CO Boilers (S1507, S1509, S1512) exceeded the consecutive 12-month period limit of 468 tons the end of January.

Probable Cause: The cause for the higher than historical NO2 levels is being investigated. One possible contributor is high CO due to operational issues. High CO can result in higher NO2 levels.

Corrective actions or preventative steps taken: Various options were employed to reduce NO2 including increasing urea injection, increasing overfire air, shifting loads between COBs, and lowering CO levels. Daily Nox levels have been lowered and continue to remain low.

Event Started: 2/16/2022 9:00 PM Ongoing Event
Stopped: 2/17/2022 3:00 PM

Source Number: 4180
Abatement Device : A4180
Emission Point:

May have resulted in a violation of:
Permit: _____
AQMD: Regulation 9, Rule 1, Section 307
Other: _____

Event Description: SRU/SCOT 4 SO2 analyzer 18A1601 showed an indicated excess of greater than 250 ppm hourly average during the 2100 clock hour on 2/16/2022 and 1400 clock hour on 2/17/2022.

Probable Cause: It was determined the above two exceedances were a result of two different causes;

Corrective actions or preventative steps taken: 2/16/2022: Malfunctioning level indication in Sour Water Stripper 6 (SWS6) NHB reflux drum led to Sulfur Recovery Unit 4 (SRU4) SO2 limit exceedance.

2/17/2022: Hydrocarbon breakthrough into Sour Water Stripper 7 (SWS7) led to Sulfur Recovery Unit 4 (SRU4) SO2 limit exceedance.

2/16/2022: Correct level was verified in field and stabilized equipment.

2/17/2022: Removed steam from the stripper to stop off gassing of hydrocarbon into SRU4

Event Started: 2/18/2022 4:15 PM Ongoing Event
Stopped: 2/18/2022 5:00 PM

Source Number: 1431
Abatement Device : _____
Emission Point: _____

May have resulted in a violation of:
Permit: _____
AQMD: Regulation 9, Rule 1, Section 307
Other: _____

Event Description: SRU SCOT #1 & #2 analyzer 8A1849 showed an indicated excess of greater than 250 ppm for the hourly average during the 4:00 PM clock hour.

Probable Cause: Faulty level indication on Sulfur Recovery Unit 1 (SRU1) DEA Acid Gas Knockout Pot resulted in sulfur system imbalance. This imbalance led to shutdown of SRU1 and SRU3 resulting in SRU1 SO2 limit exceedance.

Corrective actions or preventative steps taken: Stabilized units and then restarted units.

Event Started: 2/18/2022 6:19 PM
 Stopped: 2/18/2022 8:38 PM Ongoing Event

Source Number: Multi
 Abatement Device :
 Emission Point:

May have resulted in a violation of :
 Permit:
 AQMD: 40 CFR 60.104(a)(1)
 Other:

Event Description: Flexinas (FXG) analyzer 14A1251 showed an indicated excess of 162 ppm 3-hour rolling average limit for H2S in FXG.

Probable Cause: Faulty level indication on Sulfur Recovery Unit 1 (SRU1) DEA Acid Gas Knockout Pot resulted in sulfur system imbalance. This imbalance led to shutdown of SRU1 and SRU3 resulting in Flexinas H2S limit exceedance.
 Corrective actions or preventative steps taken: Stabilized units and then restarted units.

Event Started: 1/12/2022 12:20 AM
 Stopped: 1/13/2022 4:32 AM Ongoing Event

Source Number: 4190
 Abatement Device : A4190
 Emission Point:

May have resulted in a violation of :
 Permit: 12271 Part 24b and 24c
 AQMD:
 Other:

Event Description: Cogeneration Unit#1 analyzer 66A417 showed an indicated excess of the 3 hour average limit of 5 ppm NO2 @ 15% O2 on 1/12/2022 and 1/13/2022. In addition, exceeded NOx limit of 610 lb per calendar day limit for the cogeneration plant on 1/12/2022. SCR system appears to have not been fully operational during the exceedance.

Probable Cause: After the initial 24 hour startup period, the SCR systems was not fully operational during the exceedance.
 Corrective actions or preventative steps taken: SCR system was made fully operational.

Event Started: 3/1/2022 12:01 AM
 Stopped: Ongoing Event

Source Number: Mult COB
 Abatement Device :
 Emission Point:

May have resulted in a violation of :
 Permit: Permit Condition 25134 Part 24
 AQMD:
 Other:

Event Description: Total annual NO2 emissions from the three CO Boilers (S1507, S1509, S1512) exceeded the consecutive 12-month period limit of 468 tons the end of February.

Probable Cause: One contributor is high CO due to operational conditions. High CO can result in higher NO2 levels.
 Corrective actions or preventative steps taken: Various options have been employed to reduce NO2 including increasing urea injection, increase overfire air, shifting loads between COBs, and lowering CO levels. Daily Nox levels have been lowered and efforts continue to bring NO2 annual emissions below the limit.

Event Started: 3/17/2022 2:00 PM Ongoing Event
Stopped: 3/17/2022 3:15 PM Ongoing Event

Source Number: _____
Abatement Device: _____
Emission Point: _____

May have resulted in a violation of:
Permit: _____
AQMD: _____
Other: 40 CFR 63.670(r) and EPA-HQ-CAR-2014-0738

Event Description: Flaring at CF Flare (S4201) resulted in not meeting the net heating value in the combustion zone requirement (NHVcz).

Probable Cause: Insufficient supplemental fuel added to flared gas.

Corrective actions or preventative steps taken:

Controls have been adjusted to increase injection of supplemental fuel (earlier and increase maximum amount fuel added).

Event Started: 2/18/2022 12:00 AM Ongoing Event
Stopped: 2/19/2022 11:59 PM Ongoing Event

Source Number: Multi
Abatement Device: _____
Emission Point: _____

May have resulted in a violation of:
Permit: 12271 Part 24b
AQMD: _____
Other: _____

Event Description: Combined daily SO2 emissions from Cogeneration Units (S4190, S4191, S4192, S4193) was greater than the 458 lb/day limit. Emissions estimated to be: 2/18: 718 lb/day, 2/19: 465 lb/day

Probable Cause: Unplanned shutdown of SRU1 and SRU3 resulted in high H2S levels in flexogas and refinery fuel gas. The combustion of this flexogas and refinery fuel gas in the cogeneration units likely resulted in the SO2 exceedance.
Corrective actions or preventative steps taken: Stabilized units and restarted units.

Event Started: 4/1/2022 12:01 AM Ongoing Event
Stopped: _____ Ongoing Event

Source Number: Mult COB
Abatement Device: _____
Emission Point: _____

May have resulted in a violation of:
Permit: Permit Condition 25134 Part 24
AQMD: _____
Other: _____

Event Description: Total annual NO2 emissions from the three CO Boilers (S1507, S1509, S1512) exceeded the consecutive 12-month period limit of 468 tons the end of March.

Probable Cause: One contributor is high CO due to operational conditions. High CO can result in higher NO2 levels.

Corrective actions or preventative steps taken:

Various options have been employed to reduce NO2 including increasing urea injection, increase overfire air, shifting loads between COBs, and lowering CO levels. Daily Nox levels have been lowered and efforts continue to bring NO2 annual emissions below the limit.

Event Started: 5/1/2022 12:01 AM Ongoing Event
Stopped: 5/1/2022 12:01 AM Ongoing Event

Source Number: Multi COB
Abatement Device : _____
Emission Point: _____

May have resulted in a violation of :
Permit: Permit Condition 25134 Part 24
AQMD: _____
Other: _____

Event Description: Total annual NO2 emissions from the three CO Boilers (S1507, S1509, S1512) exceeded the consecutive 12-month period limit of 468 tons the end of April.

Probable Cause: One contributor is high CO due to operational conditions. High CO can result in higher NO2 levels.

Corrective actions or preventative steps taken: Various options have been employed to reduce NO2 including increasing urea injection, increase overfire air, shifting loads between COBs, and lowering CO levels. Daily NO2 levels have been lowered so that NO2 emissions were below the end of month limit for May.

Event Started: 5/10/2022 8:16 AM Ongoing Event
Stopped: 5/10/2022 8:29 AM Ongoing Event

Source Number: 602
Abatement Device : _____
Emission Point: _____

May have resulted in a violation of :
Permit: _____
AQMD: _____
Other: 40 CFR 63.670(f)

Event Description: The VRS3 flare (S602) had an indicated excess of the net heating value dilution parameter (NHVdfl) for approximately 7 minutes.

Probable Cause: The air blower was providing more air to the system than needed.

Corrective actions or preventative steps taken: Air blower controls were reset resulting in restoring appropriate NHVdfl.

Event Started: 3/31/2022 7:25 PM Ongoing Event
Stopped: _____ Ongoing Event

Source Number: Multi
Abatement Device : _____
Emission Point: _____

May have resulted in a violation of :
Permit: 12271 Part 37
AQMD: _____
Other: _____

Event Description: Source test report received on 5/25/2022 showed exceedance of 20 ppm ammonia @ 3%O2 limit during source test of following heaters
> F-13425A (S-4002), DCU Furnace #1 (test results = 33.9 ppm)
> F-13425B (S-4003), DCU Furnace #2 (test results = 27.0 ppm)
> F-14012/14011 (S-4031/4141), HGHT Feed Heater/CGBC Reboiler Heater (test results = 20.8 ppm)

All heaters have SCR to control Nox

Probable Cause: Overinjection of ammonia resulting in overcontrol of Nox.

Corrective actions or preventative steps taken: Reduce ammonia injection.

Event Started: 5/24/2022 9:22 AM
Stopped: 5/24/2022 11:47 AM Ongoing Event

Source Number: 4192
Abatement Device : A4192
Emission Point:

May have resulted in a violation of:
Permit: Condition#12271, Part 24c
AQMD: BAAQMD 9-9-301.2
Other:

Event Description: The Cogen 2 66A617 Nox Analyzer showed an indicated excess of the 5 ppm Nox limit (corrected to 15% oxygen) averaged over three hours.

Probable Cause: Lost Nox Steam flow due to steam valve closing.
Corrective actions or preventative steps taken: Backed down measurement load and reset valve position.

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

David Ingean

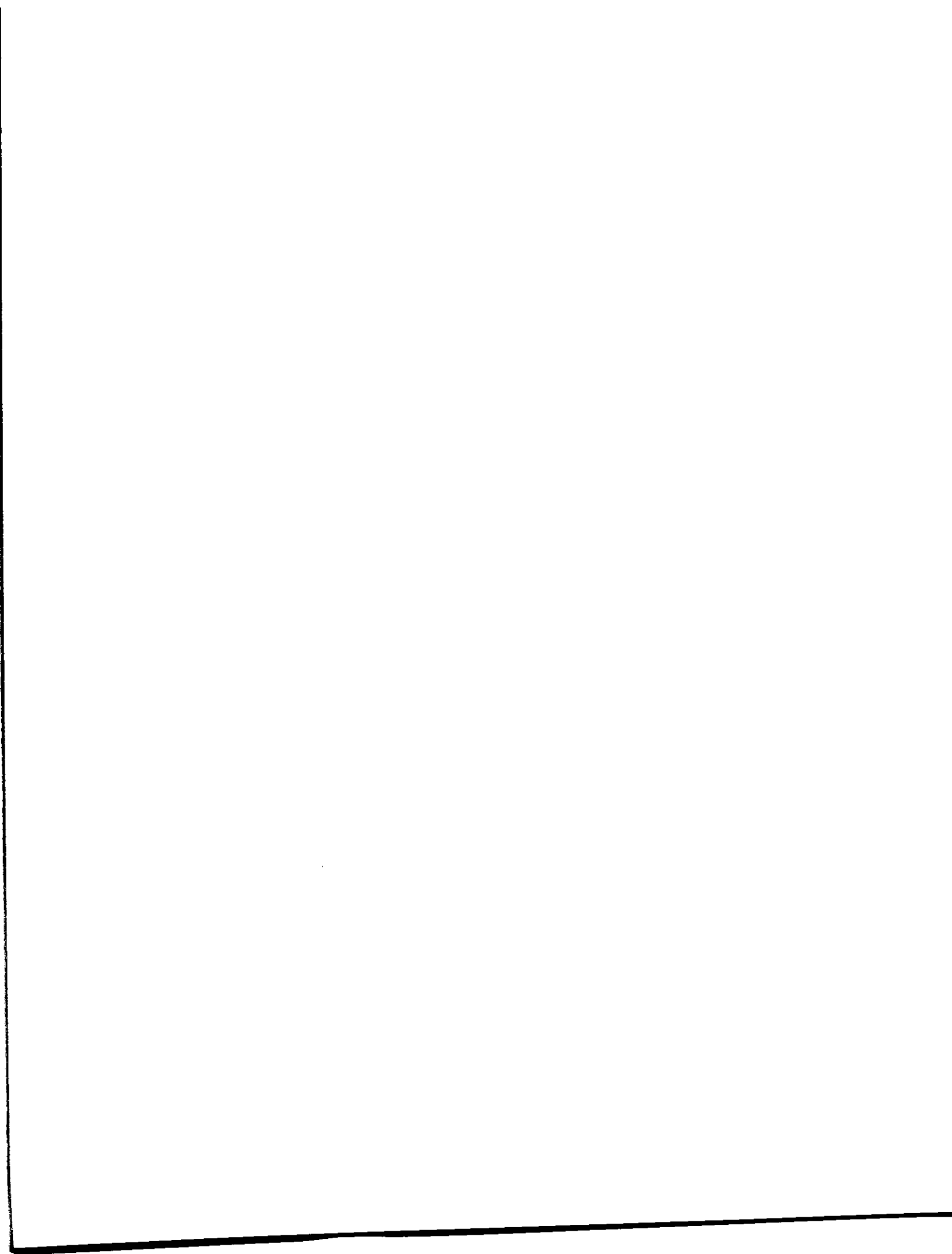
Print Name

Refinery Manager

Title

7/21/22

Date



BAAQMD Title V Permit
6 Month Monitoring Report

From 1/1/2022 to 6/30/2022

A0011 Martinez Refining Company

Facility Address:

3485 Pacheco Blvd

City: Martinez

State: CA

Zip Code: 94553-0071

Mailino Address

3485 Pacheco Blvd

City: Martinez

State: CA

Zip Code: 94553-0071

Contact: Rick Shih

Title: Environmental Engineer

Phone: (925) 313-0586

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	Gas	Parametric	NOx	SO2	CO	H2S	TRS	NH3	O2	CO2	H2O	LTA	Lead	Steam	Flow	Wind Dir.	Wind Speed	atH	Temp.	VOC	Press.		
1/11/2022 7:15 AM	1/12/2022 10:10 AM				<input checked="" type="checkbox"/>								<input checked="" type="checkbox"/>																
Event Description:		RFG / H2S/TRS / 9 A 2831/2825 analyzers have been inoperative >24 hours.																											
1/23/2022 6:00 AM	1/24/2022 4:00 PM				<input checked="" type="checkbox"/>																								
Event Description:		Air Products IIP3 Stack O2 AP_A1127 analyzer has been inoperative >24 hours.																											
1/27/2022 1:02 PM	1/28/2022 2:50 PM				<input checked="" type="checkbox"/>																								
Event Description:		DC CWT / CWT-13278 / 40 A 1708 analyzer has been inoperative >24 hours.																											
3/9/2022 8:00 AM	3/4/2022 6:00 PM				<input checked="" type="checkbox"/>																								
Event Description:		DC CWT-13278/40A1708 analyzer has been inoperative > 24 hours.																											
5/5/2022 10:35 PM	5/10/2022 10:10 AM				<input checked="" type="checkbox"/>																								
Event Description:		FXG H2a / 14 A 1251 analyzer has been inoperative >24 hours.																											
5/5/2022 8:50 AM	5/7/2022 7:30 AM				<input checked="" type="checkbox"/>																								
Event Description:		F-66 / 5A2856 (NOx), 5A2904 (CO), and 5A2857 (O2) analyzers have been inoperative > 24 hours.																											
5/5/2022 8:50 AM	5/8/2022 7:55 AM				<input checked="" type="checkbox"/>																								
Event Description:		F-67 / 5A2859 (NOx) & 5A2860 (O2) analyzers have been inoperative > 24 hours.																											
5/5/2022 8:50 AM	5/6/2022 9:15 AM				<input checked="" type="checkbox"/>																								
Event Description:		FXU / F-102 / 14A4275 (NOx) & 14A4276 (O2) analyzers have been inoperative > 24 hours.																											
6/28/2022 9:30 AM	7/5/2022 10:30 AM				<input checked="" type="checkbox"/>																								
Event Description:		SCOT #4 / TRS / 18 A 234 analyzer has been inoperative >24 hours.																											

Started _____ Stopped _____
 Gauge _____
 Wind _____
 Wind Dir. _____ Speed _____ pH _____ Temp. _____ VOC _____
 Press. _____
 Opacity/ _____
 LTA _____ Lead _____ Steam Flow _____
 SO2 _____ CO _____ H2S _____ TSS _____ NH3 _____ O2 _____ CO2 _____ H2O _____
 Fuel _____
 Parametric NOx _____
 Abatement Device (A#) _____
 Emission Point (P#) _____
 SEM _____ GLM _____ Gas _____
 Source (S#) _____

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.

[Handwritten Signature]

Parish Ingram Refining Manager

7/21/22

Signature of Responsible Official

Title

Date