

PHILLIPS 66
SAN FRANCISCO REFINERY
1380 San Pablo Avenue
Rodeo, CA 94572



PROVIDING ENERGY. IMPROVING LIVES.

January 26, 2023

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Via E-Mail – Compliance@BAAQMD.gov

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: **Six-month Monitoring Report for July 1, 2022 through December 31, 2022
Phillips 66 Company - Contra Costa Carbon Plant – Plant No. A0022**

Director:

Phillips 66 is submitting its Monitoring Report covering the period of July 1, 2022 through December 31, 2022 as required by Section I.F in its Title V permit.

If you have any questions or require additional information on the information contained in this report, please contact Wilma Dreessen at (510) 245-5893.

Sincerely,


Jennifer Ahlskog, Team Leader
Environmental Department


Attachments

cc: Mr. Jeremy Kearns, BAAQMD Inspector, via e-mail (JKearns@baaqmd.gov)
Ms. Roshni Brahmhatt, Manager, Air Enforcement Section (ENF 2-1)
Enforcement and Compliance Assurance Division,
U.S. Environmental Protection Agency, Region 9
Air Enforcement Section, via e-mail (AEO_R9@epa.gov)

**BAAQMD Title V Permit
6 Month Deviation Summary Report
From 7/1/2022 to 12/31/2022
Carbon Plant, A0022**

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

Jolie A. Rhinehart
Print Name

General Manager
Title

1/26/2022
Date

BAAQMD Title V Permit 6 Month Deviation Summary Report

From 7/1/2022 to 12/31/2022

A0022 Phillips 66 Company Contra Costa Carbon Plant

Facility Address:

2101 Franklin Canyon Road

City: Rodeo
State: CA
Zip Code: 94572-

Mailing Address:

2101 Franklin Canyon Road

City: Rodeo
State: CA
Zip Code: 94572-

Contact: Wilma Dreesen

Title: Senior Environmental Cons

Phone (510) 245-5893

Title V deviations for the reporting period are summarized below:

Deviation No: 061-22

Event Started: 9/8/2022 5:00 PM

Stopped: 9/8/2022 5:05 PM

Source Number(s): 2

Abatement Device(s) : 11

Emission Point(s):

May have resulted in a deviation from:

Permit: 136-9

AQMD:

Other:

Event Description: On September 8, 2022, at 5:00 p.m., the Carbon Plant experienced a sudden and complete power outage that likely caused the Kiln 2 exhaust gas to bypass the baghouse emission control system (A-11) and, instead, be routed through the hot stack at Kiln 2 (S-2). This incident was reported to BAAQMD under Breakdown ID 08L72. The power outage caused a shutdown of the kiln, baghouse, and turbine generator. Fresh green coke feed automatically suspended immediately due to loss of power. The hot stack opened automatically at approximately the same time (as designed) to serve as an emergency relief for any excess exhaust gas that, if not released, could have caused a boiler tube rupture. In addition, the ID fan downstream of the hot stack that pulls kiln exhaust air into and through the baghouse system lost power and shut down on Kiln 2. As a result, it is suspected that Kiln 2 exhaust air was pulled up the hot stack based on natural updraft, bypassing the baghouse emission control systems. There were no visible emissions from the hot stack during the event. K-2 Kiln had been running green coke feed prior to the power outage. There was no feed to Kiln-1 (S-1) prior to the power loss. The PM emissions are estimated based on the soot blowing and baghouse cleaning emissions data from annual source test data of 40 lbs/hr for each kiln. It is estimated that the hot stack for Kiln 2 was open for approximately 5 minutes when the plant electricity was lost. The estimated excess PM emissions from Kiln 2 is 3 lbs based on the 5 minutes the Kiln 2 hot stack may have been open.

Probable Cause: The Carbon Plant produces electricity from process waste heat and through use of a steam turbine generator. A portion of the power produced from the generator is sent to the third-party utility PG&E electrical grid. Days prior to the event, during a period of elevated ambient temperatures, Operations personnel noticed drastic swing voltage draw from the grid especially during the hours of 4:00 p.m. to 9:00 p.m. This was during the same period that PG&E was issuing "flex alerts" to homeowners. On the day of the event, a sudden increase in power demand from the Carbon Plant to the main PG&E power lines occurred. This caused an undervoltage alarm and tripping of the 52T breaker (Carbon Plant and PG&E breaker), which is an automatic safety feature to protect the generator from overloading.

Corrective actions or preventative steps taken: Fresh feed to Kiln 2 stopped when the power went out, minimizing the amount of particulate matter that can bypass the baghouse. Based on the average residence time for the residual green coke to be moved out of the system, it is estimated that particulate emissions at S-2 stopped and were no longer bypassing the baghouse systems.

after approximately 5 minutes (i.e., the deviation stopped at 5:05 p.m.). Following investigation of the power outage, power was restored to the plant by approximately September 8, 2022 at 5:05 p.m. PG&E was notified of the incident soon after occurrence.

