Phillips 66
San Francisco Refinery
1380 San Pablo Avenue
Rodeo, CA 94572
phone 510.799.4411
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BAY AREA AIR QUALITY
MANAGEMENT DISTRICT

July 25, 2018

ESDR-202-18
CP: 5-B-1-C

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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: **Phillips 66 Company**
Contra Costa Carbon Plant – Plant No. A0022
Six-month Monitoring Report for January 1, 2018 through June 30, 2018

Director:

Phillips 66 is submitting its Monitoring Report covering the period of January 1, 2018 through June 30, 2018 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 Mr. Brent Eastep at (510) 245-4672.

Sincerely,

Don Bristol, Superintendent
Environmental Department

Attachment

cc: Ying Yu, BAAQMD Inspector, via e-mail (YYu@baaqmd.gov)

BAAQMD Title V Permit
6 Month Deviation Summary Report
From 1/1/2018 to 6/30/2018
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.

x Carl Perkins	Carl Perkins	Refinery Manager	7/25/18
Signature of Responsible Official	Print Name	Title	Date

BAAQMD Title V Permit
6 Month Deviation Summary Report

From 1/1/2018 *to* 6/30/2018

A0022 Phillips 66 Company Contra Costa Carbon Plant

[illegible]	[illegible]
2101 Franklin Canyon Road	2101 Franklin Canyon Road
City: Rodeo	City: Rodeo
State: CA	State: CA
Zip Code: 94572	Zip Code: 94572
Contact: Brent Bastop	Title: Environmental Engineer Phone: (510) 245-4672

Title V deviations for the reporting period are summarized below:

				May have resulted in a deviation from:	
Deviation No:	008-18	Source Number(s):	2	Permit:	
Event Started:	3/2/2018 2:00 AM	Abatement Device(s) :	15; 2	AQMD:	9-1-310.2
Stopped:	3/2/2018 3:00 AM	Emission Point(s):		Other:	

Event Description: On March 2, 2018 the K-2 Kiln (S2) SO2 was recorded as 253.8 lb/hr (+1.5% above limit) for the hour ending at 02:00 am. The limit is 250 lb/r in Regulation 9 Rule 1 (Reg 9-1). The excess was reported as Excess ID 07G39.
The bicarbonate was not being injected into the kiln which led to excess SO2 emissions. It appears moisture may have caused clumping of the bicarbonate material.
On 6/19/18 BAAQMD informed P66 that this incident was determined to be "not an excess" and that there will be no further action on this deviation.

Probable Cause: Moisture was present in the material in the silo which likely caused clumping. The sorbent material was not able to be injected into the kiln due to the clumping.

Corrective actions or preventative steps taken: The bicarbonate injection was re-established upon discovery that the SO2 was above the limit.
Upon investigation there were no obvious holes or areas where leakage could occur in the silo.
In order to comply with upcoming Regulation 9 Rule 14 SO2 limits, new sorbent silos are planned to replace the existing silos later in 2018 after the permit is issued by the BAAQMD.

May have resulted in a deviation from:

Deviation No: 009-18 | Source Number(s): 1 | Permit: 136-9

Event Started: 3/25/2018 7:30 PM | Abatement Device(s) : 10 | AQMD:

Stopped: 3/25/2018 7:32 PM | Emission Point(s): | Other:

Event Description: During startup of Kiln K-1 (S1), but prior to startup of the ID fan and planned introduction of feed into the kiln, Phillips 66 operations personnel inspected the kiln feed screw and feed scoop chute. When the inspection door was closed upon concluding those efforts, we believe that the vibrations from closing the inspection door may have caused a very small amount of coke to drop into the kiln. This belief was formed shortly after operations personnel observed visible emissions from the hot stack, which lasted less than 2 minutes. It is possible that, during this period, particulate matter may have bypassed the baghouse (A10) and been directly emitted to the atmosphere.

Probable Cause: Upon completion of inspection and the closure of the inspection door, coke material may have inadvertently fallen from the feed chute into the kiln.

Corrective actions or preventative steps taken: The damper to the boiler was opened and the ID fan started, which caused all exhaust from the Kiln to exit through the baghouse.

May have resulted in a deviation from:

Deviation No: 027-18 | Source Number(s): 33 | Permit: 19758-1

Event Started: 6/28/2018 11:30 AM | Abatement Device(s) : | AQMD:

Stopped: 6/30/2018 12:30 AM | Emission Point(s): | Other:

Event Description: During shutdown of the K2 Kiln, the normal electric driver engine could not be used to rotate the kiln. The electric driver tripped on overamperage. To safely shutdown the K2 Kiln, the diesel driver engine (S33) had to be used. Proper shutdown procedure for the kiln requires rotation of the kiln until it cools down. If the kiln is not rotated while cooling, damage can occur to the kiln. Because the electric drive was not able to rotate the kiln, the diesel driver engine (S33) was required to be used. The cooling period while the diesel engine was operating accounted for a total of 55.5 hours from 6/28 through 6/30 at 12:30 am. During this period, the total hours of operation for calendar year 2018 including hours used previously to this event were 55.8, which exceeded the permit limit of 20 hours per year.
A breakdown was filed with BAAQMD (ID 07H55).

Probable Cause: Upon investigation, it was determined that a 'carbon ring' that had developed in the kiln had increased the kiln weight thereby increasing the duty of the electric driver that rotates the kiln. Investigation also identified that at the time of the overamperage the feed belt for the kiln experienced a failure in the speed controller and was adding feed to the kiln beyond what operations thought was being added. The combination of additional weight caused by the carbon ring, and the additional feed led to the electric driver overamping and shutting down.

Corrective actions or preventative steps taken: Shutdown procedures were reviewed and the temperature of the kiln was monitored to determine when the diesel driver could be shutdown. This minimized the amount of time the diesel engine was used. Normal shutdown procedure when the electrical driver is used would have allowed a set time for cool down of the kiln and, if followed, would have led to 9 additional hours of diesel runtime.

BAAQMD Title V Permit
6 Month Monitoring Report

A0022 Phillips 66 Company Contra Costa Carbon Plant

[illegible] 2101 Franklin Canyon Road

City: Rodeo
State: CA
Zip Code: 94572

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City: Rodeo
State: CA
Zip Code: 94572

[illegible] Brent Barton [illegible] Environmental Engineer [illegible] (510) 245-4672

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

Started	Stopped	Deviation #	Source (S#)	Abatement Device (A#)	Emission Point (P#)
1/8/2018	1/10/2018	☑ 002-18			

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.
☑	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Event Description: The SO2 CEMs at the Carbon Plant K-1 cold stack apparently began giving inaccruate readings around 11:30 am on 1/8/18. The CEMs was repaired and back online at approximately 12:45 pm on 1/10/18.

Started	Stopped		Deviation #	Source (S#)	Abatement Device (A#)	Emission Point (P#)
1/13/2018	1/23/2018	☑	003-18			

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.
☑	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Event Description: The SO2 CEMs at the K-1 stack at the Carbon Plant apparently began giving inaccurate readings at approximately 7:00 pm on 1/13/18. This was based on PI trends and engineering judgment using the bicarbonate feed screw speed and coke feed rates at K-1 versus K-2 as an indication of proper analyzer function. Extensive truobleshooting and repairs were conducted over the next week or more, involving significant numbers of new parts and consultation with the manufacturer. The CEMs successfully autovalidated and appeared to be giving accurate readings at 6:30 am on 1/23/18.

5/12/2018	5/14/2018	☑	018-18			

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.
☑	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Event Description: The SO2 analyzer at K-2 failed to validate at around 8:30 am on 5/12. It also failed to calibrate on 5/13 and 5/14. The analyzer was repaired and back on line at around 2:30 pm on 5/14.

6/21/2018	8:00 AM	6/22/2018	3:45 PM	☑	025-18	2

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.
☑	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Event Description: At approximately 8:00 am on 6/21/18 the SO2 analyzer at the K-2 kiln stack failed to successfully calibrate and has been inoperative while repairs are attempted.
The monitor was repaired.

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Rodeo, CA 94572

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BAY AREA AIR QUALITY
MANAGEMENT DISTRICT

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Director of Compliance and Enforcement
Bay Area Air Quality Management District
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