BAAQMD received on 07/27/26

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

PROVIDING ENERGY. IMPROVING LIVES.

July 27, 2026

171-ESDR-26
02-E-01-B

Via E-Mail at Compliance@BAAQMD.gov

Mail Stop FM1
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

Subject: Determination and Reporting of Cause:
Main Flare (S-296) May 30 - June 1, 2026
BAAQMD 12-12-406 & Consent Decree 167 – 169
Phillips 66, Rodeo Renewable Energy Complex (Plant 16)

As required by BAAD 12-12-406 a Causal Analysis was conducted on the following flaring incident. A Causal Analysis is required when the volume flared exceeds 0.5 MMSCF or sulfur dioxide emissions are greater than 500 pounds. The flaring of unscrubbed gas occurred intermittently from May 30, 2026, at approximately 6:25 p.m. until June 1, 2026 at approximately 7:21 a.m. The report contents are based on requirements of the BAAD June 25, 2007 Compliance Advisory (BCA) and are referenced as such.

- The BAAD 500 lb. SO2 report threshold **was not** exceeded.
- The BAAD 500,000 scf/calendar day flow threshold was exceeded on May 30.

Total Volume and Emissions from Affected Flares [BCA 4, 5, 8, 9; CD 153(a) & (b)]:

Refinery Main Flare (S-296):

Date/Flare	Start Time	End Time	Duration (Hrs:Min)	Gas Flow Rate, SCF	Avg. H_2S Mole %	SO_2, lb.	CH4, lb.	NMHC, lb.
5/30/2026	6:25 p.m.	11:31 p.m.	5:06 (int)	1,759,882	0.01%	29.4	30.5	1,068.2
5/31/2026	7:15 a.m.	11:59 p.m.	16:44 (int)	9,815	0.01%	0.2	2.6	1.8
6/1/2026	6:12 a.m.	7:21 a.m.	1:09 (int)	249,570	0.01%	4.1	13.0	165.4
Totals			**21:59 (int)**	**2,028,941**	**0.01%**	**33.7**	**46.1**	**1,235.4**

SO_2 emissions are calculated using the following equation:
SO_2 (lb.) = (FR) * (H_2S conc.) * (0.1689)
FR = total flow rate during flaring, scf
0.1689 = [lb-mol H_2S/379 scf H_2S]*[64 lb SO_2/mol H_2S]
Int = intermittent flare activity

Flaring Event Description [BCA 6, 7, 10, 11]

At approximately 6:25 p.m on May 30, 2026, the G-202 Recycle Gas Compressor at Unit 240 shut down and caused the unit to shut down. Intermittent flaring during the shutdown and startup occurred until approximately June 1, 2026 at 7:21 a.m.

Primary Cause and Contributing Factors [BAAQMD 12-12-406.1, BCA 11, CD 153(d)]:

The primary cause of flaring was the shutdown of the G-202 Recycle Gas Compressor at Unit 240 and subsequent Unit 240 shutdown. The G-202 Recycle Gas Compressor has a seal oil supply Tank 2F-215. The high-level switch (2LSH-210) on seal oil supply Tank 2F-215 failed, triggering a false high level in Tank 2F-215, which shutdown the seal oil pumps. The 2F-215 seal oil tank then lost seal oil liquid level which resulted in a shutdown of the compressor due to low seal oil level.

Measures to Limit Duration/Quantity [BCA 10, 11, 12, CD 153(c)]

In response to the flaring event, process unit feed rates were reduced. Work was initiated to restore lube oil operation and restart the G-202 Recycle Gas Compressor.

Prevention Measures [BAAQMD 12-12-406.2, BCA 16, CD 153(e) & 154]:

The control logic has been updated from using the seal oil switch to using the seal oil level indictor, which is a separate piece of equipment.

Was the Flaring the Result of an Emergency [BAAQMD 12-12-406.4, BCA 13]:

No.

Was flaring due to a Regulatory Mandate to Vent to a Flare [BAAQMD 12-12-406.4, BCA 15]:

No.

Consistency with Flare Minimization Plan (FMP) [BAAQMD 12-12-406.3, BCA 14]:

The activities described that resulted in flaring are consistent with activities included in the Flare Minimization Plan. Specifically, these activities can be found described in the FMP in more detail in Section 4.2 as described below:

- Upset/Malfunction (4.2.1.4) – Loss of major gas compressor.

Please contact Nina Thomas at 510-245-5197 if you have any questions.

Sincerely,

Brent Eastep
Sr. Manager, Environmental