

PHILLIPS 66  
 RODEO RENEWABLE ENERGY COMPLEX  
 1380 San Pablo Avenue  
 Rodeo, CA 94572



PROVIDING ENERGY. IMPROVING LIVES.

August 28, 2024

322-ESDR-24  
 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) July 10, 2024  
 BAAQMD 12-12-406  
 Phillips 66, Rodeo Renewable Energy Complex (Plant 16)**

As required by BAAQMD 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 scrubbed and unscrubbed gas occurred intermittently from July 10, 2024, at approximately 3:01 p.m. until July 10, 2024, at approximately 7:50 p.m. The report contents are based on requirements of the BAAQMD June 25, 2007 Compliance Advisory (BCA) and are referenced as such.

- The BAAQMD 500 lb. SO<sub>2</sub> report threshold **was not** exceeded.
- The BAAQMD 500,000 scf/calendar day flow threshold was exceeded on July 10, 2024.

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 <sub>2</sub> S Mole %	SO <sub>2</sub> , lb.	CH <sub>4</sub> , lb.	NMHC, lb.
7/10/2024	3:01 p.m.	7:50 p.m.	4:49 (int)	884,769	0.01%	15	37	288
<b>Totals</b>			<b>4:49 (int)</b>	<b>884,769</b>		<b>15</b>	<b>37</b>	<b>288</b>

SO<sub>2</sub> emissions are calculated using the following equation:  
 $SO_2 \text{ (lb.)} = (FR) * (H_2S \text{ conc.}) * (0.1689)$   
 FR = total flow rate during flaring, scf  
 $0.1689 = [lb\text{-mol } H_2S / 379 \text{ scf } H_2S] * [64 \text{ lb } SO_2 / \text{mol } H_2S]$   
 Non-detect H<sub>2</sub>S is assumed to be 0.01% by volume.

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

On July 10, 2024, the Rodeo Renewable Energy Complex experienced a unit upset that led to a flaring event. Flaring occurred intermittently from approximately July 10, 2024 at 3:05 PM until July 10, 2024 at 7:50 PM.

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

On July 10, 2024, a facility contractor was removing scaffolding that had been in place for turnaround activities related to the petroleum to renewable feed transition that had occurred in prior months. On this day, as the scaffolding was disassembled and removed, a piece of scaffolding hit a coupling with enough force to break the coupling. The coupling housed an instrument air-line that was used by the control valve for the Unit 240 G-201 feed pump. Due to the sudden loss of air, the control valve closed, and the pump stopped supplying feed to the unit, per design. The loss of feed to Unit 240 resulted in flaring.

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

Flaring was stopped once instrument air was restored to the U240 feed pump control valve.

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

No prevention measures were identified. The pump shutdown after loss of instrument air as designed.

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:

- 4.2.1.4 Upset/Malfunction - Equipment Failure which results in an immediate or controlled unit shutdown (e.g. charge pump failure) & loss of utility (air)

Please contact Morgan Zellers at 510-245-5893 if you have any questions.

Sincerely,



Brent Eastep  
Environmental Director



**Attachments**

PFD Refinery Flare & Blowdown System (RVR-ENVRNM-YF-FLRE-001)  
 PFD Unicracker Feed & First Stage Reaction Section (2402-YF-001-001)

**cc:**

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Community Distribution via CFEP Community Agreement – Condition 11  
 w/o Confidential attachments

<b>Name</b>	<b>Citizens Advisory Panel (CAP) Members</b>	<b>Memorandum of Understanding (dtd. 4/16/12) Signatories</b>	<b>Submit via</b>
<b>B. Concannon</b>		x	Email
<b>B. Vargen Kotchevar</b>	x		Email
<b>C. Davis</b>	x		Email
<b>C. Scribe</b>	x		Email
<b>C. Herrera</b>	x		Email
<b>D. Brandon</b>	x		Email
<b>D. Columbo</b>	x		Email
<b>D. Drake</b>	x		Email
<b>D. Foote</b>	x		Email
<b>E. Gray</b>	x		Email
<b>E. Tannenbaum</b>		x	Email
<b>F. Brosnan</b>		x	Email
<b>H. Adams</b>		x	Email
<b>J. Callaghan</b>		x	Email and paper mail
<b>J. Gunkelman</b>		x	Email
<b>J. May</b>	x		Email
<b>M. Brennan</b>		x	Email
<b>M. Kirker</b>	x	x	Email
<b>R. Wilson</b>	x		Email
<b>R. Ramirez</b>	x		Email



