

For CCHS Use Only:

Received By:

Date Received:

Incident Number:

Copied To:

Event Classification Level:

ATTENTION: Randall L. Sawyer
Chief Environmental Health and Hazardous Materials Officer
Contra Costa Hazardous Materials Programs
4585 Pacheco Boulevard, Suite 100
Martinez, CA 94553

INCIDENT DATE: May 27, 2021

INCIDENT TIME: 17:45

FACILITY: Chevron Richmond Refinery

PERSON TO CONTACT FOR ADDITIONAL INFORMATION: Patricia Roberts

(510) 242-3887 (office)

(510) 890-5677 (mobile)

I. SUMMARY OF EVENT

At approximately 17:45 on 5/27/21, the refinery experienced the loss of all boilers in operation which caused a significant loss of refinery steam production. Loss of refinery steam production ultimately resulted in process plant flaring beginning at approximately 18:00 due to a steam driven compressor slowing down and causing a process plant upset. Boilers were restarted which replenished refinery steam production. An investigation has been initiated to understand the root cause of the event.

II. AGENCIES NOTIFIED, INCLUDING TIME OF NOTIFICATION

In accordance with the Contra Costa County Health Services (CCCHS) incident notification policy, a CWS Level 1 notification was sent.

Primary: Community Warning System (CWS):

- Level 1 CWS activated at approximately 5/27/21 18:16
- Event Over CWS activated at approximately 5/27/21 19:26

Secondary: Subsequent notifications via telephone to the agencies below

| Agency | Person Reached | Phone Number | Time |
|--------|----------------|--------------|------|
|--------|----------------|--------------|------|

| | | | |
|--|--|-----------------|-------|
| Richmond Fire/ Police Central Dispatch | Stephanie Minnis 1463 | 510-620-6933 | 18:03 |
| Contra Costa County Health Services Department | Badge #88832 | 925-655-3232 | 18:05 |
| BAAQMD | Megan (with answering service) | 800-334-6367 | 18:07 |
| BAAQMD for Flow >500,000 SCF | flarenotification@baaqmd.gov | N/A – via email | 18:59 |
| SOES | Diego | 800-852-7550 | 18:12 |
| NRC | N/A – SO2 not reportable to NRC | N/A | N/A |

III. AGENCIES RESPONDING, INCLUDING CONTACT NAMES AND PHONE NUMBERS:

No agencies responded on site for this event.

IV. EMERGENCY RESPONSE ACTION:

The Chevron Fire Department Incident Command System was not required nor initiated, and Fire Brigade members were not mobilized.

No mutual aid was required for this event.

V. IDENTITY OF MATERIAL RELEASED AND ESTIMATED OR KNOWN QUANTITIES:

Emissions from flaring associated with the event are summarized below.

| | Flare emissions |
|-----------------------|-----------------|
| Vent Gas Volume (SCF) | 1,608,818 |
| SO ₂ (lbs) | 1,210 |

* Flare emissions data presented herein is for the date of the flaring (5/27/2021). Estimates herein are based on currently available data. Upon further investigation and analyses, an update will be provided should a significant change of the data occur.

VI. METEOROLOGICAL CONDITIONS AT TIME OF EVENT: METEOROLOGICAL CONDITIONS AT TIME OF EVENT:

| | |
|-------------------------|-------|
| Wind Speed (mph) | 14.50 |
| Wind Direction (degree) | 218 |
| Precipitation (inches) | 0 |
| Temperature (F) | 71 |

Information based on data received from the Refinery's meteorological station which is located near Gertrude Street.

VII. DESCRIPTION OF INJURIES:

There were no injuries associated with this event.

VIII. COMMUNITY IMPACT:

There were no regulatory exceedances based on Ground Level Monitoring data. There are no detects above known health limits based on Air Monitoring data.

Ground Level Monitoring Data Summary

| | Background Prior to and Maximum Concentration Readings During the Flaring | | |
|---|---|-------------|-----------------|
| | Castro Street | Office Hill | Gertrude Street |
| H ₂ S (ppb) Background @ 17:00 | 4.01 | 4.47 | 1.96 |
| H ₂ S (ppb) Max. | 6.86 | 5.27 | 2.28 |
| SO ₂ (ppb) Background @ 17:00 | 5.64 | 6.49 | 2.37 |
| SO ₂ (ppm) Max. | 8.59 | 6.65 | 2.66 |
| | | | |

Note: The Cal/OSHA PEL for SO₂ is 2,000 ppb (2 ppm) averaged over an 8-hour period. The Cal/OSHA PEL for H₂S is 10,000 ppb (10 ppm) averaged over an 8-hour period.

Fence Line Air Monitoring Summary

During the time period of flaring, no obvious detections were seen at the fenceline air monitoring stations.

Community Air Monitoring Summary

During the time period of the event, no obvious detections were seen at the community air monitoring stations.

IX. INCIDENT INVESTIGATION RESULTS:

An incident investigation will be conducted to determine the cause of the flaring.

X. SUMMARIZE INVESTIGATION RESULTS BELOW OR ATTACH COPY OF REPORT:

Results will be determined by the investigation.

XI. SUMMARIZE PREVENTABLE MEASURES TO BE TAKEN TO PREVENT RECURRENCE INCLUDING MILESTONE AND COMPLETION DATES FOR IMPLEMENTATION

Preventable measures will be determined by the investigation.