

Valero is committed to working with the City of Benicia to improve communications regarding events at the Benicia Refinery that may affect the City and members of the community. Although a formal Memorandum of Understanding is still in development, Valero is providing the following information in keeping with our commitment to sharing relevant information in a timely manner. The information contained in this 72-hour report should be considered preliminary until the full event investigation is completed and all data are verified.

- I. Summary of event: On Saturday, March 23, the Flue Gas Scrubber (FGS) at the Benicia Refinery experienced an operational upset resulting in a dark, opaque plume and emissions of particulate matter and carbon monoxide. Efforts to restore normal operations proved unsuccessful, and on Sunday, March 24, the appearance and odor of the plume changed in a manner indicating that corrective action requiring shutdown of process units would be necessary in order to restore normal operations. The refinery began a safe shutdown of processing units which remains underway at this time. As part of the shutdown process, it is anticipated that the refinery will experience intermittent flaring until the shutdown is complete. Maintenance is underway to repair all affected equipment.

Operating difficulty with the Fluid Coker on March 11, 2019 resulted in carryover of coke fines from the Fluid Coker into downstream process units including the FGS. The presence of coke fines in the FGS resulted in a darker than normal plume appearance and intermittent exceedances of the BAAQMD standard for opacity. In order to avoid undesirable consequences such as flaring, several attempts to identify and resolve the excess opacity issues online were made. Significant improvement was observed on Friday, March 22, 2019 when the FGS plume returned to a normal appearance. An investigation is underway to determine causal factors regarding this abnormal operating condition as well as the causal factors regarding the March 23 event.

- II. Agency Notifications: Agencies notified include the City of Benicia, Solano County, BAAQMD, EPA Region IX, and Cal-OSHA. As previously discussed, Valero will provide the city with courtesy copies of any publicly available information regarding this incident that are provided to these agencies. The BAAQMD and Solano County conducted sampling offsite. The BAAQMD mobilized a “mobile GLM” which measures H<sub>2</sub>S, SO<sub>2</sub> and CO.
- III. Response Actions: Valero immediately initiated monitoring in the community for particulate matter, carbon monoxide, and nitrogen oxides using handheld portable monitors, with assistance from a third party expert, Center for Toxicology and Environmental Health, LLC (CTEH). The BAAQMD-approved fence-line monitoring system, which monitors for H<sub>2</sub>S, SO<sub>2</sub>, and BTEX compounds, was operational throughout the event. Valero participated in the City of Benicia’s Emergency Operations Center and communicated status updates frequently throughout the event. As described above, Valero initiated a safe shutdown of processing units

- promptly upon determination that corrective maintenance is necessary to restore normal operations.
- IV. Meteorological Data: these data are available on the website <https://beniciarefineryairmonitors.org/> by scrolling backward in time and/or can be provided in spreadsheet format if needed.
  - V. Injuries: Valero received notice from the City that several 911 calls were received during the course of this event. We have no further information on the medical treatment sought by any individual.
  - VI. Community Impact: CTEH monitoring reports were provided to the City daily summarizing the monitoring results from the prior day. Additional monitoring data is available on the website: <https://beniciarefineryairmonitors.org/>. More detail on community inquiries received can be provided under separate cover to protect the individual's privacy.

End of Report