CONTRA COSTA HEALTH

WAS THE SMOKE DANGEROUS?

- Hazardous materials burned during the Feb. 1 fire at PBF's Martinez Refining Company (MRC), producing smoke that contained chemicals that can contribute to cancer, heart disease, lung disease and other health impacts.
- Contra Costa Health's (CCH) measurements show that concentrations of these chemicals in the air during the event were mostly below the threshold to be considered dangerous.
- CCH briefly detected hazardous levels of fine particulate matter, which can cause lung and heart issues, and increase long-term risk of lung cancer. These readings were in an unpopulated area northeast of Martinez.
- The wind protected most people near the fire from prolonged exposure to the smoke.
- CCH will analyze and incorporate data from the Bay Area Air District, and work with a toxicologist to assess long-term risks to the community, including impacts to soil and water..

MRC REPORTED THESE SUBSTANCE BURNED IN THE FIRE

- NAPHTHA (PETROLEUM), LIGHT THERMAL CRACKED
- DIETHANOLAMINE, LFG 85
- DISTILLATES (PETROLEUM), LIGHT CAT CRACKED
- DISTILLATES (PETROLEUM), INTERMED CAT CRACKED
- NAPHTHA (PETROLEUM), LIGHT CATALYTIC CRACKED
- SULFUR DIOXIDE
- ISOBUTANE-RICH C3-C4

WHAT WAS IN THE SMOKE?

Exposure to several of these chemicals, including diethanolamine and naphtha, is known to cause cancer and other serious health concerns.

These chemicals also produce airborne compounds when burned that travel in smoke and can cause health concerns if inhaled.

CCH monitored for most of these chemicals or common byproducts during the fire:

Chemicals of Concern	Level of Concern	Date/Time/Location of Highest Level Detected by CCH
Smoke (Particulate Matter) PM Total mass concentration	**150 AQI index**	**2/1/25 4:07 pm Waterbird/Waterfront AQI reading 2,374**
Carbon monoxide (CO)	27 PPM	2/1/25 3:54 pm 680/Marina Vista, 5 ppm
Sulfur dioxide (SO2)	0.2 PPM	Not detected
Hydrogen sulfide (H2S)	0.33 PPM	2/2/25 @11:10 am 680/Waterbird, 1.935 ppm* *Day after fire, level could not be reproduced
Volatile Organics Totals (benzene, ethylbenzene, toluene, xylene, Naphthalene, etc.)	0.50 PPM	Not detected

WHAT ARE THE HEALTH RISKS OF EXPOSURE TO THE SMOKE?

The smoke contained a high level of fine particulate matter. Prolonged exposure can cause lung and heart disease and other health problems.

There were likely trace amounts of other cancer-causing chemicals in the smoke. CCH did not detect hazardous levels of other chemicals in smoke during the fire.

WAS I EXPOSED TO THE SMOKE?

Hazardous concentrations of fine particulate matter were detected in a mostly uninhabited area northeast of the refinery.

Most community members would not have experienced significant exposure to smoke, based on observed conditions including wind direction.