

Richmond air quality safe, analysis says

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A huge plume of black smoke billows from a fire at the Chevron refinery in Richmond after an explosion set it off, sending hundreds of neighbors to hospital emergency rooms for treatment. Photo: John Sebastian Russo, Special To The Chronicle / SF

Regulators say the black cloud that wafted over the Bay Area during Monday's fire at the Chevron oil refinery had no obvious negative effect on Richmond's air quality, a claim that raises serious questions about why more than 1,700 people ended up in emergency rooms.

All but one of the toxic pollutants commonly associated with petroleum production were at background levels during the fire and did not pose a significant health risk, according to the Bay Area Air Quality Management District, which is responsible for protecting air quality in the nine Bay Area counties. At the same time, the regulators say they are still trying to determine whether particulate matter from the smoke is what sent people to the hospital.

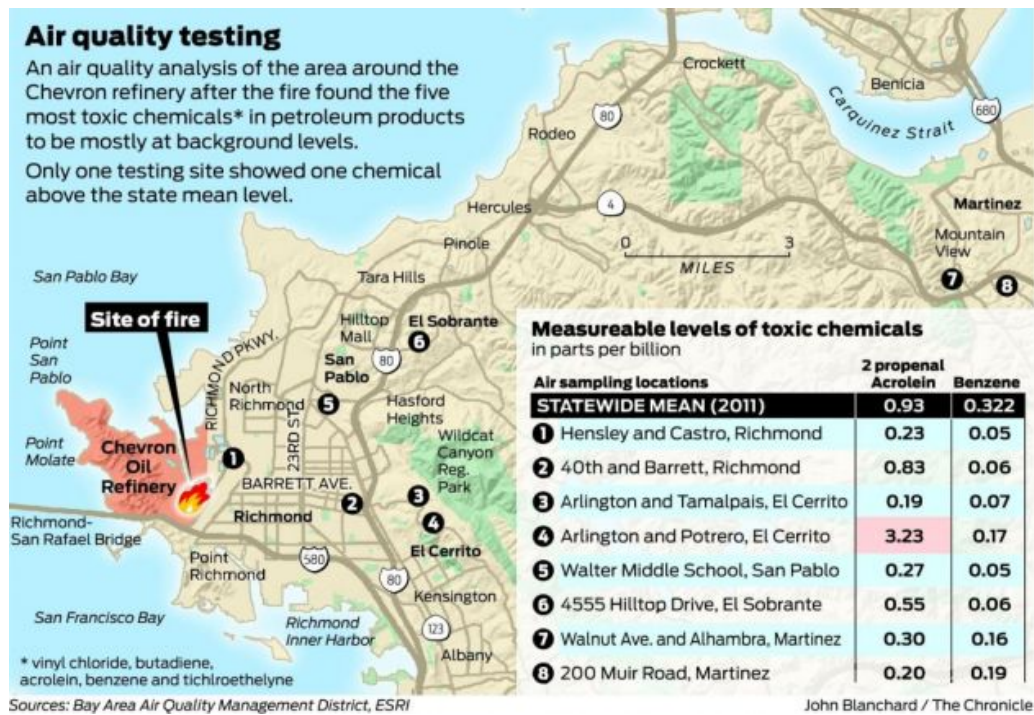
Yet their suggestion that the air in Richmond was no worse during the fire than on an average summer evening prompted other air-quality analysts to wonder if there is adequate monitoring.

Only two of the eight air-quality monitoring stations in the area are in Richmond - and none is at the refinery.

"Why is the government saying the exact opposite of what the hospital and the people are saying?" said Greg Karras, a senior scientist for Communities for a Better Environment.

The fire began about 6:15 p.m. Monday with a hydrocarbon leak at the refinery's No. 4 Crude Unit and quickly grew into a major conflagration, spewing noxious smoke across the East Bay and forcing thousands of Richmond residents to seek shelter indoors.

Emergency crews sealed off the damaged unit, and the fire was contained by 10:40 p.m. No one was killed or seriously injured in the fire, but local hospitals were overwhelmed with people seeking medical attention for respiratory problems.



1 compound tests high

Air-quality tests done during the fire at monitoring stations in Richmond, El Sobrante, San Pablo, El Cerrito and Martinez found levels at or below normal for all but one of 23 known compounds identified by the state as toxic air contaminants, said Eric Stevenson, the management district's director of technical services.

The one compound that tested high was acrolein, also called 2-propanal. Acrolein is a highly toxic compound associated with combustion that can cause skin, eye and respiratory tract irritation and, in high doses, death.

At 8:05 p.m. Monday, regulators found 3.2 parts per billion of acrolein at one measuring station, at the corner of Arlington Boulevard and Potrero Avenue in El Cerrito. That's more than three times higher than last year's mean statewide level of 0.93 parts per billion.

"We know that the smoke from chemicals that are burned in the refineries can be really, really toxic," said Jenny Bard, the regional director for programs and advocacy for the American Lung Association. "We all saw the huge cloud and we know that hundreds of people went to the hospital, so I think that speaks for itself."

Paul Blanc, chief of environmental medicine at UCSF, said he can't understand why anyone would say that the high level of acrolein found near the refinery is not a danger to the public.

"How do you make that statement when the state of California says those levels (of acrolein) are above the guidelines?" he asked.

Levels vary

Stevenson said levels often vary, and the high level could have come from some other source. A testing site in Riverside County last year measured 16 parts per billion. Besides, he said, none of the four other most dangerous chemicals associated with petroleum - vinyl chloride, 1,3 butadiene, benzene and trichloroethylene - were above normal levels.

He said the toxics apparently burned up or were dispersed with the plume, which rose into the atmosphere and drifted over the Central Valley and Sierra, where it has all but disintegrated.

All of the health complaints were probably caused by breathing the localized soot and other fine particles, Stevenson said.

"The main compound that we're concerned about is particulate matter, which is a major component of the black smoke," he said. "That, during fires, is the compound that tends to be in the highest concentration and causes the majority of the health impacts."

Bard and other environment experts insist something is wrong with a monitoring program that misses the toxics in choking black smoke.

"Smoke is harmful. All smoke is harmful," Bard said. "Children, the elderly, residents with asthma or emphysema and those with chronic heart disease are at risk, particularly in communities that are already impacted by pollution from multiple sources like highways and refineries."

More results expected

Initial monitoring of particulate matter done in Oakland, Vallejo and San Rafael found nothing out of the ordinary, Stevenson said. But air-quality managers are still collecting data from filtration systems within a mile or two of the refinery and expect to have the results in a couple of weeks.

"Just because these particular samples came in low, doesn't mean we've exhausted the search," Stevenson said.

Meanwhile, recent state air pollution and compliance inspections of the plant - including a major audit conducted last year - did not find significant regulatory or safety violations.

But the plant is still under a 2003 federal Environmental Protection Agency order to cut sulfur dioxide and nitrous oxide emissions in its refineries. The agency fined the Richmond plant \$20,000 for failing to alert authorities to a 500-pound leak of sulfur dioxide in 1999. Chevron

also paid \$540,000 to settle a federal enforcement action accusing the company of bypassing proper filtration of contaminated wastewater from the Richmond plant in the mid-1990s.

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<http://www.sfgate.com/bayarea/article/Richmond-air-quality-safe-analysis-says-3774298.php#ixzz234ZJxrRt>