

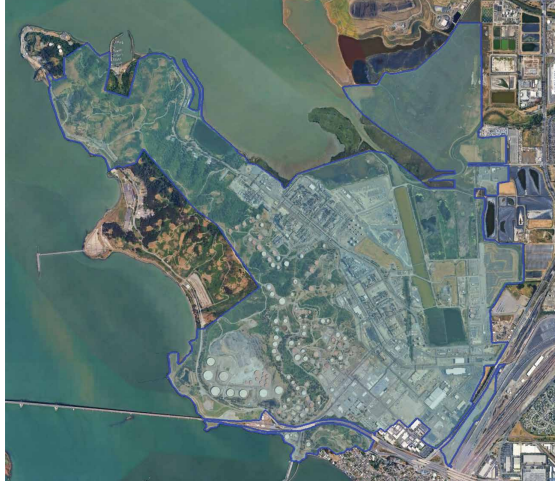
Rule 11-18 Preliminary Health Risk Assessment:

Chevron Refinery in Richmond, CA

A **Health Risk Assessment** (HRA) evaluates the potential health risks from exposure to toxic air pollutants emitted by facilities like refineries, wastewater treatment plants, landfills, and chemical plants. HRAs help us understand how emissions from these stationary air pollution sources may affect the health of nearby residents, offsite workers, students, and sensitive populations. Health risk assessments are an important tool for understanding potential health risks and supporting the Air District's ongoing work to protect public health. They are the first step in ensuring successful implementation of risk reduction efforts. The Air District requires facility-wide HRAs as part of our Rule 11-18 Facility Risk Reduction Program to **identify and reduce toxic emissions, protect public health, and inform communities about potential sources of health risk.**

To learn more about the Rule 11-18 health risk assessment process please view the [Rule 11-18: Understanding Health Risk Assessment fact sheet](#)

To learn more about the Rule 11-18 program, including frequently asked questions and a glossary of terms, please visit baaqmd.gov/11-18-facilities.



Chevron Refinery – Facility Boundary

This document serves as an overview of the results from the HRA conducted for the Chevron Refinery located in Richmond, California. For the full technical preliminary report, please refer to the [Preliminary Facility-Wide Health Risk Assessment Report](#) on the Rule 11-18 Facilities webpage.

The Chevron Refinery (Refinery) is a petroleum refinery located in Richmond, California, that occupies approximately 2,900 acres along the San Francisco Bay and has been operating since 1902. The Refinery was identified as having the potential to pose elevated health risk to the surrounding community. As part of the Rule 11-18 process, the Air District conducted a preliminary HRA for the facility based on estimated emissions in 2021.

Preliminary HRA Results

The Air District's preliminary Health Risk Assessment (HRA) for the Chevron Refinery shows that **health risks exceed Rule 11-18 Risk Action Levels** for the maximum long-term cancer risk for nearby residents and the short-term 1-hour ("acute") risk. Risk Action Levels are the health risk thresholds that, if met or exceeded, the facility is required to develop and implement a risk reduction plan for on-site sources that contribute significantly to health risk. The results identify the risk for the maximally exposed individual (MEI), which refers to the person who is estimated to experience the highest potential health risk from a facility based on factors such as proximity to the source, local air dispersion patterns, and estimated exposure duration.

Health Risk	Definition	Results	Risk Action Level
Cancer Risk	Cancer risk is an estimate of the chance that an individual may develop cancer from long-term exposure to harmful air pollutants, known as carcinogens.	37 in a million	10 in a million
Acute Hazard Index	Acute risk is an estimate of the potential non-cancer health effects from short-term exposure to toxic air pollutants over a one-hour period.	1.2	1.0
Chronic Hazard Index	Chronic risk estimates the potential non-cancer health effects from long-term exposure to toxic air pollutants.	0.26	1.0

Table 1: Comparison of Preliminary Health Risk Assessment Results and Rule 11-18 Risk Action Levels

What is Driving the Risk?

Cancer Risk Driver:

Pollutant: Benz[a]pyrene

Primary Source: Emissions from refinery pipe fittings and storage tanks

Health Effects: Long-term exposure may increase cancer risk and affect developmental, reproductive, and immune health.

Acute Risk Driver:

Pollutant: Benzene

Primary Source: Wastewater treatment operations

Health Effects: Short-term exposure to benzene may cause temporary eye, nose, throat, and lung irritation, headaches, dizziness, and other health effects.

- The public and the facility have 90 days to comment on the preliminary HRA.
- The Air District reviews these comments and may make changes to the preliminary HRA based on new information received. *These changes may result in a decrease or increase in the preliminary risk results.*
- If the risk remains at or above the risk action levels in Rule 11-18, the facility will be required to create and implement a risk reduction plan – a plan outlining detailed risk reduction measures that will be implemented to reduce health risk below the risk action levels, or the application of best available retrofit control technology to reduce toxic emissions.

How to Comment

Public comment on the preliminary report is open on August 25th and closes on November 23rd, 2026, at 5 pm. Comments may be sent via email with the subject line of ***FID10_hra_[last name/group identifier]*** to **Reg11-18@baaqmd.gov**.

What Happens Next?

These results are considered **preliminary** and have not been finalized. Before the Air District finalizes these results, the following steps will occur:

Public Meeting

The Air District will host a public meeting on September 21, 2026, from 5:00 – 6:30 pm at the Richmond Memorial Auditorium and Convention Center, Main Floor, 403 Civic Center Plaza in Richmond.