



# Flaring & Air-Quality Updates



# flaring & air-quality report out

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## **safety measures & understanding flaring**

Brian Hubinger, Public & Government Affairs Manger  
Kris Battleson, Health, Safety, and Environment Manager

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## **reportable flaring events**

Duy Nguyen, Environmental Air Specialist

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## **air-quality related notices of violation (NOVs)**

Danny Barbour, Environmental Compliance Manager

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## **flaring & air-quality improvement measures**

Anna Morgan, Environmental Manager

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## **community support**

Lily Rahnema, Community Engagement Manager

# refinery air quality compliance overview

## monitoring emissions is a team effort

- Air Manager & Compliance Manager
- 6 Environmental Air Specialists
- 4 Environmental Field Coordinators
- 3 Environmental Technicians
- 1 Supervisor & 12 Component Inspection Techs
- 2 Air Permitting Specialists
- Compliance Specialist
- Environmental On-Call Designee
- Battalion Chief
- 24/7 Operating Crews



Chevron Richmond works with over 36 federal, state and local regulatory agencies

## continual checking of monitoring systems

99

continuous emission monitors

228

parametric monitors

785

monitoring points

8

flare camera monitors

450,000

component inspection points

280

annual source tests



Nearly a 40% reduction in particulate matter emissions refinery-wide since 2018

# understanding refinery flares

## part of our safety system

- Chevron Richmond takes our commitment to environmental protection very seriously and we work hard to prevent flaring
- Our flares are a visible part of our comprehensive network of safety systems designed to keep equipment running safely and reliably during all operating conditions

### what are flares

Refinery flares are safety devices that burn pollutants to prevent them from being released into the atmosphere

### why do they occur

Flaring occurs during unit startups and shut downs or during upsets or equipment malfunctions

### how am I protected

Air District Rule 12, Regulation 12 minimize the frequency and magnitude of flaring events. Rule 12, Regulation 11 requires monitoring to minimize flare events.



# flaring events

October 1, 2023 – September 30, 2024

Date Range	Number of Flaring Events	Duration of Flaring (hrs)
Oct. 1, 2022 – Sept. 30, 2023	19	270
Oct. 1, 2023 – Sept. 30, 2024	18	159

**% reduction**

**-5%**

**-41%**

**Flaring at Richmond Chevron refinery caused by partial power loss at facility, officials say**

Bay City News  
Monday, November 27, 2023



## November 27, 2023 - significant visible flaring event

- Electrical power loss to a primary and secondary electrical system
- Very rare scenario
- Resulted in the activation of the facility's safety systems.
- Chevron and responding agencies proactively monitored air quality near the refinery and within the community during and after the flaring even

### Preventative follow-up measures:

- Replacement and testing of malfunctioned equipment.
- Simplify electrical system design to improve reliability.

# air quality related notices of violation (NOVs)

October 1, 2023 – September 30, 2024

## Two types of violations:

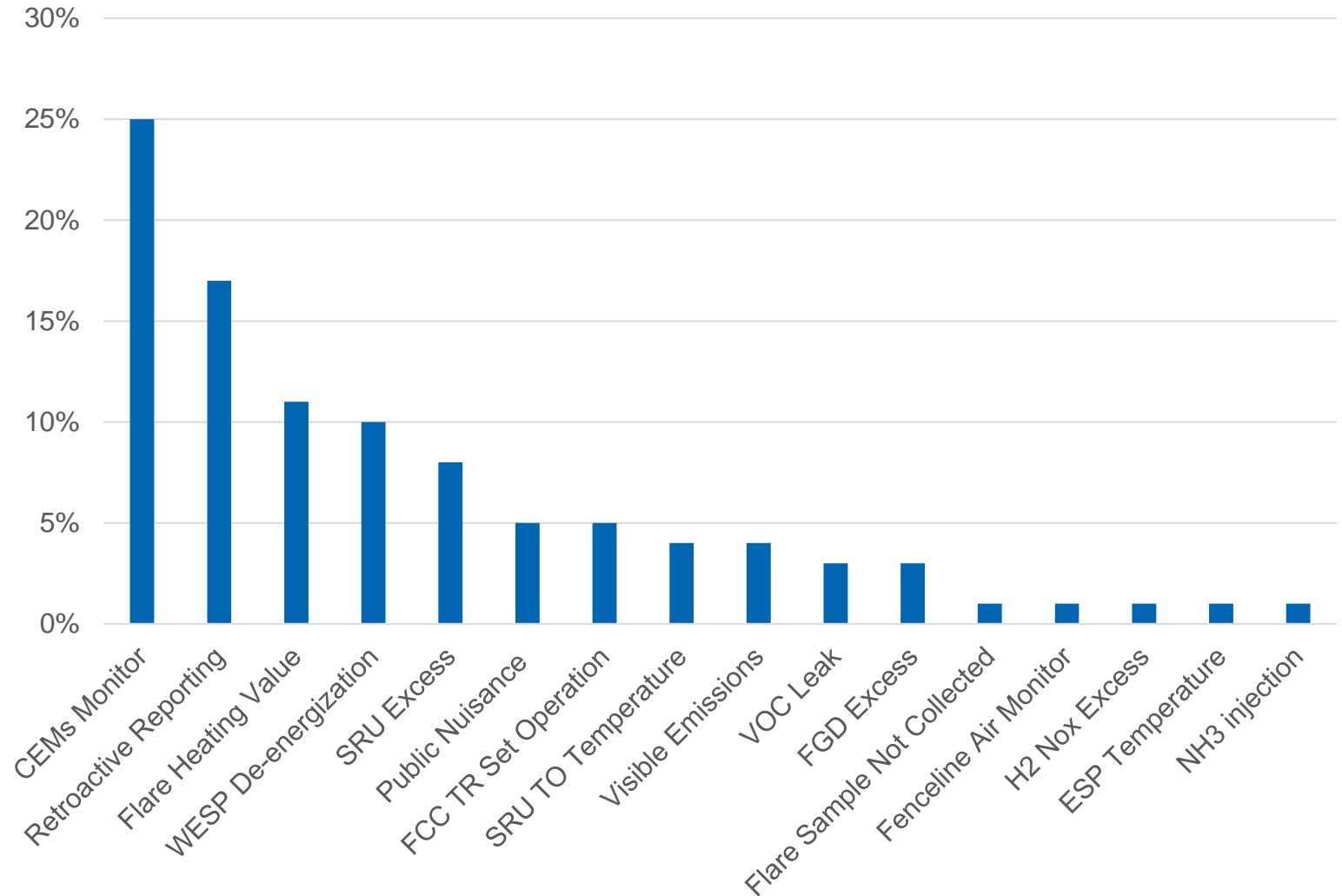
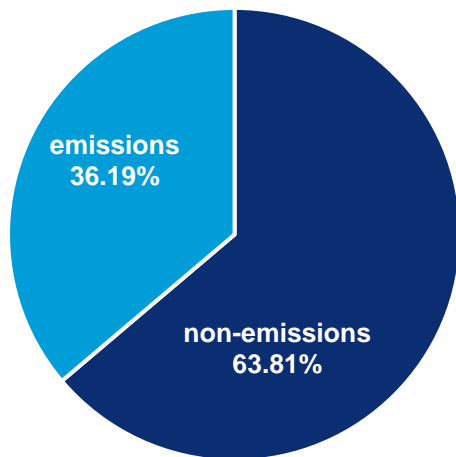
### Emissions Violations:

- Measurable air emission exceeded

### Non-Emissions Violations:

- No measurable emission exceeded, (e.g., inaccurate or missed reporting)

The BAAQMD does not always issue NOVs immediately, and sometimes years after permit deviations due to changes in regulations or other reasons.



# efforts to minimize flaring & air quality NOV's



## Flare Minimization Team

A multidisciplinary team that meets monthly to strategize continual reductions in flaring for the refinery.



## Source Reduction

An on-going function at the refinery, identifying actions to minimize relief flow rate.



## Flare & Blow-Down Training

Training for operators and other employees involved in management of flares and flare gas recovery systems.



## Automatic Flare Control

A system installed to optimize flare operations and ensure complete combustion.



## Flaring Prevention/Minimization Assessment

Analyzing flaring data to identify lessons learned and develop potential solutions to improve operation reliability and minimize flaring.

# flare performance improvement

## installation of Flare IQ

- **Computer program using algorithms to monitor, reduce, and control flaring emissions through:**
  - data collection
  - analysis
  - optimization
- **Allows more efficient and cleaner burning combustion and improves transparency for flare operations**
- **Currently underway for 2 out of 7 flares stacks**





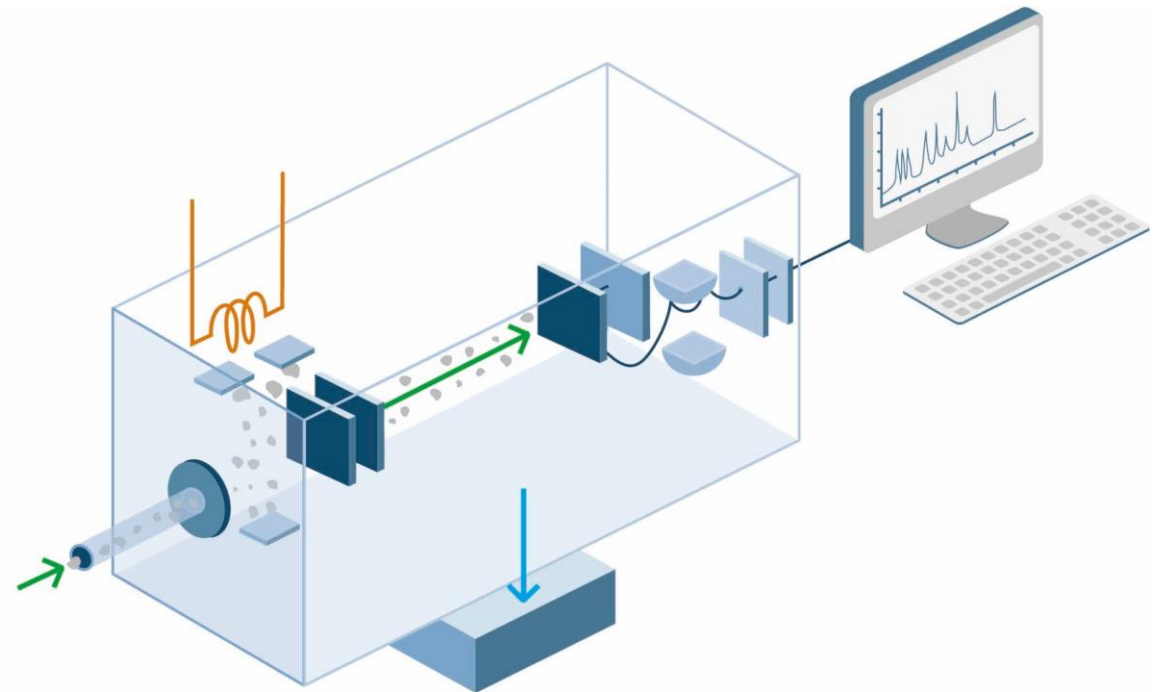
# flare emission monitoring improvements

## mass spectrometer certification

Certification expected by the end of October 2024 and expected to significantly reduce occurrences of missed flare samples.

### What is a Mass Spectrometer?

- monitors environmental compliance and permits more efficient refinery operations
- more accurately identifies and measures different chemical compounds
- certification by the EPA acts as a report card
- one time certification with required quarterly accuracy tests and daily validations



# continuing community impacts

Chevron is committed to being a good neighbor and providing affordable, reliable and ever-cleaner energy that powers our community, while enhancing community partnerships and enabling economic development.

## supporting the community

\$48MM+ to non-profits, supporting workforce development, educating students and providing other opportunities since 2012.

## driving economic development

Refinery operations contributed \$2B+ to the local economy by purchasing supplies and services from Bay Area businesses and paying local taxes since 2015.

## deploying the best talent

Our operations in Richmond support approximately 3,000 employees and contractors – making us the largest employer in Richmond.





# additional community support



### ECIA

Annual funding through City of Richmond for non-profits



### Regional Occupation Program

Free operator training program



### Richmond Promise

Chevron provided \$35M in seed funding so all graduating Richmond HS seniors have college scholarships for four years



### Refinery Scholarships

Additional annual scholarships sponsored by Black Employee Network and Somos

