Understanding Refinery Flares

Why do they occur?
Flaring may result from the start-up and shutdown of units or during accidents or upsets.

How am I protected?
Air District flare regulations were the first and most comprehensive flare rules in the nation. The regulations are designed to limit the frequency and magnitude of flaring events (Rule 12-12) and to monitor the flares (Rule 12-11). These rules protect the health of residents living close to the refineries and reduce overall levels of air pollution in the Bay Area.

They require refineries to:
- Immediately notify the Air District of flaring
- Monitor the volume and composition of gases burned in flares
- Calculate the emissions based on the data collected
- Determine the reasons for the flaring and implement prevention measures to keep it from happening again
- Continuously monitor and record the flares
- Submit the data monthly to the Air District

By instituting better operating practices and equipment, flare emissions have been reduced by 75 percent.

What are they?
Refinery flares are safety devices that burn pollutants that would otherwise be directly released into the atmosphere.

Typical Flare System

Key
- Normal process for excess gases
- Route of gas when flaring occurs

Start
Refinery Process Gases/Liquids

Refinery Operations

Monitor

Vent Gas Liquid
Knockout Drum
Water Seal

Purge Gas
Pilot Gas

Video Monitor

Refinery Flare