

# Benicia Fire Department

## Portable Air Monitors



Valero CAP Meeting  
June 13, 2023

# The Original Portable Air Monitor



# What is the purpose of the fire department's air monitoring program?

- Initially, it was to keep our firefighters safe
  - Confined Space Rescue
- Evolved to include assisting in keeping the community safe
  - Provide community notifications
  - Informed decisions on shelter in place or evacuation orders
- Acute vs chronic
  - Chemical releases vs long term air pollution

# Air monitors utilized by the Benicia Fire Department



Air Monitor	Quantity	Particulates and/or Chemicals Detected	Location
Aerocet 831* 	2	Particulate Matter (PM) 1 Particulate Matter (PM) 2.5 Particulate Matter (PM) 4 Particulate Matter (PM) 10	Battalion 11 Truck 11
ChemPro100i* 	2	Gas & Vapor. Hazard classifier. Broad spectrum of chemical detection.	Battalion 11 Engine 11
PpbRae 3000* 	2	Volatile Organize Compound (VOC) and Toxic gases from <10 ppb - 10,000 ppm	Battalion 11 Truck 11
X-am 5000/5600 	3	Oxygen (O2) Lower Explosive Limits (LEL) Hydrogen Cyanide (HCN) Hydrogen Sulfide (H2S) Carbon Monoxide (CO)	Engine 11 Engine 12 Truck 11
Pac 5500 	3	Carbon Monoxide (CO)	Engine 11 Engine 12 Truck 11
Pac 7000 	3	Chlorine (Cl)	Engine 11 Engine 12 Truck 11

# Dräger PAC 5500 CO



## Type

Single Gas Detector

## Detects

Carbon Monoxide (CO) in PPM

## Common Uses

CO Alarm Sounding

Specific Complaints on Medical Calls

## Quantity

3

## Location

Engine 11

Truck 11

Engine 12

# Dräger PAC 7000 CL



## Type

Single Gas Detector

## Detects

Chlorine (Cl) in PPM

## Common Uses

Suspected Chlorine Leak

## Quantity

3

## Location

Engine 11

Truck 11

Engine 12

# Dräger X-am 5000/5600



## Type

Multi Gas Detector

## Detects

Oxygen (O<sub>2</sub>)  
Lower Explosive Limits (LEL)  
Hydrogen Sulfide (H<sub>2</sub>S)  
Carbon Monoxide (CO)  
Hydrogen Cyanide (HCN)

## Common Uses

Confined Space Rescue  
Post Structure Fire

## Quantity

3

## Location

Engine 11  
Truck 11  
Engine 12

# PpbRae 3000



## Type

Photoionization Detector (PID)  
Volatile Organic Compound (VOC) Monitor

## Detects

Volatile Organic Compounds  
Toxic gases from 1 ppb – 10,000 ppm  
How much of something is present but not what

## Common Uses

Toxic Industrial Chemicals  
Sniffer Function

## Quantity

2

## Location

Battalion 11  
Truck 11



# ChemPro100i



## Type

Toxic Industrial Chemical Detector

## Detects

Gas and Vapor Hazard Classifier

Broad Spectrum of Chemical Detection

Does not provide ppm or ppb

## Common Uses

Chemical Odor Complaints

## Quantity

2

## Location

Battalion 11

Engine 11

# Aerocet 831



## Type

Particulate Meter

## Detects

Particulate Matter PM 1  
Particulate Matter PM 2.5  
Particulate Matter PM 4  
Particulate Matter PM 10

## Common Uses

Wildfire Smoke  
Pet Coke

## Quantity

2

## Location

Battalion 11  
Truck 11

# **Incident Response Procedures**

**How Benicia Fire Department and Valero Work  
Together to Address Emergency Incidents**

# Legal Responsibility For Emergency Response

The City has the legal authority for the control and investigation of fires and other emergencies occurring at the refinery

Additionally, there are various regulations, codes, contracts, agreements, and policies that memorialize how we will notify, communicate, and respond together to mitigate emergency incidents

- California Fire Code
- California Health And Safter Code
- Valero Emergency Procedures Manual
- Valero Good Neighbor Agreement
- City Of Benicia – Valero Cooperation Agreement
- Hazardous Materials Incident Notification Policy

# Past Working Relationship

- Has changed over the years
- There have been times when the working relationship was very poor
- Has a direct impact on community safety

# Current Situation

- Very good working relationship  
Not perfect – will always be room for improvement
- Common goal of public safety
- Identified operational challenges in past incidents  
Memorialized plans to overcome and improve

# Examples

- Notification
  - Comprehensive notification plan with very specific triggers
- Access
  - Immediate access for incident response
- EOC Coordination
  - Participation and coordination by both parties
- Emergency Procedures and planning
  - Annual EOP / EPM review and update
- Training
  - Scheduled annual joint trainings
- Reports
  - Incident investigations, root cause analysis reports, safety reports

# **Valero / Benicia Incident Response vs. Surrounding Jurisdictions**





# Questions