

Petroleum Refinery Community Air Monitoring Workshop

May 14, 2020

Purpose of Workshop

- Share initial concepts on design of community air monitoring
- Provide overview of petroleum refining in the Valley
- Provide overview of Assembly Bill (AB) 1647 requirements and recently adopted District Rule 4460 and Rule 3200
- Receive recommendations from community and other stakeholders on locations for community air monitoring

Petroleum Refinery Industry

- Petroleum refinery facilities conduct a number of processes, including:
 - Fractionation or distillation of crude oils
 - Redistillation of unfinished petroleum derivatives
 - Cracking
- Refinery processes result in a variety of products, including:
 - Gasoline, naphtha, and kerosene
 - Distillate and residual fuel oils
 - Lubricants

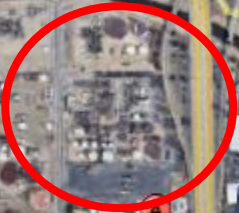
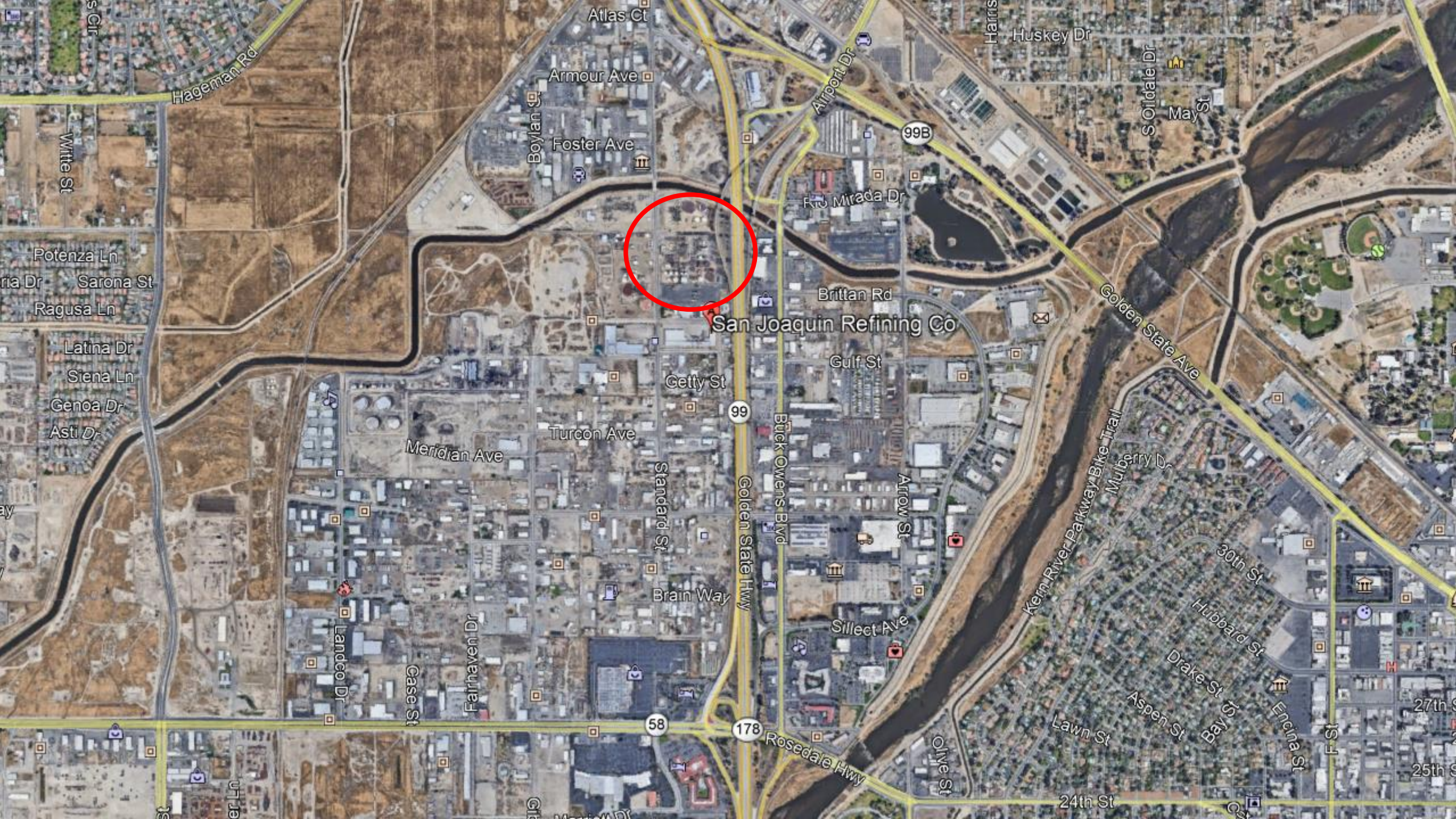
San Joaquin Valley Petroleum Refining Operations

Facility Name	Location	Processing Capacity (barrels/day)	Status of Refining (2019 CEC Report)
Alon Bakersfield Refining (Delek US)	Rosedale Highway, Bakersfield, CA	66,000	Non-Refining
San Joaquin Refining Company	Shell Street, Bakersfield, CA	15,000	Operational
Kern Oil & Refining Co.	Panama Lane, Bakersfield, CA	26,000	Operational
Tricor Refining, LLC	Manor Street, Bakersfield, CA	12,500	Non-Refining

San Joaquin Refining Co.

- Independent oil refining company located in Bakersfield, CA
- One of smallest refineries in state, processes up to 15,000 barrels of petroleum per day
- Distribution network ships products for a variety of industries through the Port of Los Angeles
- Majority of product used in asphalt production
- Also serves industries with applications for diesel fuel, drilling fluids, fuel additives, hydraulic fluids, lubricants, tires, etc.
- Currently employs 130 employees





San Joaquin Refining Co

99

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58

178

Kern Oil & Refining Co.

- Independent oil refining company located in Bakersfield, CA
- Processes up to 26,000 barrels of petroleum per day
- Gasoline and diesel production (key supplier for Southern San Joaquin Valley)
- Co-processes and blends various biofuels with fossil fuel production process
- Currently employs 155 employees





Kern Oil & Refining Co

Fuller Acres

Enterprise St

Reynolds St

Kam Ave

Cameo Rd

E Panama Ln

Farmers Ln

Fuller Dr

Brooks Rd

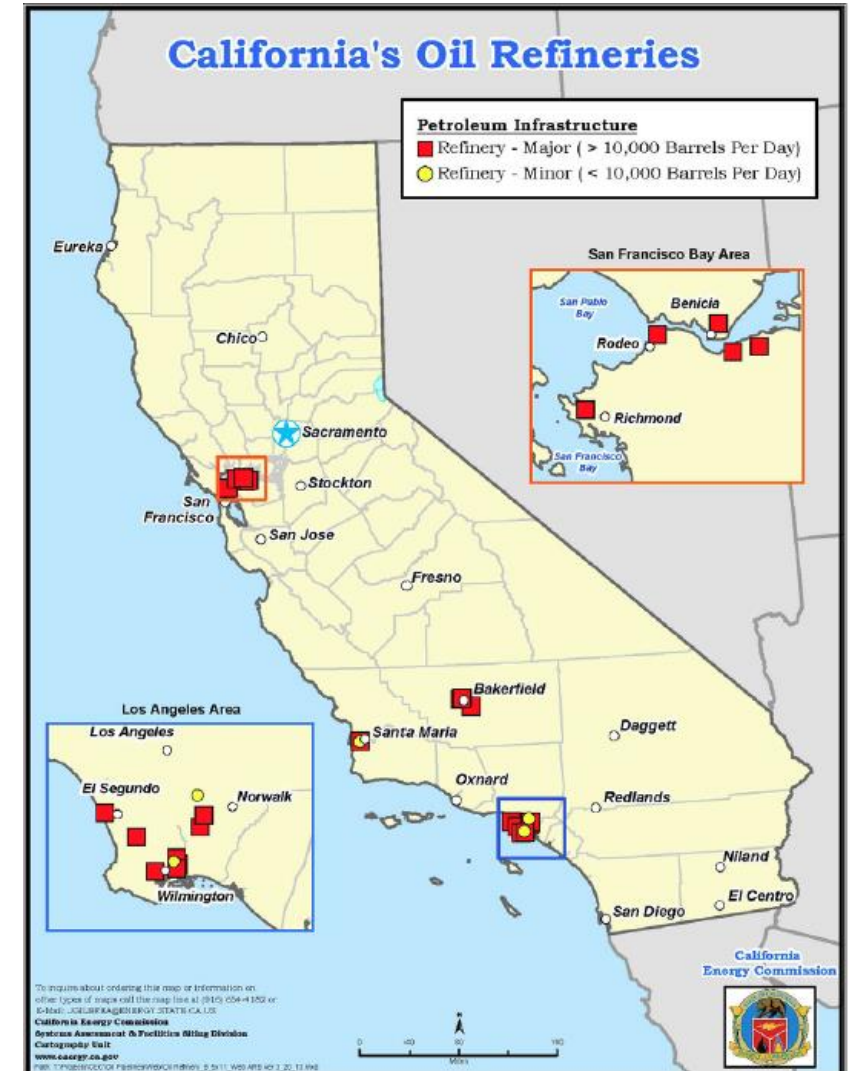
Hilltop Dr

Sh

Rd

Development of State Legislation

- Safety incidents at large refineries in Bay Area and South Coast raised concerns about safety practices, public health, and emergency preparedness
- As a result, state legislation developed to require additional safety precautions at petroleum refineries – “California Refinery Jobs and Safety Action Plan” (includes AB 1647, Muratsuchi)



Assembly Bill (AB) 1647

- As part of Assemblymember Muratsuchi's bill package, AB 1647 approved by the Governor of California on October 8, 2017
- AB 1647 requires:
 - Petroleum refineries develop, install, operate and maintain a fence-line air monitoring system at and near refineries in accordance to guidance developed by CARB and local air district
 - Air districts design, develop, install, operate and maintain a refinery-related community air monitoring system
 - Real-time data be made accessible to the public

District Rule Development

- In response to AB 1647, District developed local rules to establish requirements for petroleum refinery fence-line and community air monitoring
- District Rule 4460 (Petroleum Refinery Fence-line Air Monitoring) and Rule 3200 (Petroleum Refinery Community Air Monitoring Fees) developed through public process and adopted on December 19, 2019
 - Rule 4460 requires fence-line air monitoring systems at Valley petroleum refining operations
 - Rule 3200 establishes fee structure to fund District community air monitoring operations near petroleum refineries

Petroleum Refinery Community Air Monitoring

- In addition to fence-line air monitoring, AB 1647 requires air districts design, develop, install, operate and maintain a refinery-related community air monitoring system
- District to monitor sulfur dioxide, hydrogen sulfide, and BTEX compounds (benzene, toluene, ethylbenzene, and xylene) in the community
 - Same pollutants will be measured by affected Valley refineries through their fence-line monitoring systems
- One air monitoring system to be deployed in the community per affected petroleum refinery
- Collected data to be available in real-time data



Image courtesy of airpointer, 2019

Considerations for Community Air Monitoring

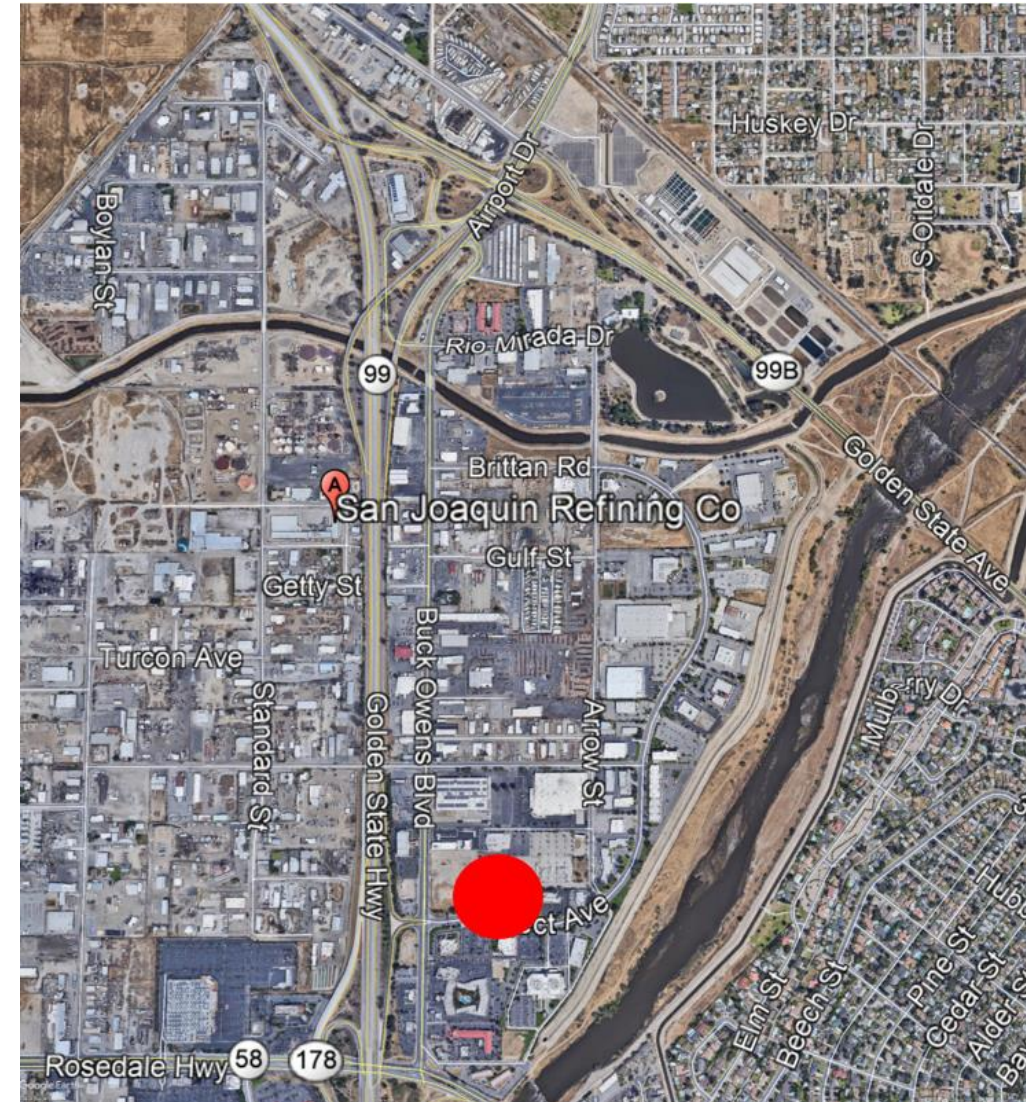
- Number of factors to be taken into consideration when planning for placement of air monitoring equipment
 - Permission of land-owner to place equipment on property
 - Establishment of lease agreements with property owner
 - Security of the location to protect equipment
 - Access to power source to operate equipment
 - Proper monitoring siting (no obstructions, mindful of influence from other local sources of pollution)
 - Downwind of applicable refinery and near populated area
- These factors frequently impact the ability to find a suitable community monitoring location
- These factors should be kept in mind when making recommendation for monitoring location

San Joaquin Refining Company

Potential Air Monitoring Location

Office park:

- Downwind of refinery
- Upwind of populated residential area
- Multiple locations with access to power
- Options for secure locations for air monitoring equipment
- Approximately 0.5 miles from petroleum refinery

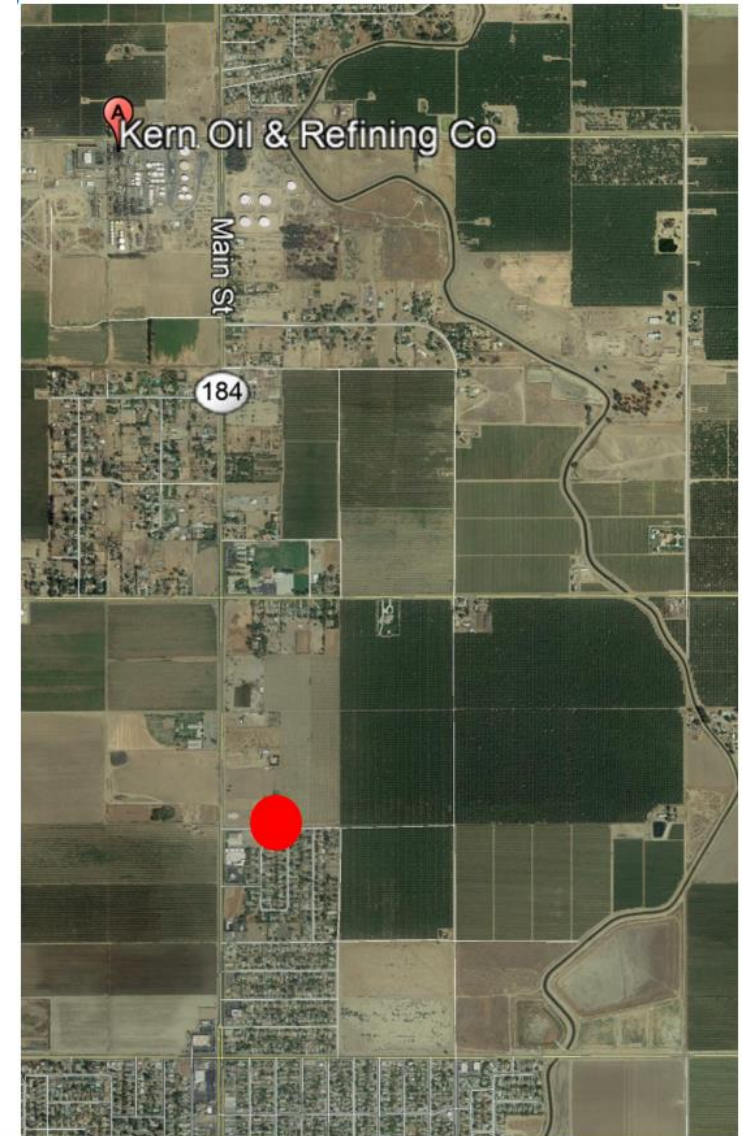


Kern Oil & Refining Co.

Potential Air Monitoring Location

Kern County Fire station:

- Downwind of refinery
- Upwind of community of Lamont
- Access to power
- Secure location for air monitoring equipment
- Approximately 1.3 miles from refinery



Next Steps: Public Engagement Process for Petroleum Refinery Community Air Monitoring

Public Workshop (Today)

5/14/20

Public Comments Due

6/11/20

District Develops Community Air Monitoring Plan (with public feedback)

Summer 2020

District Develops Community Air Monitoring Systems

Summer 2020-Spring 2021

District Begins Community Air Monitoring

2021

Public Participation and Comment Invited throughout Process

Requested Feedback

- What other factors should be considered when selecting a location for community air monitoring?
- What other potential air monitoring location would you recommend for the areas near San Joaquin Refining Company and Kern Oil & Refining Co.?

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Questions/Comments