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

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