Southeast Treatment Plant Projects Air Emissions and Mitigation

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Presentation for: Citizen Advisory Committee (CAC)

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Agenda

- Introductions and overview
- Existing air quality and regulatory setting
- Air quality analysis and emissions
- Mitigation measures and compliance
Southeast Treatment Plant Projects

• Extensive Bayview community and CAC input
• Rigorous environmental review
• Environmental Justice policy
Goals and Active Projects

- Reduce odor, improve aesthetics, operate more efficiently, protect the City’s critical facilities in an earthquake
Air Pollutant Exposure Zone (APEZ)

- Areas with greater pollution
  - Traffic (freeways)
  - Maritime activities
  - Caltrain
  - Industrial uses

- Cleaner construction equipment required
Air Quality Regulations

• U.S. Environmental Protection Agency (EPA)
• California Air Resources Board (CARB)
• Bay Area Air Quality Management District
• City and County of San Francisco
  • Most stringent requirements
  • APEZ includes even more stringent
• SFPUC Environmental Justice Policy
APEZ Clean Construction Requirements

• Tier = engine rating by USEPA
• Tier 4  Tier 0
cleanest/newest  oldest/dirtiest

• In APEZ must use:
  • Tier 4
  • Tier 2 + particulate filters or
  • Tier 3 + particulate filters

SF Air Basin All fleet Sizes Pieces of Equipment, 2017
California Environmental Quality Act (CEQA)
Air Quality Analysis

• Criteria Air Pollutants
  • ROG, NOx, PM10, PM2.5

• Health risk

• Fugitive dust

• Greenhouse gas emissions
Emissions Sources

• Construction
  • Building demolition
  • Grading and excavation
  • Equipment such as excavators
  • Trucks
  • Generators
  • Off-gassing

• Operations
  • Facilities
  • Trucks
  • Emergency generators and pumps
CEQA Air Quality Analysis for Biosolids Digester Facilities Project (BDFP)

- **Existing Air Quality**
  - Freeways, Industrial Sources, etc

- **Project Emissions**
  - Construction and Operation

- **Mitigation**
  - Cleaner Fuel, Equipment, etc

- **Mitigated Project Emissions**

- **Other Project Emissions**
  - Nearby Cumulative Projects

- **Total Area Emissions**
Criteria Air Pollutant Emissions- Construction

- Emissions reduced substantially with cleaner equipment
- All below CEQA thresholds for all SEP projects
- Except BDFP NOx in years 1 and 3
  - NOx offsets to mitigate excess emissions

Source: BDFP EIR Table 4.8-9
Criteria Air Pollutant Emissions - Operations

- BDFP future operation:
  - ROG and NOx decrease
  - PM 2.5 slight increase
  - Below CEQA threshold
  - Monitor PM and offsets to ensure no increase over baseline (EJ recommendation)
- All other SEP projects – no increase in emissions

Source: BDFP EIR Table 4.8-10 and Response to Comments Table 10.6-2
Cumulative Health Risk – PM 2.5

- Background levels are high
- BDFP PM2.5 concentrations are below CEQA APEZ threshold
- BDFP plus cumulative projects are still below CEQA APEZ threshold
- Per EJ recommendation, committed to no net increase for BDFP

Source: BDFP EIR Table 4.8-15 and AQTR Figure 5b
Environmental Construction Compliance

• Proactive
• Systematic
• Boots on the ground
• Open communication
• Solutions oriented
• Integrated with Construction Management Team
• Close coordination with EJ and Communications Team
## Construction Air Quality Mitigation

<table>
<thead>
<tr>
<th>Mitigation Measure</th>
<th>Criteria Air Pollutants</th>
<th>Fugitive Dust</th>
<th>Health Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dust control (watering, covering stockpiles, track-out prevention, covering haul loads)</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Equipment and vehicle maintenance</td>
<td>X</td>
<td></td>
<td>X</td>
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<tr>
<td>Idling limited to 2 minutes</td>
<td>X</td>
<td></td>
<td>X</td>
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<tr>
<td>No parking of equipment/trucks in front of daycare facility (EJ requirement)</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Tier 2/Tier 3 + VDCS</td>
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<tr>
<td>Tier 4 Final for equipment 140 and greater</td>
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<td>X</td>
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<tr>
<td>2010 or newer haul trucks</td>
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<tr>
<td>Renewable diesel</td>
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<td></td>
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<tr>
<td>NOx offsets</td>
<td>X</td>
<td></td>
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<tr>
<td>Contractor assistance to upgrade equipment</td>
<td>X</td>
<td></td>
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</tbody>
</table>
Construction Compliance Methods

- Daily SEP-wide site inspections
- Perimeter air quality monitoring
- Review of Contractor submittals and reports
- Tracking and documentation
- Other agency inspections (i.e., BAAQMD)
- SFPUC construction hotline (415-551-4SEP)
- Bayview Hunters Point Environmental Justice Response Task Force’s IVAN Network (Identifying Violations Affecting Neighborhoods)
Environmental Training

• ALL personnel trained to ensure mitigations are implemented
Thank You

Questions?