Meeting Agenda

SDAPCD
- Purpose of this meeting
- Air Toxics and the “Hot Spots” Program
- Facility operation, emissions, and health risk for 2017 emissions
- Next Steps (Risk Reduction Plan)

Public Comment
- Receive public comments
- Answer questions
- SDAPCD staff and BAE Systems staff
California Air Toxics “Hot Spots” Program (Assembly Bill 2588)

Program Goal

• Protects the public’s right to know about toxic air contaminant emissions and how these emissions can potentially impact public health; and,
• Requires health risk reductions for facilities with elevated health risks

Toxic Air Contaminants

• Chemicals emitted into the atmosphere that may cause adverse health effects

Adverse Health Effect

• Range from minor eye or throat irritation, shortness of breath, or headaches, to cancer, birth defects, or damage to organs
California Air Toxics “Hot Spots” Program

- Quantify Toxic Air Contaminant Emissions
- Identify Facilities that may Present Public Health Concerns
- Request Health Risk Assessments – Review and Approve
- Implement Public Notification and Risk Reduction Requirements
### Air Toxics “Hot Spots” Program Health Risks

<table>
<thead>
<tr>
<th><strong>Cancer Risk</strong></th>
<th>Calculates the probability that a person would contract cancer if exposed to emissions for 30 years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health Hazard Index</strong></td>
<td>Calculated for acute exposure (or short-term health impacts) and chronic exposure (or long-term health impacts)</td>
</tr>
<tr>
<td>Index &lt; 1</td>
<td>no adverse health effects</td>
</tr>
<tr>
<td>Index ≥ 1</td>
<td>potential for adverse health effects</td>
</tr>
<tr>
<td><strong>Cancer Burden</strong></td>
<td>Estimates of the number of people that can contract cancer within a community that is exposed to the emission levels</td>
</tr>
<tr>
<td>Health Risk</td>
<td>Public Notification Threshold</td>
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<tr>
<td>-----------------------------------</td>
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</tr>
<tr>
<td>Cancer Risk</td>
<td>10 in one million</td>
</tr>
<tr>
<td>Acute Noncancer Health Hazard Index</td>
<td>1.0</td>
</tr>
<tr>
<td>Chronic Noncancer Health Hazard Index</td>
<td>1.0</td>
</tr>
<tr>
<td>Cancer Burden</td>
<td>1.0</td>
</tr>
</tbody>
</table>
BAE Systems

- Ship repair facility
BAE Systems Equipment

- Abrasive blasting
- Coating operations
- Diesel Engines
- Welding
## Elevated Health Risks
### BAE Systems 2017 Emissions

<table>
<thead>
<tr>
<th>Health Risk</th>
<th>HRA Results</th>
<th>Risk Notification Thresholds</th>
<th>Risk Reduction Thresholds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Worker Cancer Risk</td>
<td>14.2 in one million</td>
<td>10 in one million</td>
<td>100 in one million</td>
</tr>
<tr>
<td>Maximum Worker Acute Health Hazard Index</td>
<td>2.44</td>
<td>1.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>
Emission Contributions
Worker Cancer Risk of 14.2 in one million

- Hexavalent Chromium (Welding) - 52%
- Diesel Particulate Matter (Diesel Engines) - 29%
- Cadmium (Welding & Abrasive Blasting) - 12%
- Ethyl Benzene (Coatings and Solvents) - 12%
- Nickel (Welding & Abrasive Blasting) - 3%
Emission Contributions Worker Acute Non-Cancer Health Hazard Index of 2.44

- **Nickel** (Welding & Abrasive Blasting) 1%
- **Benzene** (Diesel Engines) 99%
AB2588 Toxic Hot Spots Emission Reduction Efforts

- **Implementation of electronic tracking for daily use of welding consumables**
  - Allows for improved accuracy
  - Tracks daily unused welding consumables
  - Provides greater precision for actual use of weld rods and flux-core spools
- **Dry Dock Electrification** – Pride of San Diego
- **Renewable Diesel used in all equipment** portable & stationary devices
  - 30-60% emission reduction made from renewable resources
- **Tier 4 or Electric Air Compressors** are used for ship repair activities
Additional Diesel Particulate Reduction Initiatives

2015-2021 Goals Accomplished

- 2 – Fully Electric Semi Trucks – tested for ship repair use
- 22k Electric Forklift purchased to replace 18k Diesel Forklift
- Developed incentive-based vanpool program

2022-2024 Goals

- Purchase ZEV Semi (newest 579)
- ZEV Forklift fleet – currently propane
- Fleet vehicles – replace 20% with ZEV over next 5 years
- Roof top solar installation to accommodate EV charging needs
- Expand vanpool program
Next Steps

- BAE Systems to submit risk reduction plan by May 16, 2022
- Public notice of risk reduction plan
- Consider public comments
- Review and approve risk reduction plan for 2017 emissions