Purpose of Meeting

- Explain 2015 estimated health risks
- Background about Lubeco
- About Health Risk Assessments
- Steps taken to reduce the health risks
- Estimated health risks today
- Public input and comments
Who we are

• South Coast AQMD is the regional agency responsible for air quality for areas in Los Angeles, Orange, Riverside and San Bernardino Counties
  • Largest of the 35 local air agencies in CA
  • Work with CARB and EPA to meet state and federal standards

• Responsibilities
  • Control emissions from stationary sources (e.g., power plants)
  • Work to achieve federal air quality standards
  • Permit and inspect 28,400 affected businesses
  • Administer $100 million of incentive funding annually
SCAQMD’s Air Toxics Program

- Over 25 rules to reduce toxic air contaminants
- Community meetings and direct public communication 1-800-CUT-SMOG
- All new and modified sources are evaluated for toxics during permitting (Rules 1401 and 1401.1)
- Requires Health Risk Assessments, Risk Reduction Plans, and Public Notification
- Ambient monitoring near facilities and community monitoring
- Ensures facilities are complying with Toxic Rules and investigates complaints
- Measures regional toxic air contaminants throughout air basin

SCAQMD Toxics Rules

Rule 1402 and Toxics Hot Spots Program

Ambient Air Monitoring and AB 617

Community Meetings and 1-800-CUT-SMOG

Permitting

Multiple Air Toxics Emissions Study

Compliance
The Air Toxics “Hot Spots” Information & Assessment Act (AB 2588)

• State law enacted in 1987 (Connelly)
• Public **Right-to-Know** Program
• Purpose
  • Collect emissions data with updates every 4 years
  • Identify facilities having localized impacts
  • Evaluate potential health risks through Health Risk Assessments
  • Notify residents of those potential health risks
  • Reduce health risks below certain thresholds

• Rule 1402
  • Implements requirements of AB 2588
  • More stringent requirements for reducing health risk
Why are we discussing Lubeco?

- **April 2017**: Source tests on a heated sodium dichromate seal tank confirmed Lubeco is a source of hexavalent chromium
- **May 2017**: Ambient monitors measured high levels of hexavalent chromium near Lubeco

- **September 2017**: Designated the facility as a potentially high-risk facility under Rule 1402
- **September 2019**: Modeled risks were above thresholds requiring that Lubeco take steps to reduce risks and notify the public
Potentially High Risk Level Facilities

What is a Potentially High Risk Level Facility

- Facilities that are expected to or have exceeded the Significant Risk Level (Cancer Risk ≥ 100 in-a-million)
- Determination based on emissions data, source test, or ambient monitoring data
- High levels of hexavalent chromium measured at ambient monitors near Lubeco*

Addresses High Health Risks Early

- Submittal and implementation of Early Action Reduction Plan

Expedited Implementation

- Submittal of: Air Toxics Inventory Report, Health Risk Assessment, Risk Reduction Plan

Better Overall Public Health Sooner

- Completes overall Risk Reduction sooner than traditional AB 2588 Program

* http://www.aqmd.gov/home/news-events/community-investigations/air-monitoring-activities
Timeline of Key Events

Oct 2016
Ambient monitors measured high levels of hexavalent chromium near Lubeco

Apr 2017
Source tests on a heated sodium dichromate seal tank confirmed Lubeco is a source of hexavalent chromium

Aug 2017
Hearing Board granted a stipulated Order for Abatement (OA)

Sep 2017
Lubeco designated as a Potentially High Risk Level facility

Sep 2018
Permits to construct issued for air pollution control equipment

March 2018
EARP conditionally approved. Health Risk Assessment (HRA) and Risk Reduction Plan (RRP) submitted

Feb 2018
Lubeco submitted the Air Toxics Inventory Report (ATIR)

Oct 2017
Lubeco submitted an Early Action Reduction Plan (EARP) to meet requirements of the OA & Rule 1402

Nov 2018
Rule 1469 amended, new requirements applicable

Sep 2019
Revised ATIR and Revised HRA Approved

Dec 2019
Hearing Board issued a second stipulated OA

Jan 2020
Revised RRP conditionally approved
Lubeco, Inc.

- Located at 6859 Downey Avenue in the city of Long Beach
- Job-shop metal finishing facility
- Operations include: spray coating, anodizing, sealing, and coloring of metal parts for the aerospace industry
Emission Sources at Lubeco

Hexavalent Chromium Tanks
Anodizing, heated, and/or air sparged tanks are sources of hexavalent chromium emissions.

Coating Operations (Spray Booth)
Spray coating of chromate based primers is a source of hexavalent chromium emissions.

*Pictures are for illustration purposes only and are not actual photos of processes at Lubeco, Inc.*
About Health Risk Assessments

Estimates the chance that a person may experience a health effect from toxic air contaminant emissions

“Snapshot” based on toxic air contaminant emissions from one year of operation
Assumes 2015 emissions levels for 30 years

Snapshot can change if toxic air contaminant emissions are reduced

Conservative assumptions - people are outdoors 24 hours, 7 days a week in one location
Health Risk Assessment Process

**Hazard Identification**
Identifies health problems and potency of toxic air contaminants.

**Dose-Response**
Accounts for the increased chances of having health effects when pollutant levels are higher.

**Exposure**
Estimates the amount of time a person could be exposed to toxic air contaminants. Residential exposure is 30 years, and off-site worker exposure is 25 years.

**Sensitivity**
Accounts for children being more sensitive to the health effects of air toxics.

1 Uses methodology established by the California Office of Environmental Health Hazard Assessment
3 Key Health Risk Elements of Rule 1402

Cancer Risk
- Estimates the probability of excess cancer cases
- Expressed in “Chances in a million”

Non-Cancer Risk
- Estimates non-cancer health effects
- Acute non-cancer effects are from short-term exposure
- Chronic non-cancer effects are from long-term exposure
- Expressed using a Hazard Index (HI)

Cancer Burden
- Estimates the increase in the occurrence of cancer cases in a population subject to a cancer risk of 1 in a million or greater
- Cancer burden $\geq 0.5$ requires risk reduction
# Health Effects of Key Toxic Air Pollutants

<table>
<thead>
<tr>
<th>Toxic Air Pollutant</th>
<th>Health Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexavalent Chromium</td>
<td>Long-term inhalation (years to decades) can increase the chance or probability of developing cancer (e.g., lung cancer)</td>
</tr>
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</table>
## Rule 1402 Health Risk Thresholds

<table>
<thead>
<tr>
<th></th>
<th>Significant Risk</th>
<th>Risk Reduction</th>
<th>Public Notification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cancer Risk</strong></td>
<td>Cancer Risk $\geq$ 100 in one million</td>
<td>Cancer Risk $\geq$ 25 in one million</td>
<td>Cancer Risk $\geq$ 10 in one million</td>
</tr>
<tr>
<td><strong>Non-Cancer Risk</strong></td>
<td>Non-Cancer Hazard Index $\geq$ 5</td>
<td>Non-Cancer Hazard Index $\geq$ 3</td>
<td>Non-Cancer Hazard Index $\geq$ 1</td>
</tr>
<tr>
<td><strong>Cancer Burden</strong></td>
<td>Risk Reduction</td>
<td></td>
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</tr>
</tbody>
</table>
Rule 1402 Risk Reduction Plans

**Early Action Reduction Plan – Required if Risk > Significant Risk Level**

- Measures that can be implemented immediately to reduce the facility-wide health risk below 100 in one million

**Risk Reduction Plan – Required if Risk > Risk Reduction Threshold**

- Permanent, verifiable and enforceable risk reduction measures
- Must be implemented within 2 years from the approval of plan or sooner
- Must reduce the facility-wide health risk below 25 in-a-million for cancer risk and a Hazard Index of 3 for non-cancer health effects
Implementation of Key Early Action Reduction Measures at Lubeco

- Installed plastic curtains in the open process tank area to reduce potential cross drafts
- Implemented the following measures for open process tanks containing hexavalent chromium:
  - Eliminated air sparging
  - Covered tanks
  - Limited heating of tanks when not in use
  - Eliminated certain tanks
- Enclosed demasking operations
- Enclosed storage of paint trays
- Enhanced housekeeping: Vacuum with HEPA, no brooms
• 2015 estimated cancer risk is above Significant and Risk Reduction Thresholds
  • 2015 hexavalent chromium emissions from spray booths and process tanks represent 99% of the cancer risk
• Implementation of Risk Reduction Plan will significantly reduce cancer risk below both Action Risk Level and Notification Risk Level
Next Steps

• Monitor progress of Risk Reduction Plan
• Conduct source tests and facility inspections to verify compliance with all applicable rules and requirements
• Finalize implementation of Risk Reduction Plan
  • Implementation of Risk Reduction Plan is expected to significantly reduce health risks
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