MM West Covina
AB 2588 Public Meeting

South Coast Air Quality Management District
May 19, 2020
Purpose of Meeting

- Notify public of estimated health risks in 2014
- Background about MM West Covina
- About Health Risk Assessments
- Steps taken to reduce the health risks
- Estimated health risks today
- Public input and comments
Who We Are

• The South Coast AQMD is the regional agency responsible for air quality for areas in LA, Orange, Riverside and SB 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)
  • Comply with U.S. government air quality standards
  • Permit and inspect 28,400 affected businesses
  • Administer $100 million of incentive funding annually
South Coast AQMD’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)

South Coast AQMD Toxics Rules

Community Meetings and 1-800-CUT-SMOG

Permitting

Multiple Air Toxics Emissions Study

Rule 1402 and Toxics Hot Spots Program

Ambient Air Monitoring and AB 617

Compliance

Requires Health Risk Assessments, Risk Reduction Plans, and Public Notification

Ambient monitoring near facilities and community monitoring

Ensures facilities are complying with Toxic Rules

Measures regional toxic air contaminants throughout air basin
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
MM West Covina

• Located at 2210 S. Azusa Ave. in West Covina, CA.
• Generates electricity by combusting landfill gas from BKK landfill
• Boiler system in operation since 1993
  • MM West Covina began operating boiler system in 1997*
• HRA required based on 2014 emissions

*In 1997, a change of operator took place at the facility.
Operations at MM West Covina

- 115 MMBtu/hr Boiler that combusts landfill gas.
- Steam powers turbine for electricity generation.
- Source of emission include:
  - Dioxins and Furans
  - Hexavalent chromium
  - Arsenic
  - Nickel
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 2014 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
3 Key Health Risk Elements of Rule 1402

Cancer Risk
- Estimates the increased probability for cancer
- 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 > 0.5 requires risk reduction
# Health Effects of Key Toxic Air Pollutants

<table>
<thead>
<tr>
<th>Toxic Air Pollutant</th>
<th>Health Effect</th>
<th>Exposure</th>
<th>Potential Effects</th>
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<tbody>
<tr>
<td>Dioxins and Furans</td>
<td></td>
<td>Long-term</td>
<td>Cancer and non-cancer-chronic effects on the human liver, development, endocrine, blood, reproductive, and respiratory systems</td>
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<tr>
<td>Hexavalent Chromium</td>
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<td>Cancer and non-cancer chronic effects on the human respiratory and blood systems</td>
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<td>Arsenic</td>
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<td>Long-term</td>
<td>Cancer and non-cancer effects on the human cardiovascular, nervous, reproductive, respiratory, and skin systems</td>
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<td>Short-term</td>
<td>Non-cancer-acute effects on the human development, cardiovascular, and nervous systems.</td>
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<tr>
<td>Nickel</td>
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<td>Long-term</td>
<td>Non-cancer effects on the human respiratory, blood, and immune systems</td>
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<td></td>
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<td>Non-cancer acute effects on human immune system</td>
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Rule 1402 Health Risk Thresholds

Cancer Risk Thresholds
- Risk Reduction: Cancer Risk > 25 in one million
- Public Notification: Cancer Risk > 10 in one million

Non-Cancer Risk Thresholds
- Risk Reduction: Non-Cancer HI > 3
- Public Notification: Non-Cancer HI > 1

Cancer Burden Threshold
- Risk Reduction: Cancer Burden > 0.5
Cancer Risk Evaluations

Residential Receptor
- Continuous exposure for 30 years
- All age groups evaluated

Offsite Worker Receptor
- Exposure for 8 hours per day, 5 days per week for 25 years
- Adult age groups evaluated
Rule 1402 Risk Reduction Plans

- Permanent, verifiable, and enforceable risk reduction measures
- Must be implemented within 2½ 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

Risk Reduction Plan – Required if Risk > Risk Reduction Threshold
Approved HRA

- Uses 2014 process data
- Uses default factors to estimate emissions from burning landfill gas
- These factors likely overestimated toxics such as dioxins & furans
- The resulting estimated risk levels are likely higher than the actual risk levels in 2014

Alternate HRA

- Uses 2014 process data
- Uses dioxins and furans emission factors developed from a 2018 source test
- Factors are likely better estimate of dioxins & furans emissions provided the landfill gas produced in 2018 is similar to that in 2014

The Approved HRA remains the official HRA; the Alternate HRA will not be reviewed for approval but validated information may still be used in the risk reduction plan.
Estimated Cancer Risk – 2014 Approved HRA and Alternate HRA

- 2014 Approved HRA cancer risk is well above risk reduction threshold
  - Dioxins, furans, and metals from landfill gas combustion represent 94% of the cancer risk
- 2019 Alternate HRA risk is below risk reduction threshold
  - Metals represent 92% of the cancer risk
Residential Cancer Risk – 2014 Emissions
Estimated Non-Cancer Risk – 2014 Approved HRA and Alternate HRA

- Short-term acute health risk from both 2014 Approved HRA and 2019 Alternate HRA is below the Risk Reduction Threshold.
- Nickel emissions from landfill gas combustion represent 90% of the short-term acute health risk.
Non-Cancer Acute Risk – 2014 Emissions
Estimated Cancer Burden – 2014 Approved HRA and Alternate HRA

- 2014 Approved HRA cancer burden is well above the Risk Reduction Threshold
- 2019 Alternate HRA cancer burden is below the Risk Reduction Threshold
- The 2019 Alternate HRA will not be reviewed for approval but validated information may still be used in the risk reduction plan
Cancer Risk Context

South Coast AQMD Public Notification Threshold

South Coast AQMD Risk Reduction Threshold

Maximum Residential Cancer Risk from MM West Covina if 2014 Emissions Continued*

Regional Average Cancer Risk from All Sources**

Mostly due to diesel particulate matter

* Future emissions will be reduced by Rule 1402
** Based on MATES IV study
Public Notification Process

• AB2588 Notification
  • Letter sent to ~7,730 addresses
  • Public meeting via Zoom
  • Approved Health Risk Assessment:
Next Steps

MM West Covina submits a Risk Reduction Plan*

South Coast AQMD reviews & approves the Risk Reduction Plan

Risk Reduction Plan will be implemented as soon as feasible but no later than 2 ½ years

*Source test results can be used in the RRP to demonstrate lower risk. If used, no further reductions will be required.
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