

# MM West Covina AB 2588 Public Meeting

South Coast Air Quality Management District  
May 19, 2020



# Purpose of Meeting



# 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



# 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



 Boundary of MM West Covina

*\*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

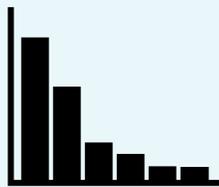


“Snapshot” based on toxic air contaminant emissions from one year of operation

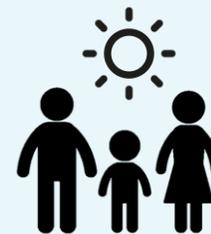
Assumes 2014 emissions levels for 30 years



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

Toxic Air Pollutant	Health Effect	
	Exposure	Potential Effects
Dioxins and Furans	Long-term	Cancer and non-cancer-chronic effects on the human liver, development, endocrine, blood, reproductive, and respiratory systems
Hexavalent Chromium	Long-term	Cancer and non-cancer chronic effects on the human respiratory and blood systems
Arsenic	Long-term	Cancer and non-cancer effects on the human cardiovascular, nervous, reproductive, respiratory, and skin systems
	Short-term	Non-cancer-acute effects on the human development, cardiovascular, and nervous systems.
Nickel	Long-term	Non-cancer effects on the human respiratory, blood, and immune systems
	Short-term	Non-cancer acute effects on human immune system

# 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

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

- 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

# MM West Covina Approved & Alternate HRAs

## Approved HRA

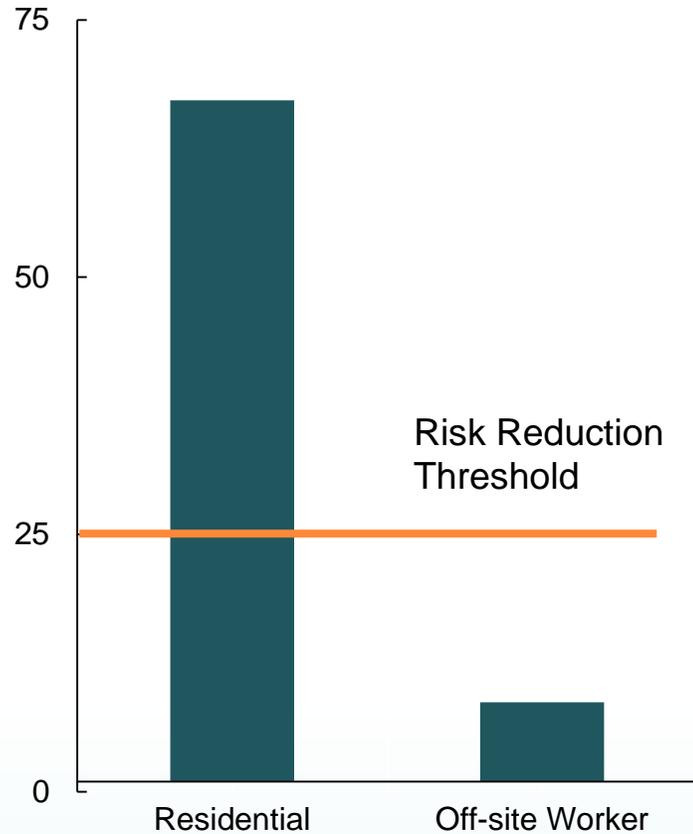
- Uses 2014 process data
- Uses default factors to estimate emissions from burning landfill gas
- These factors likely overestimated toxics such as dioxins & furans
- The resulting estimated risk levels are likely higher than the actual risk levels in 2014

## Alternate HRA

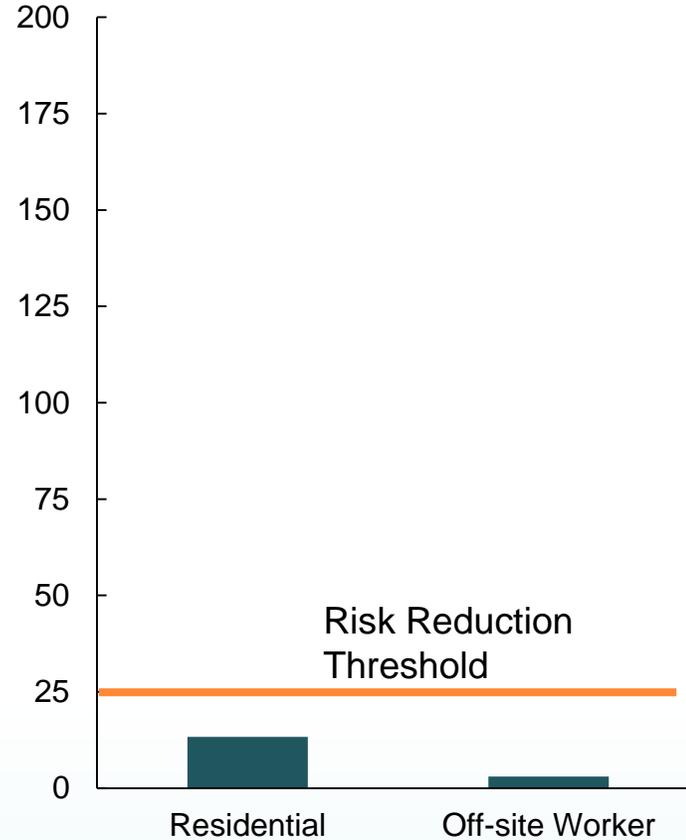
- Uses 2014 process data
- Uses dioxins and furans emission factors developed from a 2018 source test
- Factors are likely better estimate of dioxins & furans emissions **provided** the landfill gas produced in 2018 is similar to that in 2014

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



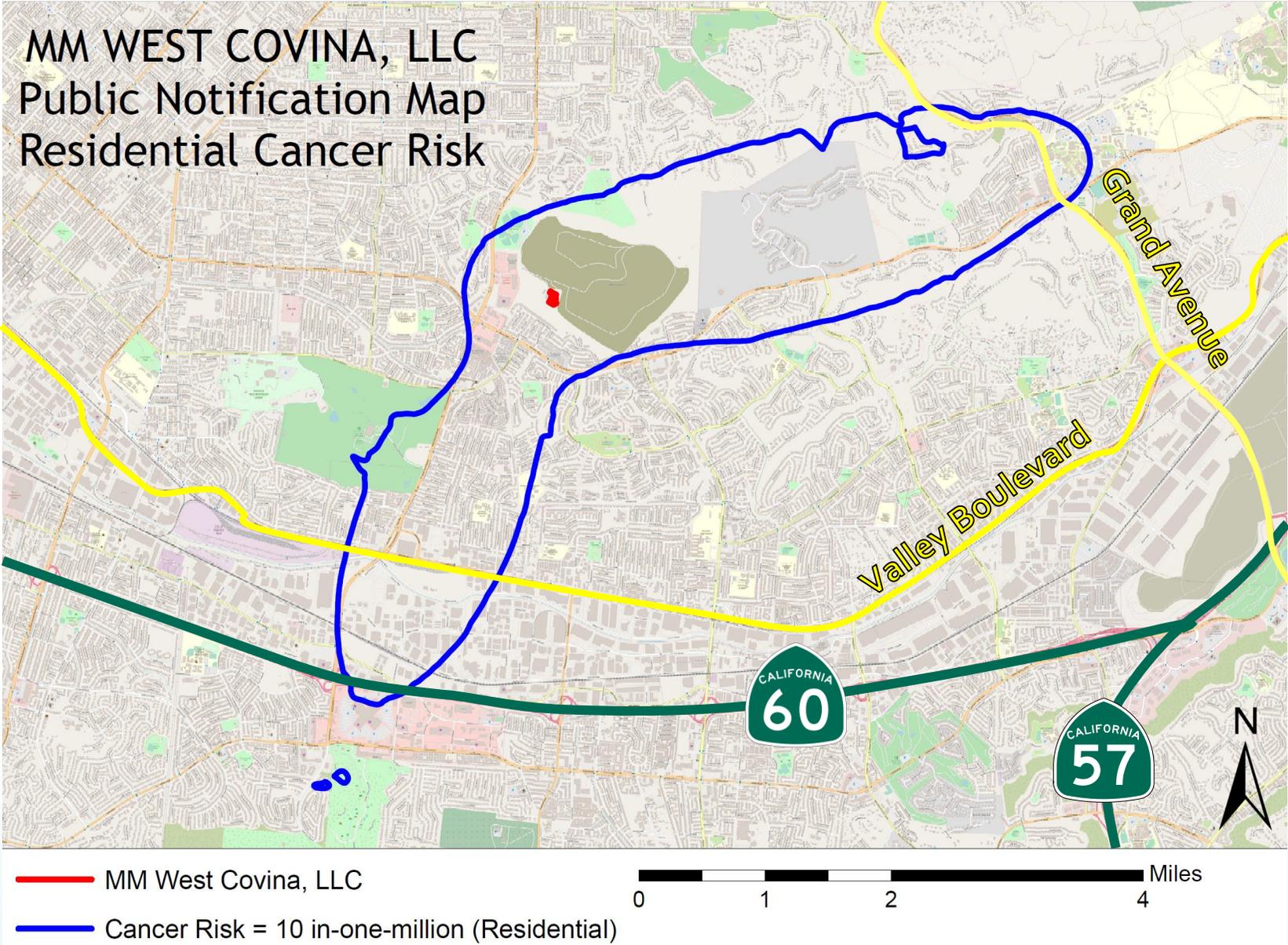
**2014 Approved  
HRA Cancer Risk**



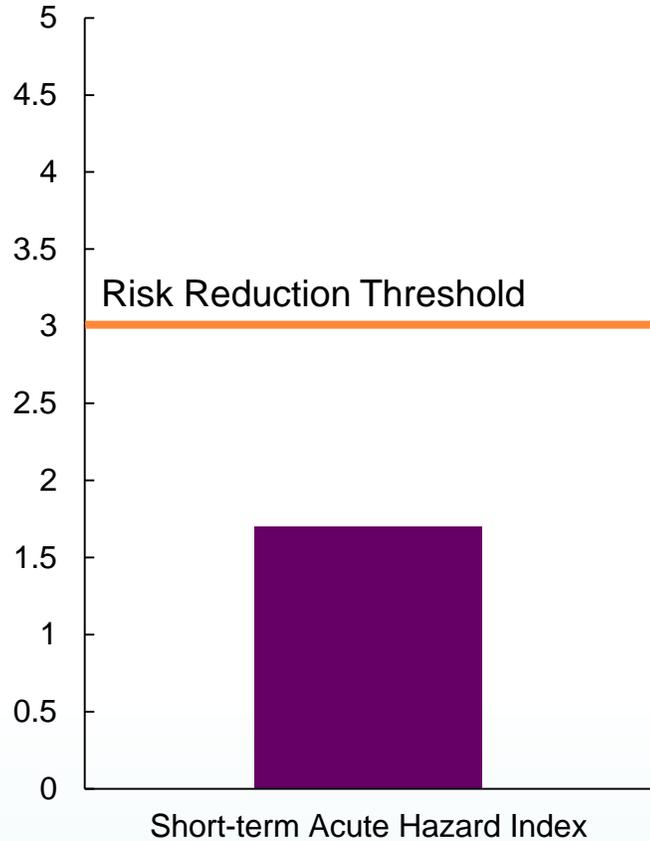
**Alternate HRA  
Cancer Risk**

- 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

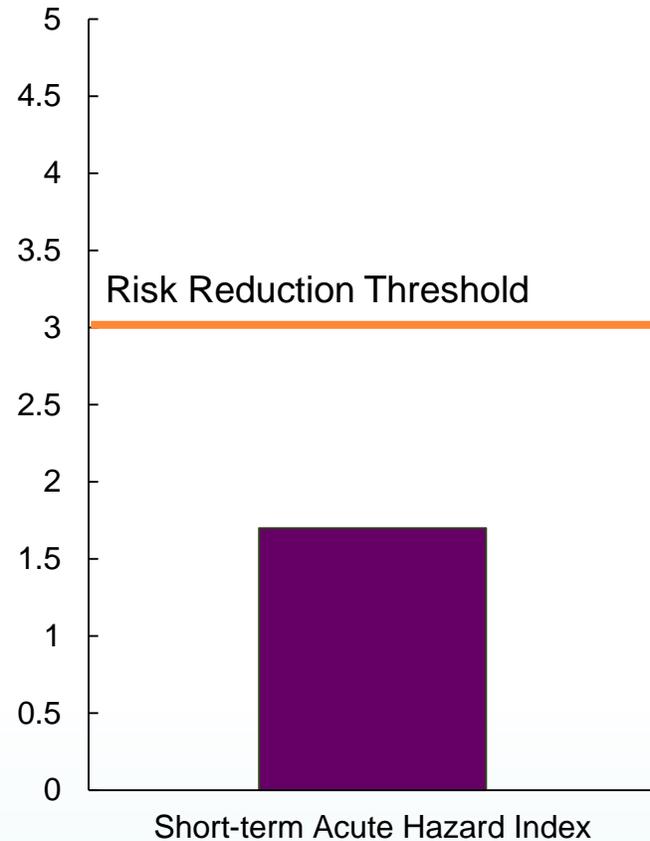
# Residential Cancer Risk – 2014 Emissions



# Estimated Non-Cancer Risk – 2014 Approved HRA and Alternate HRA



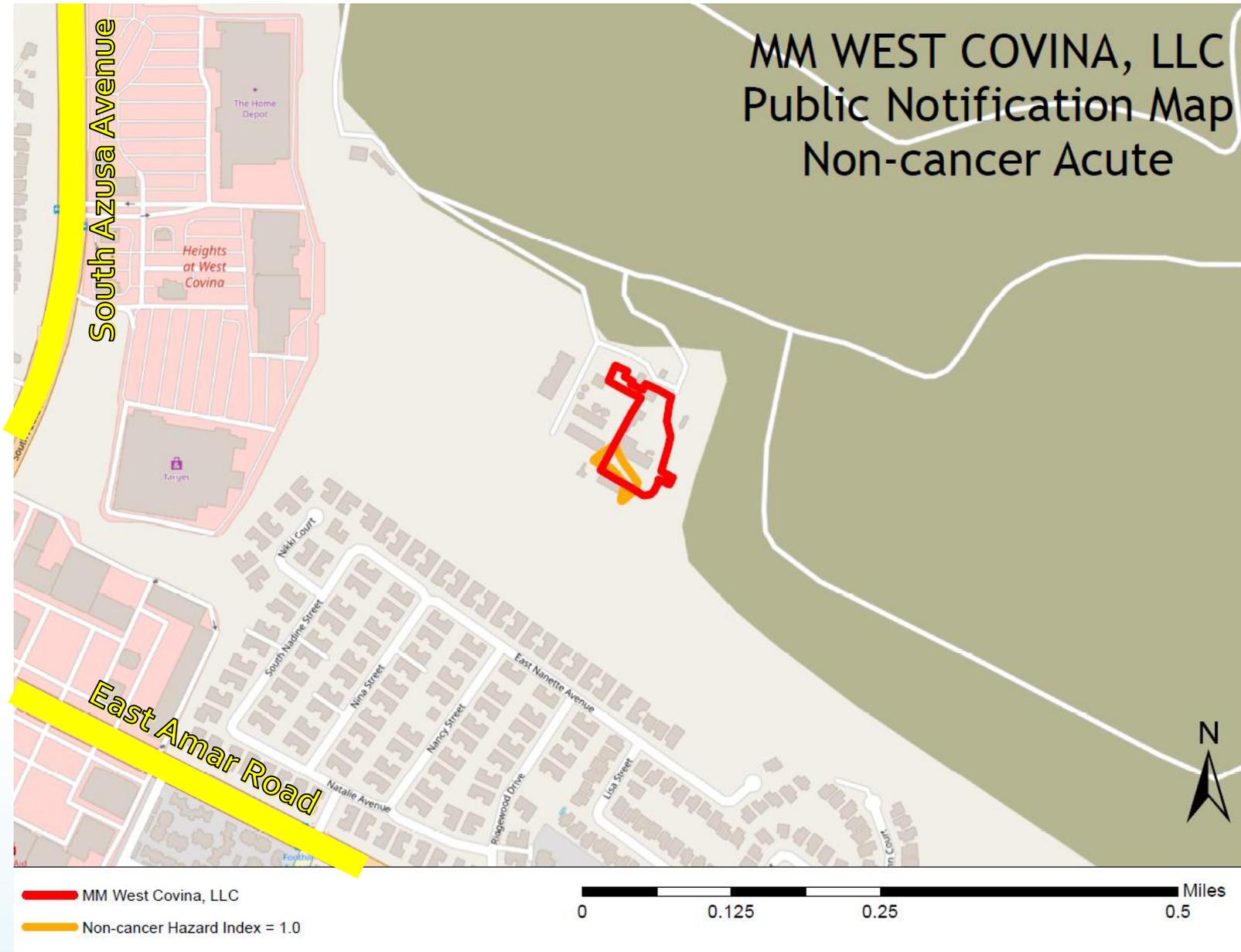
**2014 Approved HRA  
Short-term Chronic Risk**



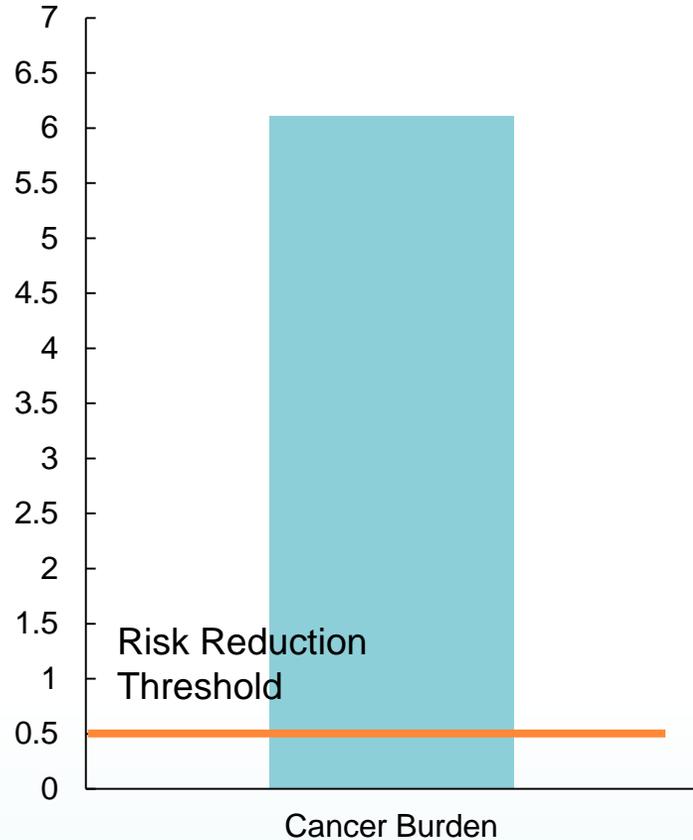
**Alternate HRA Long-  
term Chronic Risk**

- 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

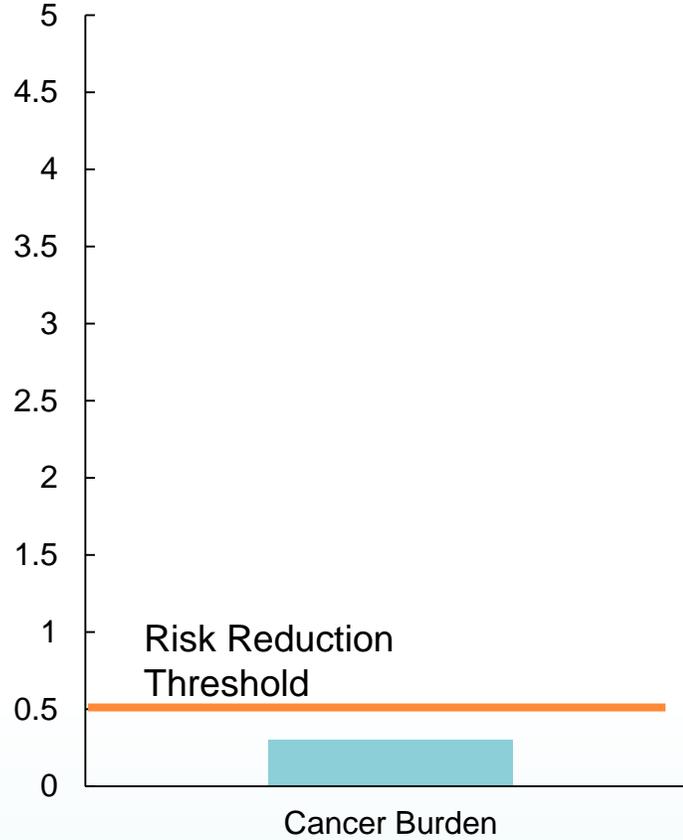
# Non-Cancer Acute Risk – 2014 Emissions



# Estimated Cancer Burden – 2014 Approved HRA and Alternate HRA



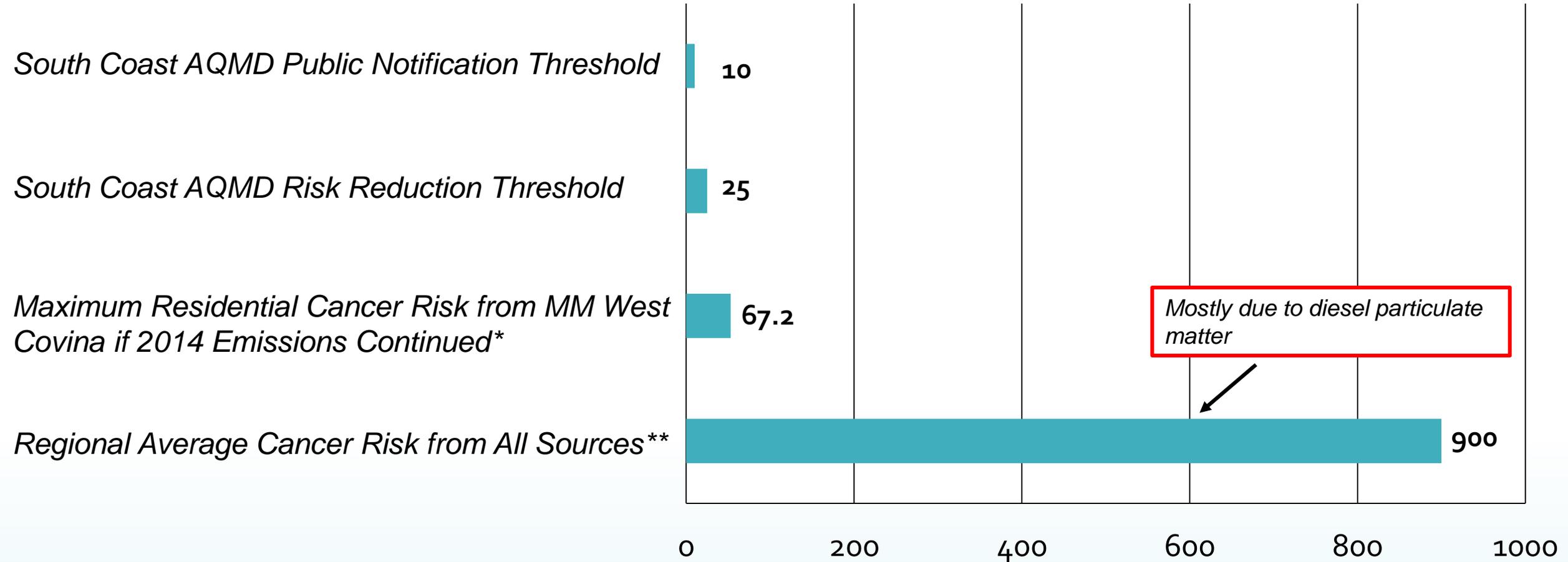
**2014 Approved HRA  
Cancer Burden**



**Alternate HRA  
Cancer Burden**

- 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



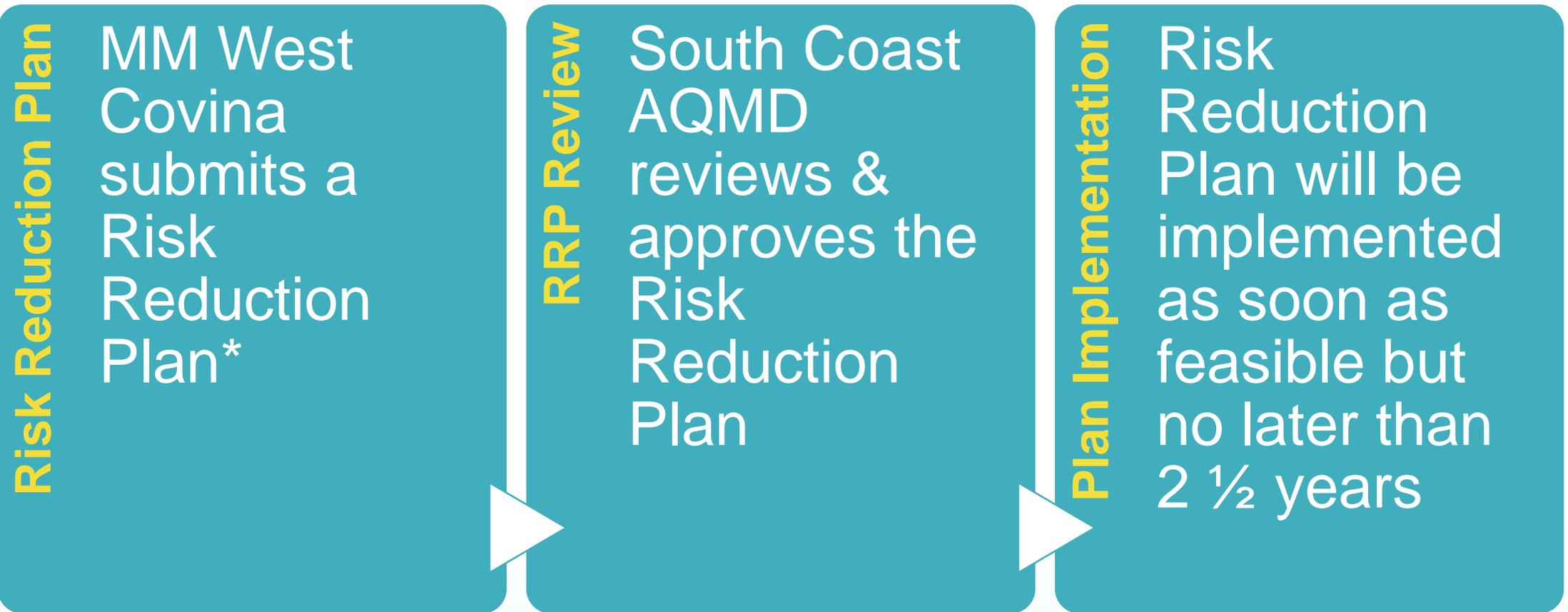
\* Future emissions will be reduced by Rule 1402

\*\* Based on MATES IV study

# Public Notification Process

- AB2588 Notification
  - Letter sent to ~7,730 addresses
  - Public meeting via Zoom
  - Approved Health Risk Assessment:
    - [http://www.aqmd.gov/docs/default-source/planning/risk-assessment/hra-\(main-and-alt\)-mm-west-covina-llc\\_2020-01-29.pdf](http://www.aqmd.gov/docs/default-source/planning/risk-assessment/hra-(main-and-alt)-mm-west-covina-llc_2020-01-29.pdf)

# Next Steps



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

# Contacts

- Tracy Goss  
Planning and Rules Manager  
909-396-3106  
[tgoss@aqmd.gov](mailto:tgoss@aqmd.gov)
- Victoria Moaveni  
Program Supervisor  
AB 2588  
909-396-2455  
[vmoaveni@aqmd.gov](mailto:vmoaveni@aqmd.gov)