

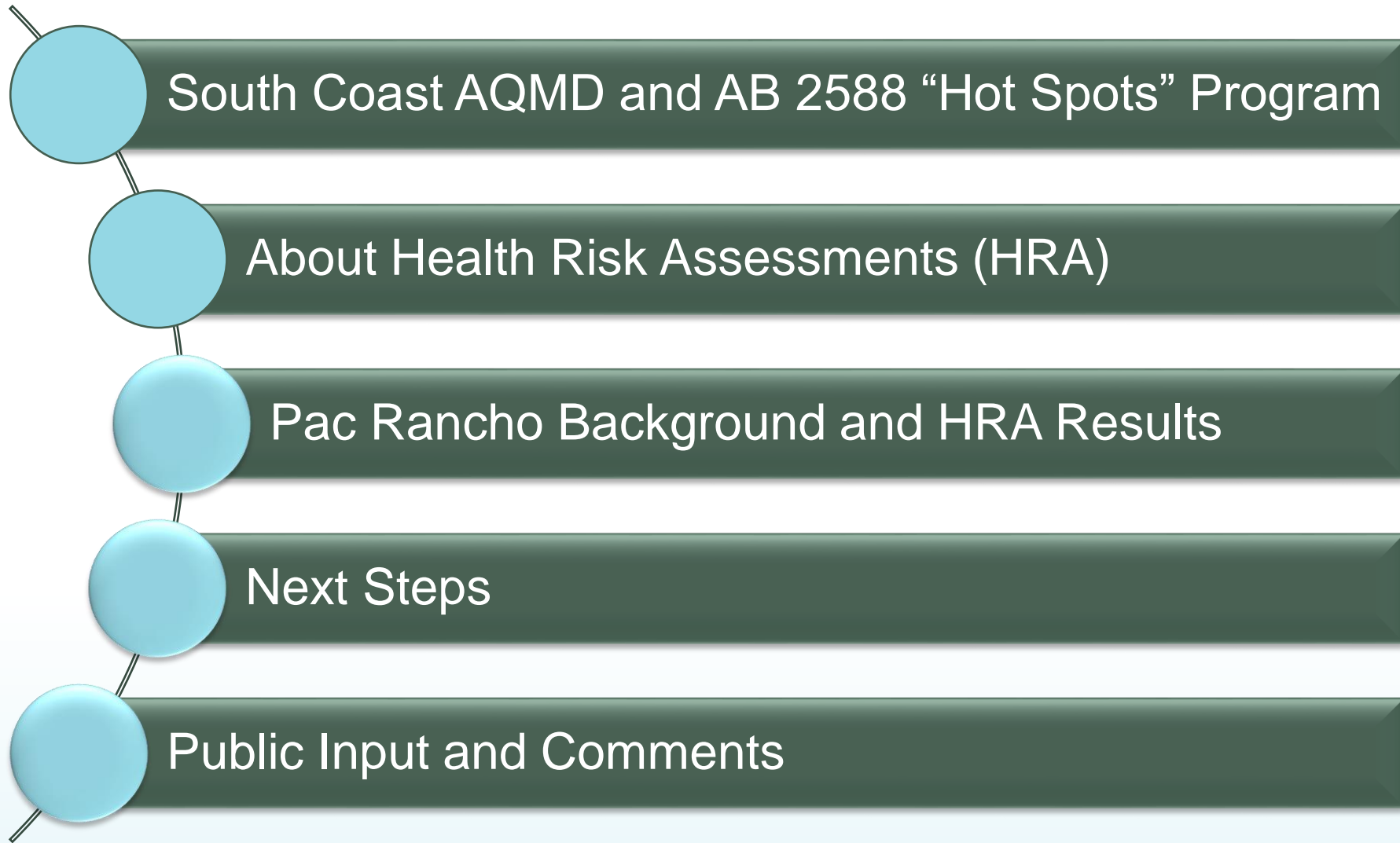
# **Pac Rancho Inc.**

## **AB 2588 Public Meeting**

**South Coast Air Quality Management District**  
**May 2, 2023**



# Purpose of Meeting

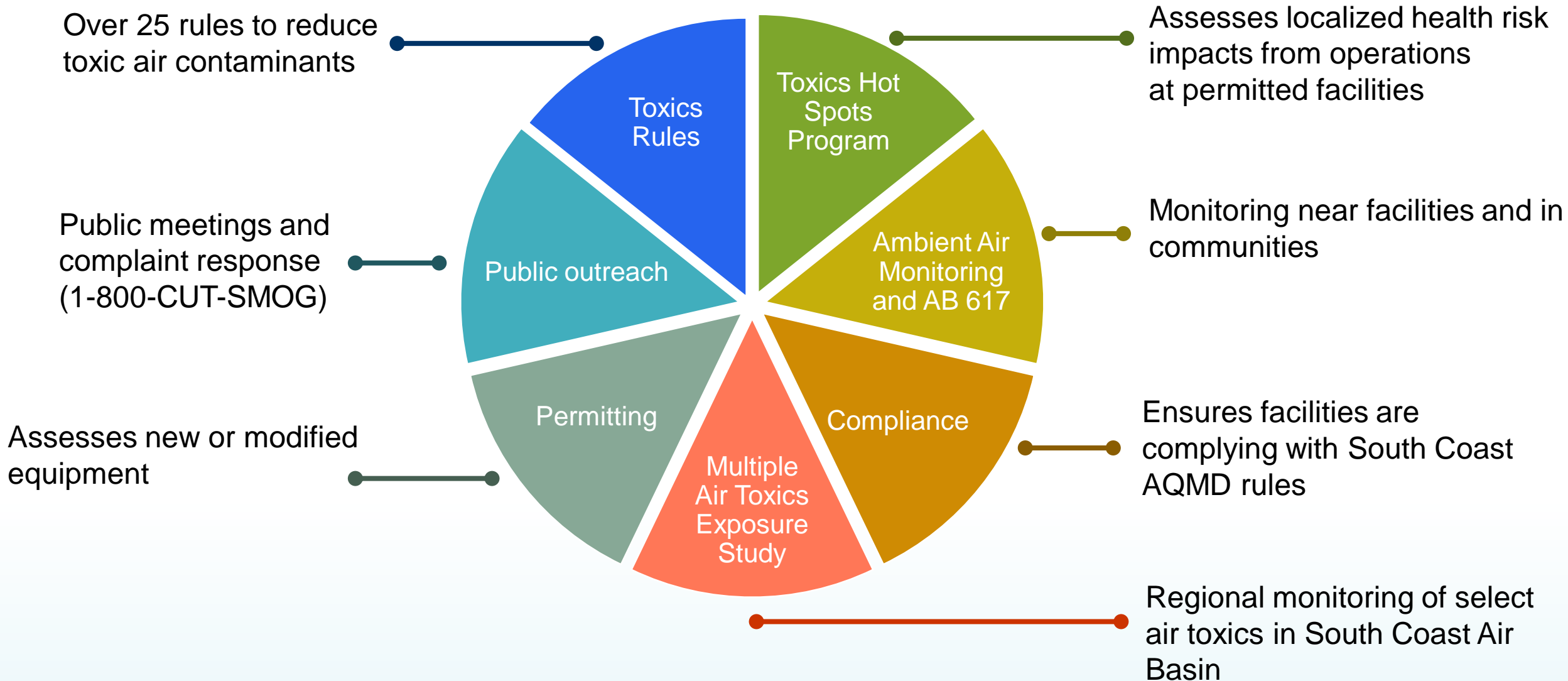


# South Coast Air Quality Management District

- Multi-County Air Pollution Control Agency
- Governed by 13-member Board of local elected and appointed officials
- 16+ million people
- ~28,000 permitted sources



# South Coast AQMD's Air Toxics Program

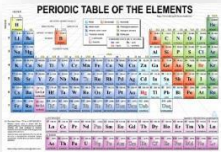


# The Air Toxics “Hot Spots” Information & Assessment Act (AB 2588)

- State law enacted in 1987 (Connelly)
- Public **Right-to-Know** Program
- Purpose
  - Collect emissions data with updates every 4 years
  - Identify facilities posing localized impacts
  - **Evaluate potential health risks through Health Risk Assessments**
  - Notify affected receptors of those potential health risks, if above Rule 1402 notification thresholds
  - Reduce health risks below specific thresholds in Rule 1402
- Rule 1402
  - Implements requirements of AB 2588
  - More stringent requirements for reducing health risk

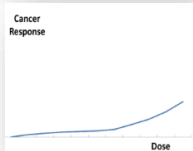
# About Health Risk Assessments (HRA)

- Estimates chance a person will experience a health effect from a toxic air contaminant
- Based on a "snapshot" of emissions from an inventory year
- Conservatively assumes person is outdoors in one location 24 hours/day and 7 days/week
- HRA process estimates potential health risk\* and involves:



## 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



## Sensitivity

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

\*Uses methodology established by the California Office of Environmental Health Hazard Assessment

# Rule 1402 Health Risk Thresholds

## Cancer Risk

(increased probability for cancer)

Significant Risk

Cancer Risk  $\geq 100$  in one million

Risk Reduction

Cancer Risk  $\geq 25$  in one million

Public Notification

Cancer Risk  $\geq 10$  in one million

## Cancer Burden

(increase in occurrence of cancer case in population)

Risk Reduction

Cancer Burden  $\geq 0.5$

## Non-Cancer Risk

(acute and chronic exposure)

Significant Risk

Non-Cancer Hazard Index  $\geq 5$

Risk Reduction

Non-Cancer Hazard Index  $\geq 3$

Public Notification

Non-Cancer Hazard Index  $\geq 1$



# Rule 1402 Risk Reduction Plans

**Risk Reduction Plan (RRP) – required if Risk  $\geq$  Risk Reduction Threshold**

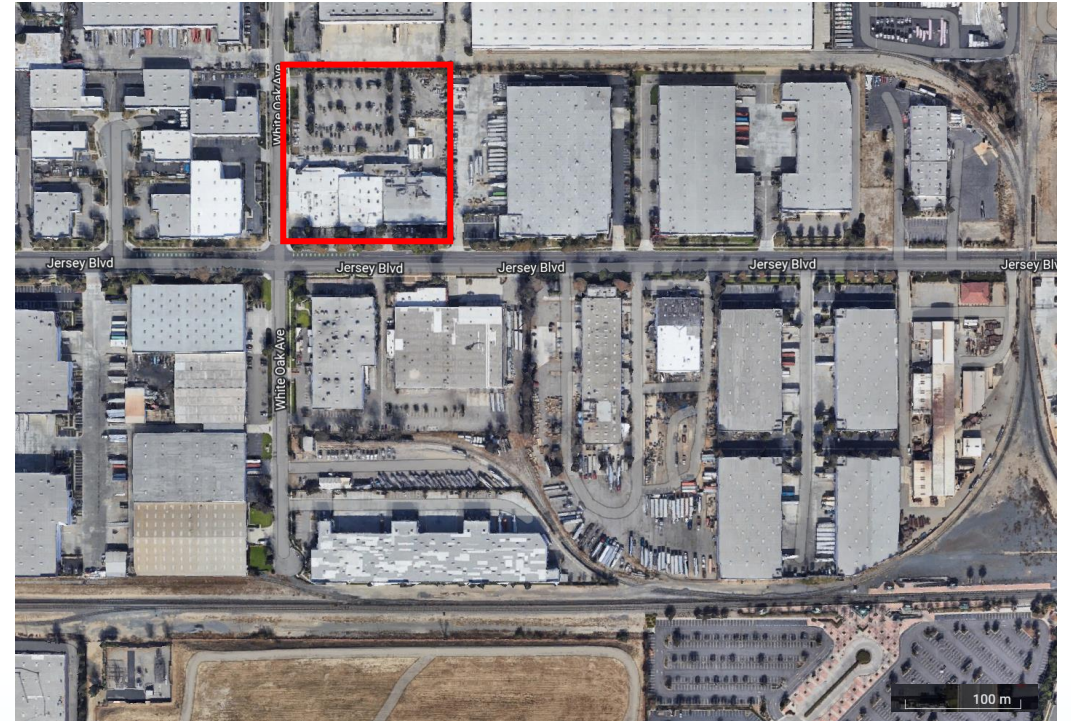
- Permanent, verifiable, and enforceable risk reduction measures
- Must reduce the facility-wide health risk below 25 in-a-million for cancer risk and a Hazard Index of 3 for non-cancer health effects
- Must be implemented within 2½ years from the approval of plan or sooner



**Pac Rancho Inc.**

# Pac Rancho Inc.

- Pac Rancho is an aluminum and steel foundry that manufactures parts for the aerospace and aircraft industries
- Located at 11000 Jersey Boulevard in Rancho Cucamonga
- HRA required based on 2018 emissions
  - HRA was modified and approved by South Coast AQMD



Boundary of Pac Rancho

# Operations at Pac Rancho

- Primary operations: melting furnaces which includes pouring and casting operations
- Other operations include metal grinding and natural gas fired burn-off ovens
- Main pollutants are nickel, hexavalent chromium, and beryllium



# Health Effects of Key Toxic Air Pollutants

Toxic Air Pollutant	Health Effect	
	Exposure	Potential Effects
Nickel	Long-Term and Short-Term	Cancer, non-cancer acute, non-cancer chronic, and non-cancer 8-hour effects chronic effects on the immune, respiratory, blood, and reproductive systems
Hexavalent Chromium	Long-Term	Cancer and non-cancer chronic effects on the human respiratory and blood systems
Beryllium	Long-Term	Cancer and non-cancer chronic effects on the immune, respiratory, and gastrointestinal/liver systems

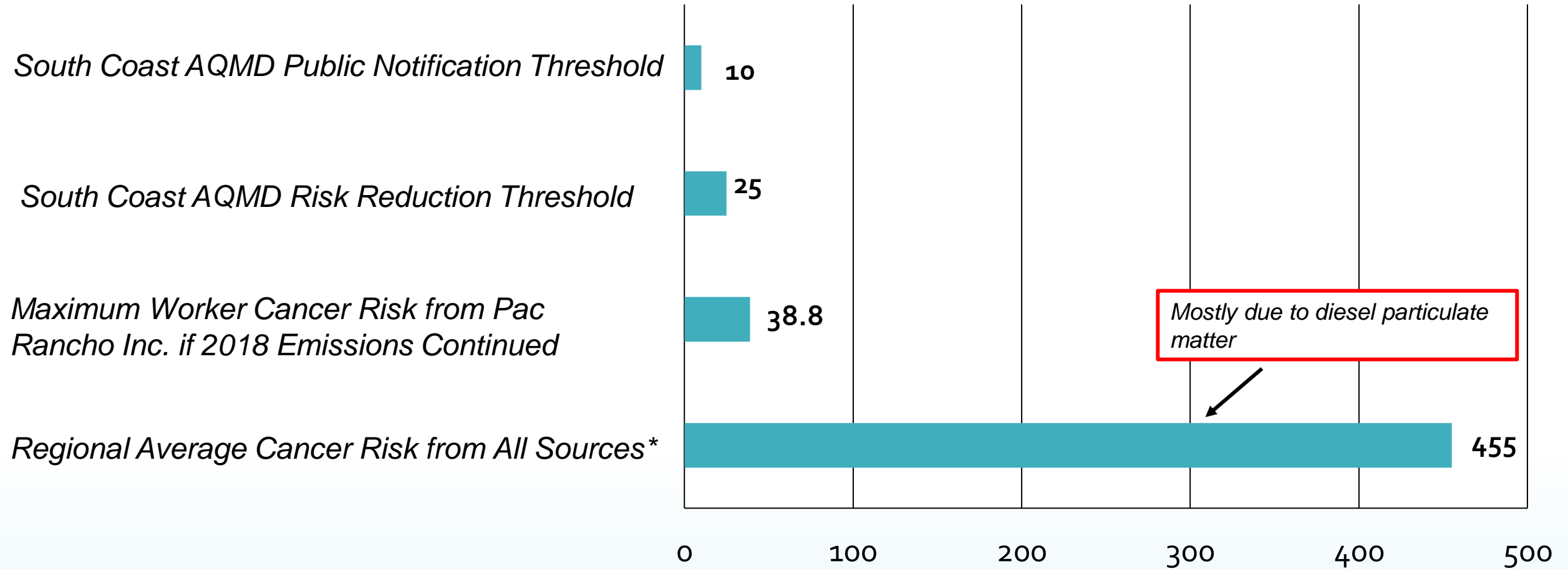
# Estimated Risks (2018)

Risk Type	Modified HRA
Worker Cancer (chances per million)	38.8
Acute (HI)	21.26
Worker Chronic (HI)	4.48
8-Hour Chronic (HI)	2.87

*\*Used default factors for primary sources of risk which resulted in conservative risk estimates*

*\*\* HRA was modified to account for the operational schedule provided by the facility*

# Cancer Risk Context

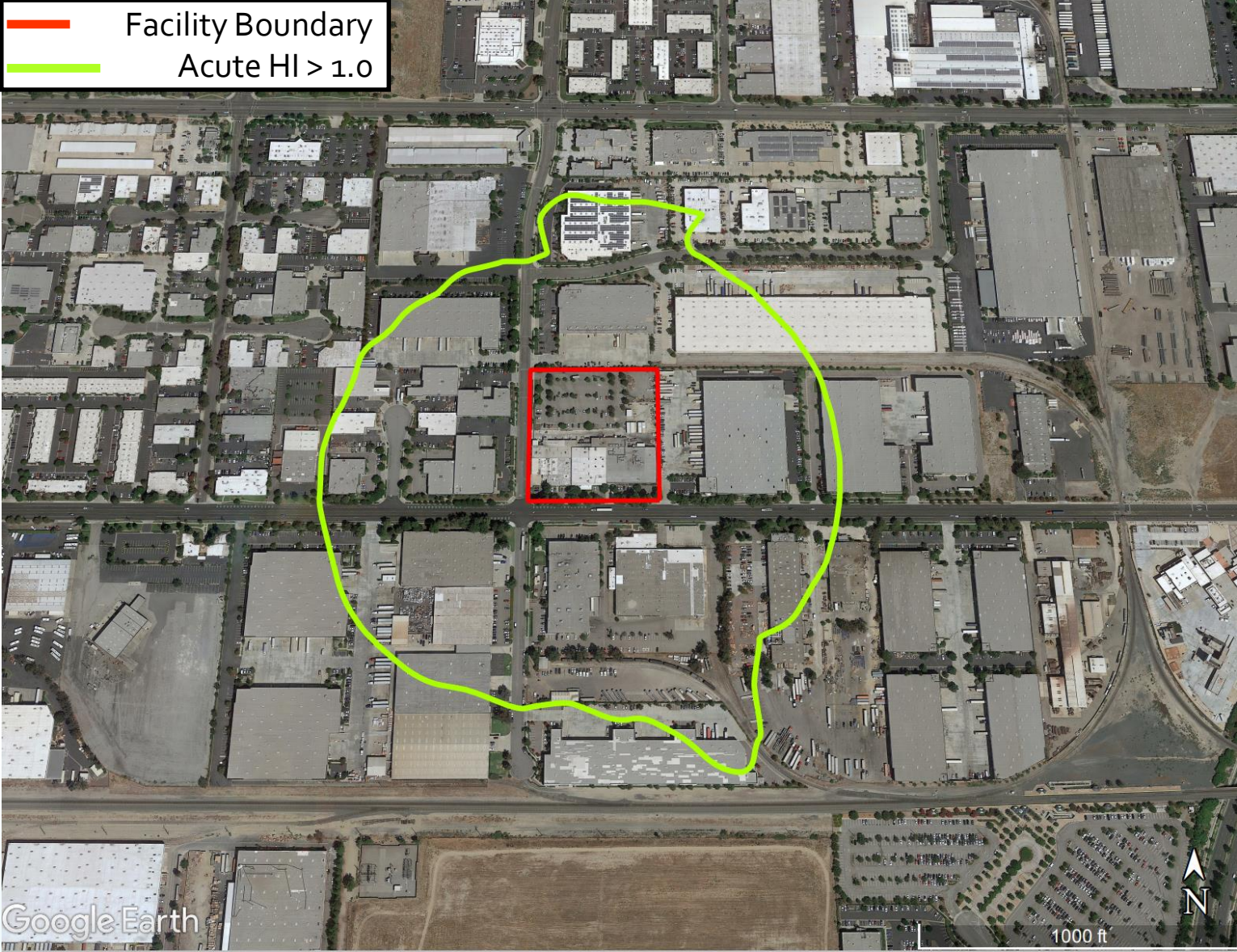


\* Based on MATES V study



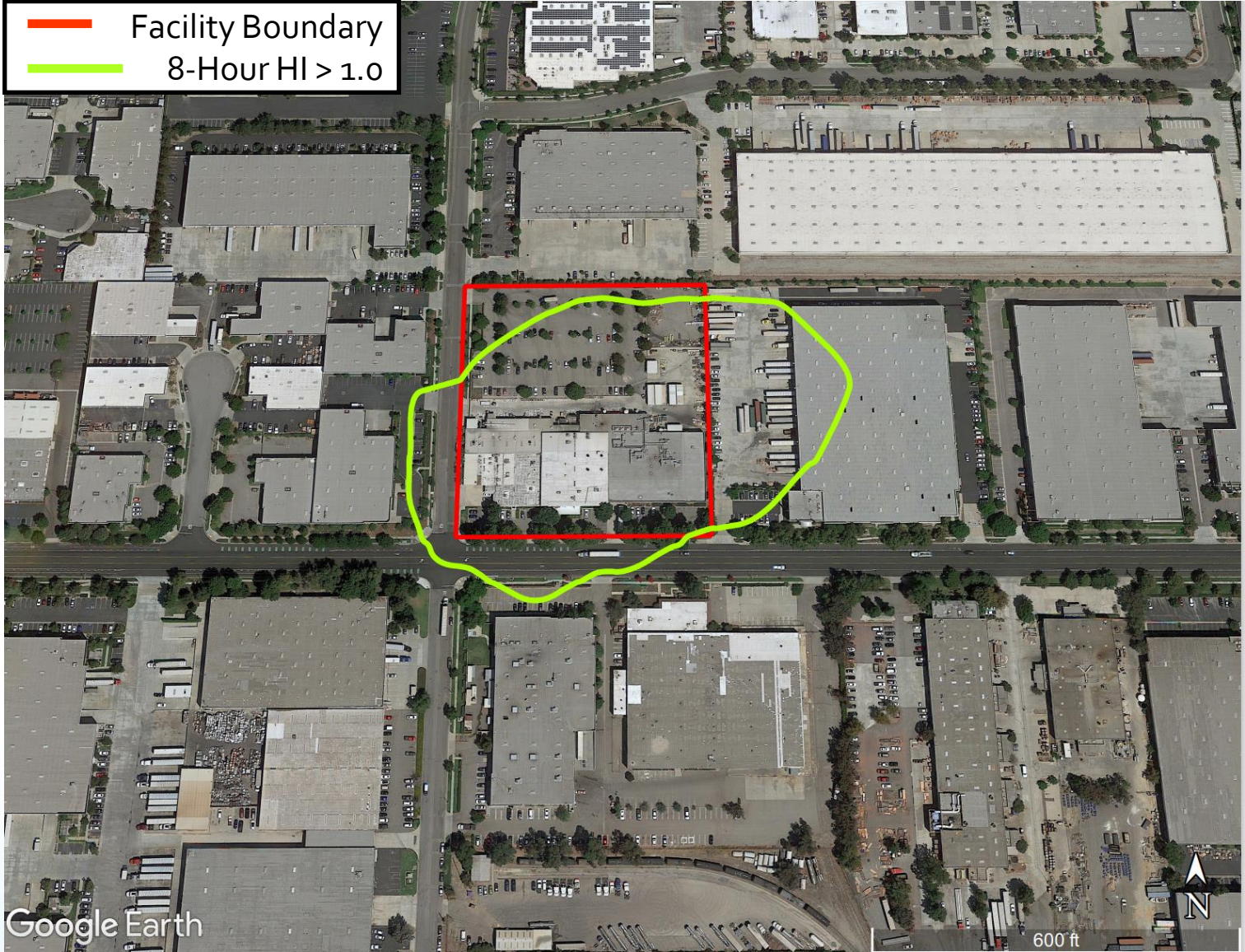
# Acute Risk (2018)

— Facility Boundary  
— Acute HI > 1.0



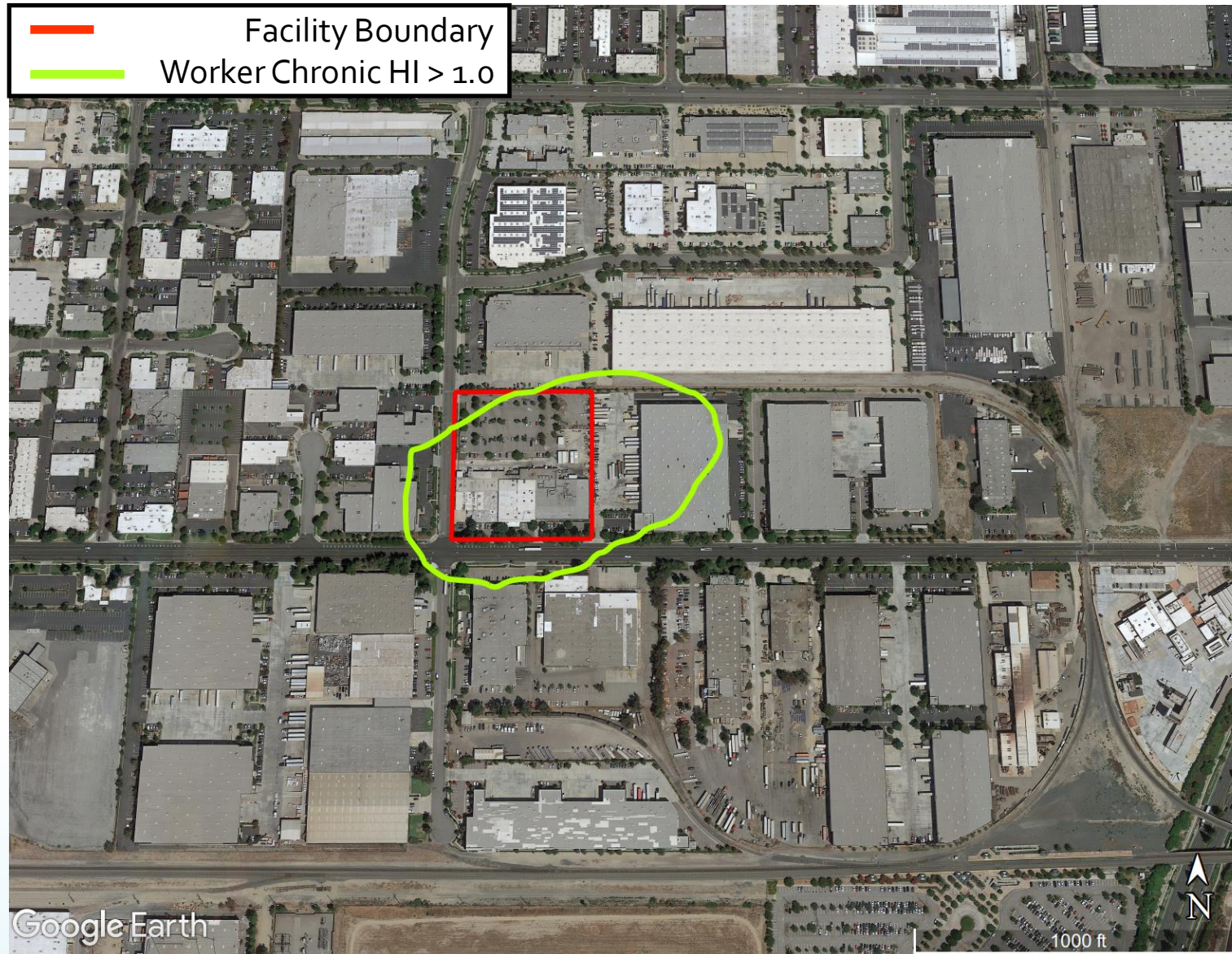


# 8-Hour Chronic Risk (2018)





# Worker Chronic Risk (2018)



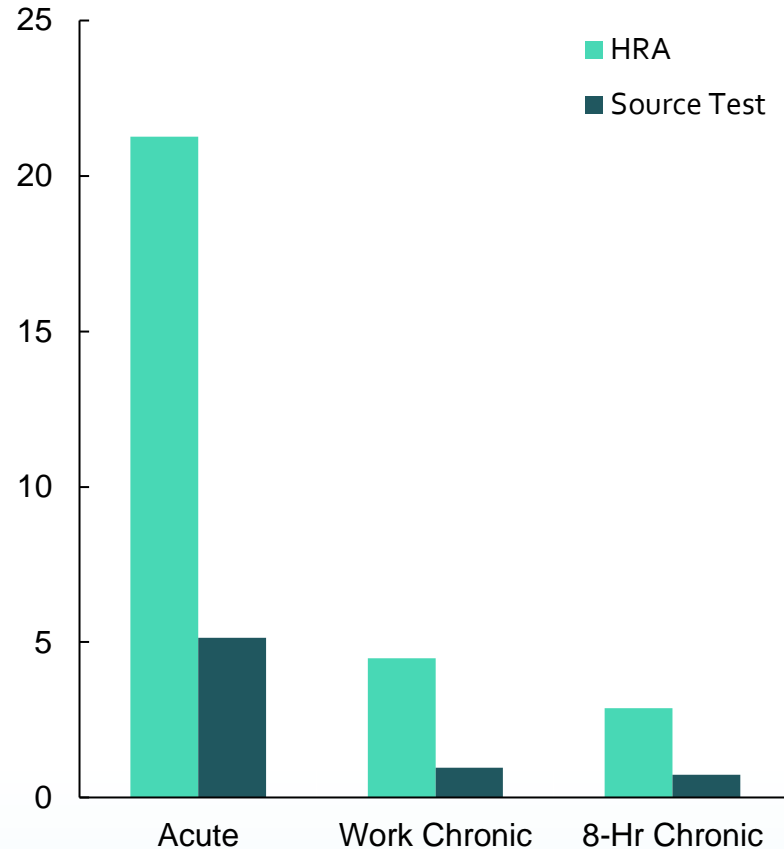


# Worker Cancer Risk (2018)

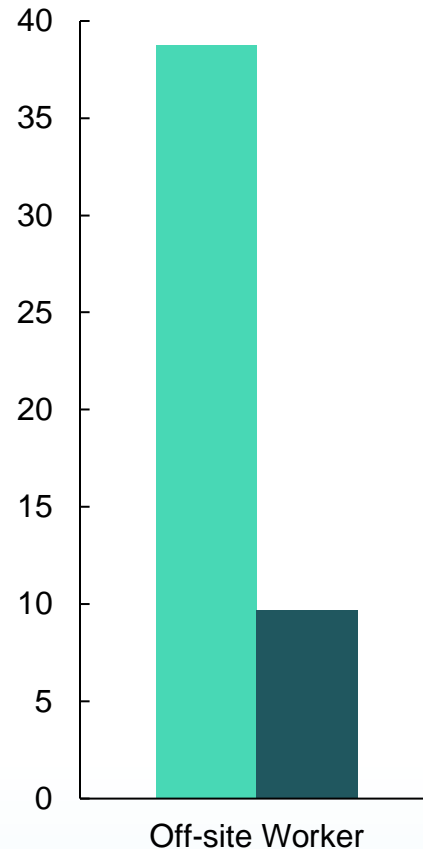
— Facility Boundary  
— Worker Cancer - chances per million > 10



# Estimated Risks – 2018 HRA & Using 2022 Source Test



**Non-Cancer Risk from Recent Source Test**



**Cancer Risk from Recent Source Test**

- 2018 HRA is above risk reduction thresholds
  - Melting furnaces used conservative default emission factors from EPA and CARB
- Steel melting furnace was source tested in January 2022
  - Use of site-specific emission factors show lower risk than previously estimated
  - Results not accounted for in HRA, but will be used in Risk Reduction Plan
- Additional reduction measures will be necessary to bring facility below Risk Reduction Thresholds

# Rule 1402 Public Notification

- Requirements when an approved HRA shows risk beyond the Public Notification Level:
  - Approved HRA is made available on website;
  - Distribute the Public Notification Materials; and
  - Participate in a Public Meeting approved by South Coast AQMD (today)
- Pac Rancho sent public notification to ~45 addresses

# Next Steps



# More Information on the AB 2588 Program

- South Coast AQMD AB 2588 Website
  - <http://www.aqmd.gov/home/rules-compliance/compliance/toxic-hot-spots-ab-2588>
- Link to the 2018 Approved HRA
  - <http://www.aqmd.gov/docs/default-source/planning/risk-assessment/Pac-Rancho/Pac-Rancho-HRA-Report.pdf>
- Email: [ab2588@aqmd.gov](mailto:ab2588@aqmd.gov)
- Hotline: (909)-396-3616



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