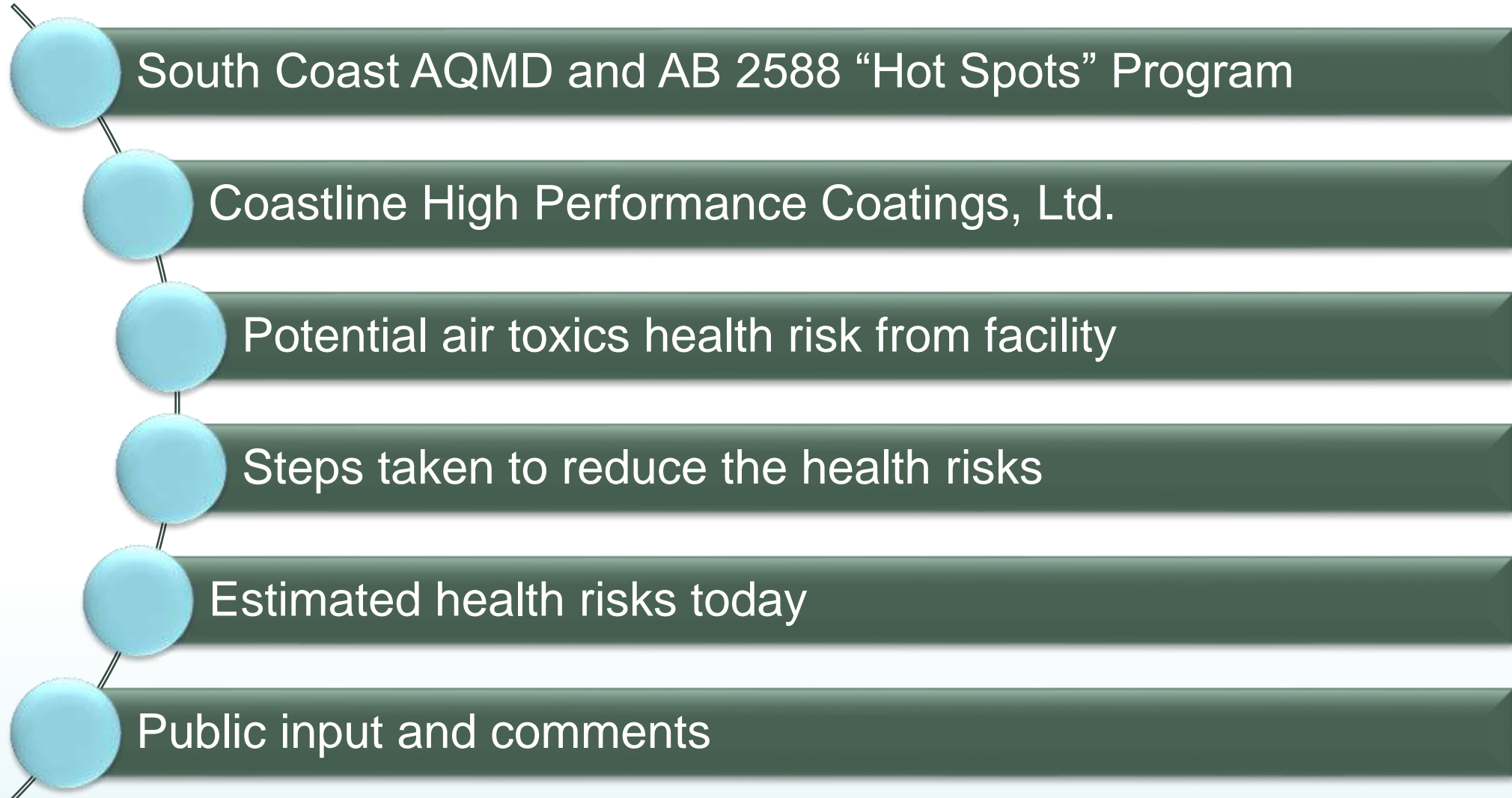


**Coastline High Performance  
Coatings, Ltd.  
AB 2588 Public Meeting**

**South Coast Air Quality Management District**  
August 4, 2022



# 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
- 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, if above South Coast AQMD notification thresholds
  - Reduce health risks below certain thresholds, if above South Coast AQMD risk reduction thresholds
- Rule 1402
  - Implements requirements of AB 2588
  - More stringent requirements for reducing health risk

## AB 2588 HRA Includes:

- Air pollutants designated as toxic by the state
- All onsite emissions sources
- Does not include mobile sources (e.g., emissions from trucks) or off-site emissions

# About Health Risk Assessments (HRA)

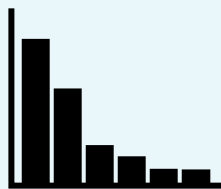
Estimates the chance that a person may experience a health effect from toxic air contaminant emissions



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

Assumes 2019 emissions levels for 30 years

Snapshot can change if toxic air contaminant emissions change through time

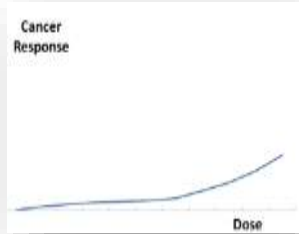


Conservative assumptions people are outdoors 24 hours, 7 days a week in one location

# HRA 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.



**Health Risk Assessment**



**Potential Health Risk Estimate\***

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

# 3 Key Health Risk Elements of Rule 1402

## Cancer Risk

- Estimates the increased probability for cancer
- Expressed in additional “chances in-one-million”

## 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

## 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)



# Rule 1402 Health Risk Thresholds

## Cancer Risk Thresholds

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 Threshold

Risk Reduction	Cancer Burden $\geq 0.5$
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## Non-Cancer Risk Thresholds

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

## 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

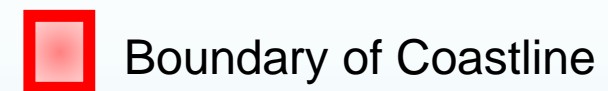
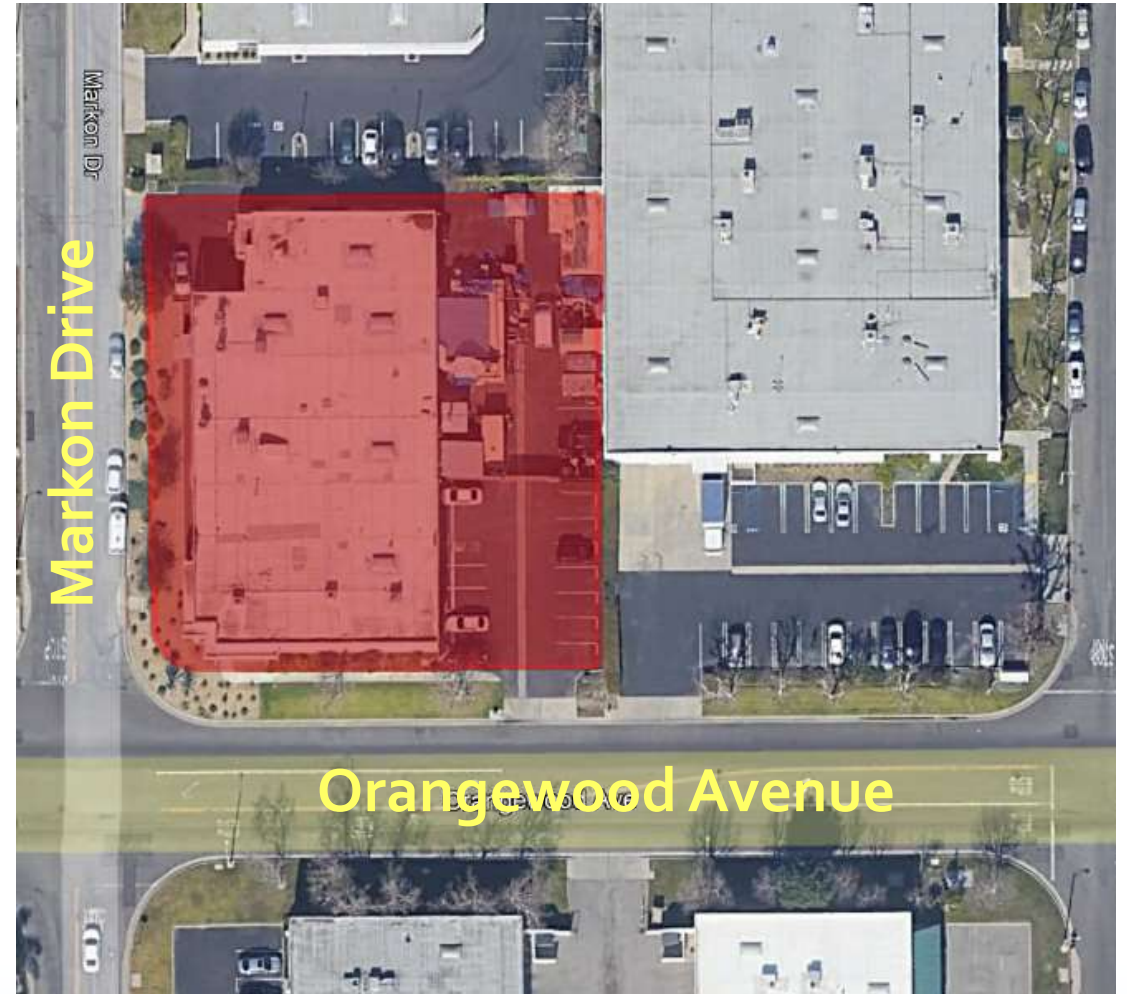
## Risk Reduction Plan – Required if Risk > Risk Reduction Threshold

- 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-one-million for cancer risk and a Hazard Index of 3 for non-cancer health effects

# **Coastline High Performance Coatings, Ltd. (Coastline)**

# Coastline

- Located at 7181 Orangethorne Avenue in Garden Grove, CA
- Specializes in application of thermal control coatings, adhesive bonding primers and solid film lubricants for aerospace and related industries



# Chromate Spray Operations at Coastline



- HRA required based on 2019 emissions
- Designated as a **Potentially High Risk Level** facility
- Primary source of risk is from hexavalent chromium contained in coatings used in three paint spray booths
- Main cause of risk was non-compliant use of chromate coating operations in two of the three paint spray booths

\*\*Above picture is for illustration purposes only and is not an actual photo of processes at Coastline High Performance Coatings Ltd.

# Health Effects of Key Toxic Air Pollutant At Coastline

Toxic Air Pollutant	Health Effect
Hexavalent Chromium	Long-term inhalation (years to decades) can increase the chance or probability of developing cancer (e.g., lung cancer)

## Health Effects of Hexavalent Chromium

A fact sheet by  
CalEPA's Office of Environmental Health Hazard Assessment  
November 9, 2016



### What is hexavalent chromium?

Hexavalent chromium, also known as chromium 6 (Cr6), is the toxic form of the metal chromium. While some less toxic forms of chromium occur naturally in the environment (soil, rocks, dust, plants, and animals), Cr6 is mainly produced by industrial processes.

Cr6 is used in:

- Electroplating
- Stainless steel production and welding
- Pigments and dyes
- Surface coatings
- Leather tanning

### How are people exposed to Cr6?

Humans are exposed to Cr6 by:

- Inhalation of aerosols or particles
- Ingestion (eating and drinking)
- Skin contact

Cr6 may occur as aerosols or particulate matter in air. These can be inhaled directly or ingested after they land on soil or water. Contact with soil containing Cr6 may transfer to the hands and then to the mouth. Young children put their hands in their mouths more frequently than adults. For this reason, young children are more likely to consume contaminated soil. Children are also more active outdoors and they may have more contact with contaminated soil.

One form of Cr6, chromic acid, is created as a mist during electroplating. Workers and bystanders may inhale the mist. Chromic acid can also be absorbed through the skin. In addition, chromic acid deposited on the skin can be ingested through hand-to-mouth activities, such as eating.

Eating or drinking Cr6 may also be harmful to humans. Studies show that Cr6 in drinking water may cause an increased risk of stomach cancer and reproductive harm. Direct contact with Cr6 can cause allergic skin rashes in some people.

### At what level could health effects occur?

OEHH has calculated a cancer risk associated with exposure to Cr6 if that exposure continues for an entire lifetime. Continuous exposure to 0.045 nanograms per cubic meter (ng/m<sup>3</sup>) of Cr6 from all sources combined for 30 years could increase cancer risk to 25 in a million. Exposure over shorter periods of time would be associated with much lower cancer risks.

OEHH has also developed a chronic Reference Exposure Level (REL) for Cr6. A chronic REL is a health-based benchmark that is set at a level at or below which adverse non-cancer health effects are unlikely to occur in the general human population when exposed continuously over a lifetime. Levels above the REL do not indicate the health effects will occur, but rather, that the chances of these health effects occurring increase at levels above the REL. Non-cancer health effects associated with Cr6 include nasal, throat, or respiratory irritation or allergies. The chronic REL for Cr6 is 200 ng/m<sup>3</sup> in air (0.2 µg/m<sup>3</sup>).

# 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  $\geq$  100 in-one-million)
- Determination based on emissions data, source test, or ambient monitoring data

### Addresses High Health Risks Early

- Submittal and implementation of **Early Action Reduction Plan**

### Expedited Implementation

- Submittal of:  
Air Toxics Inventory Report (ATIR),  
HRA,  
**Risk Reduction Plan**

### Better Overall Public Health Sooner

- Completes overall Risk Reduction sooner than traditional AB 2588 Program

# Timeline of Key Events

## 2020

- Coastline notified to prepare and submit ATIR
- Notice of Violation issued to Coastline for non-compliant hexavalent chromium spraying operations, failure to obtain permits, and failure to submit ATIR

## 2021

- Coastline back in compliance with rules and permit conditions (January)
- Designated as a Potentially High Risk Level facility
- Coastline submitted the Early Action Reduction Plan, HRA, and Risk Reduction Plan (RRP) per Rule 1402

## 2022

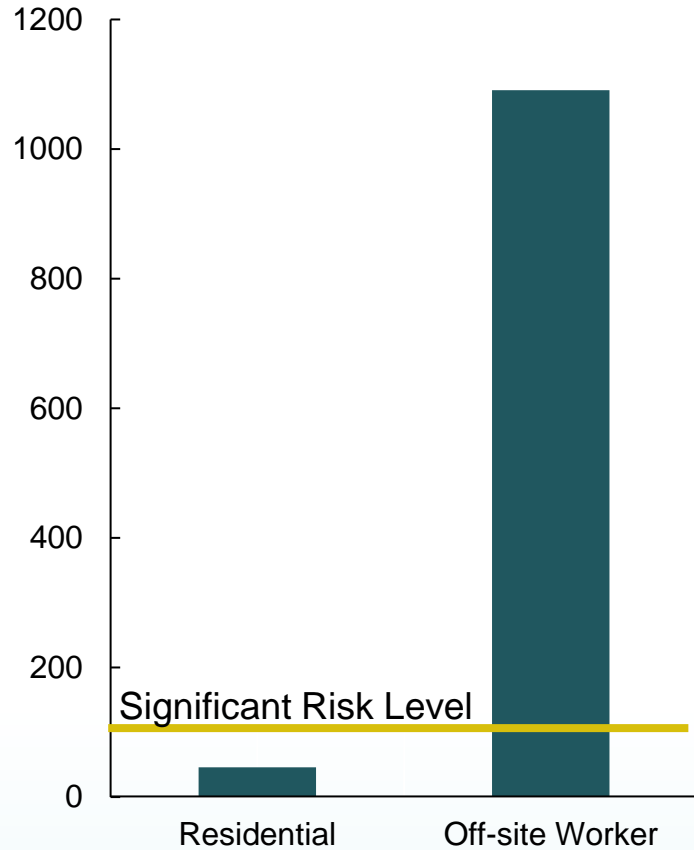
- HRA and RRP approved; full implementation of RRP by 2024



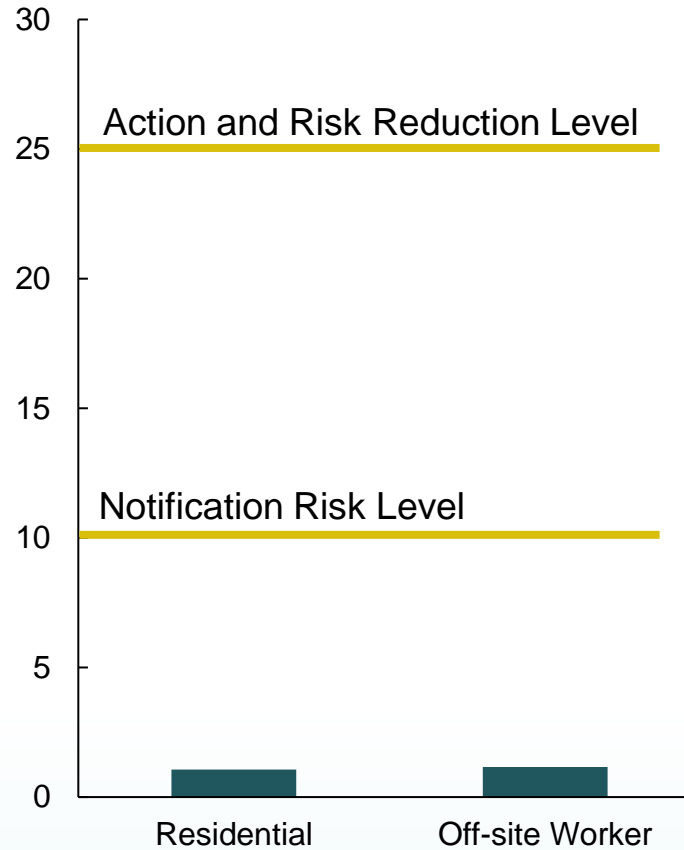
# Implementation of Key Risk Reduction Measures

- Discontinued chromate paint spray operations in two paint spray booths equipped with non-compliant filters (completed 2020)
- Limit use of chromium-containing coatings only in the existing paint spray booth equipped with HEPA filters capturing 99.97% of chromium emissions (completed 2020)
- Replace ducting for the air pollution controls on the two paint spray booths without HEPA filters (pending)
- Complete installation of HEPA filter system on the two paint spray booths prior to conducting chromate spraying operations (pending)
  - Hexavalent chromium emissions significantly reduced

# Estimated Cancer Risk (2019 and now)



**2019 Health Risk Assessment**



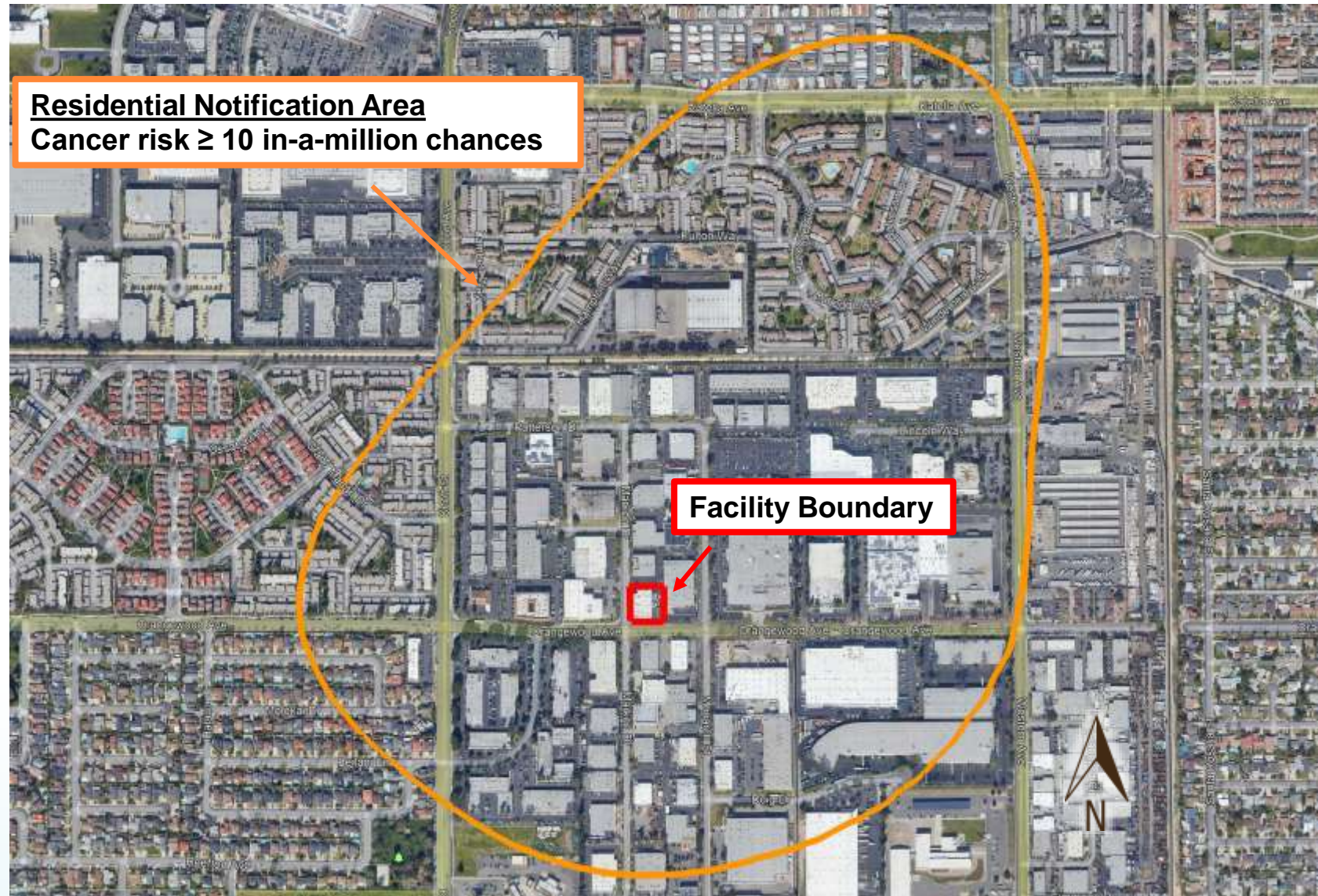
**Estimated Cancer Risk Today**

- 2019 estimated cancer risk is above Significant and Risk Reduction Levels
  - 2019 hexavalent chromium emissions from spray booths is 99% of the cancer risk
- Implementation of Early Action Reduction Plan in 2020 significantly reduced emissions and cancer risk below both Action Risk Level and Notification Risk Level

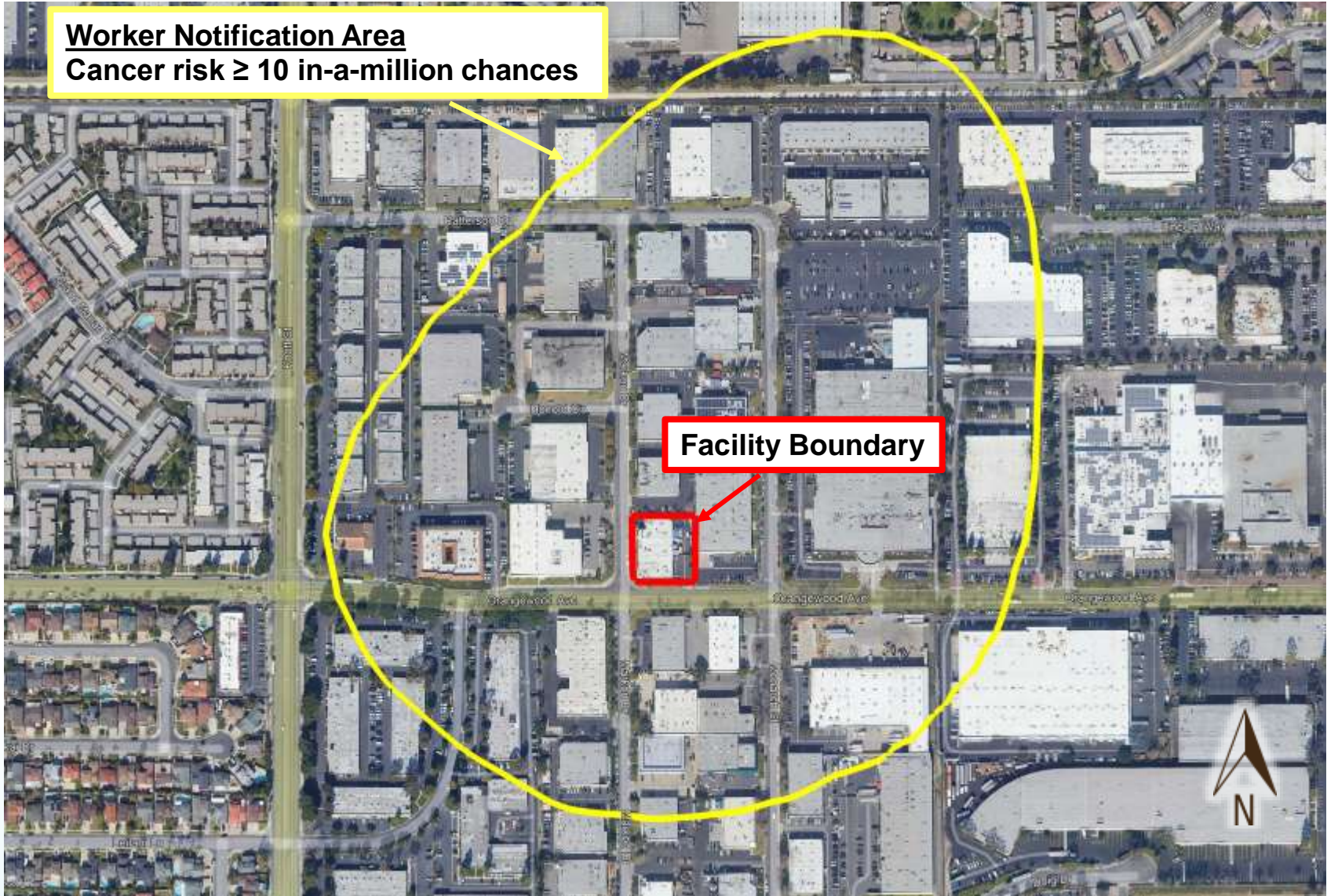
# Rule 1402 Public Notification

- 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)
- Coastline sent public notification to ~ 1,000 addresses

# Residential Cancer Risk (2019 Emissions)



# Worker Cancer Risk (2019 Emissions)



# Next Steps

- Conduct facility inspections to verify continued compliance with all applicable rules and requirements
- Monitor progress of Risk Reduction Plan
- Finalize implementation of Risk Reduction Plan

# 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 2019 Conditionally Approved HRA
  - [www.http://www.aqmd.gov/docs/default-source/planning/risk-assessment/coastline-hpc/coastline-hpc-hra-report-071421.pdf](http://www.aqmd.gov/docs/default-source/planning/risk-assessment/coastline-hpc/coastline-hpc-hra-report-071421.pdf)
- Link to the 2019 Conditionally Approved RRP
  - <https://www.aqmd.gov/docs/default-source/planning/risk-assessment/coastline-hpc/2021-09-30-coastline-r1402-revised-risk-reduction-plan.pdf>
- Email: [ab2588@aqmd.gov](mailto:ab2588@aqmd.gov)
- Hotline: 909-396-3616

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