



air pollution control district  
SANTA BARBARA COUNTY

# 2023 ANNUAL REPORT

## AB 2588 AIR TOXICS “HOT SPOTS” PROGRAM

Board of Directors  
Santa Barbara County  
Air Pollution Control District

Our Mission: To protect the people and the environment of Santa Barbara County from the effects of air pollution.

Aeron Arlin Genet  
Director / APCO

Charlotte Mountain / Air Quality Engineer – Engineering Division

May 16, 2024



# BACKGROUND

**WHAT ARE WE DOING ABOUT HEALTH RISK FROM AIR TOXICS?**

Evaluate + Assess + Notify + Reduce

**WHAT FACILITIES ARE EVALUATED?**

Includes, but is not limited to:

Industry    Businesses    Schools    Government Agencies    Healthcare Facilities

<https://www.ourair.org/ab-2588-air-toxics-hot-spots-program/>

- Assembly Bill (AB) 2588 – Air Toxics “Hot Spots” Information and Assessment Act of 1987 requires facilities to:
  - Quantify and report emissions of air toxics
  - Assess the possible health risks from emissions
  - Notify members of the public who are exposed to significant risk
- Later modified in 1992 to require risk reduction
- State defines “air toxics”



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# HEALTH RISK

- Likelihood that exposure to air toxics will result in an adverse health effect
- Cancer risks: chances-in-a-million, lifetime exposure above background risk
- Non-cancer risks (chronic, 8-hour chronic, acute): Hazard Index =  $\frac{\text{Modeled Concentration}}{\text{Reference Exposure Level}}$

Risk Type	Notification Thresholds	Risk Reduction Thresholds
Cancer	$\geq 10/\text{million}$	$\geq 10/\text{million}$
Chronic Non-Cancer	>1.0	>1.0
8-Hour Chronic Non-Cancer	>1.0	>1.0
Acute Non-Cancer	>1.0	>1.0



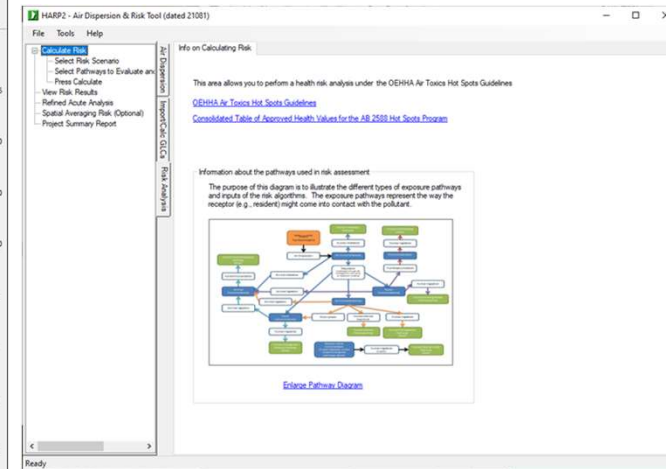
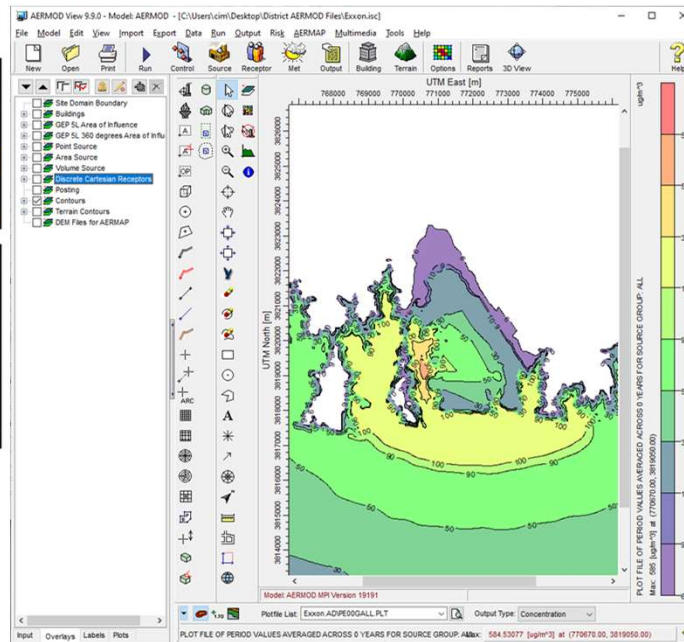
# HEALTH RISK ASSESSMENT PROCESS

Emission Inventory + Air Dispersion Modeling + Risk Analysis

		<b>Device Desc</b>	Sulfur Loading (POPCO)
		<b>Device ID</b>	150160
		<b>Location</b>	Truck Loading Station
		<b>Air Flow (scfm)</b>	245
		<b>H2S Conc. (ppmv)</b>	69
		<b>Sulfur Loading Rate (lb S/hr)</b>	50540
<b>CAS #</b>	<b>AB2588 No.</b>	<b>Sulfur Emission Rate (lb/min)</b>	0.0015
7783-06-4	7783064	<b>Hydrogen Sulfide</b>	4.54E-02

		<b>Device Desc</b>	Sulfur Loading (POPCO)
		<b>Device ID</b>	150160
		<b>Location</b>	Truck Loading Station
		<b>Air Flow (scfm)</b>	245
		<b>H2S Conc. (ppmv)</b>	69
		<b>Sulfur Loading Rate (lb S/min)</b>	1670
		<b>Sulfur Emission Rate (lb/min)</b>	0.0015
<b>CAS #</b>	<b>AB2588 No.</b>	<b>Sulfur Loaded (lbs/year)</b>	4,336,640.00
7783-06-4	7783064	<b>Hydrogen Sulfide</b>	3.90E+00



# AB 2588 PRIORITIZATION PROCEDURES

- Intent to address sources with highest potential to cause significant health risk first
- Calculated using Board-approved procedures, based on the emission rate and toxicity of each pollutant at the facility, as well as the proximity to the public

Total Facility Score (TFS)	Facility Designation
TFS > 10	High Priority – HRA is required
1 < TFS < 10	Intermediate Priority – HRA is required
TFS < 1	Low Priority – HRA is not required



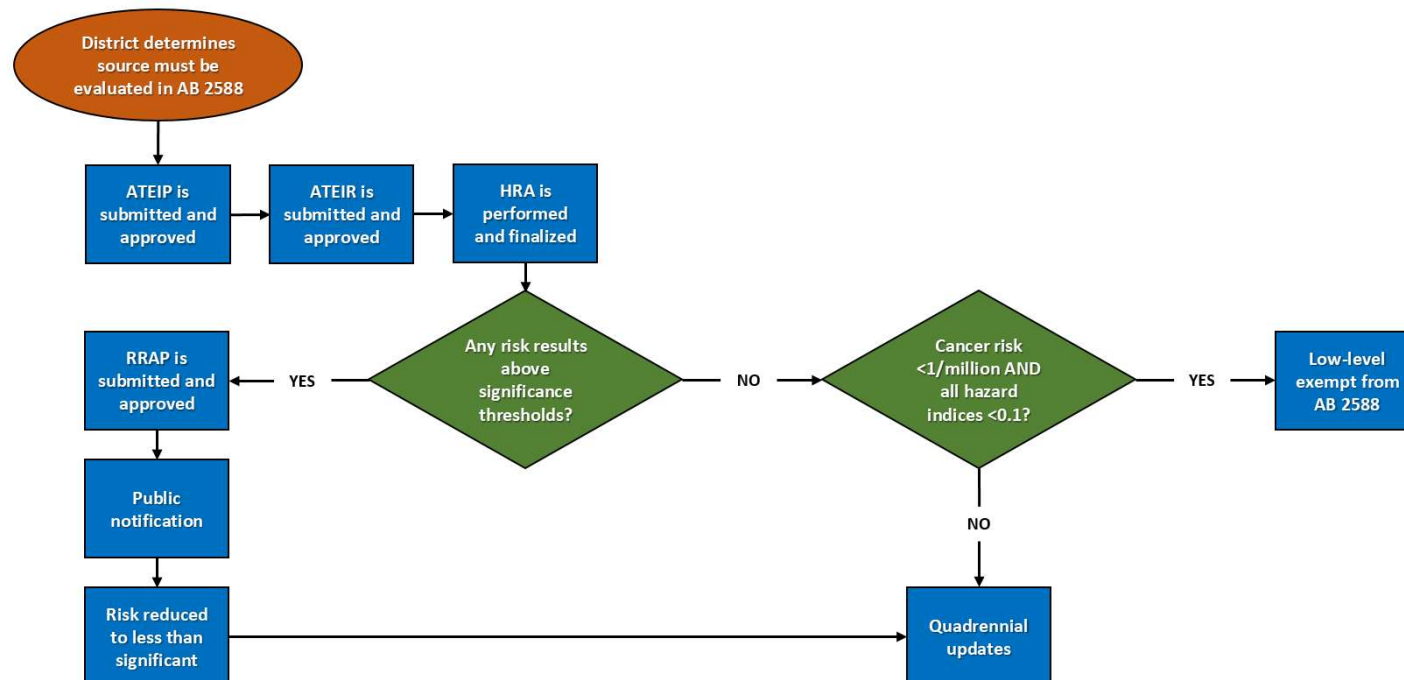
# AB 2588 HISTORY IN SANTA BARBARA COUNTY

- 1990's prioritization and subsequent HRAs
- 1991: 51 significant risk sources – began implementing voluntary risk reduction measures
- 2000: 6 significant risk sources remaining
- 2015: all significant risk sources had reduced risk below thresholds
- In 2015 update to state guidance for conducting Health Risk Assessments (HRAs)



# AB 2588 REASSESSMENT IN SANTA BARBARA COUNTY

- Facilities were re-prioritized: 71 high priority and 71 intermediate priority



# STATUS OF AB 2588 SOURCES IN 2023

Stationary Source Name	Air Toxics Emission Inventory Plan (ATEIP) Status	Air Toxics Emission Inventory Report (ATEIR) Status	Health Risk Assessment (HRA) Status
Santa Maria Regional Landfill	District provided comments 12/21/2023	NA	NA
Lompoc Sanitary Landfill	District conditionally approved 10/16/2023	District conditionally approved 2/27/2024	Due 9/2/2024
UCSB	District approved 3/30/2023	District approved 5/3/2023	Originally submitted 6/15/2023; District required revisions due 7/1/2024
Vandenberg Space Force Base	District approved 2/3/2022	District conditionally approved 3/29/2023	Originally submitted 1/17/2023; District required revisions due 7/1/2024
Lockheed Martin – SB Focalplane	District conditionally approved 1/31/2022	District conditionally approved 1/31/2022	Originally submitted 8/1/2022; District required revisions due 6/6/2024
Pacific Coast Energy Company – Orcutt Hill	District conditionally approved 11/9/2021	District conditionally approved 9/19/2022	District provided feedback

<https://www.ourair.org/ab-2588-reassessment-tracking/>



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# PREVENTING NEW SIGNIFICANT RISK SOURCES

- Per state guidelines, the District uses analyses conducted as part of the permitting process to satisfy the requirements of AB 2588
- Updates to the District's *Modeling Guidelines for Health Risk Assessments*
- New Source Review (NSR) and California Environmental Quality Act (CEQA)
- 37 HRAs approved in 2023
- Efficient use of limited resources



# STREAMLINING TOXICS REVIEW

- ATEIP/R Guidelines and Modeling Protocol Tables
- Air toxics emission factors database and document
- Continual updates to our *Modeling Guidelines for Health Risk Assessments*
- Screening tools: diesel engines and contaminated soil vapor extraction systems

## Santa Barbara County Air Pollution Control District DICE Screening Tool — August 2018

apcd air pollution control district SANTA BARBARA COUNTY

**Engine Data User Inputs**

**Dispersion**  
 Urban  
 Rural

**Meteorological Data Set**  
 Santa Maria Airport  
 Santa Barbara Airport

**Building Downwash**  
 Include Building Downwash  
 No Building Downwash

**Engine Size**  
 bhp

**Distance from Source to Nearest Resident:**  
 meters

**Nearest Worker:**  
 meters

**Diesel PM Emission Factor**  
 g/bhp-hr

**Permitted Hours**  
 hr/yr

DICE Screening Health Risk Outputs		SBCAPCD Board-Approved Significance Thresholds
Cancer Risk at the MEIR:	5.9 / million	≥10.0 / million
Chronic HI at the MEIW:	<0.1	>1.0

HI stands for "hazard index."  
 MEIR stands for "maximally exposed individual resident."  
 MEIW stands for "maximally exposed individual worker."

# SUMMARY

- Existing significant risk sources are reduced under AB 2588
- NSR and CEQA review prevent creation of new significant risk sources
- Streamline tools increase efficiency
- Limited staff resources



## CONTACT INFORMATION

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