



AB 2588 AIR TOXICS HOTSPOTS PROGRAM PUBLIC MEETING


Sterigenics US, Inc
Vernon Facility
August 7, 2024

TWO MEETING FORMATS DOS FORMATOS DE REUNIÓN



Zoom Format/Formato de Zoom

Please click on the interpretation button  at the bottom of your screen that looks like a globe. Then, select the language of your choice – either English or Spanish.

Por favor, haga clic en el botón  de interpretación en la parte inferior de su pantalla que parece un globo terráqueo. Luego, seleccione el idioma de su elección: inglés o español

Teleconference Format/Formato de Teleconferencia

To join via telephone, call **1-669-900-6833**
Then enter the English meeting ID: **923 7133 9879**

Para unirse por teléfono, llame **1-669-900-6833**
Luego ingrese el ID de reunión en español: **932 0955 9643**

Technical Assistance/ Asistencia Técnica

909-396-2311

GENERAL MEETING ANNOUNCEMENTS

ASUNTOS GENERALES DE LA REUNIÓN



Please silence your cell or desk phone to avoid feedback or interference.

Everyone except the presenter will be muted until public comment.

Public comment will be held after the presentations.

Por favor, silencie su teléfono celular o de escritorio para evitar comentarios o interferencias.

Todos excepto el presentador serán silenciados hasta el comentario público.

Comentario público se llevará a cabo después de las presentaciones.

SOUTH COAST AQMD STAFF

PERSONAL DE SOUTH COAST AQMD



Program Staff/*Personal del programa:*

- Dr. Scott Epstein, Planning Manager at 909-396-3754 and sepstein@aqmd.gov.
- Victoria Moaveni, Program Supervisor at 909-396-2455 vmoaveni@aqmd.gov.



AB 2588 AIR TOXICS HOTSPOTS PROGRAM PUBLIC MEETING

Sterigenics US, Inc
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August 7, 2024

PURPOSE OF THIS MEETING

- Discuss the results of the Health Risk Assessment for Sterigenics US, Inc
- Provide an overview of South Coast AQMD's efforts to reduce EtO emissions

MEETING OUTLINE



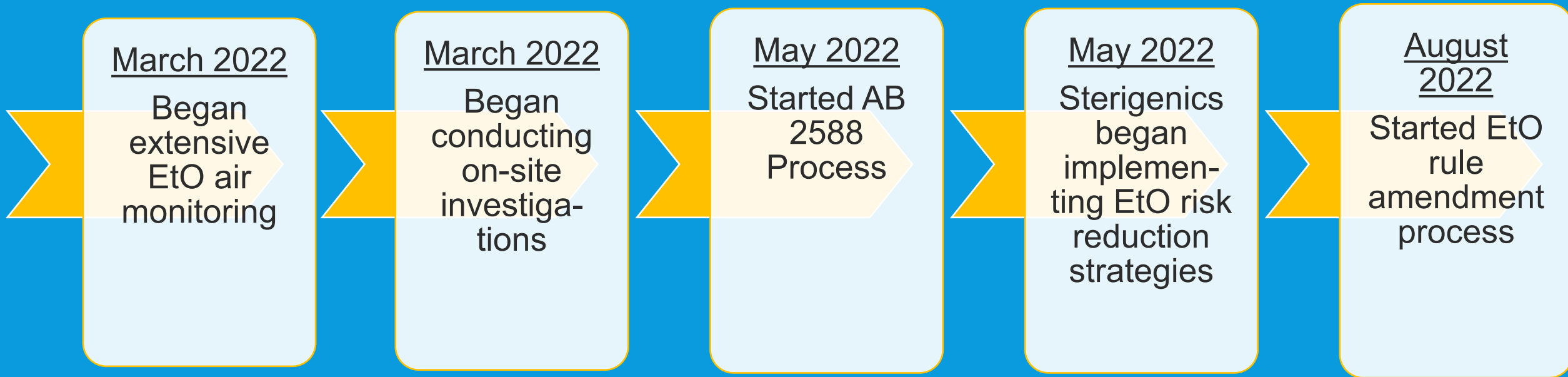
WHO IS SOUTH COAST AQMD?

- Government Agency covering major portions of four counties
- Over 17 Million People
- Over 28,000 permitted equipment
- Agency is tasked with meeting state and federal air quality standards and regulating toxic air pollution



TAKING ACTION TO IDENTIFY SOURCES AND REDUCE EMISSIONS

In March 2022, South Coast AQMD began investigating facilities that emit EtO following the U.S. EPA's reconsideration of the potential toxicity of EtO:



Continuation of all of these efforts has led to significant reductions in EtO levels and risk.

ETHYLENE OXIDE (EtO)

Toxic Air Pollutant	Exposure	Potential Health Effects
<p>Ethylene Oxide (EtO)</p> <p>A flammable, colorless gas used in many industries to sterilize medical devices or to make products including antifreeze, textiles, solvents, detergents, and adhesives</p>	<p>Long-Term (i.e. decades)</p>	<p>May increase the risk of certain cancers including lymphoid cancer and breast cancer.</p>

**Although EtO can also cause short-term health effects, these health effects are not expected at the EtO levels around Sterigenics.

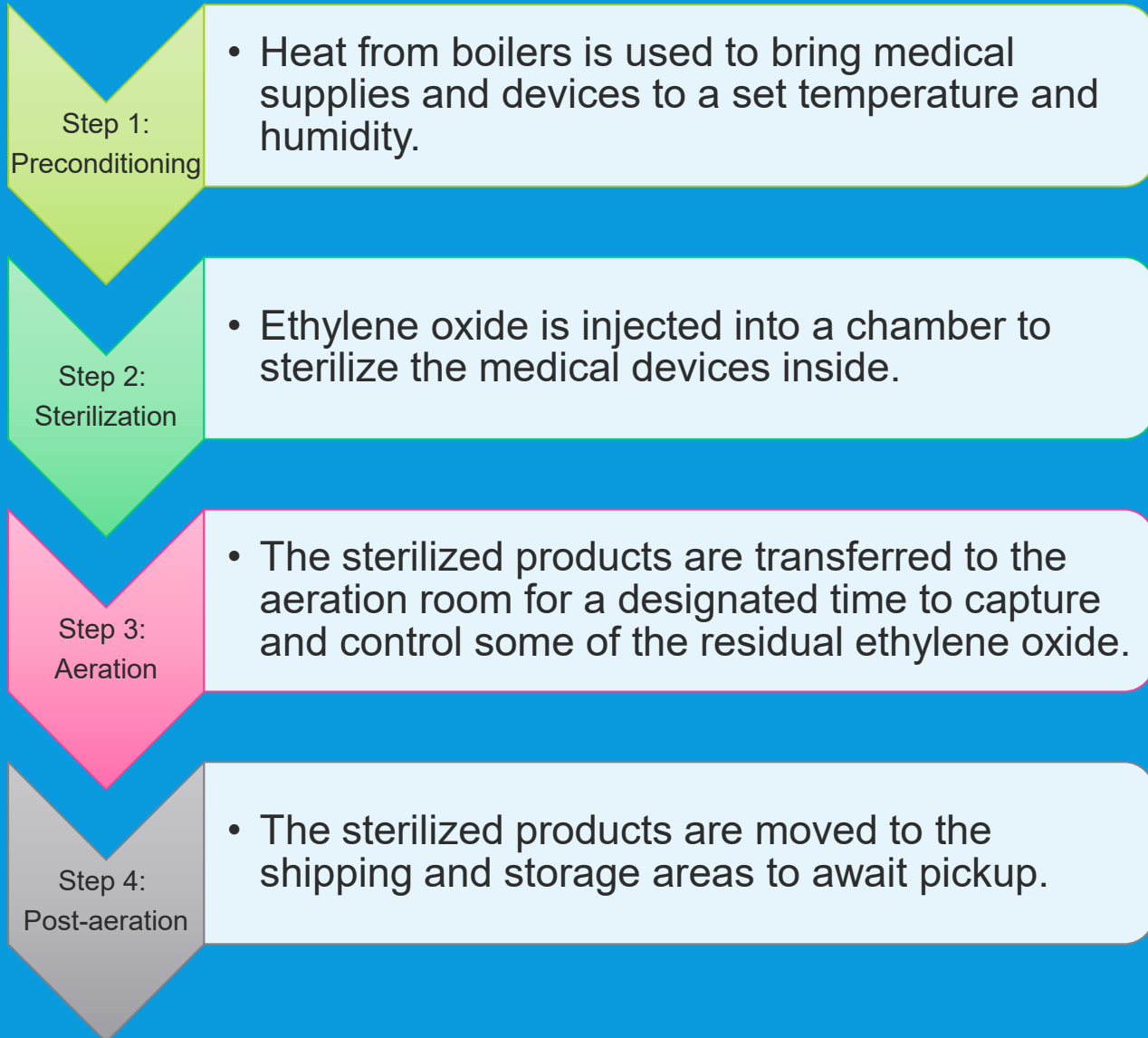
STERIGENICS US, INC

- Located at 4801-63 E. 50th Street and 4900 S. Gifford Ave in Los Angeles
- Sterilizes medical supplies and devices using ethylene oxide (ETO)



 Boundary of Sterigenics

OPERATIONS AT STERIGENICS



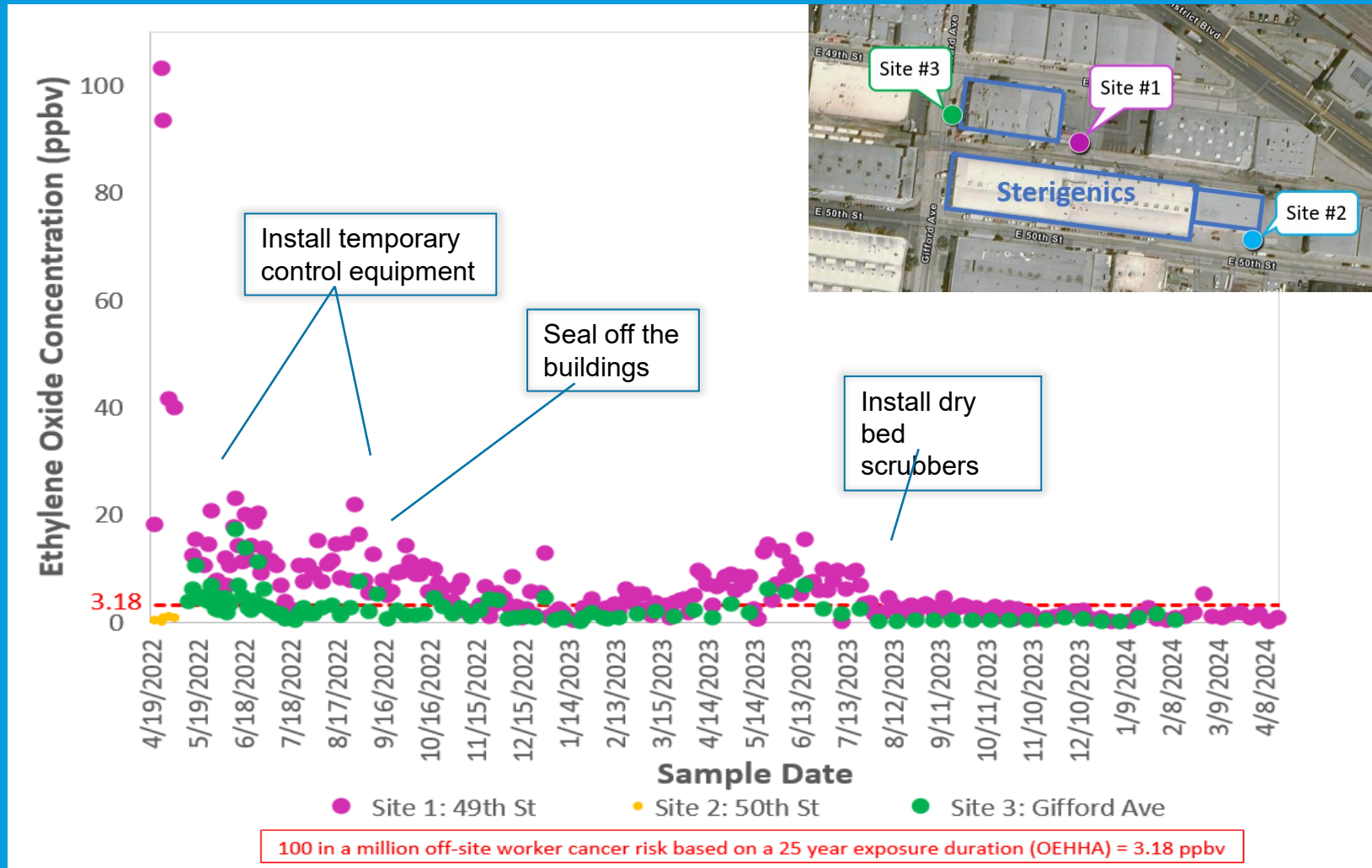
**Above picture is for illustration purposes only and is not an actual photo of processes at Sterigenics

MONITORING & ANALYSIS

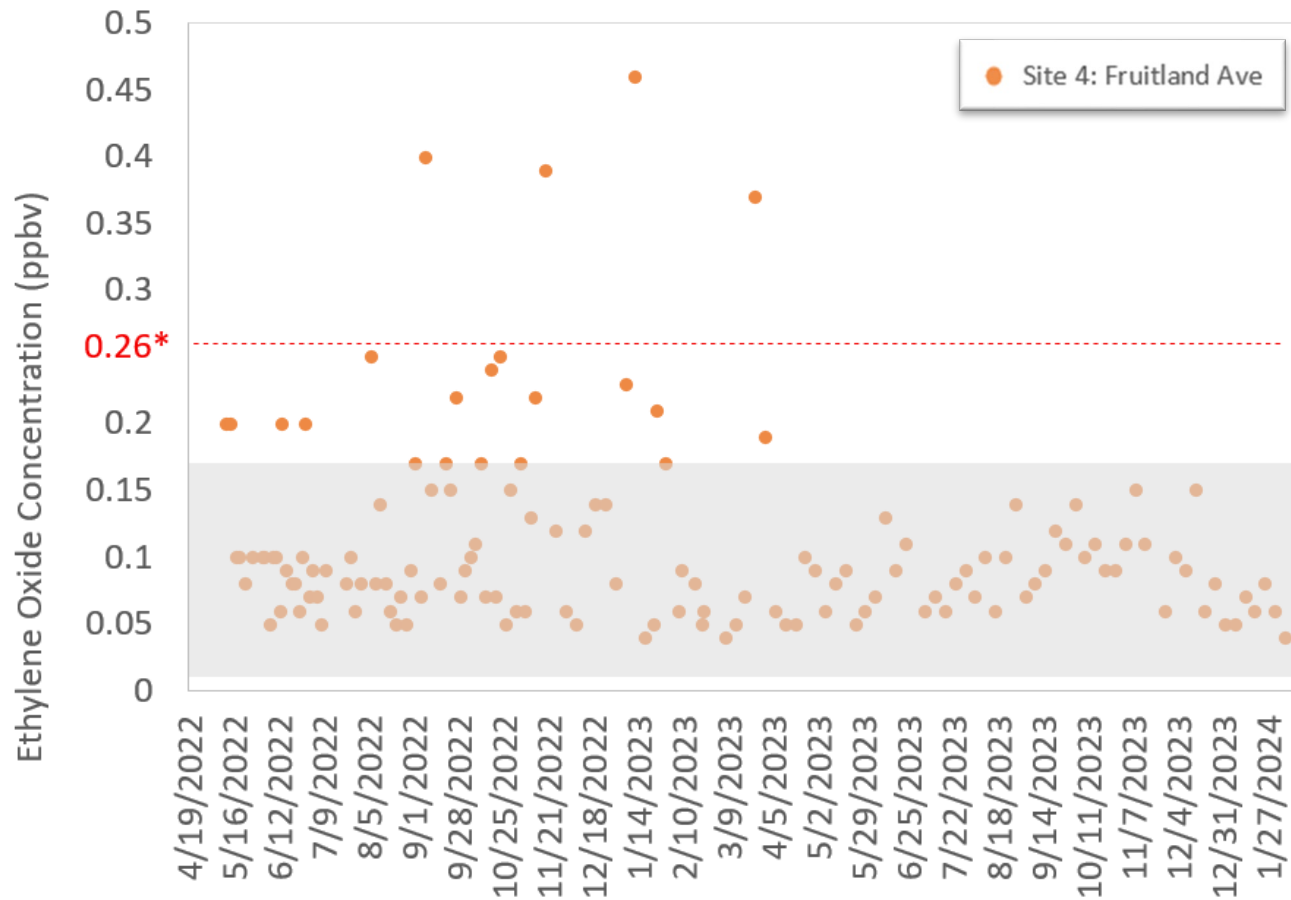
- Site evaluations conducted to identify potential EtO leaks and sources of emissions
- Mobile monitoring and grab samples used to verify that Sterigenics was a source of EtO
- Fenceline and community sampling and analysis conducted from April 2022 to April 2024



SOUTH COAST AQMD MONITORING DATA FOR NEARBY NON-RESIDENTIAL AREAS



SOUTH COAST AQMD MONITORING DATA FOR NEARBY RESIDENTIAL AREAS



Typical EtO background levels in the Los Angeles Region

*100 in a million residential cancer risk based on a 30 year exposure duration (OEHHA) = 0.264 ppbv



COMPLIANCE & ENFORCEMENT



Enforcement Activities:

- Conducted over 150 inspections and other field operations
- Issued seven Notices of Violation (NOV)
- Received and investigated over 29 notifications
- Evaluate compliance with the Early Action Reduction Plan (EARP)

WHAT IS AB 2588?

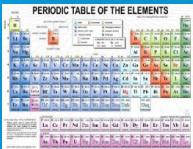
- State law enacted in 1987
- Public **Right-to-Know** Program
- Purpose
 - Collect emissions data with updates every 4 years
 - Identify facilities having localized impacts
 - **Evaluate potential health risks through Health Risk Assessments**
 - Notify residents of those potential health risks, if 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

GOALS OF AB 2588



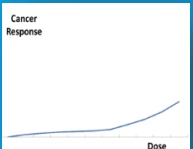
DETERMINING COMMUNITY IMPACTS WITH A HEALTH RISK ASSESSMENT (HRA)

- 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

DETERMINING COMMUNITY IMPACTS WITH A HEALTH RISK ASSESSMENT (HRA)



Cancer Risk

- Probability of a cancer case in “chances in one million”
- Estimates cancer risks for both residents and workers
- Cancer Burden is the expected excess cancers in exposed population

Non-cancer health effects also evaluated, but these health effects not expected at EtO levels around Sterigenics

POTENTIALLY HIGH-RISK LEVEL FACILITIES

What is a Potentially High-Risk Level Facility?

- Facilities that have the potential to or have exceeded the Significant Risk Level (Cancer Risk \geq 100 in-one-million)
- Determination for Sterigenics based on ambient monitoring data and on-site investigations
- The Sterigenics Vernon facility was designated as a Potentially High-Risk Level facility on June 7, 2022.

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

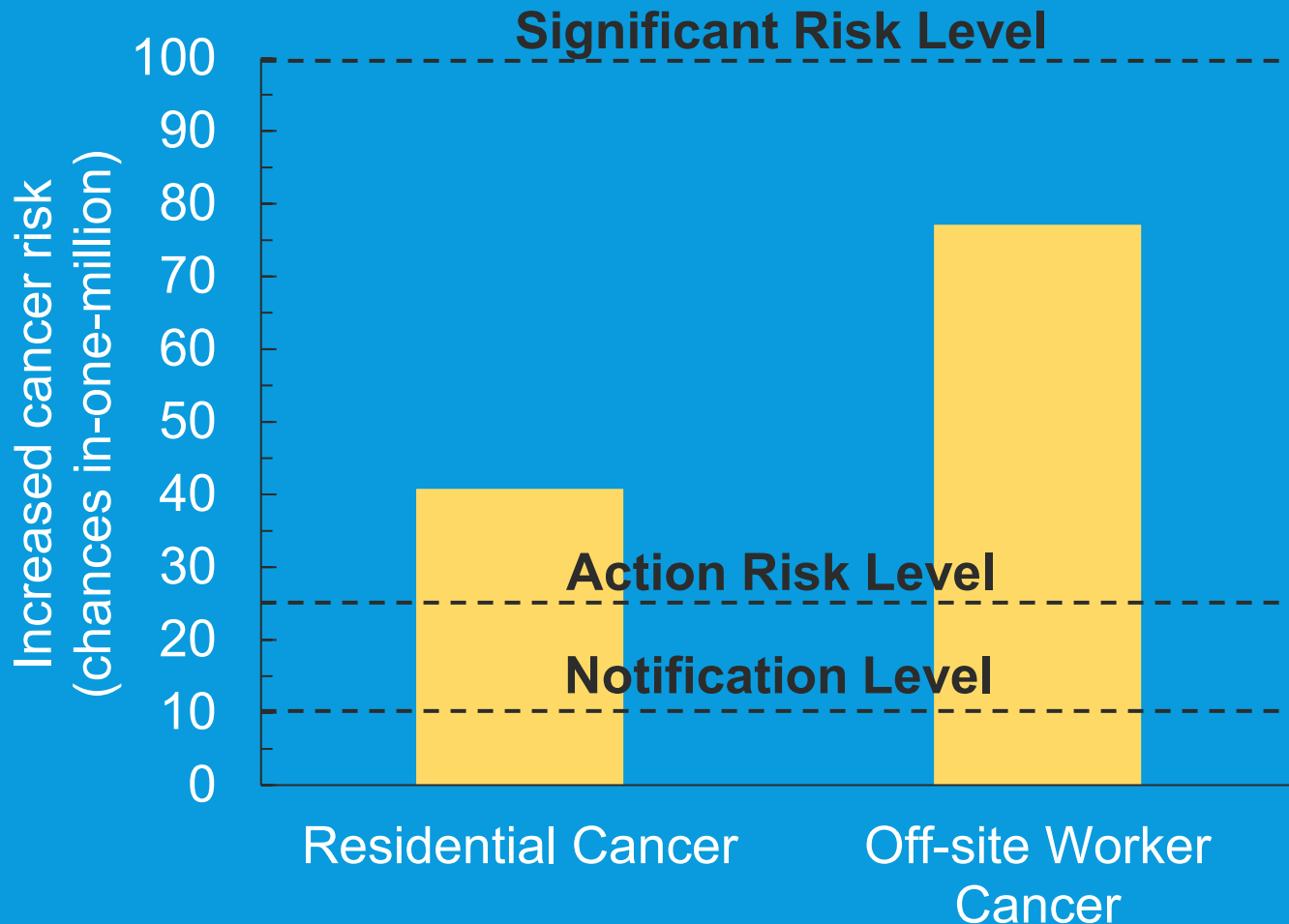
- Completes overall Risk Reduction sooner than traditional AB 2588 Program

KEY EARLY ACTION REDUCTION MEASURES



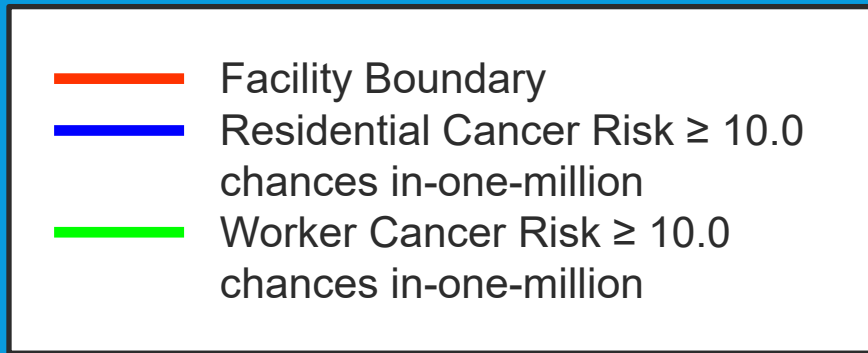
- Sealed off the buildings
- Added temporary control devices
- Increased aeration time
- Enhanced leak monitoring
- Began monitoring EtO levels and curtailing operations if thresholds exceeded
- Installed dry bed scrubbers
- Began maintaining negative pressure within the buildings
- All the added controls are included in new permits for the facility.

ESTIMATED CANCER RISKS – APPROVED HRA



- Estimated emissions calculated based on 2021 total annual usage of EtO and natural gas
- EtO levels in 2024 are approximately 90% lower than they were in 2022 near the facility
- EtO emissions contribute over 99% of the cancer risks from this facility
- The main sources of cancer risks are from fugitive emissions of EtO

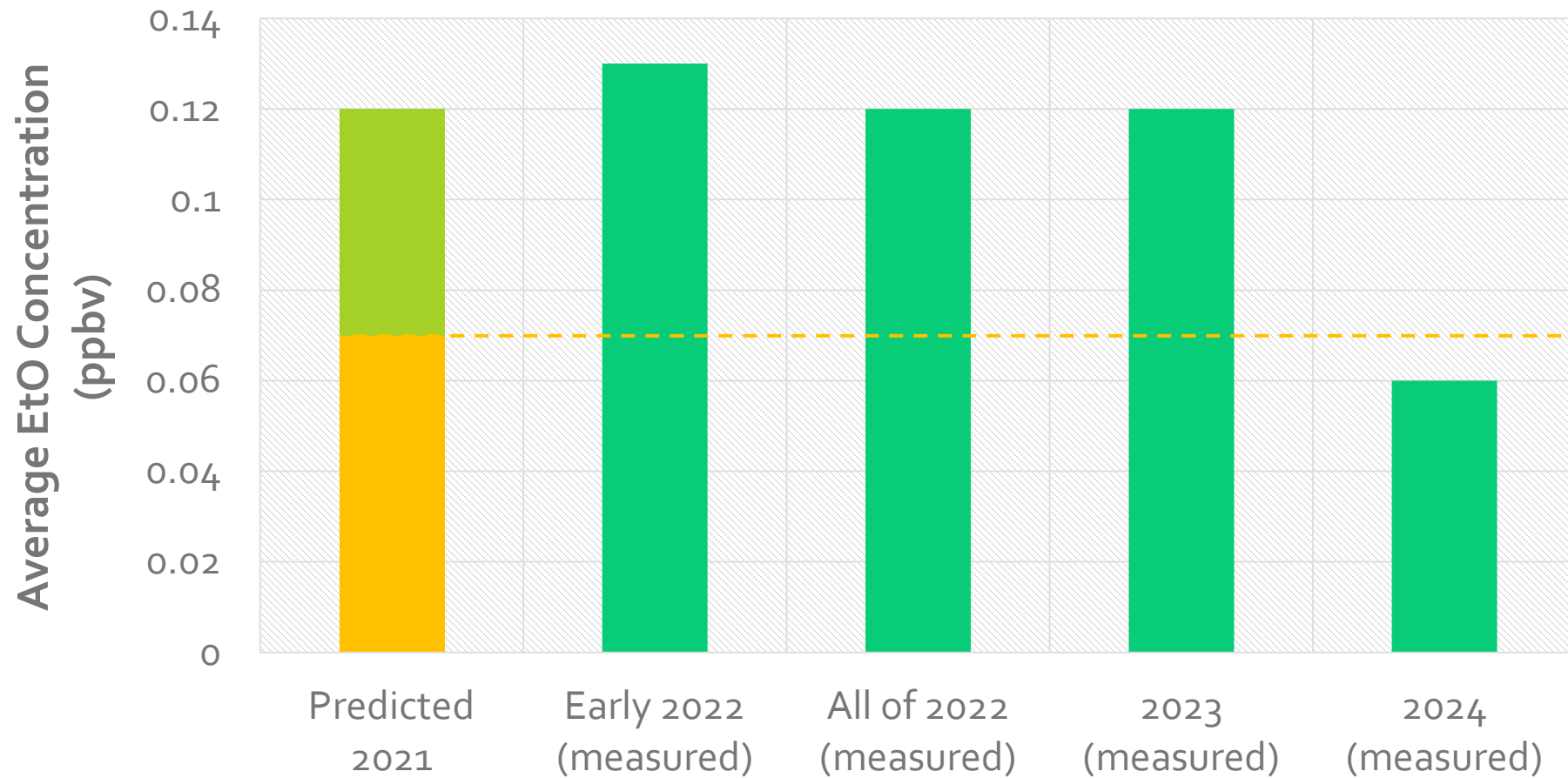
CANCER RISK FROM EMISSIONS IN 2021



- Population-weighted cancer risk in the South Coast Air Basin from all sources of air pollution is 455 chances in-one-million
- Cancer risk is currently lower due to facility controls



MULTI-YEAR ETO TRENDS IN THE COMMUNITY



Average EtO background levels in the Los Angeles Region

RULE 1402 RISK REDUCTION PLANS

Risk Reduction Plan – Required if Risk \geq Risk Reduction Threshold

- Permanent, verifiable, and enforceable risk reduction measures
- 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
- Must be implemented within 2 years from the approval of plan or sooner

NEXT STEPS – AB 2588

Risk Reduction Plan (RRP)

A Risk Reduction Plan has been submitted.

* The proposed RRP includes all requirements of the EARP plus additional controls for the scrubber and an enhanced stack.

RRP Implementation

Sterigenics has implemented or is in the process of implementing all of the risk reduction measures.

Monitoring

Sterigenics will continue ambient monitoring of EtO emissions near the facility. South Coast AQMD will continue to monitor their progress.

TAKING ACTION TO IDENTIFY SOURCES AND REDUCE EMISSIONS

Extensive EtO air monitoring has shown significant risk reduction

On-site investigations continue to ensure that Sterigenics is in compliance

Sterigenics has submitted AB 2588 Risk Reduction Plan

Sterigenics continues to implement additional EtO risk reduction strategies

EtO rule was finalized in Dec. 2023 and is being enforced

All of these efforts have led to significant reductions in EtO levels and risk to the community.

MORE INFORMATION ON THE AB 2588 PROGRAM

- South Coast AQMD AB 2588 Website
 - <http://www.aqmd.gov/ab2588>
- Email: ab2588@aqmd.gov
- Hotline: 909-396-3616
- Link and QR code to the 2024 Approved HRA
 - <http://www.aqmd.gov/docs/default-source/planning/risk-assessment/sterigenics---vernon/sterigenics-hra-report.pdf>



The screenshot shows the South Coast AQMD website. The header includes the AQMD logo and a search icon. The main heading is "Air Toxics 'Hot Spots' Program (AB 2588)". Below this is a breadcrumb trail: "Home / Rules & Compliance / Compliance / Toxic 'Hot Spots' (AB 2588)". The page content is organized into sections: "Upcoming Events", "Recent AB 2588 Activity" (listing "Carpenter Co. Public Meeting - April 25, 2024" and "Sterigenics Vernon HRA Approval - June 6, 2024"), and "AB 2588 Guidance Documents and Reports" (listing various documents like "AB 2588 Facility Prioritization Procedures (Oct. 2020)", "AB 2588 Supplemental Guidelines (Oct. 2020)", "AB 2588 Voluntary Risk Reduction Plan Guidelines (Sept. 2018)", "Template for Emission Factors Reference Sources Table (.xlsx, 14 KB)", "Public Notification Procedures (Oct. 2020)", "Quadrennial Air Toxics Emissions Reporting Procedure (Jun. 2020)", and "2022 AB 2588 Annual Report (Apr. 2023)").

MORE INFORMATION ON THE EtO COMMUNITY INVESTIGATION



The screenshot shows the South Coast AQMD website. The browser address bar displays <https://www.aqmd.gov/home/eto>. The navigation menu includes: Select Language, F.I.N.D., About, Contact, Grants & Bids, Online Services, I'm Looking For, Sign Up, and a Search box. The main navigation bar lists: AIR QUALITY, INCENTIVE PROGRAMS, RULES & COMPLIANCE, PERMITS, NEWS, WEBCASTS, & CALENDAR, TECHNOLOGY ADVANCEMENT, RESOURCES, and MEETING AGENDAS & MINUTES. The breadcrumb trail is: Home / News, Webcasts, & Calendar / Community Investigations / EtO Sterilization. The page title is "Ethylene Oxide (EtO) Emissions Investigation". The introductory text states: "South Coast AQMD began investigating facilities that emit Ethylene Oxide (EtO) in March 2022, following the Protection Agency's (U.S. EPA) reconsideration of the potential toxicity of EtO. U.S. EPA has recently been coll about emissions from facilities that handle EtO throughout the country."

Visit www.aqmd.gov/eto for additional information including:

- Background on EtO and EtO facilities
- Ambient Air Monitoring Data
- Comments by Leaders and the Community
- Enforcement Activity
- Rulemaking Activity