

VIA ELECTRONIC MAIL

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RE: Communities for a Better Environment Comments on Draft Cancer Inhalation Unit Risk Factor for Ethylene Oxide

I. Introduction

These comments are submitted on behalf of Communities for a Better Environment (“CBE”) regarding the Office of Environmental Health Hazard Assessment (“OEHHA”) and California Air Resources Board (“CARB”) proposal to further study acrolein and ethylene oxide (“EtO”) and its impacts on public health and safety. We are encouraged by OEHHA and CARB’s draft document for public review that summarizes the carcinogenicity data and derives a cancer inhalation unit risk factor (“IUR”) for acrolein and EtO. Advancing this public health research is vital to accurately measure lifetime cancer risks linked to inhalation exposure of carcinogens like acrolein and EtO.

CBE was founded in 1978 and is one of the preeminent environmental justice organizations in the nation. The mission of CBE is to build people’s power in California’s communities of color and low-income communities to achieve environmental health and justice by preventing and reducing pollution and building green, healthy and sustainable communities and environments. CBE provides residents in heavily polluted urban communities in California with organizing skills, leadership training, and legal, scientific and technical assistance, so that frontline residents can successfully confront threats to their health and well-being. This letter highlights the public health harms associated with air pollutants, focusing on the harmful effects of EtO emissions in Los Angeles, and outlines recommendations to eliminate pollution exposure.

II. Background

CARB and OEHHA’s proposal to further study acrolein and EtO and its impacts on public health and safety is a critical opportunity to shape the well-being of thousands of California residents for decades to come. In 2024, the United States Environmental Protection Agency (“U.S. EPA”) established life-saving standards (“National Emissions Standards for Hazardous Air Pollutants for EtO Commercial Sterilization Facilities” or “NESHAP”) to reduce community exposure to EtO from commercial sterilizer

facilities.¹ However, U.S. EPA is now attempting to loosen these federal standards,² thereby increasing cancer risks for Black and Brown communities already disproportionately burdened by sterilizer operations and growing environmental hazards. Now, CARB and OEHHA have an opportunity to set a community-driven standard for much-needed public health protections to adequately monitor and eliminate public health harms associated with toxic air pollutants such as EtO.

As you know, EtO is an invisible, highly reactive, cancer-causing chemical that is challenging to detect without specialized monitoring equipment. Acute exposure to EtO is associated with respiratory irritation, headache, nausea, vomiting, diarrhea, shortness of breath, and cyanosis, while chronic exposure risks include cancer, reproductive effects, DNA damage, and neurotoxicity.³ Over time, EtO exposure can result in chromosomal damage, making it a mutagenic substance.⁴ According to the Agency for Toxic Substances and Disease Registry, children may be at a higher risk of health effects from EtO.⁵ U.S. EPA's own risk assessments have increased the designation of EtO, from "reasonably anticipated" to "deemed" to "known to be" a human carcinogen, as the understanding of EtO's impact on people's health has progressed.⁶ People who live near industrial facilities that produce or use EtO may have higher exposures to these toxic emissions due to uncontrolled fugitive emissions or during venting.⁷

OEHHA and CARB's renewed effort to analyze and mitigate EtO emissions in communities across California is especially critical considering the federal government's broad exemptions granted to sterilizer facilities, and U.S. EPA's ongoing work to dismantle the 2024 NESHAP, which would inevitably increase EtO exposure and cancer risk for communities already disproportionately burdened by growing environmental hazards in Vernon, Maywood, and Huntington Park. Of the dozens of facilities slated to be exempted by U.S. EPA's proposal, three are in Southern California, and two (Sterigenics) operate in Vernon where CBE members live, work, and raise their families.

According to South Coast Air Quality Management District data, there are 15 sterilization facilities in the South Coast Air Basin.⁸ The district has focused on emissions reductions from three facilities which continue to pose a long-term concern for community exposures. Sterigenics conducts

¹ See National Emission Standards for Hazardous Air Pollutants: Ethylene Oxide Emissions Standards for Sterilization Facilities Residual Risk and Technology Review, 89 Fed. Reg. 24090 (Apr. 05, 2024) (to be codified at 40 C.F.R. pts. 60, 63), <https://www.govinfo.gov/content/pkg/FR-2024-04-05/pdf/2024-05905.pdf>.

² See National Emission Standards for Hazardous Air Pollutants: Ethylene Oxide Emissions Standards for Sterilization Facilities Residual Risk and Technology Review Reconsideration, 91 FR 12700 (Mar. 17, 2026) (to be codified at 40 C.F.R. pt. 63), <https://www.govinfo.gov/content/pkg/FR-2026-03-17/pdf/2026-05167.pdf>.

³ Occupational Safety & Health Admin., *Ethylene Oxide*, <https://www.osha.gov/SLTC/ethyleneoxide/index.html> (last visited July 29, 2026).

⁴ Philip J. Landrigan et al., *Ethylene Oxide: An Overview of Toxicologic and Epidemiologic Research*, 6 Am. J. Indep. Med. 103 (1984), <https://www.osti.gov/biblio/6586744>.

⁵ Agency for Toxic Substances & Disease Registry, *Clinician Brief: Ethylene Oxide*, <https://www.atsdr.cdc.gov/environmental-medicine/hcp/clinician-briefs/ethylene-oxide.html> (Jan. 9, 2024).

⁶ Assessment of Ethylene Oxide as a Potentially Toxic Air Pollutant, 50 Fed. Reg. 40286 (Oct. 2, 1985), https://archives.federalregister.gov/issue_slice/1985/10/2/40277-40289.pdf; Nat'l Toxicology Program, U.S. Dep't of Health & Hum. Servs., *Report on Carcinogens* (15th ed.), <https://ntp.niehs.nih.gov/ntp/roc/content/profiles/ethyleneoxide.pdf> (last visited July 29, 2026).

⁷ Nat'l Toxicology Program, U.S. Dep't of Health & Hum. Servs., *Report on Carcinogens* (15th ed.), <https://ntp.niehs.nih.gov/ntp/roc/content/profiles/ethyleneoxide.pdf> (last visited July 29, 2026).

⁸ S. Coast Air Quality Mgmt. Dist., *Ethylene Oxide (EtO) Emissions Investigation*, <https://www.aqmd.gov/home/eto> (last visited July 29, 2026).

medical device sterilization in Vernon and Ontario. The Ontario facility is located near Port View Preparatory school, where students face an elevated risk of cancer, stemming primarily from uncontrolled or “fugitive” emissions.⁹ The Sterigenics facility in Vernon is located 500 feet from the nearest residence and 1,700 feet from the nearest school.¹⁰

From recent OEHHA presentations, the typical air concentrations in SCAQMD range from 0.02-0.17 ppb, but near medical sterilizers EtO levels can spike to 103 and 139 ppb.¹¹ Frontline communities, such as Southeast Los Angeles, already face a disproportionate amount of pollution from transportation, industry, warehouses, and other pollution sources such as smoke from fires. The average air toxics cancer risk in Southeast Los Angeles is higher than the South Coast Air Basin-wide average.¹² This poor air quality contributes to higher rates of emergency department visits for asthma and heart disease, as well as babies born with low birth weight compared to statewide averages.¹³

U.S. EPA’s 2024 revised standards provided many effective mitigation measures to address EtO emissions. The 2024 NESHAP required facilities to install technologies, practices, and procedures to significantly reduce EtO emissions. For example, it required establishing standards for emissions such as building leaks; it strengthened standards for sources, such as sterilization chambers and aeration room vents; and it increased compliance requirements, such as monitoring and reporting.¹⁴ All these compliance options and mitigation measures are cost-effective to the industry, manage potential risks to the supply chain, and ensure robust standards that reduce cancer risks for communities exposed to EtO emissions.¹⁵ Effective mitigation measures are not only feasible, but exist at sterilizer facilities today, and should be used at all facilities in California and beyond.¹⁶

III. CBE Supports OEHHA and CARB’s Continued Scientific Evaluations

We commend OEHHA and CARB for their commitment to review the evolving information about the cancer-causing effects of ethylene oxide and acrolein. The draft cancer assessments indicate that

⁹ S. Coast Air Quality Mgmt. Dist., *Rule 1402 Air Toxics Health Risk Assessment: Sterigenics U.S., LLC, Ontario, California*, https://www.aqmd.gov/docs/default-source/compliance/sterigenics/hra.pdf?sfvrsn=5c21677e_2 (Oct. 3, 2025).

¹⁰ S. Coast Air Quality Mgmt. Dist., *Sterigenics Emissions Investigation in Vernon*, <https://www.aqmd.gov/home/news-events/community-investigations/sterigenics> (last visited July 29, 2026).

¹¹ *Id.*

¹² S. Coast Air Quality Mgmt. Dist., *Southeast Los Angeles: Community Emissions Reduction Plan Final*, ES-1, Appendix 3a-10 (Dec. 2020), <https://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/southeast-los-angeles/final-cerp/final-cerp.pdf?sfvrsn=9>.

¹³ *Id.* at ES-1, Appendix 3a-11.

¹⁴ See National Emission Standards for Hazardous Air Pollutants: Ethylene Oxide Emissions Standards for Sterilization Facilities Residual Risk and Technology Review, 89 Fed. Reg. 24090 (Apr. 05, 2024) (to be codified at 40 C.F.R. pts. 60, 63), <https://www.govinfo.gov/content/pkg/FR-2024-04-05/pdf/2024-05905.pdf>; see also, EPA, *Final Amendments to Air Toxics Standards for Ethylene Oxide Commercial Sterilization Facilities Fact Sheet*, https://www.epa.gov/system/files/documents/2024-03/factsheet_etosterilizers_final_3-14-24.pdf (last visited July 27, 2026).

¹⁵ *Id.*

¹⁶ See S. Coast Air Quality Mgmt. Dist., *Parter Emissions Investigation in Carson*, <https://www.aqmd.gov/home/news-events/community-investigations/parter> (last visited July 29, 2026); see also S. Coast Air Quality Mgmt. Dist., Presentation for the AB 2588 Public Notification Meeting Regarding Sterigenics Ontario (June 11, 2026).

these two chemicals are much more harmful than previously understood. To safeguard public health, agencies must continuously revisit the toxicity data for these and other common air pollutants, to illuminate the cumulative burden of lifetime exposures on all Californians and capture how this impacts public health across the state. Considering the federal government's abandonment of scientific review and health assessment, we urge OEHHA and CARB to continue to review and assess other common pollutants which could pose similar hazards.

IV. Increased Monitoring and EtO Emissions Data is Necessary to Craft Strong Air Quality Protections

It is our hope and expectation that OEHHA and CARB will continue to advance these groundbreaking toxicity assessments and identify ongoing and controllable sources of exposure to these ubiquitous pollutants. The agencies should develop a comprehensive exposure assessment for EtO and acrolein. This assessment should include a close analysis of population level exposure, cumulative impacts, and establish an updated zone of impact for communities living nearest industrial sources of pollution. These assessments must consider the disproportionate impacts of cancer-causing pollutants on communities of color, low-income communities, Tribal Nations, frontline, and fencelines communities.

The South Coast Air Basin has been in nonattainment with air pollution standards for generations, and the South Coast Quality Management District has already been tracking unhealthy levels of EtO in Southeast Los Angeles. In addition, EtO exposure is not isolated to California. This chemical is used for medical sterilization, spice fumigation and other industrial uses across the U.S.

Years ago, the State of Illinois determined that there were higher rates of breast cancer and blood cancers in women living near a Sterigenics facility in the Chicago area than in other areas of the state.¹⁷ Journalists and community advocates were key to bringing this danger to light. Yet, Sterigenics, other medical and spice sterilization, and other industrial facilities continue to emit EtO. OEEHA and CARB must review and learn from these public health crises and develop effective long-term monitoring and solutions to eliminate EtO exposure.

Eliminating the use of highly toxic chemicals like EtO is the best way to protect California communities. However, to the extent this isn't possible immediately, effective controls can minimize or eliminate exposure. As previously outlined in a letter to the South Coast Air Quality Management District, CBE urges local, state, and federal agencies to adopt and enforce strong requirements for facilities that use EtO such as (1) requiring facilities to suspend operations when any control equipment or technology breaks down or is undergoing repairs or replacements; (2) requiring rule/regulatory updates when stronger control systems and technology become available; and (3) requiring interagency coordination with local, state, and federal agencies to educate and better protect workers from EtO exposure while always requiring/supplying personal protection equipment and high-quality respirators. The bottom line is that

¹⁷ Ill. Dep't of Pub. Health, Div. of Epidemiologic Stud., *Cancer Incidence Assessment Near Sterigenics in Willowbrook, IL*, 1995-2015, <https://dph.illinois.gov/content/dam/soi/en/web/idph/files/publications/sterigenicswillowbrookcancer-investigation-final-0.pdf> (March 29, 2019).

effective, commercially available mitigation measures to eliminate EtO exposure are currently available and should be required at all facilities before EtO is completely phased out.

V. Conclusion

OEHHA's updated cancer potency values for EtO and acrolein underscore the urgency of addressing sources of harmful chemical exposure for California communities. California can also lead the nation by tightening EtO handling practices and moving quickly to protect people from harmful exposures. CBE strongly supports OEHHA and CARB's commitment to monitoring ethylene oxide through further research and engagement with fence-line and frontline residents. Deepening OEHHA and CARB's understanding of ethylene oxide exposure is the first step to eliminating this hazard and ensuring healthy, thriving communities.

CBE strongly supports OEHHA and CARB's strengthened EtO research initiative. OEHHA and CARB must ground further air monitoring and facility investigations with community listening sessions and educational seminars, to ensure the data being gathered is made publicly accessible, especially to communities directly impacted by EtO and other pollutants and environmental stressors.

Sincerely,

Communities for a Better Environment

Attachment:

1. Joint comment letter from CBE and Comité Pro Uno to the United States Environmental Protection Agency describing ongoing concerns with EtO and the importance of preserving and strengthening EtO emissions standards (May 15, 2026).

Attachment:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

National Emission Standards for
Hazardous Air Pollutants: Ethylene Oxide
Emissions Standards for Sterilization
Facilities Residual Risk and Technology
Review Reconsideration 91 Fed. Reg.
12700 (March 17, 2026)

Docket ID No. EPA-HQ-OAR-2019-0178

Via regulations.gov
May 15, 2026

COMMENTS OF PUBLIC HEALTH AND ENVIRONMENTAL ORGANIZATIONS

Comité Pro Uno and Communities for a Better Environment respectfully submit these comments on the United States Environmental Protection Agency's ("U.S. EPA" or "EPA") proposed rule: National Emission Standards for Hazardous Air Pollutants: Ethylene Oxide Emissions Standards for Sterilization Facilities Residual Risk and Technology Review Reconsideration 91 Fed. Reg. 12700 (March 17, 2026). As detailed below, it would be unlawful and arbitrary and capricious for EPA to finalize the Proposed Rule. We urge EPA to rescind the Proposed Rule and preserve the 2024 update of the Commercial Sterilizer Facilities National Emission Standards for Hazardous Air Pollutants ("NESHAP").

INTRODUCTION

We write on behalf of Comité Pro Uno (“CPU”) and Communities for a Better Environment (“CBE”) to oppose the U.S. EPA’s attempt to weaken the 2024 NESHAP that established life-saving standards to reduce community exposure to ethylene oxide (“EtO”) from commercial sterilizer facilities. For generations, CBE and CPU have worked to grow self-determination in neighborhoods that have been disproportionately burdened by air pollution, water degradation, and soil contamination. CPU and CBE work to reverse harmful land use patterns created by exclusionary zoning, racial covenants, and redlining that fueled disinvestment and concentrated heavy industrial operations in communities of color and low-income communities throughout California and beyond. Through organizing, education, and leadership development, CBE and CPU empower communities to transform environmental conditions and improve health outcomes in Black and Brown communities facing environmental injustice.

CBE and CPU have adult and youth members who reside in Southeast Los Angeles County including the City of Vernon, City of Maywood, and City of Huntington Park. These working-class predominantly Black and Brown communities are directly impacted by dangerously high EtO emissions in addition to other pollution sources such as a nearby oil refinery, congested freeways, idling trucks, abandoned cargo debris, warehouses, emissions from the San Pedro Bay Port Complex, and diesel-fueled locomotives traveling through neighborhoods. EPA’s proposal to loosen EtO emission standards will harm both CBE, CPU, and neighborhoods across the nation living near medical sterilizer operations. For years, CBE, CPU and their members have been urging local, state, and federal government agencies to accelerate the transition away from harmful chemicals like EtO.¹ Amidst rising temperatures, increasing freight activity, and worsening ozone and particle pollution, now is the time to challenge the status quo to reduce public exposure to carcinogens. Instead, EPA is essentially offering industry a free pass to relax facility emission standards by reversing the 2024 NESHAP. This concerning rollback runs counter to EPA’s mission to “protect human health and the environment.”²

CPU was founded in 1997 by Felipe Aguirre, as a community-based non-profit organization located in Maywood, California. CPU developed out of a grassroots effort lead by Aguirre focused on immigrant rights and environmental justice issues in the City of Maywood, and surrounding communities of Southeast Los Angeles. CPU leads community-based air quality monitoring projects, deploying continuous monitoring systems in partnership with impacted residents, youth, academic institutions, and local agencies to raise awareness about local air quality and potential exposures, exceedances, and how these events may impact public health. Together, CPU and residents in Southeast Los Angeles work together to build local knowledge, and remedy health harms associated with industrial pollution.

¹ Attachment A: CBE, Letter to S. Coast Air Quality Mgmt. Dist. re Ethylene Oxide Rule 1405 (April 13, 2023); Attachment B (CPU, Letter to S. Coast Air Quality Mgmt. Dist. re Toxic Air Emissions from Sterigenics Medical Sterilization plant in Vernon (May 24, 2022).

² U.S. Env’tl. Prot. Agency, Our Mission and What We Do, <https://www.epa.gov/aboutepa/our-mission-and-what-we-do> (last visited May 14, 2026).

CBE was founded in 1978 and is one of the preeminent environmental justice organizations in the nation. The mission of CBE is to build people's power in California's communities of color and low-income communities to achieve environmental health and justice by preventing and reducing pollution and building green, healthy and sustainable communities and environments. CBE provides residents in heavily polluted urban communities in California with organizing skills, leadership training and legal, scientific and technical assistance, so that frontline residents can successfully confront threats to their health and well-being. This letter highlights the public health harms associated with EtO use in Los Angeles and surrounding cumulative impacts from industrial and freight activities. Together, we urge EPA to preserve the 2024 NESHAP.

I. EPA's 2024 EtO Emissions Standards are Necessary to Protect Public Health

EtO is an invisible, highly reactive, cancer-causing chemical.³ With little to no odor unless at extremely high levels, EtO is challenging to detect without specialized monitoring equipment. Over time, EtO exposure can result in chromosomal damage making it a mutagenic substance.⁴ According to the Agency for Toxic Substances and Disease Registry, children may be at a higher risk of health effects from EtO due to incomplete development of detoxification pathways, higher respiratory rate, and more opportunities for exposure such as playing outside near sterilizer facilities.⁵

Acute exposure to EtO is associated with respiratory irritation, headache, nausea, vomiting, diarrhea, shortness of breath, cyanosis, while chronic exposure risks include cancer, reproductive effects, DNA damage, and neurotoxicity.⁶ Based on EPA's own risk assessments, EtO was initially designated as "reasonably anticipated to be a human carcinogen" in 1985⁷ and later deemed a "human carcinogen" in 1987.⁸ The most recent *15th Report on Carcinogens* by the National Toxicology Program's U.S. Department of Health and Human Services clearly designates EtO as "known to be a human carcinogen."⁹ This report found that "[p]eople who live near industrial facilities that produce or use ethylene oxide may be exposed to emissions that occur during its storage and handling at those facilities, including uncontrolled fugitive emissions or venting with other gases."¹⁰

³ Agency for Toxic Substances & Disease Registry, Clinician Brief: Ethylene Oxide (Jan. 9, 2024), <https://www.atsdr.cdc.gov/environmental-medicine/hcp/clinicianbriefeto/index.html>.

⁴ Landrigan PJ et al., Ethylene oxide: an overview of toxicologic and epidemiologic research., *Am. J Ind Med.* 103 1984, <https://www.osti.gov/biblio/6586744>.

⁵ Agency for Toxic Substances & Disease Registry, Clinician Brief: Ethylene Oxide, (Jan. 9, 2024).

⁶ Occupational Safety & Health Admin., Ethylene Oxide Overview, <https://www.osha.gov/SLTC/ethyleneoxide/index.html> (last visited May 14, 2026).

⁷ Nat'l Toxicology Program, U.S. Dep't of Health & Hum. Servs., Report on Carcinogens (15th ed.), <https://ntp.niehs.nih.gov/ntp/roc/content/profiles/ethyleneoxide.pdf> (last visited May 14, 2026).

⁸ Ethylene Oxide; Occupational Exposure Standard, 50 Fed. Reg. 40, 286, (Oct. 2, 1985), https://archives.federalregister.gov/issue_slice/1985/10/2/40277-40289.pdf.

⁹ Nat'l Toxicology Program, Report on Carcinogens Listing Criteria, National Toxicology Program, <https://ntp.niehs.nih.gov/sites/default/files/ntp/roc/content/profiles/ethyleneoxide.pdf> (last visited May 14, 2026).

¹⁰ *Id.* at 3.

A prior study analyzed over 18,000 workers at sterilization plants using EtO.¹¹ This study found that people exposed to high levels of EtO were linked to an increased risk of developing blood cancers among men and breast cancers among women.¹² Even at low concentrations, EtO exposure presents health risks. Small amounts of EtO exposure over time can cause incremental changes to DNA, with repeated exposures leading to cancer risk.¹³ Overall, there is no safe level of EtO exposure. EtO was included in EPA’s carcinogen list in 2016 after the agency’s updated analysis revealed that EtO was “30 times more carcinogenic to people who continuously inhale it as adults and 50 times more carcinogenic to those who are exposed since birth than the agency previously thought.”¹⁴ These findings prompted EPA to adopt the strengthened 2024 NESHAP designed to reduce ethylene oxide emissions from commercial sterilizers by more than 90 percent and reduce cancer risk from sterilization facilities by 92 percent.¹⁵

II. EtO Emissions Disproportionately Harm People Already Facing Extreme Cumulative Impacts in Southeast Los Angeles

Today, communities of color are now more than twice as likely to live in areas with failing air quality and high pollution burdens.¹⁶ The City of Vernon, City of Maywood, and City of Huntington Park are all boxed in by multiple sources of air pollution including intermodal railyards, industrial facilities, and encircled by the I-710 freeway. Residents in Southeast Los Angeles breathe some of the most toxic air in the South Coast Air Basin.

According to CalEnviroScreen 5.0, Huntington Park’s census tracts score among the highest in the state for particulate matter emissions.¹⁷ Residents of Huntington Park are over 96% Latino and regularly experience toxic releases, truck traffic, cleanup sites, hazardous waste, and solid waste. In addition to environmental hazards, Huntington Park residents face additional vulnerabilities from asthma, cardiovascular disease, low levels of educational attainment, linguistic isolation, poverty, and high housing cost burdens. Similarly, Maywood and Vernon residents are predominantly Latino, experiencing extreme levels of total pollution burden, in stark contrast to predominantly White regions in Agoura Hills and Malibu with nearly half the level of pollution burden experienced by Southeast Los Angeles.

¹¹ Nat’l Inst. For Occupational Safety & Health, Worker Health Study Summaries: Ethylene Oxide (Apr. 2004), <http://med.iab.me/modules/en-cdc/www.cdc.gov/niosh/pgms/worknotify/ethyleneoxide.html>.

¹² *Id.*

¹³ Union of Concerned Scientists, *What is Ethylene Oxide (Eto)?* (Oct. 8, 2021), <https://www.ucs.org/resources/what-ethylene-oxide-eto> (last visited May 15, 2026).

¹⁴ Kiah Collier, *EPA Rejects Texas’ More Lenient Standard for Highly Toxic Air Pollutant*, Texas Tribune (Jan. 28, 2022), <https://www.texastribune.org/2022/01/28/texas-epa-toxic-air/>.

¹⁵ CleanAIRE NC, et al. v. Trump, et al., NRDC Court Battles page, (Apr. 10, 2026), <https://www.nrdc.org/court-battles/cleanaire-nc-et-v-trump-et> (last visited May 15, 2026).

¹⁶ Am. Lung Ass’n, State of the Air (Apr. 2026) at 13, “According to American Lung Association’s 2026 State of the Air Report, “[a]lthough people of color make up 42.1% of the overall population of the U.S., they represent 54.2% of the people living in a county with at least one failing grade. A person of color is more than twice (2.42 times) as likely as a white individual to live in a community with a failing grade for all three pollution measures. Hispanic individuals are more than three times (3.2 times) as likely,” <https://www.lung.org/getmedia/32f0646d-c5de-4501-b0ac-07cd63c974d4/State-of-the-Air-2026-Report.pdf> (last visited May 14, 2026).

¹⁷ California Communities Environmental Health Screening Tool (CalEnviroScreen), Cal. Env’t Prot. Agency, <https://experience.arcgis.com/experience/8c5c5c91ebb8481a8a3d92c897faf8ed/page/Results> (last visited May 14, 2026).

Figure 1: Communities of color living in Southeast Los Angeles experience disproportionately higher levels of pollution burden than predominantly White communities in Los Angeles County.

Area	Predominant Race/Ethnicity	Air Quality: PM2.5	Air Quality: Ozone	Pollution Burden
Vernon (Census Tract: 6037980016)	90.30% Latino	99.81	55.15	98.07
Maywood (Census Tract: 6037533401)	99.14% Latino	99.92	55.6	90.34
Huntington Park (Census Tract: 6037532606)	96.19% Latino	97.67	51.77	83.86
Agoura Hills (Census Tract: 6037800324)	68.63% White	35.46	55.15	37.88
Malibu (Census Tract: 6037800504)	77.47% White	46.28	50.31	47.84

Source: California Communities Environmental Health Screening Tool (CalEnviroScreen), Cal. Env't Prot. Agency, <https://experience.arcgis.com/experience/8c5c5c91ebb8481a8a3d92c897faf8ed/page/Results> (last visited May 14, 2026).

Vernon, Maywood, Huntington Park, along with neighboring Southeast cities, have a painful legacy of contamination from the former Exide battery recycling facility. For years, Exide poisoned surrounding communities and ecosystems by leaking lead. To this day, homes are underdoing soil remediation by the Department of Toxic Substances Control (“DTSC”).¹⁸ Unfortunately, many of the homes previously “cleaned up” by DTSC were not properly remediated and still have traces of lead. Simultaneously, Vernon is now confronting rapidly expanding plans¹⁹ for large-scale data center development projects that will likely increase electricity rates for Southeast Los Angeles communities.²⁰

¹⁸ Cal. Dep’t of Toxic Substances Control, Residential Cleanup Program, <https://dtsc.ca.gov/residential-cleanup/> (last visited May 14, 2026).

¹⁹ S. Coast Air Quality Mgmt. Dist., Facility Information: Prime Data Center (Facility ID: 199797), <https://xappprod.aqmd.gov/find//facility/AQMDsearch?facilityID=199797> (last visited May 14, 2026); CoreSite Data Center (Facility ID: 205154), <https://xappprod.aqmd.gov/find//facility/AQMDsearch?facilityID=205154> (last visited May 14, 2026); Goodman LAX01 (Facility ID: 209974), <https://xappprod.aqmd.gov/find//facility/AQMDsearch?facilityID=209974> (last visited May 15, 2026); David Nusbaum, *Digital Realty Acquires Vernon Property for \$48.8 Million for Data Center Conversion*, Los Angeles Times (Nov. 3, 2025), <https://www.latimes.com/b2b/commercial-real-estate/story/2025-11-03/digital-realty-acquires-vernon-property-48m> (last visited May 15, 2026); and Goodman Energy Park (California Energy Commission Docket Number: 25-SPPE-01), <https://www.energy.ca.gov/powerplant/backup-generating-system/vernon-backup-generating-facility-vbgf> (last visited May 15, 2026).

²⁰ Roger Vincent, *Southern California Has an Unlikely AI Mecca: Industrial Vernon*, Los Angeles Times (Dec. 30, 2025), <https://www.latimes.com/business/story/2025-12-30/southern-california-has-unlikely-ai-mecca-very-industrial-vernon>.

Figure 2: From left to right, home undergoing soil remediation from lead exposure; Data center under construction in close proximity to sterigenics facility in Vernon.



Source: CPU facility tour in Vernon, CA. (Apr. 2026).

Weakening the 2024 NESHAP will increase cancer risk for communities already disproportionately burdened by growing environmental hazards in Vernon, Maywood, and Huntington Park. Of the dozens of facilities slated to be exempted by EPA’s proposal, three are in Southern California, and two (Sterigenics) operate in Vernon where CBE and CPU members live, work, and raise their families.

The Sterigenics facilities in Vernon are notorious²¹ for spewing unsafe levels of EtO into Southeast Los Angeles, undermining quality of life and threatening to shorten life expectancy for workers and families exposed. The Vernon Sterigenics facility uses EtO to sterilize medical equipment and operates within two buildings between 49th Street and 50th Street on Gifford Ave., an increasingly industrialized area encroaching on surrounding neighborhoods. According to the South Coast Air Quality Management District (“SCAQMD”), Vernon homes are as close as 500 feet from the Sterigenics facility, and the bustling Maywood Elementary school is 1,700 feet away, less than half a mile from both facilities.²²

According to recent investigations by SCAQMD, sampling around the facilities revealed “high levels of EtO,”²³ pushing SCAQMD to take action to identify emission sources and reduce emissions as fast as possible, including (1) air monitoring efforts, (2) circulating a Proposition 65 notice, (3) further investigating the facilities’ equipment and compliance with SCAQMD rules

²¹ Tony Briscoe, *Medical sterilizing facilities face growing scrutiny due to toxic gas concerns*, Los Angeles Times (Aug. 9, 2022), <https://www.latimes.com/environment/story/2022-08-09/medical-sterilizing-facilities-face-growing-scrutiny>.

²² S. Coast Air Quality Mgmt. Dist., *Sterigenics Emissions Investigation in Vernon*, <https://www.aqmd.gov/home/news-events/community-investigations/sterigenics> (last visited May 15, 2026).

²³ *Id.*

and regulations, and (4) evaluation of immediate actions to be taken by facilities to reduce leaks or fugitive emissions, including leak and source testing. The communities surrounding the Vernon Sterigenics facilities are already living in extreme non-attainment and breathing some of the highest levels of ozone and particle pollution in the nation daily. Reversing the EPA's 2024 NESHAP would only worsen this reality for Southeast Los Angeles residents.

To make matters worse, American Lung Association's 2026 State of the Air Report ranked Los Angeles as one of the worst U.S. metro areas for ozone pollution, with "Los Angeles County received failing grades across all three categories measured in the report: ozone, short-term particle pollution and annual particle pollution."²⁴ Any increase in the intensity or frequency of exposure to EtO coupled with surrounding pollution levels will only exacerbate negative health outcomes in Southeast Los Angeles. As previously discussed, even small increases in EtO can raise an individual's cancer risk. Increasing EtO exposure coupled with extreme ozone and particle pollution is a serious threat to public health and safety.

Figure 3: SCAQMD map of EtO community grab samples with concentrations are in parts per billion volume ("ppbv").



Source: SCAQMD, *Sterigenics Emissions Investigation in Vernon*, <https://www.aqmd.gov/home/news-events/community-investigations/sterigenics> (last visited May 14, 2026).

²⁴ Meg Tanaka, *44% of Americans breathe dangerously polluted air. In California, it's 82%*, Los Angeles Times, (Apr. 22, 2026), <https://www.latimes.com/environment/story/2026-04-22/44-of-americans-breathe-dangerously-polluted-air-in-california-its-82>; State of the Air 2026, American Lung Association, <https://www.lung.org/getmedia/32f0646d-c5de-4501-b0ac-07cd63c974d4/State-of-the-Air-2026-Report.pdf>, (last visited May 14, 2026).

Figure 4: SCAQMD map of 24-hour sampling locations.



Source: SCAQMD, Sterigenics Emissions Investigation in Vernon, <https://www.aqmd.gov/home/news-events/community-investigations/sterigenics> (last visited May 14, 2026).

III. EPA’s Proposed Rollback of the 2024 NESHAP is Illegal

In July 2024, President Trump’s commercial sterilizers proclamation²⁵ granted a flurry of unlawful exemptions to sterilizer facilities across the nation using EtO. As a result, EPA’s 2024 EtO standards no longer apply to dozens of facilities, sacrificing public health to bolster industry profits. These exemptions allow facilities to skip more stringent emissions controls and avoid continuous emissions monitoring, which is vital to verify that frontline residents are not exposed to EtO. Now, EPA proposes to roll back the 2024 EtO standards for all sources. If approved, this rule would undermine EPA’s own mission to protect human health, dismantling a regulatory framework that EPA itself created to protect breathers from hazardous EtO emissions.

President Trump’s abuse of a narrow provision of the Clean Air Act to grant unwarranted exemptions to EtO facilities must not extend to unwinding the 2024 NESHAP. Such a move would be inconsistent with EPA’s own 2016 EtO risk assessment.²⁶ CBE and CPU stand in solidarity with communities in California and across the nation urging EPA to reverse Trump’s groundless exemptions, to protect residents, uphold the law, and avoid setting a dangerous precedent that will only concentrate pollution and cancer clusters in communities of color and low-income communities.

²⁵ *Regulatory Relief for Certain Stationary Sources to Promote American Security with Respect to Sterile Medical Equipment*, The White House, Presidential Proclamation (Jul. 17, 2025), <https://www.whitehouse.gov/presidential-actions/2025/07/regulatory-relief-for-certain-stationary-sources-to-promote-american-security-with-respect-to-sterile-medical-equipment/>.

²⁶ EPA Administrator Regan Announces Bold Actions to Protect Communities Following the Journey to Justice Tour, U.S. EPA News Release, Headquarters – Office of the Administrator, (Jan. 26, 2022), <https://www.epa.gov/newsreleases/epa-administrator-regan-announces-bold-actions-protect-communities-following-journey>.

It is our position that the Presidential exemptions exceed the President's statutory authority under the Clean Air Act. The President failed to provide any facility or technology-specific analysis that would justify the exemptions, and the exemptions apply to facilities that previously reported being able to meet one or more of the standards in EPA's 2024 NESHAP.²⁷ It is also our position that repealing the 2024 EtO emissions standards risks delaying critical efforts to reduce cancer risk and increase transparency and accountability through leak prevention, capture systems, and continuous air monitoring at facilities. With decades of monitoring and enforcement expertise, EPA is well-positioned to address EtO emissions to eliminate cancer risks across the U.S. Setting limits on EtO emissions, especially near sensitive areas, is a bare minimum safety precaution.

Air pollution does not stay fixed in one place. Maintaining EPA's 2024 NESHAP is vital to protect public health in Los Angeles and across the nation. Effective capture technology is not only feasible but currently in use at the Vernon Sterigenics facility where CBE and CPU members live. We rely on these protective measures to avoid increased risk of cancer for our neighbors.

IV. Conclusion

As previously stated, we are alarmed by EPA's proposal to eliminate the 2024 NESHAP.²⁸ Rolling back current EtO standards runs the risk of discouraging facilities from maintaining best management practices and effectively punishes facilities that invested in monitoring and capture technology to comply with EPA's 2024 EtO standards. Eliminating the 2024 NESHAP also risks confusing local and state agencies such as SCAQMD and the California Air Resources Board regarding their role in addressing EtO emissions. Weakening federal standards will deter much-needed progress to develop more targeted safety measures to eliminate cancer risk for frontline residents. Preserving EPA's current 2024 NESHAP will reduce healthcare costs for workers and families and help guide facilities that have already made concrete steps to reduce toxic emissions in surrounding communities. Consistent rule enforcement will reduce uncertainty around operating costs and support long-term planning and local investment in the best available control technology.

EPA not only has the authority but has a legal obligation to enforce the Clean Air Act to protect the public health, safety, and welfare of U.S. citizens. The Environmental Protection Agency's report "The Benefits and Costs of the Clean Air Act from 1990 to 2020" confirms that the Clean Air Act remains one of the most impactful public health laws in U.S. history and is estimated to have prevented countless premature deaths.²⁹ Now is the time for EPA to double down on improving health outcomes. EtO emissions present a clear and present danger to communities like Vernon, Maywood, and Huntington Park. Given that EPA has known about risks concerning EtO exposure for decades, it is EPA's duty to ground its review and oversight

²⁷ Nat. Res. Def. Council, Complaint, Clean Air v. Trump (Jan. 28, 2026), https://www.nrdc.org/sites/default/files/2026-01/Filed_Complaint_CleanAir_v_Trump_2026.01.28.pdf.

²⁸ U.S. Env'tl. Prot. Agency, Fact Sheet: Final Amendments to Air Toxics Standards for Ethylene Oxide Commercial Sterilization Facilities (2024), https://www.epa.gov/system/files/documents/2024-03/factsheet_etosterilizers_final_3-14-24.pdf (last visited May 15, 2026).

²⁹ U.S. Env'tl. Prot. Agency, The Benefits and Costs of the Clean Air Act from 1990 to 2020: Final Report, Revision (Apr. 2011), [The Benefits and Costs of the Clean Air Act from 1990 to 2020, Final Report, Revision A, April 2011](#).

authority in well-established science. The compounding public health impacts from sterilizers on workers, families, and elderly residents combined with other polluting sources, is simply unacceptable. Maywood, Vernon, and Huntington Park residents deserve to breathe clean air. EPA must withdraw the proposed repeal of the 2024 NESHAP.

Sincerely,
/s/

Moses Huerta, **Comité Pro Uno**
Jennifer Ganata, **Communities for a Better Environment**
Alison Hahm, **Natural Resources Defense Council**

Attached are letters from CBE and CPU describing ongoing concerns with EtO and the importance of preserving and strengthening EtO emissions standards.

- **Attachment A:** CBE Letter to SCAQMD regarding Ethylene Oxide Rule 1405, (April 13, 2023).
- **Attachment B:** CPU Letter to SCAQMD regarding Toxic Air Emissions from Sterigenics Medical Sterilization plant in Vernon, (May 24, 2022).
- **Attachment C:** CBE Letter to SCAQMD on Proposed Amended Rule 1405, Control of Ethylene Oxide Emissions from Sterilization and Related Operations, (Apr. 9, 2023).
- **Attachment D:** CBE Letter to SCAQMD Urging Immediate action on Sterigenics and Stronger and Faster Implementation of Ethylene Oxide Emission Control & Monitoring Measures (May 11, 2023).

Attachment: A

CBE Letter to SCAQMD regarding Ethylene Oxide Rule 1405, (April 13, 2023)

April 13, 2023

Areio Soltani
Planning, Rule Development, and Implementation
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765



RE: Comments on Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations

Dear Areio Soltani:

Communities for a Better Environment (“CBE”) submit these comments on Proposed Rule 1405 (“Proposed Rule”). We appreciate the South Coast Air Quality Management District (“AQMD”) revisiting Rule 1405 to strengthen controls of ethylene oxide (“EtO”) emissions following the United States Environmental Protection Agency (“USEPA”) reconsideration of the potential toxicity of EtO. While we applaud AQMD for new control measures and monitoring requirements, we are concerned that the current language will not meaningfully regulate sterilization and related operations that harbors a known carcinogen identified by the California Air Resources Board (“CARB”) as a Toxic Air Contaminant (TAC) and by the USEPA as a Hazardous Air Pollutant.¹

CBE participates in the Southeast Los Angeles AB 617 Steering Committee. We also participated in the workshops and have met with staff working on this Rule over the past several months. The mission of CBE is to build people's power in California's frontline communities to achieve environmental health and justice by preventing and reducing pollution and building green, healthy, and sustainable communities and environments. It was concerning that AQMD only began investigating facilities that emit EtO *after* the USEPA announced the reconsideration of the potential toxicity of EtO given that Southeast Los Angeles communities are heavily impacted by transportation, industry, warehouses, and many other pollution sources. Stronger requirements under Rule 1405 can help reduce EtO emissions and protect public health.

We hope AQMD will adopt higher standards for Rule 1405 to reduce the health impacts of EtO emissions on the surrounding communities by, but not limited to:

¹ AQMD (2023, March). *Preliminary Draft Staff Report Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations*. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdsr_031723_draftfinal.pdf?sfvrsn=8, pg 1-1.

1. Revisiting and amending Rule 1405 immediately if the USEPA's assessment of EtO requires higher control performance metrics and equipment.
2. Rescheduling implementation dates of emission control requirements sooner rather than later to avoid any potential fugitive emissions.
3. Requiring fenceline monitoring of facilities that emit EtO and warehouses that receive/store products sterilized by EtO, to ensure control systems are performing to the highest standard.

I. Purpose

CBE appreciates AQMD in updating the purpose of this Rule by including warehouses that store materials sterilized with EtO.² By including warehouses in this Rule AQMD can monitor if aeration processes and control systems are efficient in reducing fugitive emissions of EtO.

II. Large Facility Requirements

CBE would like to address that the timeframes for Large Facilities' Stack Emission, Stack Emission Monitoring, and Fugitive Emission Requirements (d)(1)(2)(3) are too long and can be detrimental for communities who live close to facilities that emit EtO. Instead of implementation starting in 2024 or 2025, AQMD should change the dates closer to the end of 2023 or summer of 2024 given the toxicity of the EtO and how it can stay in the air for several months.³

III. Medium Facility Requirements

CBE encourages AQMD to add the requirements from Large Facility (d)(4)(A)(B)(D) to Medium Facility Requirements. This is to ensure the safety and protection of workers and residents who live near or work in warehouses that store or receive materials that were sterilized with EtO. While AQMD's Warehouse Facility Questionnaire responses were limited, three facilities reported that they do not know if they receive EtO-sterilized products.⁴ USEPA estimates that as much as 1% of EtO used remains on sterilized products even after aeration.⁵

² AQMD. (2023 March 23). *Proposed Amended Rule 1405 - Control of Ethylene Oxide Emissions from Sterilization and Related Operations* [slide 4].
http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par-1405---public-workshop_031723_draftfinal.pdf?sfvrsn=8.

³ AQMD. (2023 March 23). *Proposed Amended Rule 1405 - Control of Ethylene Oxide Emissions from Sterilization and Related Operations* [slide 3].
http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par-1405---public-workshop_031723_draftfinal.pdf?sfvrsn=8.

⁴ AQMD. (26 October 2022). *Proposed Amended Rule 1405 - Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes* [slide 16].
http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_wgm3_102122.pdf?sfvrsn=14.

⁵ AQMD. (28 September 2022). *Proposed Amended Rule 1405 - Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes* [slide 32].
<http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405-wgm2-092822.pdf?sfvrsn=14>.

Labeling all materials that have been sterilized with EtO can be critical in protecting consumers and workers who are not aware of the toxic gas and its effect on human health.

Additionally, the timeframes for Medium Facilities' Stack and Fugitive Emission Requirements (e)(1)(2) should be shortened and like our recommendation for Large Facility Requirements, implementation should begin sooner either end of 2023 or summer of 2024, given the harmful effects of EtO exposure.

IV. Small Facility Requirements

Similar to the Large and Medium Facility Requirements, CBE also recommends changing the implementation dates for Small Facilities' Stack and Fugitive Emission Requirements (f)(1)(2). Instead of new requirements beginning in 2025 or 2026, requirements should start at the end of 2023 or summer of 2024, given the harmful effects of EtO exposure.

V. Warehouse Reporting Requirements

We appreciate AQMD requiring Large, New and/or Designated Warehouses to record the number of Sterilized Palletized Units received each month as well as other warehouse information in section (h)(2). CBE recommends the initial summary report include information such as the location of sensitive receptors within 500ft of warehouses, the wind direction at warehouses, and a diagram showing where pallets are received and stored at a warehouse. Per EPA, it's difficult to know how far EtO can travel due to factors such as concentration, weather conditions, wind speed, and the amount of dispersion.⁶ As noted earlier, AQMD has even stated at the March 2023 Public Workshop that EtO can stay in the air for several months.⁷

VI. Permanent Total Enclosure Requirements

CBE recommends AQMD to adopt a stronger requirement for Permanent Total Enclosures (PTE) by requiring monthly monitoring of PTE for negative pressure efficiency. All PTE equipment should be regularly inspected every month for maintenance, quality assurance, predictive maintenance (if equipment is shown to be slowly deteriorating or failing) in order to protect workers and nearby communities.

VII. Lead Detection and Repair (LDAR) Program Requirements

While CBE appreciates AQMD requiring daily audio/visual checks for the LDAR program, we are concerned with the disadvantages of the LDAR control system. Per AQMD, Working Group #4 presentation stated that the disadvantages of LDAR can result with fugitive emissions being

⁶ EPA. (2023, January). *Hazardous Air Pollutants: Ethylene Oxide*. USEPA. [HYPERLINK "https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/frequent-questions-about-ethylene-oxide-eto."](https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/frequent-questions-about-ethylene-oxide-eto)[https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/frequent-questions-about-ethylene-oxide-eto.](https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/frequent-questions-about-ethylene-oxide-eto)

⁷ AQMD. (2023 March 23). *Proposed Amended Rule 1405 - Control of Ethylene Oxide Emissions from Sterilization and Related Operations* [slide 3]. [http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par-1405---public-workshop_031723_draftfinal.pdf?sfvrsn=8.](http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par-1405---public-workshop_031723_draftfinal.pdf?sfvrsn=8)

emitted when repairs or replacements are conducted.⁸ As it stands, the Proposed Rule states Large and Medium Facilities require either Permanent Total Enclosure (PTE) or the LDAR program to control fugitive emissions.⁹ Does this mean that a Large and/or Medium Facility will continue operating if the LDAR control system breaks down? No facility that emits EtO should continue to operate without any fugitive emission controls given the dangers of EtO exposures. We urge AQMD to stop facilities who use LDAR from operating until repairs or replacements are resolved. EtO is a known carcinogen that can stay in the air for several months, which harms communities already heavily impacted by many pollution sources.

VIII. Reporting

As it stands, facilities are required to report within 30 days of exceeding the limit of permitted EtO use. CBE believes this is too large of a timeframe given the toxicity of EtO, its proximity to sensitive receptors, and the life span of EtO in the air. Therefore, AQMD should shorten the reporting from 30 days to 1 week to address exceedances in EtO permitted uses in order protect frontline communities.

IX. Sterilization Facilities Exceeding Applicable Ethylene Oxide Usage

Similar to Reporting requirements, CBE feels that that the timeframe of 24 months for facilities to adhere to the applicable EtO usage is too long given the dangers of EtO emissions. Any facility that emits more EtO than its category amount should adhere to the requirements of the permitted usage as feasible as possible, preferably less than 6 months. This 24-month timeframe is concerning given the current history of large facilities in the South Coast Air Basin and its high EtO emissions. Facilities using EtO outside their category amount that do not have the proper control equipment and/or systems in place are a danger to nearby communities and the 24-month timeframe is too much of a public health risk.

X. Additional Recommendations for Proposed Rule 1405

We urge AQMD to endorse a stronger Rule 1405 by adding additional requirements that provide the following:

Encourage the Adoption of Technologies Above and Beyond Rule Requirements

USEPA is continuing to reassess the toxicity of EtO and current air regulations to determine whether legal standards for EtO emissions can be strengthened.¹⁰ While CBE appreciates the AQMD taking initiative in investigating facilities that emit EtO in early 2022, we recommend

⁸ AQMD. (17 January 2023). *Proposed Amended Rule 1405 – Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization of Fumigation Processes* [slide 31].

http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_wgm_presentation_011323.pdf?sfvrsn=8.

⁹ AQMD. (17 March 2023). *Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations* [slides 6-9]. , pgs 6-9 http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdr1_031723_draftfinal.pdf?sfvrsn=8.

¹⁰ EPA. (2022, December). *What EPA Is Doing to Address Ethylene Oxide and to Learn More About the Chemical*. USEPA. <https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/what-epa-doing-address-ethylene-oxide-and-learn-more-about>.

that AQMD adopt technologies that go above and beyond Rule 1405 requirements. AQMD noted in the third Working Group meeting that Rule 1405 requirements are currently more stringent than CARB's EtO Airborne Toxic Control Measures.¹¹ In addition, the California Office of Environmental Health Hazard Assessment is also currently reviewing the carcinogenicity of EtO.¹² This is to say that AQMD already takes the lead in requiring higher standards for controlling EtO emissions and should adopt stringent standards if AQMD has new research, data, and/or technologies that are available and efficient in reducing EtO emissions. This includes additional safety requirements and technologies for workers who are exposed to EtO daily. AQMD should revisit and amend the Rule any time there is new information or technology available for the control of EtO emissions.

Fenceline Monitoring

CBE urges AQMD to do fenceline monitoring at Large and Medium Facilities in order to protect communities who live and/or work near facilities that emit EtO. Fenceline monitoring can serve to better understand if the emissions controls put in place are working. For example, fenceline monitoring can determine how much fugitive emissions are emitted when a facility's LDAR control system is going through repairs. If AQMD does not plan to cease operations when there are LDAR repairs, then implementing a fenceline monitoring system can help make adjustments well before emissions levels become hazardous to the community or workers.

According to the USEPA, there are many benefits of fenceline monitoring. Fenceline monitoring can encourage early detection and correction of problems before they reach high emission levels.¹³ Fenceline monitoring can help identify equipment and control system leaks and contribute to ongoing research of EtO emissions on the federal, state, and local level, including the community.¹⁴ AQMD already has a history of using fenceline monitoring of EtO emissions as their Preliminary Draft Staff Report for Rule 1405 states how fenceline monitoring was conducted at three sterilization facilities with elevated signals of EtO.¹⁵ Fenceline monitoring proved to be effective in detecting high EtO emissions and whether Sterigenics Vernon's Early Action Reduction Plan (EARP) and interim measures were successful in reducing and controlling EtO Emissions.¹⁶

¹¹ AQMD. (26 October 2022) *Working Group #3: Proposed Amended Rule 1405 - Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization of Fumigation Processes* [slide 30]. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_wgm3_102122.pdf?sfvrsn=14.

¹² Ibid, slide 30.

¹³ EPA. (2016, June). *Petroleum Refinery Fenceline Monitoring Stakeholder Engagement*. USEPA. [slide 9]., pg 9.

¹⁴ Ibid.

¹⁵ AQMD. (2023 March). *Preliminary Draft Staff Report Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations*. SCAQMD. pgs 1-7. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdsr_031723_draftfinal.pdf?sfvrsn=8.

¹⁶ Ibid.

Overall, fenceline monitoring provides additional protection for frontline communities who already face cumulative impacts from many pollution sources and serves to measure the efficiency of control systems and technologies of EtO emissions.

Effective and Productive Interagency Coordination

CBE has voiced on separate occasions that AQMD needs to cooperate with other state and local regulatory agencies to enforce facilities to comply with best practices for frontline communities.¹⁷ Given the toxicity of EtO, AQMD should coordinate with CalOSHA to better protect workers - being that they are the most impacted group in polluting facilities, are frequently people of color or low-income and may also live in the local community. AQMD should also coordinate with the State Water Board to ensure that facilities are not discharging any Sterilizer Exhaust Vacuum Pump working fluid or any EtO contaminated liquids to the wastewater stream.¹⁸ Interagency coordination is instrumental in protecting public health and the environment, and AQMD should consider hosting interagency community workshops that foster an inclusive and accessible environment for the community.

Alternatives to EtO Sterilization

Currently, ethylene oxide accounts for approximately 50% of devices that require sterilization given its advantage of low temperature, penetration of products, and large capacity usage.¹⁹ But ethylene oxide is a known carcinogen by AQMD, OEHHA, and the USEPA, and yet it continues to be used for sterilization and other industrial usage.²⁰ CBE encourages AQMD to look at alternatives to EtO sterilization such as ionizing radiation (gamma),²¹ steam methods, hydrogen peroxide vapor,²² and other safe alternatives human health. The lack of material compatibility of EtO and industrial feasibility should not sacrifice the health of communities, workers, and the

¹⁷ AQMD. (2022, November) *BOARD MEETING DATE: November 4, 2022: AGENDA NO. 28*. SCAQMD. pg A-31. <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2022/2022-Nov4-028.pdf?sfvrsn=6>.

¹⁸ AQMD. (2023 March). *Preliminary Draft Rule Language*. SCAQMD. pg 24. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdr1_031723_draftfinal.pdf?sfvrsn=8.

¹⁹ AQMD. (17 August 2022). *Proposed Amended Rule 1405 – Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes*. [slide 14-15]. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_wgm1_081122.pdf?sfvrsn=6.

²⁰ AQMD. (28 September 2022) *Working Group #2: Proposed Amended Rule 1405 - Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes* [slide 10]. <http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405-wgm2-092822.pdf?sfvrsn=14>.

²¹ Gamma Industry Processing Alliance. (2017 August). *A Comparison of Gamma, E-beam, X-ray and Ethylene Oxide Technologies for the Industrial Sterilization of Medical Devices and Healthcare Products*. Stanford University. pgs 10-11. <http://large.stanford.edu/courses/2018/ph241/goronzy2/docs/gipa-aug17.pdf>.

²² Shahbandar, Lena. (2018 November). *Alternatives to Ethylene Oxide*. StopSterigenics. <https://www.stopsterigenics.com/post/alternatives-to-ethylene-oxide>.

environment. AQMD should reconsider adopting sterilizing alternatives based on material combustibility as a solution to reduce and control EtO emissions.

XI. Conclusion

We appreciate the work of AQMD on Proposed Rule 1405 and the opportunity to comment. We highly encourage AQMD to endorse a stronger Rule. We welcome the opportunity to discuss these matters.

Sincerely,

Ambar Rivera
Staff Researcher

Attachment: B

CPU Letter to SCAQMD regarding Toxic Air Emissions from Sterigenics Medical
Sterilization plant in Vernon, (May 24, 2022)



COMITÉ PRO UNO

CENTRO DE ASESORÍA POPULAR

4030 E. Slauson Ave.

Maywood, CA 90270

May 24, 2022

Ms. Wayne Natri
Executive Director
South Coast AQMD
21865 Copley Drive
Diamond Bar California 91765

Re: Toxic Air Emissions from Sterigenics Medical Sterilization plant in Vernon

Dear Ms. Natri:

I am writing you to urge South Coast Air Quality Management you to force Sterigenics to cease operations of any activities that are contributing to elevated air emissions of a highly toxic chemicals ethylene oxide. Ethylene Oxide is both a neurotoxin and a carcinogen

Maywood exemplifies an environmental justice community due to its close proximity to multiple sources of air pollution—intermodal rail yards, industrial facilities in the adjoining City of Vernon, and the I-710 freeways. Residents here breathe some of the most toxic air in the four-county area that makes up the South Coast Air Basin. And, not surprisingly, the annual income per capita is less than half that of Los Angeles County residents.

As you know Maywood elementary school is located 1700 feet and the level of emissions are 1800 times the one in a million risk level. our community of Maywood is only 500 feet from the sterigenics facility..Please listen to the voice of our community .We do not want any additional health burdens. We want to see you approach be be in a cumulative impacts effect of all the contaminants this community is expose to Close down Sterigenics Now!

Very truly yours

Felipe Aguirre Director,

Tel: (323) 560-1111 • Fax: (323) 560-1505 • Email: pro1centro@aol.com

Attachment: C

CBE Letter to SCAQMD on Proposed Amended Rule 1405, Control of Ethylene Oxide
Emissions from Sterilization and Related Operations, (Apr. 9, 2023)

August 9, 2023

Areio Soltani
Planning, Rule Development, and Implementation
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765



RE: Comments on Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations

Dear Areio Soltani:

Communities for a Better Environment (“CBE”) submit these comments on Proposed Rule 1405 (“Proposed Rule”). We appreciate the South Coast Air Quality Management District (“AQMD”) revisiting Rule 1405 to strengthen controls of ethylene oxide (“EtO”) emissions following community concerns on the Preliminary Draft Rule Language released in March 2023.¹ While we appreciate AQMD updating the Proposed Rule with additional measures and requirements, we are disappointed that AQMD continues to fall short in requiring mitigation measures that meaningfully protect environmental justice communities that already face a disproportionate amount of air pollution from transportation, industry, warehouses, and many other sources.

CBE has been involved in the Proposed Rule 1405 process since August 2022 and has continuously advocated for stronger requirements to reduce and control EtO emissions from sterilization facilities. While we acknowledge AQMD for including additional measures such as fenceline monitoring and curtailment of sterilization operations in the Revised Preliminary Draft Rule Language, we are alarmed that these rule additions and updates also fall short in protecting nearby communities that are at risk of high EtO exposure.

As previously mentioned in our April and May 2023 comment letters CBE requests AQMD effectuate strong requirements for facilities that emit EtO such as:

- Requiring Small, Medium, and Large Facilities to adhere to Rule 1405 regulations end of 2023 instead of 2025-2026.
- Requiring facilities to suspend operations when any control equipment or technology breaks down or is going through repairs or replacements.
- Requiring Rule updates when stronger control systems and technology becomes available.
- Requiring interagency coordination with local, state, and federal agencies to educate and better protect workers from EtO exposure by always requiring personal protection equipment and high-quality respirators.

¹ AQMD. (2023, March). *Preliminary Draft Staff Report Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations*. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdsr_031723_draftfinal.pdf?sfvrsn=8.

- Requiring the initial summary report to include information such as the location of sensitive receptors within 500ft of warehouses, the wind direction at warehouses, and a diagram showing where pallets are received and stored at a warehouse. Per EPA, it's difficult to know how far EtO can travel due to factors such as concentration, weather conditions, wind speed, and the amount of dispersion.² As noted earlier, AQMD has even stated at the March 2023 Public Workshop that EtO can stay in the air for several months.³
- Requiring a Rule update when new technologies and data are available. This includes additional safety requirements and technologies for workers who are exposed to EtO on a daily basis. AQMD should revisit and amend the Rule any time there is new information or technology available for the mitigation of EtO emissions.
- Requiring interagency coordination with state and federal agencies to enforce facilities to comply with best practices for frontline communities. Given the toxicity of EtO, AQMD should coordinate with CalOSHA to better protect workers - being that they are the most impacted group in polluting facilities, are frequently people of color or low-income and may also live in the local community. AQMD should also coordinate with the State Water Board to ensure that facilities are not discharging any Sterilizer Exhaust Vacuum Pump working fluid or any EtO contaminated liquids to the wastewater stream.⁴ Interagency coordination is instrumental in protecting public health and the environment, and AQMD should consider hosting interagency community workshops that foster an inclusive and accessible environment for the community.
- Requiring AQMD to reconsider alternatives to EtO sterilization such as ionizing radiation (gamma),⁵ steam methods, hydrogen peroxide vapor,⁶ and other safe alternatives to human health. The lack of material compatibility of EtO and industrial feasibility should not sacrifice the health of communities, workers, and the environment. AQMD should reconsider adopting sterilizing alternatives based on material compatibility as a solution to reduce and control EtO emissions.

² EPA. (2023, January). *Hazardous Air Pollutants: Ethylene Oxide*. USEPA. □HYPERLINK "https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/frequent-questions-about-ethylene-oxide-eto." <https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/frequent-questions-about-ethylene-oxide-eto>.

³ AQMD. (2023 March 23). *Proposed Amended Rule 1405 - Control of Ethylene Oxide Emissions from Sterilization and Related Operations* [slide 3]. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par-1405---public-workshop_031723_draftfinal.pdf?sfvrsn=8.

⁴ AQMD. (2023 March). *Preliminary Draft Rule Language*. SCAQMD. pg 24. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdlr_031723_draftfinal.pdf?sfvrsn=8.

⁵ Gamma Industry Processing Alliance. (2017 August). *A Comparison of Gamma, E-beam, X-ray and Ethylene Oxide Technologies for the Industrial Sterilization of Medical Devices and Healthcare Products*. Stanford University. pgs 10-11. <http://large.stanford.edu/courses/2018/ph241/goronzy2/docs/gipa-aug17.pdf>.

⁶ Shahbandar, Lena. (2018 November). *Alternatives to Ethylene Oxide*. StopSterigenics. <https://www.stopsterigenics.com/post/alternatives-to-ethylene-oxide>.

While the Revised Preliminary Draft Rule Language has included and revised some of our concerns listed above, the Proposed Rule continues to be ineffective in controlling and preventing EtO emissions particularly with the technology used for fenceline monitoring.

- According to AQMD's Working Group #6 presentation,⁷ out of the six EtO monitoring technologies proposed by AQMD, only one meets the criteria – the canister collection – which still faces availability challenges due to potential surge in demand. As for the other EtO monitoring technology, there are issues either with detection limits, established methods, and/or availability. What happens if the Continuous Emission Monitoring System (CEMS) doesn't work and there isn't fenceline monitoring to alert high EtO emissions (since fenceline monitoring will discontinue once CEMS kicks in)?⁸ What type of monitoring will take place? We urge AQMD to continue investigating better EtO monitoring technology that detects EtO emissions at the lowest limit to protect nearby communities.

It is critical that AQMD revisit the Preliminary Draft Rule Language and implement a stronger ruling with high quality technology, real-time measurements and analysis, and continuous fenceline monitoring paired with CEMS. AQMD should not take lightly the dangers of EtO exposure and carcinogen toxicity given the reassessments by state and federal agencies.⁹ Environmental justice communities have suffered enough and should not face neglect and injustice by weak and neutral technology and policies that sacrifice their health. We urge AQMD to continue strengthening the Proposed Rule and we welcome the opportunity to discuss these matters.

Sincerely,

Ambar Rivera
Staff Researcher

⁷ AQMD. (2023 June 8). *Proposed Amended Rule 1405 - Control of Ethylene Oxide Emissions from Sterilization and Related Operations* [slide 37]. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par-1405_wgm6_final.pdf?sfvrsn=6.

⁸ AQMD. (2023 July 6). *Proposed Amended Rule 1405 - Control of Ethylene Oxide Emissions from Sterilization and Related Operations* [slide 11]. <http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/pr-1405-wgm7-presentation-063023.pdf?sfvrsn=12>.

⁹ AQMD (2023, March). *Preliminary Draft Staff Report Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations*. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdsr_031723_draftfinal.pdf?sfvrsn=8, pg 1-1.

Attachment 1

May 11, 2023

Mr. Wayne Natri
Executive Officer
South Coast Air Quality Management District
21865 Copley Dr
Diamond Bar, CA 91765



VIA ELECTRONIC MAIL

RE: URGING Immediate action on Sterigenics and Stronger and Faster Implementation of Ethylene Oxide Emission Control & Monitoring Measures

Dear Director Natri,

Communities for a Better Environment (“CBE”) appreciates the opportunity to engage in the Ethylene Oxide (EtO) rulemaking process—Rule 1405. CBE is a community-based environmental health and justice organization, organizing with Southeast Los Angeles communities living near the Sterigenics facility in Vernon. We are writing to express our disappointment with the rulemaking process and request a meeting with you to address this urgent air pollution and public health emergency.

EtO has been a known carcinogen since the 1950s. EtO is a flammable, colorless gas that can cause cancer in humans and even damage children’s DNA. Exposure to EtO has detrimental health impacts to communities and workers such as debilitating the respiratory system to cancers such as lymphoma. CBE submitted a comment letter on the Proposed Amended Rule 1405 on April 13, 2023. (See Attachment 1) We believe the current draft language will not meaningfully regulate sterilization and related operations that harbors a known carcinogen identified by the California Air Resources Board (“CARB”) as a Toxic Air Contaminant (TAC) and by the United States Environmental Protection Agency (“USEPA”) as a Hazardous Air Pollutant. It is also disheartening to see that AQMD only began investigating facilities that emit EtO *after* the USEPA announced the reevaluation of the potential toxicity of EtO.

AQMD stated in the April 11, 2023 PAR 1405 study session that fence-line monitoring would not be the most effective tool for PAR 1405 due to other emission capturing and monitoring,¹⁰ but now the USEPA has announced an action proposal that would require continuous air pollution monitoring at the facility to ensure that pollution control equipment is operating

¹⁰ AQMD. *Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations Study Session*. April 11, 2023.
https://drive.google.com/file/d/1TvOd5uUIs3MzoVfyLLLszOt2GbR_gnR/view?usp=sharing.

effectively.¹¹ The continuous emissions monitors required by this proposal are the most accurate type of monitoring for EtO emissions from commercial sterilizers.¹²

CBE requests AQMD impose stronger requirements for facilities that emit EtO such as:

- Requiring Small, Medium, and Large Facilities to adhere to Rule 1405 regulations by end of 2023 instead of 2025-2026.
- Requiring facilities to suspend operations when any control equipment or technology breaks down or is going through repairs or replacements.
- Requiring facilities to suspend operations when a facility emits more EtO than its category amount.
- Requiring Rule updates when stronger control systems and technology becomes available.
- Requiring interagency coordination with CalOSHA to educate and better protect workers from EtO exposure by always requiring personal protection equipment and high-quality respirators.
- Requiring fence-line monitoring at facilities that emit EtO given that EtO can stay in the air for several months. Recently, the USEPA released a proposal that would require continuous air pollution monitoring at the facility to ensure that pollution control equipment is operating effectively and require data to be submitted to EPA electronically twice a year.¹³ Fenceline monitoring can monitor early detection leaks and help evaluate the effectiveness of control systems and equipment to better protect workers and communities from EtO exposure.

Frontline communities, such as Southeast Los Angeles, already face a disproportionate amount of pollution from transportation, industry, warehouses, and many other pollution sources. It is critical that AQMD implement a stronger ruling that takes effect immediately rather than a year or two from its adoption date. This is a significant environmental justice issue that impacts all generations of communities, leaving some residents unaware that a facility is harboring a known carcinogen. While environmental justice has been identified as a priority of Governor Newsom, CalEPA, and AQMD Board, we continue to see the same patterns of neglect and injustice in low-income communities of color. We request a meeting with you and your staff to discuss this urgent matter. Please keep in mind that some of the households impacted here are the same that have been severely impacted by the regulatory failures related to Exide. The time to act is now. We appreciate your prompt attention to this issue.

¹¹ USEPA. *EPA Proposes to Strengthen Clean Air Act Standards for Ethylene Oxide from Commercial Sterilization Facilities: Fact Sheet*. <https://www.epa.gov/system/files/documents/2023-04/Fact%20Sheet%20Proposal%20to%20Address%20EtO%20Risks%20from%20Commercial%20Sterilizers.pdf>. Pg 1-2.

¹² Ibid.

¹³ USEPA. *EPA Proposes to Strengthen Clean Air Act Standards for Ethylene Oxide from Commercial Sterilization Facilities: Fact Sheet*. <https://www.epa.gov/system/files/documents/2023-04/Fact%20Sheet%20Proposal%20to%20Address%20EtO%20Risks%20from%20Commercial%20Sterilizers.pdf>. Pg 1.

Sincerely,

A handwritten signature in black ink, appearing to be 'AR' followed by a stylized flourish.

Ambar Rivera, Staff Researcher
Bahram Fazeli, Director of Research and Policy
Communities for a Better Environment

CC:

Wayne Natri
Executive Officer

Michael Krause
Assistant Deputy Executive Officer

Neil Fujiwara
Program Supervisor

Kalam Cheung, Ph.D.
Planning and Rules Manager

Areio Soltani
Air Quality Specialist

Attachment 2

April 13, 2023

Areio Soltani
Planning, Rule Development, and Implementation
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765



RE: Comments on Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations

Dear Areio Soltani:

Communities for a Better Environment (“CBE”) submit these comments on Proposed Rule 1405 (“Proposed Rule”). We appreciate the South Coast Air Quality Management District (“AQMD”) revisiting Rule 1405 to strengthen controls of ethylene oxide (“EtO”) emissions following the United States Environmental Protection Agency (“USEPA”) reconsideration of the potential toxicity of EtO. While we applaud AQMD for new control measures and monitoring requirements, we are concerned that the current language will not meaningfully regulate sterilization and related operations that harbors a known carcinogen identified by the California Air Resources Board (“CARB”) as a Toxic Air Contaminant (TAC) and by the USEPA as a Hazardous Air Pollutant.¹⁴

CBE participates in the Southeast Los Angeles AB 617 Steering Committee. We also participated in the workshops and have met with staff working on this Rule over the past several months. The mission of CBE is to build people's power in California's frontline communities to achieve environmental health and justice by preventing and reducing pollution and building green, healthy, and sustainable communities and environments. It was concerning that AQMD only began investigating facilities that emit EtO *after* the USEPA announced the reconsideration of the potential toxicity of EtO given that Southeast Los Angeles communities are heavily impacted by transportation, industry, warehouses, and many other pollution sources. Stronger requirements under Rule 1405 can help reduce EtO emissions and protect public health.

We hope AQMD will adopt higher standards for Rule 1405 to reduce the health impacts of EtO emissions on the surrounding communities by, but not limited to:

¹⁴ AQMD (2023, March). *Preliminary Draft Staff Report Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations*. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdsr_031723_draftfinal.pdf?sfvrsn=8, pg 1-1.

1. Revisiting and amending Rule 1405 immediately if the USEPA's assessment of EtO requires higher control performance metrics and equipment.
2. Rescheduling implementation dates of emission control requirements sooner rather than later to avoid any potential fugitive emissions.
3. Requiring fenceline monitoring of facilities that emit EtO and warehouses that receive/store products sterilized by EtO, to ensure control systems are performing to the highest standard.

I. Purpose

CBE appreciates AQMD in updating the purpose of this Rule by including warehouses that store materials sterilized with EtO.¹⁵ By including warehouses in this Rule AQMD can monitor if aeration processes and control systems are efficient in reducing fugitive emissions of EtO.

II. Large Facility Requirements

CBE would like to address that the timeframes for Large Facilities' Stack Emission, Stack Emission Monitoring, and Fugitive Emission Requirements (d)(1)(2)(3) are too long and can be detrimental for communities who live close to facilities that emit EtO. Instead of implementation starting in 2024 or 2025, AQMD should change the dates closer to the end of 2023 or summer of 2024 given the toxicity of the EtO and how it can stay in the air for several months.¹⁶

III. Medium Facility Requirements

CBE encourages AQMD to add the requirements from Large Facility (d)(4)(A)(B)(D) to Medium Facility Requirements. This is to ensure the safety and protection of workers and residents who live near or work in warehouses that store or receive materials that were sterilized with EtO. While AQMD's Warehouse Facility Questionnaire responses were limited, three facilities reported that they do not know if they receive EtO-sterilized products.¹⁷ USEPA estimates that as much as 1% of EtO used remains on sterilized products even after aeration.¹⁸

¹⁵ AQMD. (2023 March 23). *Proposed Amended Rule 1405 - Control of Ethylene Oxide Emissions from Sterilization and Related Operations* [slide 4].
http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par-1405---public-workshop_031723_draftfinal.pdf?sfvrsn=8.

¹⁶ AQMD. (2023 March 23). *Proposed Amended Rule 1405 - Control of Ethylene Oxide Emissions from Sterilization and Related Operations* [slide 3].
http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par-1405---public-workshop_031723_draftfinal.pdf?sfvrsn=8.

¹⁷ AQMD. (26 October 2022). *Proposed Amended Rule 1405 - Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes* [slide 16].
http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_wgm3_102122.pdf?sfvrsn=14.

¹⁸ AQMD. (28 September 2022). *Proposed Amended Rule 1405 - Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes* [slide 32].
<http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405-wgm2-092822.pdf?sfvrsn=14>.

Labeling all materials that have been sterilized with EtO can be critical in protecting consumers and workers who are not aware of the toxic gas and its effect on human health.

Additionally, the timeframes for Medium Facilities' Stack and Fugitive Emission Requirements (e)(1)(2) should be shortened and like our recommendation for Large Facility Requirements, implementation should begin sooner either end of 2023 or summer of 2024, given the harmful effects of EtO exposure.

IV. Small Facility Requirements

Similar to the Large and Medium Facility Requirements, CBE also recommends changing the implementation dates for Small Facilities' Stack and Fugitive Emission Requirements (f)(1)(2). Instead of new requirements beginning in 2025 or 2026, requirements should start at the end of 2023 or summer of 2024, given the harmful effects of EtO exposure.

V. Warehouse Reporting Requirements

We appreciate AQMD requiring Large, New and/or Designated Warehouses to record the number of Sterilized Palletized Units received each month as well as other warehouse information in section (h)(2). CBE recommends the initial summary report include information such as the location of sensitive receptors within 500ft of warehouses, the wind direction at warehouses, and a diagram showing where pallets are received and stored at a warehouse. Per EPA, it's difficult to know how far EtO can travel due to factors such as concentration, weather conditions, wind speed, and the amount of dispersion.¹⁹ As noted earlier, AQMD has even stated at the March 2023 Public Workshop that EtO can stay in the air for several months.²⁰

VI. Permanent Total Enclosure Requirements

CBE recommends AQMD to adopt a stronger requirement for Permanent Total Enclosures (PTE) by requiring monthly monitoring of PTE for negative pressure efficiency. All PTE equipment should be regularly inspected every month for maintenance, quality assurance, predictive maintenance (if equipment is shown to be slowly deteriorating or failing) in order to protect workers and nearby communities.

VII. Lead Detection and Repair (LDAR) Program Requirements

While CBE appreciates AQMD requiring daily audio/visual checks for the LDAR program, we are concerned with the disadvantages of the LDAR control system. Per AQMD, Working Group #4 presentation stated that the disadvantages of LDAR can result with fugitive emissions being

¹⁹ EPA. (2023, January). *Hazardous Air Pollutants: Ethylene Oxide*. USEPA. HYPERLINK "<https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/frequent-questions-about-ethylene-oxide-eto>." <https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/frequent-questions-about-ethylene-oxide-eto>.

²⁰ AQMD. (2023 March 23). *Proposed Amended Rule 1405 - Control of Ethylene Oxide Emissions from Sterilization and Related Operations* [slide 3]. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par-1405---public-workshop_031723_draftfinal.pdf?sfvrsn=8.

emitted when repairs or replacements are conducted.²¹ As it stands, the Proposed Rule states Large and Medium Facilities require either Permanent Total Enclosure (PTE) or the LDAR program to control fugitive emissions.²² Does this mean that a Large and/or Medium Facility will continue operating if the LDAR control system breaks down? No facility that emits EtO should continue to operate without any fugitive emission controls given the dangers of EtO exposures. We urge AQMD to stop facilities who use LDAR from operating until repairs or replacements are resolved. EtO is a known carcinogen that can stay in the air for several months, which harms communities already heavily impacted by many pollution sources.

VIII. Reporting

As it stands, facilities are required to report within 30 days of exceeding the limit of permitted EtO use. CBE believes this is too large of a timeframe given the toxicity of EtO, its proximity to sensitive receptors, and the life span of EtO in the air. Therefore, AQMD should shorten the reporting from 30 days to 1 week to address exceedances in EtO permitted uses in order protect frontline communities.

IX. Sterilization Facilities Exceeding Applicable Ethylene Oxide Usage

Similar to Reporting requirements, CBE feels that that the timeframe of 24 months for facilities to adhere to the applicable EtO usage is too long given the dangers of EtO emissions. Any facility that emits more EtO than its category amount should adhere to the requirements of the permitted usage as feasible as possible, preferably less than 6 months. This 24-month timeframe is concerning given the current history of large facilities in the South Coast Air Basin and its high EtO emissions. Facilities using EtO outside their category amount that do not have the proper control equipment and/or systems in place are a danger to nearby communities and the 24-month timeframe is too much of a public health risk.

X. Additional Recommendations for Proposed Rule 1405

We urge AQMD to endorse a stronger Rule 1405 by adding additional requirements that provide the following:

Encourage the Adoption of Technologies Above and Beyond Rule Requirements

USEPA is continuing to reassess the toxicity of EtO and current air regulations to determine whether legal standards for EtO emissions can be strengthened.²³ While CBE appreciates the AQMD taking initiative in investigating facilities that emit EtO in early 2022, we recommend

²¹ AQMD. (17 January 2023). *Proposed Amended Rule 1405 – Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization of Fumigation Processes* [slide 31].

http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_wgm_presentation_011323.pdf?sfvrsn=8.

²² AQMD. (17 March 2023). *Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations* [slides 6-9]., pgs 6-9 http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdr1_031723_draftfinal.pdf?sfvrsn=8.

²³ EPA. (2022, December). *What EPA Is Doing to Address Ethylene Oxide and to Learn More About the Chemical*. USEPA. <https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/what-epa-doing-address-ethylene-oxide-and-learn-more-about>.

that AQMD adopt technologies that go above and beyond Rule 1405 requirements. AQMD noted in the third Working Group meeting that Rule 1405 requirements are currently more stringent than CARB's EtO Airborne Toxic Control Measures.²⁴ In addition, the California Office of Environmental Health Hazard Assessment is also currently reviewing the carcinogenicity of EtO.²⁵ This is to say that AQMD already takes the lead in requiring higher standards for controlling EtO emissions and should adopt stringent standards if AQMD has new research, data, and/or technologies that are available and efficient in reducing EtO emissions. This includes additional safety requirements and technologies for workers who are exposed to EtO daily. AQMD should revisit and amend the Rule any time there is new information or technology available for the control of EtO emissions.

Fenceline Monitoring

CBE urges AQMD to do fenceline monitoring at Large and Medium Facilities in order to protect communities who live and/or work near facilities that emit EtO. Fenceline monitoring can serve to better understand if the emissions controls put in place are working. For example, fenceline monitoring can determine how much fugitive emissions are emitted when a facility's LDAR control system is going through repairs. If AQMD does not plan to cease operations when there are LDAR repairs, then implementing a fenceline monitoring system can help make adjustments well before emissions levels become hazardous to the community or workers.

According to the USEPA, there are many benefits of fenceline monitoring. Fenceline monitoring can encourage early detection and correction of problems before they reach high emission levels.²⁶ Fenceline monitoring can help identify equipment and control system leaks and contribute to ongoing research of EtO emissions on the federal, state, and local level, including the community.²⁷ AQMD already has a history of using fenceline monitoring of EtO emissions as their Preliminary Draft Staff Report for Rule 1405 states how fenceline monitoring was conducted at three sterilization facilities with elevated signals of EtO.²⁸ Fenceline monitoring proved to be effective in detecting high EtO emissions and whether Sterigenics Vernon's Early Action Reduction Plan (EARP) and interim measures were successful in reducing and controlling EtO Emissions.²⁹

²⁴ AQMD. (26 October 2022) *Working Group #3: Proposed Amended Rule 1405 - Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization of Fumigation Processes* [slide 30]. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_wgm3_102122.pdf?sfvrsn=14.

²⁵ Ibid, slide 30.

²⁶ EPA. (2016, June). *Petroleum Refinery Fenceline Monitoring Stakeholder Engagement*. USEPA. [slide 9]., pg 9.

²⁷ Ibid.

²⁸ AQMD. (2023 March). *Preliminary Draft Staff Report Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations*. SCAQMD. pgs 1-7. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdsr_031723_draftfinal.pdf?sfvrsn=8.

²⁹ Ibid.

Overall, fenceline monitoring provides additional protection for frontline communities who already face cumulative impacts from many pollution sources and serves to measure the efficiency of control systems and technologies of EtO emissions.

Effective and Productive Interagency Coordination

CBE has voiced on separate occasions that AQMD needs to cooperate with other state and local regulatory agencies to enforce facilities to comply with best practices for frontline communities.³⁰ Given the toxicity of EtO, AQMD should coordinate with CalOSHA to better protect workers - being that they are the most impacted group in polluting facilities, are frequently people of color or low-income and may also live in the local community. AQMD should also coordinate with the State Water Board to ensure that facilities are not discharging any Sterilizer Exhaust Vacuum Pump working fluid or any EtO contaminated liquids to the wastewater stream.³¹ Interagency coordination is instrumental in protecting public health and the environment, and AQMD should consider hosting interagency community workshops that foster an inclusive and accessible environment for the community.

Alternatives to EtO Sterilization

Currently, ethylene oxide accounts for approximately 50% of devices that require sterilization given its advantage of low temperature, penetration of products, and large capacity usage.³² But ethylene oxide is a known carcinogen by AQMD, OEHHA, and the USEPA, and yet it continues to be used for sterilization and other industrial usage.³³ CBE encourages AQMD to look at alternatives to EtO sterilization such as ionizing radiation (gamma),³⁴ steam methods, hydrogen peroxide vapor,³⁵ and other safe alternatives human health. The lack of material compatibility of EtO and industrial feasibility should not sacrifice the health of communities, workers, and the

³⁰ AQMD. (2022, November) *BOARD MEETING DATE: November 4, 2022: AGENDA NO. 28*. SCAQMD. pg A-31. <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2022/2022-Nov4-028.pdf?sfvrsn=6>.

³¹ AQMD. (2023 March). *Preliminary Draft Rule Language*. SCAQMD. pg 24. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_pdr1_031723_draftfinal.pdf?sfvrsn=8.

³² AQMD. (17 August 2022). *Proposed Amended Rule 1405 – Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes*. [slide 14-15]. http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405_wgm1_081122.pdf?sfvrsn=6.

³³ AQMD. (28 September 2022) *Working Group #2: Proposed Amended Rule 1405 - Control of Ethylene Oxide and Chlorofluorocarbon Emissions from Sterilization or Fumigation Processes* [slide 10]. <http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1405/par1405-wgm2-092822.pdf?sfvrsn=14>.

³⁴ Gamma Industry Processing Alliance. (2017 August). *A Comparison of Gamma, E-beam, X-ray and Ethylene Oxide Technologies for the Industrial Sterilization of Medical Devices and Healthcare Products*. Stanford University. pgs 10-11. <http://large.stanford.edu/courses/2018/ph241/goronzy2/docs/gipa-aug17.pdf>.

³⁵ Shahbandar, Lena. (2018 November). *Alternatives to Ethylene Oxide*. StopSterigenics. <https://www.stopsterigenics.com/post/alternatives-to-ethylene-oxide>.

environment. AQMD should reconsider adopting sterilizing alternatives based on material combustibility as a solution to reduce and control EtO emissions.

XI. Conclusion

We appreciate the work of AQMD on Proposed Rule 1405 and the opportunity to comment. We highly encourage AQMD to endorse a stronger Rule. We welcome the opportunity to discuss these matters.

Sincerely,

Ambar Rivera
Staff Researcher

Attachment: D

CBE Letter to SCAQMD Urging Immediate action on Sterigenics and Stronger and Faster Implementation of Ethylene Oxide Emission Control & Monitoring Measures (May 11, 2023)

May 11, 2023

Mr. Wayne Natri
Executive Officer
South Coast Air Quality Management District
21865 Copley Dr
Diamond Bar, CA 91765



VIA ELECTRONIC MAIL

RE: URGING Immediate action on Sterigenics and Stronger and Faster Implementation of Ethylene Oxide Emission Control & Monitoring Measures

Dear Director Natri,

Communities for a Better Environment (“CBE”) appreciates the opportunity to engage in the Ethylene Oxide (EtO) rulemaking process—Rule 1405. CBE is a community-based environmental health and justice organization, organizing with Southeast Los Angeles communities living near the Sterigenics facility in Vernon. We are writing to express our disappointment with the rulemaking process and request a meeting with you to address this urgent air pollution and public health emergency.

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AQMD stated in the April 11, 2023 PAR 1405 study session that fence-line monitoring would not be the most effective tool for PAR 1405 due to other emission capturing and monitoring,¹ but now the USEPA has announced an action proposal that would require continuous air pollution monitoring at the facility to ensure that pollution control equipment is operating effectively.² The continuous emissions monitors required by this proposal are the most accurate type of monitoring for EtO emissions from commercial sterilizers.³

¹ AQMD. *Proposed Amended Rule 1405 – Control of Ethylene Oxide Emissions from Sterilization and Related Operations Study Session*. April 11, 2023.

https://drive.google.com/file/d/1TvOd5uUIs3MzoVfyLLLszOt2GbR_gnR/view?usp=sharing.

² USEPA. *EPA Proposes to Strengthen Clean Air Act Standards for Ethylene Oxide from Commercial Sterilization Facilities: Fact Sheet*. <https://www.epa.gov/system/files/documents/2023-04/Fact%20Sheet%20Proposal%20to%20Address%20EtO%20Risks%20from%20Commercial%20Sterilizers.pdf>. Pg 1-2.

³ Ibid.

CBE requests AQMD impose stronger requirements for facilities that emit EtO such as:

- Requiring Small, Medium, and Large Facilities to adhere to Rule 1405 regulations by end of 2023 instead of 2025-2026.
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- Requiring facilities to suspend operations when a facility emits more EtO than its category amount.
- Requiring Rule updates when stronger control systems and technology becomes available.
- Requiring interagency coordination with CalOSHA to educate and better protect workers from EtO exposure by always requiring personal protection equipment and high-quality respirators.
- Requiring fence-line monitoring at facilities that emit EtO given that EtO can stay in the air for several months. Recently, the USEPA released a proposal that would require continuous air pollution monitoring at the facility to ensure that pollution control equipment is operating effectively and require data to be submitted to EPA electronically twice a year.⁴ Fenceline monitoring can monitor early detection leaks and help evaluate the effectiveness of control systems and equipment to better protect workers and communities from EtO exposure.

Frontline communities, such as Southeast Los Angeles, already face a disproportionate amount of pollution from transportation, industry, warehouses, and many other pollution sources. It is critical that AQMD implement a stronger ruling that takes effect immediately rather than a year or two from its adoption date. This is a significant environmental justice issue that impacts all generations of communities, leaving some residents unaware that a facility is harboring a known carcinogen. While environmental justice has been identified as a priority of Governor Newsom, CalEPA, and AQMD Board, we continue to see the same patterns of neglect and injustice in low-income communities of color. We request a meeting with you and your staff to discuss this urgent matter. Please keep in mind that some of the households impacted here are the same that have been severely impacted by the regulatory failures related to Exide. The time to act is now. We appreciate your prompt attention to this issue.

Sincerely,

⁴ USEPA. *EPA Proposes to Strengthen Clean Air Act Standards for Ethylene Oxide from Commercial Sterilization Facilities: Fact Sheet*. <https://www.epa.gov/system/files/documents/2023-04/Fact%20Sheet%20Proposal%20to%20Address%20EtO%20Risks%20from%20Commercial%20Sterilizers.pdf>. Pg 1.



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