



Sep 2, 2022

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Office of the Chief Clerk

Texas Commission on Environmental Quality

P.O. Box 13087, MC 105

Austin, Texas 78711-3087

**RE: Comments on Celanese Ltd. Federal Operating Permit No. O1986, Application No. 33188 at 9502 Bayport Blvd, Pasadena, TX 77507-1402**

Dear Texas Commission on Environmental Quality,

On January 18, 2022, Celanese Ltd. (Celanese) (RN100227016, CN600130850) submitted its application to the Texas Commission on Environmental Quality (TCEQ) for a renewal of Federal Operating Permit (FOP) No. O1986, Application No. 33188, to authorize operation of the Ethylene Oxide / Ethylene Glycol, an All Other Basic Organic Chemical Manufacturing facility located at 9502 Bayport Blvd in Pasadena, Harris County, Texas 77507 - 1402. Air Alliance Houston (AAH) submits these comments in response.

The facility is situated within the confines of the city of Pasadena and is situated directly upwind from the neighboring cities of Deer Park and La Porte. Due to their proximity to the largest and busiest fossil fuel import/export and manufacturing hub in North America, the Houston Ship Channel, these areas are already inundated by significant levels of industrial pollution from nearby oil refineries, various petrochemical manufacturing facilities, petroleum and chemical storage terminals, fugitive emissions from the spiderweb of pipelines that converge

in the area, and the subsequent maritime and on-road emissions related to the concentration of industrial activity within the Ship Channel area. Over the course of their lifetime, communities near these facilities are subjected to a lifetime of exposure to innumerable chemicals from various sources. Many of these chemicals have known chronic exposure risks, while the potential long-term exposure effects of others have not been rigorously evaluated. In addition, residents live with the constant anxiety of so-called industrial upsets; explosions, malfunctions, and releases that have the potential to adversely affect their health and safety more immediately. As a result, surrounding residents – especially those living downwind – face serious adverse health risks and impacts.

While an all-encompassing analysis of the cumulative health and safety risks associated with living in these precariously situated communities has yet to be developed, data from the EPA's 2017 AirToxScreen (previously NATA) reveal the total cancer risk for multiple census tracts downwind of the Bayport Industrial Complex – which includes the Celanese plant – exceed the 100-in-a-million (1:10,000) EPA standard for acceptable risk.<sup>1</sup> AirToxScreen overwhelmingly attributes these cancer risk estimate exceedances to ethylene oxide (EtO) exposure (84.1%). While this excessive cancer risk is not solely attributable to the Celanese facility, the facility is among the highest reported emitters of EtO within the area according to EPA Toxic Release Inventory (TRI) data and accounts for approximately 27% of all EtO emissions in Harris County.

The Celanese facility itself has a long history of noncompliance with permit requirements and unsafe operating conditions as evidenced by the 24 Clean Air Act (CAA) enforcement actions it has received over the last five (5) years and the 13 emergency responses since 2015.

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<sup>1</sup>2017 AirToxScreen Mapping Tool Search. See electronically at:  
<https://epa.maps.arcgis.com/apps/MapSeries/index.html?appid=e5a7e59018c7424eaddcb64b31ba4a41>

Moreover, it has spent at least 7 of the last 12 quarters in CAA noncompliance, and 3 quarters with significant violations, paying just \$45,337 in penalties from formal enforcement actions over the last 5 years. Its current CAA compliance status is classified as “high priority violation” (HPV) and “significant noncompliance” (SNC) (as of August 27, 2022). Despite the numerous administrative and court orders, investigations, and complaints against it, TCEQ maintains that the facility has a “satisfactory” compliance score.<sup>2 3</sup>

It is abundantly clear that TCEQ must do more to ensure Celanese’s compliance with its permits and protect the communities situated near and around the facility from harm. The Draft Permit is therefore insufficient for the following reasons: (1) the Draft Permit does not include sufficient monitoring or recordkeeping to assure compliance with various emission limits and protect surrounding communities, and (2) TCEQs permitting process lacks meaningful environmental justice considerations for communities downwind of the facility. For these reasons, Commenters respectfully request that the TCEQ deny the renewal of this permit to require compliance with existing permits and safe conditions that do not expose the community to further harm.

## **I. COMMENTERS**

Air Alliance Houston (AAH) is a Texas 501(c)(3) non-profit advocacy organization working to reduce the public health impacts of air pollution and advance environmental justice through applied research, education, and advocacy. AAH takes a strong stance against disproportionate exposure to air pollution in overburdened communities of color and lower income by focusing attention on health equity and environmental justice.

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<sup>2</sup> EPA Enforcement and Compliance History Online (ECHO) Search. See electronically at:

<https://echo.epa.gov/detailed-facility-report?fid=110067040703>

<sup>3</sup> TCEQ Compliance History Search. See electronically at:

<https://www2.tceq.texas.gov/oce/ch/index.cfm?fuseaction=main.viewdetails&rid=831480752001157>

## **II. ENVIRONMENTAL JUSTICE CONCERNS**

Celanese Ltd. (Celanese) owns the chemical manufacturing facility located at 9502 Bayport Blvd in Pasadena, Harris County, Texas 77507. The facility impacts surrounding and downwind communities in the cities of Deer Park, La Porte, and Pasadena, many of which are designated as environmental justice communities and already overburdened with multiple sources of pollution.

### **A. Factors Defining Local EJ Communities**

The United States Environmental Protection Agency (EPA) defines “environmental justice (EJ) communities” as communities most impacted by environmental harms and risks, or overburdened communities. There are several factors that define EJ communities, including where there is: (1) disproportionate exposure to environmental hazards and (2) increased vulnerability to said hazards. The EPA further describes these factors in their definition of an overburdened community: the term describes situations where multiple factors, including both environmental and socioeconomic stressors, may act cumulatively to affect health and the environment and contribute to persistent environmental health disparities.<sup>4</sup>

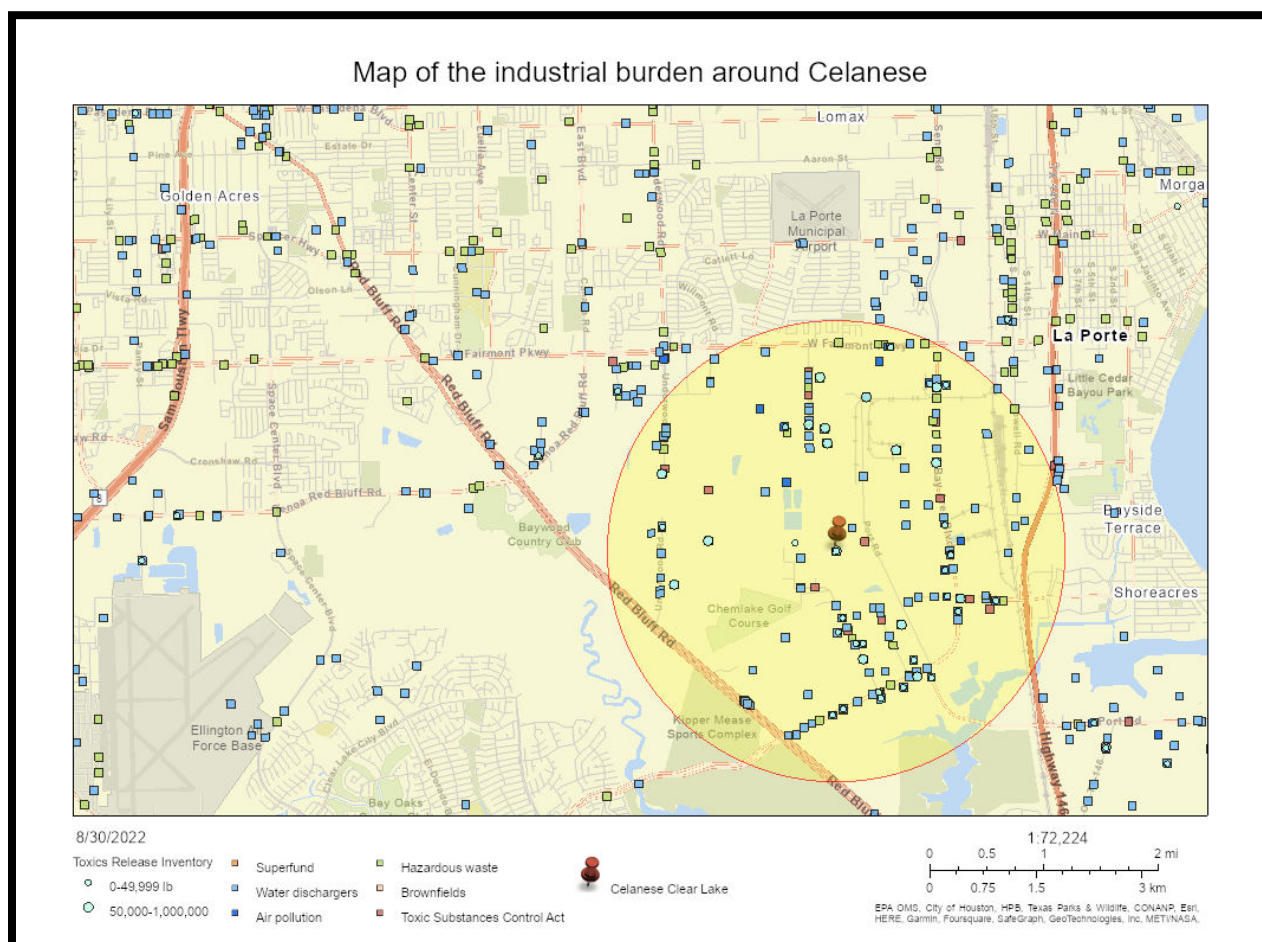
Celanese’s refinery is located less than 2 miles from Pasadena, La Porte, and Deer Park residences. EPA has recognized that each of these communities face disproportionately high exposure to risk created by industrial sources of pollution like Celanese.<sup>5</sup> Moreover, a 2006 task force report for former Houston Mayor Bill White noted: “Over 20 of the largest industrial sources [of pollution] are located in East Houston. The Port of Houston, and the Ship Channel that feeds it, passes through the middle of this area and generates a variety of hazardous pollutants, adding to those from the nearby industrial sources.” These sources include refineries,

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<sup>4</sup> United States Environmental protection Agency. See electronically at: <https://www.epa.gov/environmentaljustice>

<sup>5</sup> EPA Region 6, Texas Environmental Justice Collaborative Action Plan at 4 (August 3, 2016). See electronically at: [https://www.epa.gov/sites/production/files/2016-12/documents/texas\\_ej\\_plan\\_8-3-16\\_final.pdf](https://www.epa.gov/sites/production/files/2016-12/documents/texas_ej_plan_8-3-16_final.pdf).

chemical plants, sewage treatment facilities, hazardous waste (Superfund) sites, and concrete batch plants (see Figure 1).



*Figure 1. Map of the industrial burden in communities near Celanese (EJScreen)*

## **B. Profile of the Immediate Surrounding Community**

There are approximately 820 residences located within only a 2 mile radius of Celanese and 20,721 within only a 3 mile radius. According to EPA's EJSCREEN tool, people living in the 2 mile radius surrounding Celanese are in the top 10 percentile in the state and EPA Region for the following variables: 2017 Diesel Particulate Matter (92nd), 2017 Air Toxics Cancer Risk

(99th), 2017 Air Toxics Respiratory Hazard Index (99th), RMP Facility Proximity (99th), Hazardous Waste Proximity (99th).<sup>6</sup>

### *1. Pasadena*

Residential areas in Pasadena are surrounded by Ship Channel industries. In the Pasadena community, socioeconomic stressors combined with environmental stressors establish that they would be considered an EJ community under the EPA definition. Thirty percent (30%) of residents are children under the age of 18, and ten percent (10%) are seniors aged 65 and older. Additionally, 28% of residents have no high school diploma. Per capita income is \$24,168 with many residents falling below the poverty line. Residents of color comprise 76% of Pasadena's population with 71% alone being Hispanic/Latino. Forty-six percent (46%) of residents speak a language other than English at home, with an overwhelming percentage being Spanish.<sup>7</sup>

### *2. La Porte*

Residences in La Porte are within a two (2) mile radius of the Celanese facility and more importantly, lie directly downwind of Celanese – thus being exposed to the greatest amount of emissions and air pollution from the facility. According to the EPA's 2017 AirToxScreen, census tracts in La Porte host alarmingly high air toxic cancer risks, ranging from 80 to over 100 in a million with initial cancer risk estimates of the tracts immediately north of the Bayport Complex having the highest risks of over 300 in a million. Furthermore, according to the 2020 Census, a large portion of the community is considered a sensitive population with 37.1% of the population being children under 18 and seniors over 65. Many residents fall below the poverty line as well.

### *3. Deer Park*

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<sup>6</sup> EJSCREEN ACS Summary Report. Available electronically at: <https://ejscreen.epa.gov/mapper/>

<sup>7</sup> See electronically at: <https://www.census.gov/quickfacts/pasadenacitytexas>

Portions of the Deer Park community are also within a 2 mile radius of Celanese, and the city lies directly downwind of the facility as well. Deer Park is also considered an environmental justice community. A significant portion of the community is also considered a sensitive population with 40.6% of the population being children under 18 and seniors over 65. Residential areas in Deer Park are surrounded by Ship Channel industries as well, and are consistently exposed to routine flaring, emission events, and industrial disasters - all placing an existing cumulative health burden onto residents.

The outlined socioeconomic and environmental factors indicate that the proposed renewal of this permit involves significant environmental justice implications and requires particular focus and action by TCEQ to address these concerns. Given that people living near Celanese are already overburdened by pollution, vulnerable to health concerns due to age, isolated due to language barriers, and facing more serious barriers to upward mobility than most people living in Texas, the TCEQ must carefully weigh the impacts associated with the proposed renewal against the continued burdens it will propagate.<sup>8</sup>

### **III. CONCERNS REGARDING THE FACILITY AND ITS HISTORY**

Celanese owns and operates a chemical manufacturing facility located at 9502 Bayport Blvd in Pasadena, Harris County, Texas 77507 and is a major source of hazardous air pollutants such as ethylene oxide (EtO) as well as criteria pollutants—including the precursors for ozone formation (NO<sub>x</sub> and VOC)—located in the Harris County ozone nonattainment area.

#### **A. Celanese Has A Long History of Noncompliance**

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<sup>8</sup> See, e.g., 30 Tex. Admin. Code §§ 116.111(a)(2)(A)(ii), 116.150(d)(4).



Celanese has an established history of non-compliance with the Clean Air Act, with twenty-four (24) CAA enforcement orders since 2017<sup>9</sup>, 13 emergency responses since 2015,<sup>10</sup> and 48 air quality emissions events since 2015.<sup>11</sup> Furthermore the facility has been a “high priority violator” of the Clean Air Act for at least the entirety of the current year, according to EPA records. The EPA has now levied over \$45,000 in penalties and fines against Celanese due to these violations over the last 5 years alone.

### **1. Violations and Investigations**

Over the past three years alone (since 2020), TCEQ has cited Celanese for the following violations:

1. Failure to maintain a record of visible emission observation during a flaring event
2. Failure to detect a flame present at all times
3. Failure to record liquid and vent gas flow
4. Failure to conduct quarterly sampling
5. Failure to report all instances of deviations
6. Failure to submit the Deviation Report (DR) within 30 days
7. Failure to operate for Unit ID 32V1760H
8. Failure to include all of the information required under 30 TAC 101.201(b)(2) in an emissions event final record.
9. Failure to operate the utilities flare with a present flame and or have a constant pilot flame.
10. Failure to add a component on the list of delay of repair record
11. Failure to submit the Permit Compliance Certification within 30 days
12. Failure to operate within Cooling Tower hourly emission rates for Total Dissolved Solids
13. Failure to follow 40 CFR 63.169 (c)(1) guidelines for completing repairs to a Unit leaking blind flange within the required timeframe.
14. Failure of the Utilities Flare stream to meet the 40 CFR 60.18 net heating value.
15. Failure to follow maintenance procedures for repairs of 32EOFUG Unit HE195.089 with an approved simultaneous gas analyzer

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<sup>9</sup> EPA Enforcement and Compliance History Online (ECHO) Search. *See electronically at:*  
<https://echo.epa.gov/detailed-facility-report?fid=110067040703>

<sup>10</sup> TCEQ Emergency Response Report. *See electronically at:*  
[https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=iwr.emsincdetail&addn\\_id=815480762001157&re\\_id=831480752001157](https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=iwr.emsincdetail&addn_id=815480762001157&re_id=831480752001157)

<sup>11</sup> TCEQ Air Emissions Event Reports. *See electronically at:*  
[https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=iwr.eeincdetail&addn\\_id=815480762001157&re\\_id=831480752001157](https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=iwr.eeincdetail&addn_id=815480762001157&re_id=831480752001157)



16. Failure to report all instances of a deviation in the deviation report
17. Failure to complete 2017 and 2018 annual inspections for the cooling tower drift eliminators within the required timeframe.
18. Failure to prevent open-ended lines

Six (6) more violations had occurred since 2017.<sup>12</sup> Celanese has also been the subject of ten (10) compliance investigations since 2017.<sup>13</sup>

## **2. Emergency Responses and Emission Events**

The most recent emergency response was recorded on July 23, 2021. Several more of these emergency response events have occurred over the past few years including an explosion and fire that erupted on September 21, 2019, causing visible emissions including black smoke billowing into the air.<sup>14</sup> Since 2015, the plant has been responsible for 13 emergency response events.<sup>15</sup>

The most recent emissions event record lasted nearly 50 hours from June 10 to June 12 2022. During this emissions event, Celanese released over 41,822 lbs (20.9 tons) of carbon monoxide into the air and surrounding communities.<sup>16</sup> Carbon monoxide, a highly poisonous and environmentally destructive gas, causes 400 deaths, 20,000 emergency room visits and 4,000 hospitalizations every year in the U.S.<sup>17</sup>

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<sup>12</sup> TCEQ Notice of Violations. Air Operating Permit 1986. *See electronically at:* [https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=iwr.novdetail&addn\\_id=815480762001157&re\\_id=831480752001157](https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=iwr.novdetail&addn_id=815480762001157&re_id=831480752001157)

<sup>13</sup> TCEQ Investigations. Air Operating Permit 1986. *See electronically at:* [https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=iwr.invdetail&addn\\_id=815480762001157&re\\_id=831480752001157](https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=iwr.invdetail&addn_id=815480762001157&re_id=831480752001157)

<sup>14</sup> Click2Houston. "Fire occurred at Celanese chemical plant in Pasadena Saturday, company says" September 19, 2019. <https://www.click2houston.com/news/2019/09/22/fire-occurred-at-celanese-chemical-plant-in-pasadena-saturday-company-says/>

<sup>15</sup> TCEQ Emergency Responses at CELANESE CLEAR LAKE PLANT. Air Operating Permit 1986. *See electronically at:* [https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=iwr.emsincdetail&addn\\_id=815480762001157&re\\_id=831480752001157](https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=iwr.emsincdetail&addn_id=815480762001157&re_id=831480752001157)

<sup>16</sup> TCEQ Air Emission Event Report Database Incident 381286. *See electronically at:* <https://www2.tceq.texas.gov/oce/eer/index.cfm?fuseaction=main.getDetails&target=381286>

<sup>17</sup> CDC. Carbon Monoxide Poisoning: <https://www.cdc.gov/co/faqs.htm>

Several more of these emissions events and even permit violations have occurred over the past few years resulting in illegal emissions released into the surrounding community. On July 24, 2021, the plant's Ethylene Oxide / Ethylene Glycol Unit violated its permit by releasing over 372 lbs of ethylene oxide into the air, despite having an allowed emission limit of (0).<sup>18</sup> Only a few months earlier, on March 25, 2021, the same EO/EG Unit was responsible for releasing 14 lbs of ethylene oxide and over 185 lbs of gaseous ethylene into the air, despite having no permit allowance to do so for either pollutant (allowed emission limits of zero for each).<sup>19</sup> Both of these illegal emissions were released by the very same Ethylene Oxide / Ethylene Glycol unit that Celanese is seeking an FOP renewal for. These occurrences display Celanese's clear negligence for current permit requirements.

Celanese has been responsible for 40 such air quality emission events since 2015 alone.<sup>20</sup> The facility has consistently been releasing hazardous chemicals into nearby communities contributing to unnecessary harm and health risks.

Moreover, Celanese has faced 2 official complaints to TCEQ on emission event issues further highlighting the harm and nuisance it causes nearby communities.<sup>21</sup> It is evident that Celanese has also disregarded the requirements of its permits, which were created to maintain the intent of the CAA. Instead, Celanese accepts the meager fines imposed and continues its

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<sup>18</sup> TCEQ Air Emission Event Report Database Incident 363269. *See electronically at:*  
<https://www2.tceq.texas.gov/oce/eer/index.cfm?fuseaction=main.getDetails&target=363269>

<sup>19</sup> TCEQ Air Emission Event Report Database Incident 353288. *See electronically at:*  
<https://www2.tceq.texas.gov/oce/eer/index.cfm?fuseaction=main.getDetails&target=353288>

<sup>20</sup> TCEQ Air Quality Emission Events at Celanese Clear Lake Plant. *See electronically at:*  
[https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=iwr.eeincdetail&addn\\_id=815480762001157&re\\_id=831480752001157](https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=iwr.eeincdetail&addn_id=815480762001157&re_id=831480752001157)

<sup>21</sup> TCEQ Air Quality Complaints at Celanese Clear Lake Plant. *See electronically at:*  
[https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=iwr.complincdetail&addn\\_id=815480762001157&re\\_id=831480752001157](https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=iwr.complincdetail&addn_id=815480762001157&re_id=831480752001157)

noncompliance. TCEQ must address this pattern of disregard and noncompliance by Celanese before approving any future permit renewals.

## **B. Data on Celanese's Risk to Health**

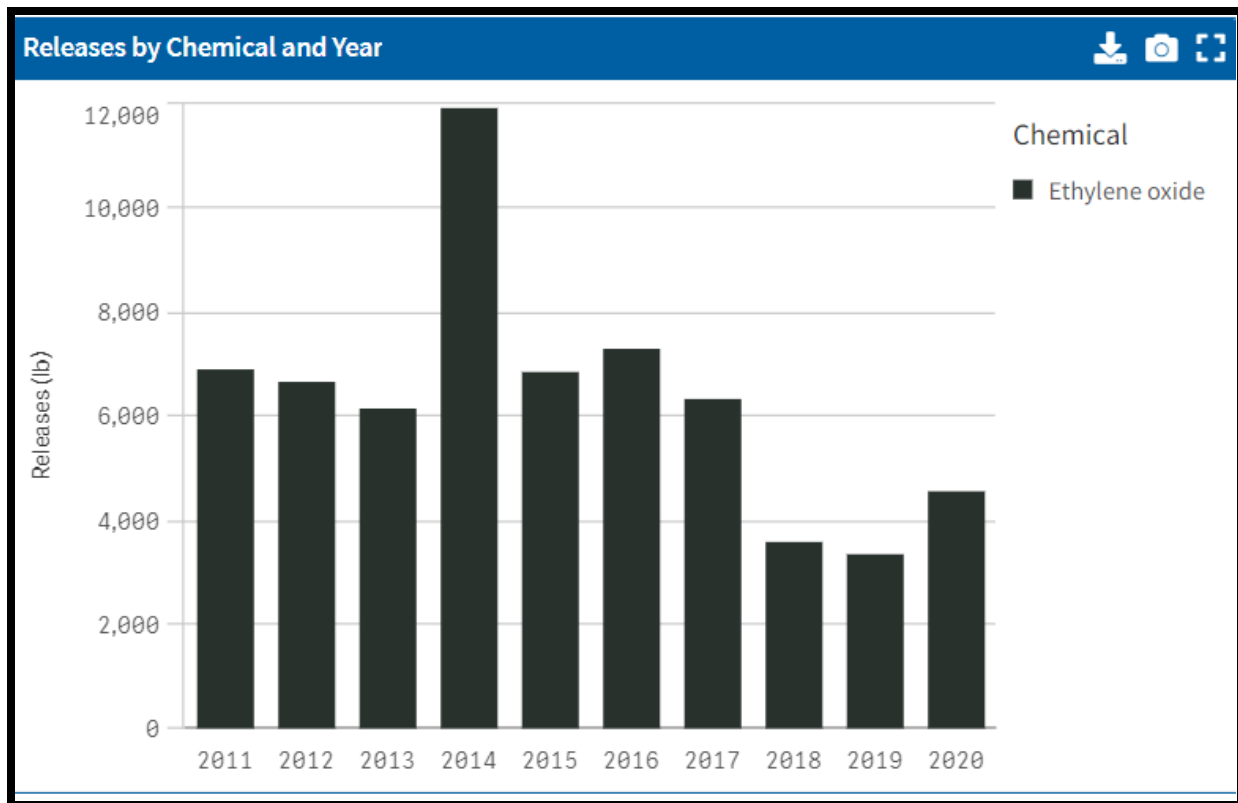
### **1. Ethylene Oxide (EtO) pollution and air toxics cancer risk**

The Celanese Clear Lake Plant manufactures ethylene oxide at a rate of 700 million lb/yr. EtO is used for the local production of ethylene glycol, with the remainder being sold in the merchant market. The material is stored on site in pressurized and refrigerated spheres. According to the EPA Toxic Release Inventory (TRI), the facility is identified as one of the top sources of EtO pollution in the area, constituting 27% of EtO releases in Harris County as a whole, out of 542 TRI facilities.

According to EPA TRI data on Celanese (TRI ID: 77507HCHST9502B), the facility released 4,554 lbs of EtO in 2020, 3,345 lbs in 2019, and 3,582 lbs in 2018, mostly into the air.<sup>22</sup> Additionally, the TRI records a total release value of 63,556 lbs of EtO from the plant between 2011-2020 - 97.8% of which (62,164 lbs) was released into the air.

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<sup>22</sup> Toxic Release Inventory. EPA TRI Toxics Tracker: <https://www.epa.gov/toxics-release-inventory-tri-program>



Production related ethylene oxide waste increased heavily in 2019 to 93,092 lbs, a sharp increase from 2018 (34,382 lbs) and 2017 (53,976 lbs) and while a majority of this waste has been treated, a significant amount of ethylene oxide still gets released into the environment.

Data from the 2017 AirToxScreen (previously NATA) reveal the total cancer risk for the census tract housing Celanese to be 60 in a million<sup>23</sup>. EtO alone possesses the greatest contribution to this risk at 52.1% of the total (34 in a million). Additionally, census tracts downwind of the plant possess even higher cancer risks: several tracts exceed the 100-in-a-million (1:10,000) EPA standard for acceptable risk and initial estimates found at least two tracts that exceeded cancer risk rates of over 300-in-a-million.

<sup>23</sup> 2017 AirToxScreen Mapping Tool Search. See electronically at:  
<https://epa.maps.arcgis.com/apps/MapSeries/index.html?appid=e5a7e59018c7424eaddcb64b31ba4a41>

The EPA's Risk Screening Environmental Indicator (RSEI) Score is a unitless value that accounts for the size of the chemical release, how the chemical degrades and moves through the environment, the size and location of the exposed population, and the chemical's toxicity. The total RSEI score for Celanese with regards to EtO was 72,620,300 – significantly higher than the median industry value for organic chemical manufacturing facilities, as well as other TRI-reporting facilities in the United States.<sup>24</sup> Celanese's RSEI score is ranked 3rd out of 3,967 facilities nationally in the Chemical industry sector, highlighting the acute and concerning health risks and toxicity its emissions pose to surrounding communities.<sup>25</sup>

EPA, as well as the International Agency for Research on Cancer (IARC) and the National Toxicology Program, classify EtO as carcinogenic to humans. Studies of workers show that their exposures to EtO are associated with an increased risk of cancers of the white blood cells (the infection-fighting cells of the immune system) and an increased risk of breast cancer in females. Evidence in humans indicates that exposure to EtO increases the risk of cancers of the white blood cells, including non-Hodgkin lymphoma, myeloma, and lymphocytic leukemia. Studies also show that long-term exposure to EtO in the community also increases the risk of breast cancer in females. Furthermore, EtO is mutagenic (i.e., it can change the DNA in a cell). Children may be more susceptible to the harmful effects of mutagenic substances.<sup>26</sup>

An analysis of 5 years of modeled EPA RSEI data revealed that the Celanese facility alone contributes about 91.6% of the estimated excess lifetime cancer risk within its surrounding

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<sup>24</sup> EPA Air Toxics Screening Assessment, 2017 AirToxScreen: <https://www.epa.gov/AirToxScreen>

<sup>25</sup> Toxic Release Inventory. EPA TRI Toxics Tracker: <https://www.epa.gov/toxics-release-inventory-tri-program>

<sup>26</sup> Hazardous Air Pollutants: Ethylene Oxide. Frequent Questions: Health Information About Ethylene Oxide.

December 2021. See electronically at:

<https://www.epa.gov/hazardous-air-pollutants-ethylene-oxide/frequent-questions-health-information-about-ethylene-oxide>

areas (1 in 210) which is 48 times the EPA's acceptable risk level.<sup>27</sup> This is no coincidence. As a facility already emitting dangerously high levels of carcinogens and pollutants, it is irresponsible for TCEQ to allow Celanese to continue releasing carcinogenic emissions such as EtO at current levels into the surrounding community. These and other emissions contribute to the alarming levels of excess cancer risk as already measured around the facility. Furthermore, the routine pattern of flagrant violations, noncompliance, and all other concerns outlined in this section must be resolved before the TCEQ issues any requested amendments.

## **2. Volatile Organic Compound (VOC) pollution**

In addition to only its EtO pollution, Celanese continues to remain a significant contributor to overall Volatile Organic Compound (VOC) pollution within surrounding areas as well. According to TCEQ data, over the last 5 years, the facility's total annual VOC releases have ranged from approximately 120 to 200 tons per year (240,000 - 400,000 lbs) showing little to no signs of significant pollution reduction or emissions mitigation through process improvements – but rather a trend towards ever increasing emissions in the more recent years.<sup>28</sup> Such high levels of hazardous air pollution add considerable burden to the already high levels of adverse health risks within surrounding communities.

VOCs along with NOx, play a major role in the atmospheric reactions that produce ozone, which is the primary constituent of smog. People with lung disease, children, older adults, and active people can be affected when ozone levels are unhealthy. Ground-level ozone exposure is linked to a variety of short-term health problems, including lung irritation and difficulty breathing, as well as long-term problems, such as permanent lung damage from

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<sup>27</sup> ProPublica. The Most Detailed Map of Cancer Causing Industrial Air Pollution in the U.S. See *electronically at*: <https://projects.propublica.org/toxmap/>.

<sup>28</sup> TCEQ CR Query, Air Emissions Inventory, Clear Lake Plant. See *electronically at*: [https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=iwr.pgmdetail&addn\\_id=411587052009251&disp\\_aei=Y](https://www15.tceq.texas.gov/crpub/index.cfm?fuseaction=iwr.pgmdetail&addn_id=411587052009251&disp_aei=Y)

repeated exposure, aggravated asthma, reduced lung capacity, and increased susceptibility to respiratory illnesses such as pneumonia and bronchitis.

Furthermore, acute (short-term) inhalation exposure of humans to VOCs (such as benzene) may cause drowsiness, dizziness, headaches, as well as eye, skin, and respiratory tract irritation, and, at high levels, unconsciousness. Chronic (long-term) inhalation exposure has caused various disorders in the blood, including reduced numbers of red blood cells and anemia in occupational settings. Reproductive effects have been reported for women exposed by inhalation to high levels, and adverse effects on the developing fetus have been observed in animal tests. Increased incidences of leukemia have also been observed in humans occupationally exposed to benzene and similar carcinogenic VOCs.

### **C. Cumulative Impacts of Surrounding Facilities on Human Health**

As mentioned previously, the areas surrounding Celanese's refinery are communities that are already significantly overburdened by hazardous and other air pollution, including from multiple refineries and petrochemical facilities, hazardous waste sites, RMP facilities, and Superfund sites (see Figure 1: Map of the industrial burden in communities near Celanese). Cumulative Impacts refer to the total burden – positive, neutral, or negative – from chemical and non-chemical stressors and their interactions that affect the health, well-being, and quality of life of an individual, community, or population at a given point in time or over a period of time.<sup>29</sup> TCEQ must consider these cumulative health and industrial impacts when approving the Celanese permit renewal as well as other refinery permits and facility corrective action plans in the immediate area.

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<sup>29</sup> United States Environmental Protection Agency. 2022. *Cumulative Impacts*. See electronically at: [https://www.epa.gov/system/files/documents/2022-01/ord-cumulative-impacts-white-paper\\_externalreviewdraft-508-tagged\\_0.pdf](https://www.epa.gov/system/files/documents/2022-01/ord-cumulative-impacts-white-paper_externalreviewdraft-508-tagged_0.pdf)



#### IV. CONCLUSION

Air Alliance Houston (AAH) is very concerned about the impacts of the Celanese Ltd. facility on air quality and public health in and around the immediate surrounding residences including the Pasadena, La Porte, and Deer Park communities as well as the greater east Harris County area as a whole. The facility displays a pattern of disregard for the Clean Air Act (CAA) and already exerts a significant pollutive burden on surrounding residents that has resulted in higher cancer risks and adverse health outcomes. Therefore, Commenters request the following:

- **TCEQ should deny the permit amendment listed above outright and require a corrective action plan and timeline from Celanese for how they will reach compliance with current emissions standards, prevent future unauthorized emissions, and provide for the removal/decommissioning of specific facility equipment with relevance to the renewal application.**
- **TCEQ should require that Celanese implement additional emission control/reduction measures and technologies given its routine violation of permit limits and air quality standards as outlined above and also to reduce the likely higher-than-reported actual emissions of various pollutants.**
- **TCEQ must consider environmental justice concerns during decision-making on this and future permit applications from Celanese due to the cumulative impact of environmental and health harms caused by the operation of this facility.**

Should there be any questions about these comments, please feel free to contact the undersigned representative at any time. We appreciate your urgent attention and response to these matters.

Respectfully submitted,

/s/

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